

HSE REQUIREMENTS ANNEX

2023

TotalEnergies
HSE Requirements for tenders

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Safety health environment quality charter

In accordance with its Code of Conduct, TotalEnergies has adopted the following principles concerning safety, security, health, the environment, quality and societal commitment:

- 1.** TotalEnergies holds safety, security, health, respect for the environment, customer satisfaction, listening to all stakeholders by way of an open dialogue, as paramount priorities.
- 2.** TotalEnergies complies with all applicable laws and regulations wherever it conducts its business and supplements them with specific requirements and commitments when necessary.
- 3.** TotalEnergies promotes, among its employees a shared culture which the core components are professionalism, the rigorous compliance and application of regulations, skills management, incident feedback and continuous learning. This approach relies on the vigilance and commitment of all.
- 4.** Each and every team member, at all levels, must be aware of their role and personal responsibility in the practice of their duties. Individuals must demonstrate the strictest discipline in preventing accidents and deliberate damage; in protecting health, the environment and product and service quality whilst addressing stakeholder expectations. Rigor and exemplarity in these fields are important criteria in evaluating the performance of each member of personnel, in particular for those in positions of responsibility.
- 5.** TotalEnergies favors the selection of industrial and business partners on the basis of their ability to apply policies similar to its own concerning safety, security, health, the environment, quality and societal measures.
- 6.** TotalEnergies implements, for all of its operations, appropriate management policies regarding safety, security, health, the environment, quality, societal commitment and a periodic risk assessment of relevant policies and measures. Any development of a project or launch of a product is undertaken upon full lifecycle risk assessment.
- 7.** Appropriate safety, health, environmental, quality and societal commitment management systems for each business undergo regular assessment involving measurement of performance setting milestones, formulating relevant action plans and instituting suitable control procedures.
- 8.** TotalEnergies implements incident response plans and means of intervention designed to face different types of events it may encounter. Such measures are periodically updated and reviewed during exercises.
- 9.** TotalEnergies is committed to managing its energy consumption, emissions in natural environments (water, air and soils), production of final waste, use of natural resources and impact on biodiversity. It develops new processes, products and customer services in order to enhance energy efficiency and reduce environmental footprint.
- 10.** TotalEnergies adopts a constructive attitude towards safety, security, health, the environment and quality, based on transparency and an open dialogue with stakeholders and outside parties. Through its societal commitment, TotalEnergies is particularly keen on contributing to the sustainable development of neighboring communities, with a focus on human, economic and social issues. It conducts its operations in such a way as to responsibly ensure security, in compliance with the Voluntary Principles on Security and Human Rights (VPSHR).

Patrick Pouyanné
Chairman and Chief Executive Officer



TotalEnergies

September 2021

توتال انرجيز للتسويق إيجيبث

ميثاق السلامة والصحة وحماية البيئة والجودة والتنمية المستدامة

نحن نؤمن في شركة توتال انرجيز للتسويق إيجيبث بأن مسؤليتنا تجاه الصحة والسلامة والأمن وحماية البيئة والجودة والتنمية المستدامة هي جزء لا يتجزأ من عملنا ونعبر عن نيتنا في أن نكون رواداً في هذه المجالات لذلك نلتزم التزاماً تاماً بالقوانين المحلية ونعاون تعاوناً كاملاً مع السلطات المحلية كذلك نلتزم بقواعد ومعايير الشركة الأم ومبادئ وأهداف ال-وان مايسترو , ويعتبر جميع العاملين بالشركة مسئولين عن أداء واجباتهم ودعم الجهود الرامية إلى تحقيق أهداف الشركة في هذا المجال.

المادة 1: الالتزام

الصحة والسلامة والجودة واحترام البيئة ورضاء العملاء والاستماع إلى أصحاب المصالح وأمن العاملين تأتي على رأس التزاماتنا.

المادة 2: السلامة

السلامة مبدأ أساسي على الجميع سواء العاملين بالشركة أو المقاولين ونحن نؤمن بأن الالتزام والتدريب ومهارات العاملين والاتصال والموارد وسلامة التصميمات الهندسية والتفتيش اليومي الميداني وقياس الأداء هي عوامل أساسية لضمان تحقيق مستوى عال من السلامة أثناء أداءنا لعملنا. تنتظر إدارة الشركة من جميع العاملين أن يقوموا بإبلاغها عن أي مواقف خطيرة مهددة للسلامة أو أي حوادث يعلمون بها لتضمن الشركة ان قواعدها الذهبية تطبق بدقة في كل الاوقات . تتعاقد توتال انرجيز للتسويق إيجيبث فقط مع الشركات التي تتفق نظم إدارة السلامة والمعايير بها مع نظم شركتنا ومعاييرها والتي تظهر بوضوح التزامها بهذه النظم.

تطبق شركة توتال انرجيز للتسويق إيجيبث خطط إدارة الأزمات وكل وسائل التدخل المصممة لمواجهة كل السيناريوهات التي قد تواجهها.

المادة 3: النقل

أ- نقل المنتجات

تولى الشركة أهمية فائقة لتجنب مخاطر الحوادث ذات علاقة بنقل المنتجات وتؤمن بمفهوم أن الحوادث يمكن تجنبها. تطبق أيضا على نقل المنتجات والبضائع بواسطة مقاولي النقل عن طريق برنامج الباتروم.

ب- نقل الأشخاص

وتطبق سياسة القيادة الآمنة على العاملين بالشركة وكذلك المقاولين الذين يستخدمون السيارات الملاكي لأغراض مهنية.

المادة 4: الجودة

نحقق قوتنا التنافسية عن طريق طريق تحسين كل من الجودة والإنتاجية من أجل الوصول إلى الرضاء الكامل لعملائنا بتقديم منتجات ذات جودة عالية وتحسين أهدافنا الخاصة بالجودة.

المادة 5: الصحة المهنية

نهتم بصحة العاملين بالشركة ومقدمي الخدمات حيث نقوم بإدارة المخاطر التي قد يتعرضون لها. نقوم كذلك بدراسات الآثار البيئية على السكان الذين يقيمون أو يعملون بجانب منشآتنا أو المحتمل تعرضهم لها.

المادة 6: الأمن

تطبق سياستنا الأمنية على البشر والأصول والمعلومات ونقوم على التقييم المستمر للمخاطر التي قد تتعرض لها عملياتنا بهدف توفير وتطبيق سبل الحماية المناسبة. تجري شركة توتال انرجيز للتسويق إيجيبث عملياتها بطريقة تضمن الأمن بشكل مسؤول وفقاً للمبادئ التطوعية بشأن الأمن وحقوق الإنسان.

المادة 7: الوقاية من المخاطر الصناعية

نقوم بتحديد المخاطر المتعلقة بالصحة والسلامة والبيئة والتي تنتج عن أنشطتنا المختلفة ونعمل على خفضها إلى أدنى مستوى ممكن ونهدف إلى تقليل تأثير أنشطتنا على البيئة وحماية موظفينا وعمالنا والمقاولين ومقدمي الخدمات والمجتمع المحيط من الحوادث وخاصة الوفاة والإصابات والأمراض المهنية. ستمارس الشركة عملياتها المختلفة بطريقة تراعى منع مخاطر الحريق وتدمير المنشآت وذلك بالتأكد على أن جميع الأصول والمعدات وأدوات العمل تعمل بصورة جيدة وعن طريق تبنى الشركة لنظم السلامة الفعالة.

وتطبق الشركة نظام الوقاية والحماية من المخاطر في كل مشروع تقوم به وذلك خلال الدورة الكاملة للمشروع حتى الانتهاء من تنفيذه عن طريق:

- تحليل المخاطر الكبيرة.
- تطبيق خطط العمل الفعالة وتقييم التزام المقاولين العاملين لدينا .
- التفتيش والمراجعة محلياً أو بالاستعانة بمفتشين خارجيين.

المادة 8: البيئة

سوف تقوم الشركة بتقليل الأثر البيئي والصحي لعملياتنا عن طريق حماية التربة والمجاري المائية والهواء وتقليل النفايات والإنبعاثات والاستخدام الرشيد للطاقة وإعادة تأهيل مواقع العمل كذلك ستقوم الشركة بدعم نظم السلامة المختلفة وعمل مراجعات وتفتيش للتأكد من الالتزام في هذا الشأن. تلتزم توتال انرجيز للتسويق إيجيبث بإدارة إستهلاكها من الطاقة والإنبعاثات في البيئة الطبيعية (الماء، الهواء، التربة) وإنتاج النفايات النهائية واستخدام الموارد الطبيعية والتأثير على التنوع البيولوجي.

المادة 9: المسؤولية المجتمعية للشركة

تعتبر تنمية المجتمع جزء لا يتجزأ من عملياتنا حيث سنقوم بمبادرات في مجالات الصحة العامة والتعليم وسلامة الطرق والتطوير البشري والإقتصادي والاجتماعي ومن أجل تحقيق هذه الأهداف فإن إستراتيجيتنا تركز على الاحترام والاستماع والحوار مع أصحاب المصالح.

المادة 10: المسؤولية والالتزام

يلتزم كل أعضاء الفريق على مختلف المستويات يجب ان يكونوا على علم ودراية بدورهم ومسؤوليتهم في أداء واجباتهم . ويجب عليهم اظهار الانضباط والالتزام بمعايير السلامة العامة بشركة توتال انرجيز للتسويق إيجيبث. إن الدقة والحزم والالتزام الفردي بهذه المعايير مهم في التقييم الفردي للأداء خصوصاً لتقييم الأداء للأفراد الذين في موقع المسؤولية. هناك ثقافة مشتركة بين موظفيها وهي المكون الأساسي وهي الاحتراف والامتثال الدقيق وتطبيق اللوائح وإدارة المهارات و دراسة الحوادث والتعلم المستمر منها.

المادة 11: المخدرات والخمور

تمنع بشدة شركة توتال انرجيز للتسويق إيجيبث اي شخص من العمل او القيادة او دخول احدى مبانيها تحت تأثير المخدرات او الخمور.



Thomas STRAUSS
Managing Director



TotalEnergies

TotalEnergies Marketing EGYPT

HEALTH, SAFETY, SECURITY, ENVIRONMENT, QUALITY, AND SUSTAINABLE DEVELOPMENT CHARTER

At TotalEnergies Marketing Egypt, we believe that the responsibilities of Health, Safety, Security, Environment, Quality, and sustainable development are an integral part of our business, and we intend to be a pioneer in those fields; therefore, we strictly comply with local applicable laws and regulations, and make full cooperation with official authorities. We equally adhere to the Group HSSEQ directive and standards together with the principles and expectations of One-MAESTRO. All our employees are responsible to fulfill all their duties and to support the efforts destined for achievement of our objectives and goals in the field of HSSEQ.

Article 1: Commitment

Health, safety, quality, respect for the environment, customer satisfaction, listening to the stakeholders, and personal security are paramount commitment.

Article 2: Safety

Safety is a core value for all, our employees as well as our contractors. Accountability, training, employee skills, communication, resources, engineering design, in the field daily inspections and performance measurement are key factors in ensuring high level of safety during operations. All our personnel are expected to bring to the notice of management any safety concerns, unsafe situations, or incidents which they become aware of and to personally ensure that our safety Golden rules are strictly complied at any time. We only contract with companies whose HSSEQ management systems and standards are compatible with ours, and who clearly demonstrate their commitment to such systems. We strictly comply with applicable laws and regulations. TotalEnergies Marketing Egypt implements crisis management plans and means of intervention designed to face different types of events it may encounter.

Article 3: Transport

i)Product Transport:

Preventing the risks of accidents related to product transportation is a key focus. We adopt the "avoidable accident" concept as a safety management tool. It is applicable to the transportation of products and goods executed by contractors via PATROM program.

ii)Light Vehicles Transport:

The driving safety policy is addressed to TotalEnergies Marketing EGYPT employees as well as contractor employees that use motorized vehicles for professional needs.

Article 4: Quality

We achieve competitive strength by improving our quality and productivity with a view to reaching customer satisfaction by offering top quality products and improving our quality target.

Article 5: Health and Industrial Hygiene

We monitor the health of employees and service providers and manage the risks to which they may be exposed. We conduct environmental impact assessment people living or working near our facilities likely to be exposed to various risk.

Article 6: Security

The security process applies to people, assets, and data. It is designed to continuously assess threats to our operations, with the aim of providing and implementing an appropriate response. TotalEnergies Marketing Egypt conducts its operations in such a way as to responsibly ensure security in compliance with Voluntary Principles on security and human rights (VPSHR).

Article 7: Industrial Risk Prevention

We shall identify HSE risks arising from our activities and bring them to the lowest practical levels. Our goal is to minimize the impact of our activities on the environment and to protect our employees, our customers, service providers, and community from incidents such as death, injury, and occupational illness. We carry our operations in a manner which ensures proper consideration for fire and property damage prevention by ensuring that assets, equipment, and tools are in good working order and by introducing effective safety systems. Our risk prevention and mitigation process are deployed in every project throughout its life cycle. In particular, it is based on analyzing major risks, implementing proper and effective action plans, assessing our contractor's compliance and conducting internal self-assessment and external audits.

Article 8: Environment

We will continue to drive down the environmental and health impact of our operations by soil, water, and air pollution prevention, reducing waste, emissions, and discharges, and by using energy efficiently and rehabilitating sites. Management systems and procedures will be promoted and maintained. Regular checks, reviews, and audits will be carried out to ensure full compliance. TotalEnergies Marketing Egypt is committed to managing its energy consumption, emissions in natural environment (Water, air & soil), production of final waste, use of natural resources and impact on biodiversity.

Article 9: Corporate Social Responsibility

Community development is an integral component of our operations. We will continue making initiatives in areas of public health, education, road safety, and human, social, and economic development. To achieve this, our strategy is centered on respect, listening, dialogue, and stakeholder involvement.

Article 10: Accountability and Individual Commitment

Each and every team member, at all levels, must be aware of their role and personal responsibility in the practice of their duties. Individuals must demonstrate the strictest discipline in enforcing TotalEnergies Marketing Egypt HSSEQ standards. Rigor, exemplarity, and individual commitment in these fields are important criteria in evaluating the performance of each member of the personnel, in particular for those in positions of responsibility. Among its employees a shared culture which is the core components are professionalism, the rigorous compliance and application of regulations, skill management, incident feedback and continuous learning.

Article 11: Drugs and Alcohol use

TotalEnergies Marketing Egypt strictly prohibits anyone to work or drive or enter its premises if they are under the influence of alcohol or drugs.

Thomas STRAUSS
Managing Director

Safety at Work

The 12 Golden Rules



TotalEnergies



Editorial

Safety is a core value in the Company. It's the cornerstone of our operational excellence in all of our business lines.

Together, as employees of TotalEnergies and contractors, let us commit ourselves personally and collectively to ensure safety on a daily basis in our operations and on our sites with a common goal: "Zero fatal accidents."

Our Golden Rules, established on the basis of lessons learned, are essential to achieve our ambition in terms of safety.

By taking ownership and implementing them with constant vigilance, for ourselves and for our colleagues, the Golden Rules will fulfill their aim and become embedded in our daily activities.

I'm convinced that all accidents can be prevented!

Everybody's commitment to systematically apply the Golden Rules, everywhere, every day, is perfectly in line with the Company's ambition: to put sustainable development at the heart of our strategy, our projects and our operations.

Michel Charton
Senior Vice President HSE

Safety for me, for you, for all

To work safely and protect the lives of all, we need to:

- ☑ Take on board and implement the Golden Rules at all times.
- ☑ Step in if we observe deviations from our Golden Rules.
- ☑ Report anomalies to learn lessons from them.
- ☑ Share good practices of Golden Rules application.

Our 12 Golden Rules

- | | |
|---|---|
|  <p>1 \| High-Risk Situations</p> |  <p>7 \| Powered Systems</p> |
|  <p>2 \| Traffic</p> |  <p>8 \| Confined Spaces</p> |
|  <p>3 \| Body Mechanics & Tools</p> |  <p>9 \| Excavation Work</p> |
|  <p>4 \| Personal Protective Equipment</p> |  <p>10 \| Work at Height</p> |
|  <p>5 \| Work Permits</p> |  <p>11 \| Hot Work</p> |
|  <p>6 \| Lifting Operations</p> |  <p>12 \| Line of Fire</p> |

Rule 1



High-Risk Situations



I avoid high-risk situations.

My commitment to **Safety**:

- ✓ **I do not smoke or vape** outside designated areas.
- ✓ **I do not work or drive** under the influence of alcohol or drugs.
- ✓ **I secure** the downgraded situation and **report** it to my supervisor.
- ✓ **I know** the risks before executing a non-routine or complex operation.
- ✓ **I respect** the operating instructions for shutting down and starting up equipment and units.

Rule 2



Traffic



I follow the safety rules when I drive, ride a bike or walk.

My commitment to **Safety**:

- ✓ **I check** the condition of my vehicle before use.
- ✓ **I always wear** a seatbelt.
- ✓ **I do not exceed** the speed limit and adapt my driving to road conditions.
- ✓ **I do not use** any communication system while driving, such as phone, walkie-talkie and radio, even with hands-free kit.
- ✓ **I respect** the authorised driving time and the journey management plan.
- ✓ **I use** the lanes dedicated to pedestrians and cyclists accordingly.
- ✓ **I hold** handrails when taking the stairs.

Body Mechanics & Tools



I handle tools safely.

My commitment to **Safety**:

- ✓ **I check** that my tool is:
 - The one specified in the work permit or operating instruction
 - Suitable for the task and work area
 - In good condition
- ✓ **I use** the tools, including those for pressure tests, in line with the manufacturer's specified design limits.
- ✓ **I position** my body to minimize excessive strain.

Personal Protective Equipment (PPE)



I wear the required PPE.

My commitment to **Safety**:

- ✓ **I check** that my PPE are in good condition before use.
- ✓ **I wear** my helmet with the chin strap fastened.
- ✓ **I wear** the PPE adapted for the task and the area in which I am working.
- ✓ **I wear** a life jacket whenever required.

Work Permits



I work with a valid permit.

My commitment to **Safety**:

- I have checked** the permit and associated certificates.
- I am qualified and authorised** to perform the work.
- I understand** the work permit.
- I ensure** that the point of intervention is identified.
- I have checked** that the safety conditions are met to start the work.
- I stop** and reassess the risks if conditions change and refer to my supervisor.

Lifting Operations



I follow the lifting plan.

My commitment to **Safety**:

- I establish** barriers and exclusion zones.
- I check** that the lifting equipment has been inspected, is in good condition and fit for purpose.
- I only operate** equipment that I am qualified to use.
- I check** that the load is securely slung and bundled and I control the load in motion.
- I ensure** that a qualified banksman is present for the lifting operation.
- I never position** myself under a suspended load.

Powered Systems



I check the isolation and the absence of energy and fluids before any intervention.

My commitment to **Safety**:

- I have** a permit to work and a powered system isolation certificate.
- I have identified** all energy and fluid sources.
- I respect** the isolation plan.
- I confirm** that energy and fluid sources have been isolated, locked, and tagged.
- I ensure** that there is no energy and fluid supply.
- I ensure** that there is no residual or accumulated energy and fluid.
- I ensure** that the work is completed and check the removal of isolation before starting up.

Confined Spaces



I obtain authorisation before entering a confined space.

My commitment to **Safety**:

- I have** a work permit and a confined space entry certificate.
- I ensure** all energy and fluid sources are isolated.
- I check** and use respiratory protection equipment when required.
- I confirm** a rescue plan is in place.
- I confirm** the atmosphere has been tested prior to intervention and that it is monitored.
- I confirm** there is supervision for entry/exit and for alerting.
- I obtain** authorisation to enter.

Excavation Work



I secure excavation areas.

My commitment to **Safety**:

- I have** a work permit and an excavation certificate.
- I confirm** that the excavation area is clearly marked off.
- I stay alert** to the location of underground structures and networks.
- I position** machinery and extracted material at least one meter away from the excavation area.
- I only enter** an excavation deeper than 1.3m if the access is secured.

Work at Height



I protect myself against a fall when working at height $\geq 1.5\text{m}$.

My commitment to **Safety**:

- I inspect** my harness, lanyard and lifeline before use.
- I secure** tools and materials to prevent dropped objects.
- I wear** a harness and tie off to approved anchor points as per the work permit.
- I use** scaffolding fit for purpose and approved.
- I respect** the minimum safety distance when working near power lines.
- I ensure** the integrity of roofs (storage tanks, buildings, canopies...) before work starts and that appropriate fall protection has been installed for fragile areas.
- I only move** a Mobile Elevating Work Platform (MEWP) in its low position.

Hot Work



I avoid hot work whenever possible.

My commitment to **Safety**:

- ☑ I **have** a hot work permit.
- ☑ I **identify** flammable substances and ignition sources.
- ☑ Before starting any hot work:
 - I **ensure** the absence of flammable substances or their isolation
 - I **obtain** a written authorisation
- ☑ In a hazardous area, I **confirm**:
 - The absence of gas has been tested;
 - The absence of gas will be continuously monitored.

Line of Fire



I keep myself and others out of the line of fire.

My commitment to **Safety**:

- ☑ I **position myself** to avoid:
 - Moving objects
 - Vehicles
 - Pressure releases
 - Dropped objects
- ☑ I **establish** barriers and exclusion zones.
- ☑ I **take action** to secure loose objects.
- ☑ I **respect** barriers and exclusion zones.

Using the Stop Card is taking action for Safety

We have a duty to intervene as soon as a situation seems dangerous to us, and whenever the Golden Rules are not implemented.

Even when in doubt, without fear of being sanctioned, let's use our Stop Card!

By asking questions about the safety of an activity and stopping a job in progress, we can prevent accidents and save lives.

STOP CARD

I step in if a situation
seems **dangerous**
to me!





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6,601,073,322.50 euros
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**THE 12 GOLDEN RULES
PUBLISHED IN JANUARY 2022**

 TOTAL Marketing & Services	COMPANY RULE		CR-MS-HSEQ-201EN
	Version: 2	Effective date: 10/2020	Page: 1 of 30
General Safety Rules			

WARNING

Paragraph 6 "Personal Protective Equipment" of this Branch Company rule is replaced by Group Rule CR-GR-HSE-406 " Personal Protective Equipment ", which is published on 11/03/20 and is effective on 11/09/20.

Paragraph 7 "Driving on site" of this Branch Company rule is replaced by Group Rule CR-GR-HSE-418 "HSE Requirements for Site Traffic ", which is published on 02/10/20 and will be effective on 02/07/21.

Purpose: The purpose of these rules is to lay down the minimum safety requirements to be met on sites belonging to the Marketing & Services branch.

These rules supplement the laws and regulations in force in the country, which apply every instance.

These rules are concise and do not go into all of the subjects in detail. It is therefore the responsibility of each entity or site to add to them in order to completely cover the risks associated with its activity, referring in particular to the specific rules of each "metier" where these exist and are more restrictive.

Scope: This company rule apply to all entities within the Marketing & Services branch that are operated by the Group. It concerns industrial and non-industrial sites with the exception of service stations (sites open to the public) and airport stations (under an airport's responsibility) for which there are specific rules.

For activities outside of Group operations (non operated domain), the Group's representatives encourage the operating entity to apply the content of this company rules.

Revision	Date	Written by	Checked by	Validated by	Approved by
0	01/09/14	J-M. Stoffel	C. Wagner	-	Ph. Legrand
1	11/03/20	A.L CHAPUT			
2	02/10/20	C.CHUCHE			

Function: HSEQ	Owning entity: MS/HSEQ/SOC
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(This English version is translated from the original French reference version)



Marketing & Services

COMPANY RULE

CR-MS-HSEQ-201EN

Version: 2

Effective date: 10/2020

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General Safety Rules

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1 - REFERENCE DOCUMENTS

1.1 - GROUP DOCUMENTS

TOTAL GOLDEN RULES

- Group Golden Rule No.2: Traffic: Machinery/vehicles/cyclists/pedestrians.
- Group Golden Rule No.3: Body mechanics and tools.
- Group Golden Rule No.4: Protective equipment.
- Group Golden Rule No.7: Work on powered systems.
- Group Golden Rule No.10: Work at height.

GROUP DIRECTIVES

- DIR-GR-SEC-007: Safety Guideline 7 - Isolation of energy sources and hazardous substances before work.
- DIR-GR-SEC-010: Safety Guideline 10 - Accident-inducing substances.
- DIR-GR-SEC-012: Safety Guideline 12 - Safety-critical operations.
- DIR-GR-SEC-013: Safety Guideline 13 - Prevention of falls from heights.

GROUP MAJOR REX (SAFETY FEEDBACK)

- REG-GR-SEC-030: Major REX - Drowning in water retention ponds.

OTHER GROUP DOCUMENTS

- DIR-GR-SUR-006 : Voluntary Principles on Security and Human Rights (VPSHR)
- GM-GR-SUR 006B : VPSHR-Guidelines for implementation of Group priority measures
- GM-GR-SEC-006: "Preventing on site accidents" guide.
- GM-GR-SEC-015: "Access to tanker and wagon domes" guide.
- GM-GR-SEC-022: "Forklift Truck Safety" guide.

1.2 - M&S DOCUMENT

- CR MS HSE 110 - HSEQ management general requirements (MAESTRO M&S).
- CR MS HSEQ 202 – Hazardous operations and works
- RM.09.00 – Policy on prevention of alcohol, drugs and addiction.

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2 - DEFINITIONS AND GLOSSARY

HSE: Health, Safety and Environment

Collective Protective Equipment: device, mechanism, apparatus or installation that, by design (arrangement and materials), is capable of effectively protecting personnel against one or more occupational risks and limiting the consequences thereof. This equipment is built into or added to production means or workplace. It is considered to be collective protection if it indistinctly ensures the safety of the assigned personnel (direct risk) and that of other people nearby.

Personal Protective Equipment (PPE): concerns any device or means designed to be worn or held by a person in order to protect them against one or more hazards likely to threaten their health or safety.

Site: means the different types of establishment:

- **Industrial:** lubricant blending plant or other speciality product facility, production centres, hydrocarbon storage, LPG filling centres, bulk and packaged (bottled) LPG storage, speciality refineries, etc.
- **Non-industrial:** administrative (head offices, regional departments, etc.), laboratories, research centres, training centres, etc.

Reminder: *service stations (sites open to the public) and airport stations (under aerodrome responsibility) are not affected by this rule.*

Entity: means the operating divisions or subsidiaries to which the industrial and non-industrial sites belong.

Visitor: person who is not part of the site workforce and does not provide a service on the site: supplier, authority, or Group employee coming from another site.

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3 - BASIC RULES

3.1 - COMPLIANCE WITH LAWS AND REGULATIONS

- All sites must comply with the laws and regulations in force. An action plan must be drawn up in the event of deviation.

3.2 - INTERNAL RULES

- A document¹ summarising the general rules, practices and warnings specific to the site, must be in place.
- These rules must be easily accessible to personnel (e.g. put on a notice board, handed out). They must be updated whenever necessary.

3.3 - TOBACCO

- Smoking must be prohibited on the site, including in private offices.
- Special locations (smoking areas) may be made available to smokers on the site. They must be clearly marked and equipped with an ashtray. It should be noted that the provision of such areas for smokers is not mandatory.
- The use of electronic cigarettes must be governed by the same rules as tobacco.

3.4 - ALCOHOL

- It is prohibited to bring, supply or consume alcoholic drinks on industrial and non-industrial sites.
- It is prohibited for an employee, a contractor or a visitor to enter or stay on a site under the influence of alcohol.
- A blood alcohol level threshold must therefore be set by the entity:
 - this threshold may not be higher than the threshold defined by local regulations for driving a personal car,
 - and under no circumstances may this threshold exceed 0.5 g/L of alcohol in the blood.
- In compliance with the regulations in force and according to the conditions laid down and clearly communicated, site management may check for excessive alcohol consumption:
 - after an accident, in the event of behaviour that would suggest alcohol has been consumed,
 - as a preventive measure, at random.
- The Site Director or Manager may authorise exceptions, particularly for one-off events. In this case:
 - the consumption of alcohol must be limited (typically 0.25 liter of wine per person or the equivalent in alcohol for other drinks),
 - no strong alcohol² may be served,
 - arrangements must be made so that people do not have to get back into their cars immediately after the event (site served by public transport, organisation of group transport).

¹ One or more documents, but fewer is better.

² More than 24% alcohol.

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3.5 - OTHER ACCIDENT-INDUCING SUBSTANCES

- It must be prohibited to enter a site or to work under the influence of drugs or medicines that alter consciousness.
- If an employee has a specific medical prescription, the effects of this treatment must not pose additional risks for the individual (in the performance of his job) or for his working environment (colleagues, operation of installations, etc.).
- In compliance with the regulations in force, and according to the conditions laid down and clearly communicated, site management may check for the use of drugs or medicines following an accident, in the event of obviously altered behaviour or at random.

3.6 - FOOD AND DRINK

- On industrial sites, the consumption of food and drink at workplace must be prohibited in production areas, warehouses and laboratories.
- Food may only be consumed in dedicated dining and relaxation areas (break rooms, dining halls, canteens, furnished rooms) or, failing that, in office areas.
- Food, drink containers and packaging must never be reused for transferring or storing chemicals or other non-food products.
- Refrigerators used for laboratory activities (storage of samples) or any other work equipment (except dedicated for catering) must not be used for storing or cooking food & drinks.
- Refrigerators, ovens and any other equipment reserved for food and drink must be kept clean.

3.7 - HAIR, CLOTHING AND JEWELLERY

- If the job held or the task being performed poses a risk of exposure to a naked flame or snagging in a machine's mechanism (fixed or moving):
 - hair must be kept short or tied up and beards trimmed so that they cannot get caught. They must not come below the shirt collar,
 - clothing must be close-fitting and buttoned (jackets and sleeves in particular),
 - clothing accessories (e.g. ties, scarves) and jewellery must be removed or arranged in such a way that they cannot get trapped in any mechanism. In particular, scarves must not be worn around the neck.

3.8 - PERSONAL HYGIENE

TOILETS

- A sufficient number of toilets and sinks must be available and these must be kept clean and in good working order.
- Separate toilets must be available for men and women (if relevant).
- Signs must remind staff to wash their hands:
 - after using the toilet,
 - before consuming food and drink,
 - for smokers, before smoking,
 - if they come into contact with hazardous products.

CHANGING ROOMS

- Personnel on industrial sites must have changing rooms available to them.
- Showers must be provided for workers if required by the type of activity (mainly industrial sites).

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3.9 - FIREARMS

- It must be prohibited to carry a firearm onto an industrial or non-industrial site, except for persons authorised by the law (e.g. police or the armed forces).
- Armed security guards may provide security services for people and/or property if warranted by safety conditions. Within this context, it must be ensured that these guards:
 - are authorised to use a weapon by site management and in accordance with the regulations in force,
 - are trained and have been carefully selected.
- The following security documents : DIR-GR-SUR-006 : Voluntary Principles on Security and Human Rights (VPSHR) and GM-GR-SUR 006B : VPSHR-Guidelines for implementation of Group priority measures give additional rules and guidance on the subject

3.10 - NAKED FLAMES

- Naked flames are prohibited unless a fire permit is obtained. The use of naked flames must be limited as far as possible. This rule also applies in the offices.
- This rule does not apply to ongoing "naked flame" activities (laboratories, maintenance workshops, kitchens, etc.).

3.11 - MOBILE PHONES AND OTHER ELECTRONIC DEVICES

- The use of mobile telephones and other electronic devices must be regulated on industrial sites. They may be prohibited across the board or only in certain areas. These rules do not apply to equipment specifically designed for use in explosive atmospheres.
- The taking of photographs must be regulated by the site.

3.12 - BASIC SECURITY RULES

- In general, the sites have to be fenced. However, if a site is limited to activities within the building (warehouse) or office (headquarters, regional office ...), the fence is not necessary but the premises must be able to be locked.
- During business hours, public entrances must be guarded and/or a video surveillance system must be installed.
- Visitors must sign in and out whenever they enter or leave the site.
- The personnel of contractors can sign in as visitors or obtain an entry pass.
- The identification documents left by visitors at the checkpoint or at reception must be locked away or guarded at all times.
- On an industrial site, a log of entries and exits by people, or an equivalent system, must be in place to indicate who is on the site at any given time.

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4 - COMMUNICATION, RECEPTION AND OTHER ACTIVITIES

4.1 - HSE COMMUNICATION

- Internal communication on HSE subjects must be organised in various forms (e.g. notice board displays, team meetings, in-house magazines, multimedia communications).
- It must refer to the general safety rules, especially the Golden Rules for the activities performed, and highlight the importance of following them.
- Generally speaking, it must be adapted to the entity's activities.
- Notice boards must be positioned in places where people pass.
- The display must give information about:
 - HSE performance (branch, division, site),
 - feedback and alert forms,
 - HSE news (upcoming meetings, World Day for Safety, safety challenges, etc.).
- The content of the notice board must be kept up to date.
- Posters and notices put up for general promotion of HSE subjects must be renewed regularly.
- In order to encourage and raise awareness amongst industrial site personnel of safety issues and to inform visitors about the site's safety performance, a notice board must be positioned at the entrance to the site.

4.2 - SIGNS

- Signs must be installed on the sites.
- They must be positioned near to the place where the risk or hazard is situated (work areas, traffic, walkways, machine, etc.).
- They must be consistent and easy to understand (dos and don'ts, warnings, hazards, emergency procedures).
- They must take into account regulations in force or, failing that, for traffic, draw on the Highway Code.
- For industrial sites, marking and/or colour coding must be used for pipes in order to differentiate between the main types of fluid.
- The marking or signs used to warn personnel about a physical risk or an obstacle, for instance a column or beam, must be in a contrasting colour.

4.3 - INDUCTION OF NEW EMPLOYEES, CONTRACTORS AND VISITORS

NEW EMPLOYEES

- The induction must include a general HSE induction and a job-specific induction if required.
- Written materials (booklet, file, etc.) must be issued to new employees. The main rules associated with the site's activities must be explained.

CONTRACTORS

- As a minimum, the personnel of contractors working on a site must be made aware of HSE issues when they first come to the site.
- A variety of methods and tools (written materials, induction session, videos, etc.) may be used for receiving the personnel of contractors.

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- Contractors must be provided with appropriate information about the safety rules to be applied and about the potential risks to which they may be exposed as a result of the site's activities. This information must include, at least, the following:
 - risks associated with the site's activity,
 - safety rules that apply on the site,
 - traffic and parking rules that apply on the site,
 - work sector, work area, hazardous areas,
 - authorisations and work permits,
 - PPE rules,
 - cleanliness and tidiness, waste management,
 - evacuation rules (alarms, assembly point, etc.),
 - encouragement to report any anomalies encountered,
 - etc.
- Exemptions may be granted when receiving "risk-free" service providers. These are treated as simple visitors.

TRANSPORT COMPANY

- The personnel of a transport company providing a service limited to delivery or loading may be given less information. This information must include, at least, the following:
 - driving and parking instructions,
 - basic HSE rules (no smoking, PPE, etc.),
 - evacuation rules (alarms, emergency exits, assembly points, etc.),
- This streamlined procedure does not apply if the driver is required to operate the entity's installations alone (typically loading gantry). In this case an appropriate induction must be in place

VISITORS

- Special attention must be paid to visitors as they are unfamiliar with the site and/or the associated risks. To this end, they must be accompanied throughout their visit to the site unless they obtain authorisation and specific information.
- They must wear something distinctive so that they can be easily identified by site personnel (badge, emblem, sticker, coloured hard hat, high-visibility jacket, etc.).
- The rules that apply to visitors entering the enclosure of the industrial or non-industrial site must be clearly explained to them. In particular, these are:
 - significant risks to which they may be exposed,
 - main kinds of prohibited behaviour,
 - the site traffic and safety rules,
 - wearing of PPE³,
 - evacuation rules (alarms, emergency exits, assembly points, etc.),
 - etc.
- The information must be provided to visitors in the language of the country where the site is based, in writing or verbally. An English version and a French version if relevant must be available for foreign visitors.

4.4 - SPORTS AND RECREATIONAL ACTIVITIES

³ See section 3.9.2 relating to personal protective equipment for visitors.

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- The entity must check that any individual or team sports or recreational activities offered during meetings, seminars, training courses, etc. do not pose any great risk for the health or physical, psychological or moral integrity of the participants.
- If any of the activities proposed does not satisfy all of the necessary guarantees, it must not be allowed.
- The activities offered to personnel must be optional. Personnel must not, under any circumstances, be forced to participate.
- Activities requiring intense physical effort, of which the practice is dangerous or recognised as potentially leading to an accident, must be strictly prohibited. In particular, these include the following activities:
 - rock climbing, mountaineering, off-piste skiing,
 - motor sport taking the form of a race and/or practised at excessive speed and/or on hazardous terrain (motor racing, motor biking, quad biking),
 - gliding, microlighting, flying in single-engine aircraft, aerobatics,
 - paragliding, parachuting, hang-gliding, base jumping, bungee jumping,
 - scuba diving
 - rafting, canyoning, jet skiing, caving,
 - rodeo, bullfighting, bull running.
 - hunting, fire arm shooting
- The materials and safety equipment used must be in good condition and designed for use in the proposed activities.
- For nautical activities, the number of life jackets must correspond to the number of participants.
- The participants must be supervised by qualified, experienced personnel. The number of supervisors must be suitable for the number of participants.
- Before beginning an activity, the supervisors must remind the participants of the safety instructions.
- Should a weather-related or other hazardous situation arise that may get worse, the activity must be stopped immediately.

4.5 - TRANSPORT OF PEOPLE BY ROAD⁴

- The transport of personnel by bus, minibus or limousine chartered by the entities or sites is covered in this chapter. This involves, for example, transport organised⁵ to:
 - travel within a site,
 - provide a connection between sites or between accommodation and a site,
 - provide shuttles between airports, stations, hotels, restaurants, seminars, training venues, shows, etc.
- The entity or the site must check with the transport company that the driver has a valid driving licence for transporting passengers.
- During transport, the driver must abide by the rules of the road; otherwise, his behaviour must be reported to his employer, who must provide a replacement.
- The only people the driver may allow into his vehicle are those provided for by the organisation.
- The number of people who board the vehicle must not exceed the maximum authorised capacity of the vehicle.
- All of the seats must be fitted with seatbelts.

⁴ Transport by air (helicopter, aeroplane) is dealt with in the company rules on air transport.

⁵ These points should be dealt with when the contract is awarded or when the service provision contract is signed.

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- Throughout the journey, passengers must remain seated and their seatbelts must be kept fastened.

5 - LAYOUT AND RUNNING OF PREMISES

5.1 - GENERAL MAINTENANCE

- A maintenance programme for buildings and premises must be implemented in order to guarantee the overall good condition of the sites.
- Rights of way on the site must be kept in good condition.

5.2 - CLEANLINESS AND TIDINESS

- The premises must be cleaned regularly.
- A cleanliness and tidiness programme must be included in the general inspection programme in which all personnel must be involved.

5.3 - EVACUATION AND EMERGENCY EXITS

- Appropriate signs must indicate the route to the nearest building exit. The signs must be fluorescent or illuminated so that they can be seen in the dark.
- The width of exits and the spaces leading to them must comply with local regulations in force. Under no circumstances may they be narrower than 0.80 metres.
- The number and location of the exits must comply with local regulations in force.
- Doors used for evacuation must be easily manoeuvrable from the inside without a key.
- No objects, goods or equipment must hinder the movement of people or reduce the width of spaces.
- Exit signage and clearances must be regularly checked in formal inspections.
- One or more assembly points must be provided.
- Evacuation drills must be regularly organised in order to measure the suitability and effectiveness of equipment and procedures.

5.4 - FIRE PROTECTION

- A specific company rule will lay down the fire protection rules for industrial sites. The following rules apply to non-industrial sites (offices, research facilities, etc.).
- Emergency and firefighting procedures must be publicly posted.
- Fire protection must consist of fire extinguishers as a minimum.
- The fire equipment used must comply with the regulations and official standards, be in adequacy with the risks and be in good working condition.
- Some personnel must be trained in the use of fire protection equipment.
- Each piece of fire protection equipment is clearly identified with appropriate information.
- Fire doors must be regularly checked to ensure their ability to function and their effectiveness.
- Firefighting equipment that requires manual action (extinguisher, hose, fire alarm push button) must be kept accessible.
- A fire detection system must be installed in office buildings in accordance with regulations in force, as a minimum:



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Type of building or structure		Detection	Firefighting equipment	Organisation
Offices	Head offices, main department offices	Yes, at least in corridors (fire or smoke detection)	Water and CO2 extinguishers (1 x 6 kg water or 2x5 kg CO2) for the first 100 m ² of offices and the same for the next 200 m ² At least one extinguisher per floor. No more than 25 m (75 ft) from an extinguisher	Personnel trained in evacuation
	Other offices, Non-critical offices	Optional		
Technical rooms	IT room: server room	Yes, smoke	CO2 extinguisher ⁶	
	Electrical room	Optional	CO2 extinguisher	
Research laboratories	Use of solvents, handling of flammable liquids	Yes	Powder extinguishers (one per laboratory) ⁷ At least one 50 kg powder extinguisher in the building if more than 1,000 L of solvent is stored	Personnel trained in evacuation
	Other laboratories	Yes	Powder extinguishers (one per laboratory) Possible CO2 extinguisher for protecting precious laboratory equipment	Personnel working in the laboratory are trained in handling extinguishers

⁶ Automatic extinguishing (inert gas) may be anticipated for highly critical IT but detection takes priority.

⁷ A CO2 extinguisher can be added if there is a specific electrical hazard. This applies for electronic research equipment or if major electrical panels or units are present

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6 - PERSONAL PROTECTIVE EQUIPMENT

Paragraph 6 "Personal Protective Equipment" of this Branch Company rule is replaced by Group Rule CR-GR-HSE-406 "Personal Protective Equipment", which is published on 11/03/20 and will be effective on 11/09/20.

6.1 - DEFINITION OF PERSONAL PROTECTIVE EQUIPEMENT

- Collective protective equipment must always be preferable to personal protection. It protects personnel or alleviates the consequences by way of separation, obstacles or attenuation of a nuisance (noise, vibration, pollution, etc.).
- The need for personal protective equipment must be defined following identification of the risks at workplace and in the geographical areas of the site.
- Insofar as possible, personnel must be involved in the selection of personal protective equipment.
- The protective equipment provided must comply with the standards and regulations in force.
- Before selecting PPE, its characteristics and properties must be checked (product data sheet) to ensure that it is perfectly suited to the risks it is expected to cover.

6.2 - USE OF PERSONAL PROTECTIVE EQUIPMENT

GENERAL RULES

- Appropriate signs must be installed in the necessary places to remind personnel about the requirement to wear suitable safety equipment if the rules differ.
- On an industrial site, a PPE-free route may be organised where the risks identified are far enough away and the ground is clearly marked⁸. It may involve, for example, pedestrian walkways to offices and the canteen.
- The personnel in question must be given all of the instructions and training required to correctly use the protective equipment entrusted to them. In particular, these include:
 - the risks targeted by the PPE,
 - instructions for use and basic maintenance,
 - hygiene rules.
 - maximum recommended duration of use

INDUSTRIAL SITE PERSONNEL

- The site must provide PPE that has to be worn by company staff.
- All personnel must wear the protective equipment identified.
- Supervisors must ensure that the protective equipment identified is worn correctly by personnel and must follow this rule themselves.
- A policy of sanctions for not wearing PPE must be put in place and explained to personnel.
- A PPE maintenance or replacement policy must be put in place.

NON-INDUSTRIAL SITE PERSONNEL

- The risk analysis may demonstrate, for a certain category of personnel, that the wearing of personal protection is necessary, even mandatory. This may affect, for example, maintenance personnel or personnel who work in a laboratory or a research centre.

⁸ The use of a green line is best practice for identifying a PPE-free route.

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CONTRACTOR PERSONNEL

- The site must notify the contractor of the PPE rules applicable on the site through various documents (safety rules for contractors, prevention plan).
- The personal protective equipment must be at least equivalent to that used by company staff for performing the same task.
- For some tasks or jobs, the risk analysis may require additional PPE or PPE with specific characteristics to be worn.
- In most cases⁹, the contractor must provide its own personnel with the appropriate PPE.

VISITORS

- Each site defines the personal protective equipment that visitors must wear when they enter its enclosure.
- These rules may be relaxed (limited to shoes, gloves and high-visibility vest, etc.) unless there are hazards associated with the general environment (hard hat, goggles, earplugs, overalls, etc.).
- Visitors must be notified of the rules for wearing the personal protective equipment that concerns them.
- Insofar as possible, the site must provide visitors with the personal protective equipment defined. Otherwise, visitors must bring their own equipment if they wish to access the site.

6.3 - BASIC REQUIREMENTS

BODY PROTECTION

Personnel concerned

- | | | |
|---|---|---|
| <input checked="" type="checkbox"/> industrial site | <input checked="" type="checkbox"/> laboratory | <input type="checkbox"/> training centre |
| <input type="checkbox"/> administrative site | <input checked="" type="checkbox"/> research centre | <input checked="" type="checkbox"/> drivers/delivery agents |

- If the activity

performed calls for protection against heat or flame or against hazardous products (including fuels), work clothing must be long-sleeved (one piece or in two parts).

- A lab coat may be worn in the laboratories instead of protective clothing.
- When handling flammable liquids or LPG, work clothing must be antistatic, non-flammable and temperature-resistant¹⁰.

HEAD PROTECTION

Personnel concerned

- | | | | |
|---|--|---|--|
| <input checked="" type="checkbox"/> industrial site | <input type="checkbox"/> laboratory | <input type="checkbox"/> training centre | <input checked="" type="checkbox"/> worksite |
| <input type="checkbox"/> administrative site | <input type="checkbox"/> research centre | <input checked="" type="checkbox"/> drivers/delivery agents | |

- Hard hats must be worn wherever

there is a risk of material falling from an upper floor, primarily on worksites. Hard hats must prevent penetration and absorb impact.

- Hard hats must withstand a falling object that releases 50 Joules (1 kg x 5 m) of energy.
- They must meet an internationally recognised standard.
- The life expectancy of the hard hat must be taken into account. It varies depending on the material it is made of and is marked on the hard hat itself.
- Hard hats must be replaced after a significant impact.

⁹ This is particularly the case for harnesses at dome loading stations.

¹⁰ Cotton satisfies these 3 requirements as do certain special synthetic fabrics.

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- If a head can be hit on hard objects that may result in lacerations or other superficial injuries or knock employees unconscious, protection must be worn:
 - either a hard hat,
 - or a bump cap¹¹.
- a bump cap is not designed to protect against the effects of falling objects and is not a replacement for a hard hat.

EYE PROTECTION

Personnel concerned

- | | | | |
|---|---|---|--|
| <input checked="" type="checkbox"/> industrial site | <input checked="" type="checkbox"/> laboratory | <input type="checkbox"/> training centre | <input checked="" type="checkbox"/> worksite |
| <input type="checkbox"/> administrative site | <input checked="" type="checkbox"/> research centre | <input checked="" type="checkbox"/> drivers/delivery agents | |

- Eye and face protection must be

used to protect against mechanical (splinters, particles, impact, etc.), chemical (splashes of liquid particles, dust, etc.), thermal (radiant heat, projections of high- and low-temperature products, fire, etc.) and radiation (infrared, welding, etc.) hazards.

- Eye protection must be worn in the following sectors or activities:
 - production sites, filling centre (apart from offices),
 - laboratory/research (apart from offices),
 - maintenance workshops,
 - warehouses/tank storage,
 - loading and unloading of products (during operations),
 - technical work on tanks (during operations),
 - operation of forklift trucks without windscreen,
 - handling of hazardous substances,
 - use of grinding machines, drills, hacksaws, pneumatic drills, pressure washers, pneumatic equipment, and any other operation involving a risk of projections, sandblasting,
 - welding work, regardless of the technique used.
- Safety goggles when required must protect against mechanical hazards (impact energy of around 1 joule).
- If there is a significant risk of projection and lateral splashes, the goggles must completely cover the eyes and the part of the face around the eyes. This type of safety goggles must therefore have special side protection or be wraparound.
- It is not enough to just wear prescription glasses. In this case, over-glasses goggles must be worn.
- Depending on the nature of the risk, the goggles or over-glasses goggles must be replaced by a full visor fitted to the hard hat (face screen).

HAND PROTECTION

Personnel concerned

- | | | | |
|---|---|---|--|
| <input checked="" type="checkbox"/> industrial site | <input checked="" type="checkbox"/> laboratory | <input type="checkbox"/> training centre | <input checked="" type="checkbox"/> worksite |
| <input type="checkbox"/> administrative site | <input checked="" type="checkbox"/> research centre | <input checked="" type="checkbox"/> drivers/delivery agents | |

- Hand protection must be worn in the

following sectors or activities:

- use of sharp tools,
- handling of abrasive, sharp, spiky (pallets in particular) or piercing objects,

¹¹ In general, these are designed for indoor use (warehouse, packaging).

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- exposure to hazardous products (including fuels, corrosive substances, etc.),
- handling of hot or cold products (including bitumen and LPG),
- work that many involve impact (handling of gas cylinders).
- Gloves must be carefully selected taking into account the risks identified and user comfort.
- Gloves must be worn only for the risks that they cover.

FOOT PROTECTION

Personnel concerned

- | | | | |
|---|---|---|--|
| <input checked="" type="checkbox"/> industrial site | <input checked="" type="checkbox"/> laboratory | <input type="checkbox"/> training centre | <input checked="" type="checkbox"/> worksite |
| <input type="checkbox"/> administrative site | <input checked="" type="checkbox"/> research centre | <input checked="" type="checkbox"/> drivers/delivery agents | |

- Safety shoes must be worn in the

following sectors or activities:

- industrial sites (outside of offices),
- certain activities: refuelling operators, delivery drivers, maintenance engineers, after-sales technicians, etc.
- laboratories (outside of offices).
- As a minimum, safety shoes must protect the toes against crushing and be non-slip. Additional protection must be sought for covering the risks specific to certain activities:
 - antimagnetic (aviation),
 - heat-resistant sole (bitumen),
 - anti-perforation sole for worksite activities,
 - controlled resistivity (antistatic) for personnel handling LPG or flammable liquids (flash point \leq 60 °C),
 - high-top shoes for personnel who have to work on uneven ground or get into/out of vehicles frequently.
 - crampons or other anti slip device for personnel making deliveries during winter or in mountain areas where snow or ice may be found

RESPIRATORY PROTECTION

Personnel concerned

- | | | |
|---|---|---|
| <input checked="" type="checkbox"/> industrial site | <input checked="" type="checkbox"/> laboratory | <input type="checkbox"/> training centre |
| <input type="checkbox"/> administrative site | <input checked="" type="checkbox"/> research centre | <input checked="" type="checkbox"/> drivers/delivery agents |

- Respiratory protection must be selected by taking the exposure (fumes, gases, smoke, aerosols, hazardous dust) and the characteristics of the products to which a person is exposed into account.
- There are two categories of protection, filter masks (filtration of ambient air) and self-contained breathing apparatus fitted with cylinders or an independent air source.
- Filter or filter cartridge protection is only authorised if the level of exposure to the hazard is known or can be estimated. It must be replaced when it becomes saturated and/or after its expiry date.
- Self-contained breathing apparatus must be used for work (fires, etc.) or in unstable or oxygen-poor atmospheres or when no filter masks are available.
- There are specific rules for entering confined atmospheres.
- For airline respirators, the air source must be a dedicated compressor/cylinder rack but never a site air instrument/service network.

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HEARING PROTECTION

Personnel concerned

- | | | |
|---|--|--|
| <input checked="" type="checkbox"/> industrial site | <input type="checkbox"/> laboratory | <input type="checkbox"/> training centre |
| <input type="checkbox"/> administrative site | <input type="checkbox"/> research centre | <input type="checkbox"/> drivers/delivery agents |

- The PPE for hearing protection

mainly consists of earplugs, ear defenders, comprising earmuffs and moulded plugs.

- Before choosing the type of personal hearing protection, preliminary analyses must be conducted, in particular by measuring noise at workplace, taking into account the work activity and the constraints associated with the user.
- It must be chosen based on use (permanent or intermittent), hygiene conditions, comfort and protection level.
- If the level of exposure exceeds 80 dB(A), personal protective equipment against the harmful effects of noise must be made available to personnel. Above 85 dB(A), this equipment must be worn.
- The occasional passing-through of a noisy area where noise levels exceed 85 dB(A) is possible without hearing protection. However, above 100 dB(A), protection is mandatory even for very short periods.

SPECIFIC PPE

- **Mobile detectors** – They must:
 - be covered by a maintenance and regular calibration plan,
 - be tested prior to each use (typically using an "autotest" function upon commissioning).
- **"High-visibility" vests and clothing:**
 - on industrial sites, personnel must wear a "high-visibility" vest or other clothing with a similar system if the risk analysis so requires or the circumstances warrant its use (rain, fog, low lighting, poor visibility, night, etc.).
 - this type of clothing visually indicates the presence of personnel and ensures that they are seen to prevent dangerous situations and accidents.

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7 - DRIVING ON SITE

Paragraph 7 "Driving on site" of this Company rule is replaced by Group Rule CR-GR-HSE-418 "HSE Requirements for Site Traffic ", which was published (02/10/20) and will be effective on 02/07/21.

7.1 - TRAFFIC FLOW MANAGEMENT PLAN

- On industrial sites, a traffic flow diagram must be produced and regularly updated in order to manage traffic and enable all types of vehicle and pedestrians to coexist.
- These plans should minimize as much as possible points of contact between pedestrians, private vehicles, trucks, forklifts ...
- Appropriate ground marking and signs must indicate this traffic flow system.
- Mirrors or other equivalent devices must be set up to warn pedestrians or drivers of vehicles when crossing with little visibility.
- A simplified version of this plan must be communicated to personnel, outside workers and, if necessary, visitors.

7.2 - PEDESTRIANS

- Pedestrian walkways must be marked on the ground, maintained (paint, level of the ground,;) and must be kept clear at all times. Planned inspections must cover this point in particular.
- Walkways must be lit if required.
- Use pedestrian crossings must be compulsory.

7.3 - CARS AND TRUCKS

- For all travel on the sites, the occupants of the vehicles must fasten their seatbelts.
- Drivers must park their vehicles so that they can be driven forwards out of their parking spaces.
- The site must set a speed limit. It must not exceed 25 km/h.

7.4 - FORKLIFT TRUCKS

- For more information, please refer to the "Prevention of forklift truck accidents" best practice guide (written by SEI, reference GM-GR-SEC-022 - December 2010).

BASIC PRINCIPLES

- For use in explosive atmospheres, the forklift truck must have protection that corresponds to the risk area in which it is used.
- Forklift trucks must be kept in good working order. A regular inspection must be organised.
- No modifications should be made to the forklift truck without authorisation from the manufacturer. In particular, the value of the counterweight must not be increased with a view to lifting heavier loads.
- Forklift trucks must be fitted with a driver retention system in case they tip over. This system may be:
 - a seatbelt,
 - an enclosed cab (the doors must be kept shut while driving),
 - other retention systems (sliding gantry, etc.).

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DRIVER

- Operation of forklift trucks must be restricted to individuals formally authorised by its management who have been given relevant theory and practical training.
- Forklift truck drivers must wear the PPE necessary for the work to be done and for the areas of activity.
- Forklift truck drivers and operators working in or in the immediate vicinity of areas used by forklift trucks must wear clothing incorporating high-visibility parts.

DRIVING

- Forklift trucks with combustion engines (petrol, diesel, LPG) must not be used inside premises without adequate volume or ventilation to eliminate the risks posed by the exhaust gases.
- If the forklift truck is no longer being used, the ignition key must be removed and stored so that unauthorised people cannot drive it.
- Before starting the forklift truck, the driver must close the barrier, fasten the seatbelt or put in place the various retention devices if the forklift truck has them.
- The driver must keep his feet and every part of his body inside the forklift cab.
- The speed of forklift trucks must be limited to 15 km/h. Depending on the risk analysis, slower speeds must be defined taking into account the environment (presence of pedestrians) and the type of truck used.
- If the equipment permits, a mechanical or electronic device must restrict the speed of the forklift truck to the speed limit set.
- It must only be possible to move the forklift truck with the forks lowered (with the exception of the final movements for placing/picking up the load at height).

PARKING

- The driver must not park the forklift truck on a slope or anywhere it may hinder other vehicles or pedestrians.
- The driver must, when the forklift truck is parked, rest the forks flat on the ground or, if this is not possible, raise them more than 2 metres from the ground.

PLACEMENT AND REMOVAL OF LOADS

- The driver must not attempt to lift a load that exceeds the forklift truck's capacity.
- The driver must not lift an unbalanced or unstable load or lift a load with only one fork.
- The simultaneous use of 2 forklift trucks for handling heavy or bulky loads is hazardous and must be prohibited.
- The lifting of people using a forklift truck must be prohibited unless special arrangements are made (cage). It should be noted that this practice is prohibited in several countries.
- To prevent shearing, the slings must not come into direct contact with the forks.

REFUELLING/RECHARGING

- The places reserved for the refuelling of forklift trucks with combustion engines or for recharging the batteries of electric forklift trucks must provide all of the safety guarantees and comply with local regulations.
- Furthermore, the following principles must be followed:
 - when refuelling the tank of a forklift truck, the engine must be off and the operation may only be performed in a dedicated place,
 - in the case of LPG cylinders, the engine of the forklift truck must run until the gas in the feed pipes has been consumed,

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- the valve on the gas cylinder must be closed before the cylinder is removed.
- The place for recharging the batteries of an electric forklift truck must be at least 3 metres from combustible materials. It must also be ventilated.

7.5 - LOADING / UNLOADING DOCKS

INFRASTRUCTURES

- The docks must be kept in good condition.
- Pedestrian walkways must be clearly identified.
- Adequate lighting must be provided.

DOCK PROTECTION STOPS

- Dock stops (or bumpers) must be installed to absorb the impact of trucks when they reverse into the dock.
- The bumpers must leave an area measuring at least 30 cm between the rear of the truck and the dock to prevent people from getting crushed.

TRESTLES OR PROPS

- Trestles or a second prop must be placed under the unhitched trailer at the tractor attachment point. They prevent the trailer from tipping over in the event of weight imbalance or failure of the trailer's own prop.

LOADING RAMPS/DOCK PLATES

- The horizontal and vertical distance between the dock and the trailer is typically covered by a dock plate or leveller.
- The dock plates must be metal. The use of wood must be prohibited as it is breakable.

TRUCK DEPARTURE

- A truck must not be able to leave before loading/unloading is complete.
- An appropriate procedure and organisation must therefore be put in place. This may be supplemented by the introduction of a warning or retention system.

SAFETY WEDGING

- Trucks must be held in place when they are in the dock to prevent unwanted movement. Several systems can be used:
 - wheel chocks (or shoes) put in place manually (possibly with wedge detection¹²),
 - automatic wedging that immobilises the vehicle in the dock on both wheels of an axle,
 - truck locking systems attached to the chassis and more specifically to the rear underride guard.

¹² May be connected to an alarm, a red light or the dock leveller if there is one.

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8 - HAZARDOUS SUBSTANCES AND UTILITIES

8.1 - STORAGE AND HANDLING OF HAZARDOUS SUBSTANCES

- The site must have:
 - up-to-date safety data sheets (SDSs) for the products handled,
 - a list of the substances handled¹³ with their classification.
- The products must be stored in the recommended conditions.

8.2 - LABORATORY CHEMICALS

- In addition to the regulations in force, the use of chemicals in laboratories must obey the following rules:
 - only store the minimum quantity of products compatible with the activity and the surface area of the laboratory. The rest must be stored in special cupboards or in dedicated stores,
 - do not store hazardous products at height in heavy or fragile containers,
 - check the shelf life in order to prevent hazardous deterioration of the product,
 - ensure that all of the products, including those produced by splitting, or waste are labelled,
 - install a safety shower and an eye shower that are easily accessible and ensure that this equipment is in working order.

8.3 - GAS CYLINDERS

- Cylinders must be stored in a suitable place, preferably outside, away from sunlight and away from heat sources.
- Cylinders stored vertically that may fall over must be placed in storage racks or secured with chains.
- Different gases must be separated.
- The valves on empty cylinders must be closed.
- Adequate signs must be put up.
- It is prohibited to use the window of the protective cap to attach a hook or other system for the purposes of handling.
- The cylinders must not be thrown onto or rolled along the ground.
- The place where they are used must be well ventilated.

8.4 - NITROGEN AND OTHER GASES

- A nitrogen network must never back up an instrument air network.
- Nitrogen or other gas inlets must be marked to avoid confusion.
- The use of compressed air as an air gun without specialist equipment must be prohibited.

¹³ Possibly excluding laboratory products present in small quantities.

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8.5 - ELECTRICITY

- These rules concern installations for which the voltage exceeds 50 Volts (alternating current) or 120 Volts (direct current).
- Access to bare live parts must be prevented:
 - either by locking the cabinets or boxes,
 - or by locking the plant room housing them.
- Access to cabinets, boxes or rooms housing bare live parts must be restricted to authorised personnel who have received relevant electrical hazard training for the voltage level and for the work to be performed (accreditation).
- Electrical work must be covered by company rule CR MS HSEQ 202 – High-risk operations and work.

8.6 - ASBESTOS

- The purchase or installation of equipment or materials containing asbestos in any form must be prohibited.
- If the construction date of the buildings and installations does not rule out the presence of asbestos, the site must carry out an analysis to identify any asbestos-containing materials.
- If the presence of asbestos-containing materials is detected:
 - crumbly asbestos must be replaced as quickly as possible,
 - every opportunity must be seized and all work carried out to replace the asbestos with a less harmful material,
 - asbestos material condition must be checked on a regular basis to detect degradation that may release asbestos dust
 - a deadline for asbestos removal must be set.

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9 - MACHINES AND EQUIPMENT

9.1 - HAND TOOLS

- Hand tools must only be used for the use for which they were designed.
- Faulty hand tools must be decommissioned or safely repaired.
- The tools must be transported in chests, tool bags or suitable trolleys. They must not be put in pockets.
- The user must wear suitable PPE.
- The cutters used to cut paper, cardboard, plastic film, etc. must be adapted to the task and intrinsically safe (retractable blade, ..). In the absence of specific tools cutting cut resistant gloves must be worn.

9.2 - MOTORISED HAND-HELD TOOLS

The motor may be electric, pneumatic, hydraulic or a heat engine.

- The power cable or motor fluid hose must be in good condition.
- Maintenance must only be carried out with the power disconnected.
- Filling with fuel must only be done with the motor off (heat engine).
- The user must wear suitable PPE.
- If there is a risk of uncontrolled operation, a device (strike or equivalent) must enable the tool to be shut down or secured in the event of loss of user control. This device is mandatory for:
 - grinding machines, angle grinders, rotating brushes,
 - drills, punches,
 - circular saws and jig saws,
 - chainsaws, hedge cutters.

9.3 - TOOL MACHINES

CONTROLS

- The control panel must be kept in good condition, particularly with regard to indicator lights, control or on/off buttons and emergency stops.
- Any text and the identification of button positions on the control panel must be clear, legible and easy for the operator to understand.
- An emergency stop button must be provided. It must be easily identifiable (colour) and easy to use (push button, control rod, cable).
- Resetting the emergency stop must not result in the machine restarting.
- The following machines must have an emergency stop (list not exhaustive):
 - mixers, extruders,
 - packaging machines, filling carousel,
 - lifting machines,
 - conveyor belts,
 - waste compacter,
 - wrapping machine,
 - etc.

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PROTECTION

- Protection must be put in place to prevent contact with the moving and/or dangerous parts of machines, for example:
 - motion transmission elements: gears, shafts, wheels, pulleys, belts, in particular points likely to trap part of the body or an item of clothing, etc.,
 - working parts (press, cutter, etc.) or parts affected by projection of shavings, sparks, hot metal, etc.
- It must not be possible to remove the protection or make it inoperative, except by automatically shutting the machine down.
- If the protection is not compatible with the task being performed, the operator or his limbs must be moved away (two-handed control for example).

9.4 - LIFTING APPARATUS

- Maintenance or construction work involving the use of lifting machinery is covered by company rule CR MS HSEQ 202 – High-risk operations and work.
- Lifting apparatus must be covered by a maintenance and regular inspection plan.
- The equipment's maximum load and that of its accessories (e.g. slings, tongs, etc.) must be mentioned and respected.
- Slinging:
 - it is prohibited to attach the ends of the slings or cables used for docking hoists and winches (or for holding a part in place) to beams, pylons, pipes and existing superstructures without the approval of the operator or the competent authorities,
 - the condition of the slings must be inspected visually before use. The slings must be withdrawn from service if any visible defect is found.

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10 - FALL RISK

Work at height is covered by company rule CR MS HSEQ 202 – High-risk operations and work.

10.1 - GENERAL INFORMATION AND PROTECTION PRIORITISATION

- The fall risk is defined if there is:
 - a difference in height of more than 2 m (or 6 ft) with a gradient of at least 45°,
 - a risk of falling more than 1 m for standard passageways.
- In general, the fall risk must be prevented by the installation of permanent collective protection such as low walls or railings with the following characteristics:
 - minimum height of between 1 m and 1.10 m from the floor,
 - if there is no solid or grid material preventing the fall of objects, there must be at least one rail or middle rail approximately every 50 cm.
- This device must be supplemented by a floor-level skirting board with a height of 10 to 15 cm when falling objects need to be prevented.
- If the installation of permanent systems proves unfeasible (in particular given the temporary nature of the operation), temporary collective protection should be used as a priority, for example scaffolding, temporary railings, safety nets, lifts, etc.
- Lastly, if the installation of temporary equipment is not possible, systems to prevent falls from height, for example harnesses, should be used.
- The rules for using ladders, scaffolding, cradles or other similar devices must be defined.

10.2 - LOAD TRANSFERS

- Openings can be made in the walls or railings to transfer loads.
- To prevent people falls, these openings must be secured by:
 - gates that close automatically,
 - "lock" type barriers.

10.3 - STAIRS

- Staircases with more than 3 steps must have a hand rail.
- Personnel who go up and down stairs must hold on to this hand rail.
- Staircases that pose a risk of falling sideways must have a railing on the side(s) in question in addition to the hand rail.
- Access to stairs must not encroach on or open directly into lanes where handling machinery or vehicles operate. If this configuration is unavoidable, a barrier must be positioned at the opening to the staircase to prevent people falling from the stairs onto the traffic lane.

10.4 - FIXED LADDERS/SAFETY LADDERS

- Upper access to fixed ladders must be protected by a barrier or a chain.
- Fixed ladders must have a safety cage above 3 metres.
- A landing must be provided every 6 metres unless the total height between the arrival level and the departure level is less than 10 metres, in which case landings are not mandatory.

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11 - OTHER RISKS

11.1 - DROWNING IN TANKS AND PITS

- Access to storm-water tanks, settling tanks, firefighting water tanks, extinguishing buffer tanks and water treatment plant ponds that pose a risk of drowning (depth > 1.5 m) must be restricted.
- The appropriate prevention means based on the preliminary analysis of the risks and the prevention means listed below must be implemented:

PONDS

- In all cases:
 - have a sufficient number of rescue devices such as life buoys evenly distributed around the edge, life jackets,
 - display information (boards) indicating the risk of drowning.
- If the layout and location of the tanks enable erection of a fence:
 - prevent access by putting up a fence with a padlocked gate,
 - perform a risk analysis that will determine if the installation of a net or equivalent device that will enable somebody to regain their footing on the side by their own means is necessary or not. The parameters to be taken into account are the depth, the slope and the material of the side (if so, get it installed).
- If the layout and location of the tanks do not enable erection of a fence:
 - unless justified by a risk analysis, install a net or other device around the tank that will enable somebody to regain their footing on the side by their own means. The material the device is made of will be resistant over time and will be compatible with the ambient environment.

PITS WITH VERTICAL WALLS

- For open pits:
 - railings must prevent accidental falls. This must be made from a material compatible with ambient corrosiveness or be protected by a suitable coating (paint, galvanisations, etc.),
 - one or more ladders, depending on the pit dimensions, must be installed on the walls to enable evacuation. The ladder material must be compatible with the aggressiveness of the environment. Their access must be protected by a locked gate or a padlocked chain,
 - depending on the size of the pit, one or more buoys must be installed on the railings,
 - an information system (boards) must also be installed to warn about the risk of drowning.
- For covered or semi-covered pits:
 - these are pits with some coverage (grating, checker plate, etc.) for which there is a risk of falling or drowning. The risk of corrosion is made worse by the presence of water,
 - the cover plating (grating, checker plate, etc.) and its supporting frame must be made from a material compatible with the chemical nature of the fumes and the ambient corrosiveness. There must be an annual inspection plan. Access to the pit must be restricted as far as possible,
 - special precautions (marking) must be taken if the cover of the pit is disassembled for work.

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11.2 - SLIPS AND TRIPS

- Prevention is mostly down to best practice. The rules mentioned are therefore far from exhaustive.
- A storage, tidiness and cleanliness policy must be put in place and scheduled inspections must check this point.
- Haste and running on a site must be avoided.
- Using a telephone, typing on a keypad (SMS, Smartphone or tablet) or reading should not be done while walking.
- Slippery floors (e.g. when cleaning is in progress) must be indicated.
- Spillages must be marked if they cannot be absorbed and cleaned up immediately.
- Moving around with your arms full must be avoided if this reduces visibility.
- Sites exposed to snow and ice must have salt/sand reserves accessible to all and an organisation for:
 - tackling snow hazards,
 - clearing pedestrian walkways of snow within a reasonable time.

11.3 - ROOFS

- It is prohibited to climb onto the roofs of buildings (except for flat roofs with fall protection installed) without special authorisation.
- Access to the roof of storage tanks facilities must be regulated.
- The presence of people on roofs and roofs must be prohibited when weather conditions are dangerous (storm, storm, snow, ice ...)

11.4 - MANUAL HANDLING

- Prevention is mostly down to best practice. The rules mentioned are therefore far from exhaustive.
- Thought must be given to limiting manual handling.
- A limit for loads that can be handled¹⁴ by a single person (adult male) without mechanical assistance must satisfy the following criteria:

Unit weight of load	Maximum load per day (based on carrying for a few metres)	Other requirements
> 100 kg	Prohibited, except in exceptional circumstances	
50 – 100 kg	100 operations/day max.	Training in manual handling even if the operation is exceptional, specific medical follow-up
30 – 50 kg	200 operations/day max.	Training in manual handling even if the operation is exceptional
10 – 30 kg	Job study if > 5 tonnes/day	Training in handling if the manual handling is frequent in the job (> 100 operations/day)

¹⁴ Handling means lifting, carrying and setting down.

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11.5 - COLLAPSES AND DROPPED OBJECTS

11.5.1 - General principles

- The storage rules must be defined by the entity in order to take into account the following (not exhaustive):
 - nature of the products: flammable, toxic, corrosive, sensitive to weather ...
 - types of packaging: drums, drums, cans, boxes ...
 - full and empty containers
 - storage place: inside, outside
- Pallets can be stored either non stacked or stacked over a range of heights. In this case, the load must be on a pallet and must meet the following criteria:
 - storage on whole pallet, no stacking on incomplete pallets,
 - pallet in good condition and suitable for the load in question,
 - stability of loads,
 - minimum distance of one metre between the top point of the last pallet stored and the base of the roof, the ceiling, the heating system, the lighting, etc.
- In case of incomplete pallet, the load must be stabilized by being centered.
- Placement incompatible products on the same pallet, must be forbidden

11.5.2 - Palets

- Only pallets in accordance with the purpose for which they were designed shall be used.
- Pallets type "lost package" should not be reused.
- Any broken pallet must be replaced as soon finding the defect.
- Loads must be centered and balanced and does not overhang the pallet.

11.5.3 - Strapping and filming (excluding transport)

- If the load on a pallet is unstable, it must be filmed or properly strapped before stacking in elevation.

11.5.4 - Storage of pallets on the ground

STACKING LIMITS

- Use perimeter pallets to prevent any risk of falls.
- Limit stacked packaging heights based on the following criteria:
 - empty 200 litres barrels: 4 levels max. (1+3),
 - full 200 litres barrels: 3 levels max. (1+2),
 - empty 1 000 litres IBCs: 4 levels max. (1+3),
 - full 1 000 litres IBCs: 3 levels max. (1+2),
 - stacking of big-bags (1 m³) in a column must be prohibited. It may however be permitted to store them in a pyramid but over 2 levels only (1+1),
 - small big-bags (½ m³) can be stacked in a column over 2 levels (1+1),
 - stacking of pallets of bags must not exceed 3 levels (1+2) if the packaging of the bags does not provide the necessary guarantees (instability). The risk associated with perforation of the bags must be taken into consideration.
- If empty packaging is stored outside, special attention should be paid to the wind.
- The condition of pallets stored outside must be inspected to prevent bad weather
 - damaging them, resulting in collapse of the pile.
 - damaging the packaging or its content

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11.5.5 - Rack storage

GENERAL PRINCIPLES

- Any new installation must be covered by a preliminary, in-depth study with a professional to determine the size and structure of the racking.
- The structure must be assembled by qualified personnel.
- Any changes to the structure must be done with the assistance of the manufacturer or a specialist who knows the constraints associated with this type of installation.

MINIMAL DESIGN RULES

- Each foot must be attached to the floor using at least one anchor bolt and two wherever possible,
- Feet on the aisle side must be protected where motorised handling machinery is used,
- End of row exposed to forklift traffic must be protected by rails,
- Beams must be attached by safety bolts or clips to prevent separation from the ladders,
- Distance between the top of the racking and the base of the roof, ceiling, heating system, etc. of at must be at least 1 metre,
- Grids or protective nets must be installed behind the rows that open onto a traffic lane (pedestrians) or a workplace to prevent falling loads,
- A solid floor or grating on the cells located directly above an aisle, or cells intended for the picking must be installed.
- A clearly visible plate indicating the maximum load by cell and by bay must be installed at the end of each row.

MAINTENANCE / INSPECTION / OPERATION

- A regular storage rack inspection programme must be implemented.
- Damaged components must be replaced¹⁵. The locations in question must be neutralised pending repair.
- The aisles used by the forklift must be clear of any storage or clutter.
- Traffic management plan must minimize coactivity-pedestrian forklifts in the aisles. If a pedestrian has to go into an alley, he must first report it to the truck drivers

¹⁵ Damaged storage racks (curve of more than 5 mm in upright section or crossbeam) will be immediately neutralised and replaced.

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WARNING

- Paragraph 16 "High pressure cleaning" of this Company rule is replaced by Group Rule CR-GR-HSE-424 "Working with HP water jets", which is due as of 22/01/19.
- Paragraphes 6, 8 and 9 of the present Company rule are remplaced by the Group Rule CR-GR-HSE-428 « HSE Requirements for the Isolation of Powered Systems » which is applicable from 18/01/21 and will be due as of 18/01/22.

Purpose:

The purpose of this company rule is to define the requirements necessary for performing high-risk operations and works on sites belonging to the Marketing & Services branch.

This company rule serves as a supplement to existing departmental rules, which can be set more stringent by entities.

These rules are likewise not intended to replace any local laws and regulations which should take priority in any circumstances.

Application:

This company rule applies to all entities within the Marketing & Services branch that are operated by the Group. They concern all types of sites. This also applies to operations and works carried out by an operated entity on installations which are non-operated (CODO and DODO stations, client installations)

These rules apply to operations carried out by contractors as well as operations carried out by the entity staff.

For non operated activities, the Group's representatives should encourage the operating entity to apply similar provisions.

Version	Date	Written by	Checked by	Validated by	Approved by
0	09/15	J.-M. STOFFEL	C. WAGNER	-	P. LEGRAND
1					
2					

(This English version is translated from the original French reference version)

Department: HSEQ	Owning entity: MS/ HSEQ / COR
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High-risk operations and works

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1 - INTRODUCTION

Directive DIR-MS-02 outlines the fundamental principles of the "Marketing & Services Health and Safety, Environmental and Quality Policy" The internal rules laid out in company rule CR-MS-HSEQ-110 (MAESTRO M&S) present the principles of the policy as expressed in general HSEQ management requirements Requirement HSEQ 03.05 of CR-MS-HSEQ-110 FR stipulates that:

Based on an assessment of need, Management shall implement the operational documentation (rules, procedures, instructions, and work permits and records) used to control the operations. These activities include, but are not limited to, hazardous works and operations, personal protective equipments requirements, critical tasks, transportation operations, etc... These documents shall be accessible to interested personnel, and should be properly managed, and reviewed as often as necessary.

The purpose of this company rule is to define the requirements necessary for performing high-risk operations and works carried out on sites which are linked to the Marketing & Services branch.

These rules are concise and do not cover all subjects in detail. It is therefore the responsibility of each entity or site to add to them where necessary, so as to completely cover the specific risks and issues it shall deal with. Entities may set up more stringent rules, in particular for industrial sites.

2 - REFERENCE DOCUMENTS

2.1 - GROUP DOCUMENTS

TOTAL GOLDEN RULES

- Group Golden Rule No. 4: Protective equipment
- Group Golden Rule No. 5: Work permits
- Group Golden Rule No. 6: Lifting
- Group Golden Rule No.7: Work on powered systems
- Group Golden Rule No. 8: Confined spaces
- Group Golden Rule No. 9: Excavation work
- Group Golden Rule No. 10: Work at height
- Group Golden Rule No. 12: Simultaneous operations or co-activities

SAFETY GUIDELINES

- DIR-GR-SEC-004: Confined spaces entry
- DIR-GR-SEC-007: Isolation of Energy Sources and hazardous substances before work
- DIR-GR-SEC-012: Safety-critical operations
- DIR-GR-SEC-013: Prevention of falls from heights

GROUP SAFETY RULES

- REG-GR-SEC-022: Work permit process for industrial sites (draft)
- REG-GR-SEC-024: Major REX: Requirements for sealing leaks on line

GROUP SAFETY GUIDES

- GM-GR-SEC-008: High-pressure cleaning

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2.2 - M&S BRANCH DOCUMENTS:

INTERNAL M&S RULES

CR-MS-HSEQ-110: HSEQ management general requirements (MAESTRO M&S)

CR-MS-HSEQ-204: HSE management of contractors

3 - DEFINITIONS AND GLOSSARY

HSE:

Health, Safety and Environment

SITE:

Means any of the following kinds of establishments:

- **Industrial:** lubricant or other speciality product blending facilities, bitumen refineries, special fluids facility, hydrocarbon or LPG depots, LPG filling centres, packaged LPG and hydrocarbon warehouses, other production centres, etc.
- **Non-industrial:** administrative offices (head offices, regional departments, etc.), laboratories, research centres, training centres, etc.
- **Service stations and similar:** road service stations, airport stations (installations in zones under airport responsibility) other loading/unloading facilities (such as marine terminals), dedicated service station (mining)
- Marine and river terminals: loading/unloading facilities for ships and barges, bunkering facilities.
- Other installations: pipelines, customer installations.

ENTITY:

Means a division or subsidiary to which the site belongs.

ORDER GIVER:

Role of the entity requesting the work/services, generally a department in charge of maintenance/construction or with an operating role. This role can be transferred to an external specialist.

OPERATOR:

Structure associated with the entity having operational responsibility for installations where target operations are carried out. For application of this company rule, and for the works/services it orders, the order giver can assume the role of operator.

- A site under construction or shut down (for decontamination, dismantling, or works) is not likely to have an "operator" in this context. The order giver will therefore take on the role of operator to apply these rules
- The order giver can also take on the role of operator within the context of CODO and DODO stations and client installations

CONTRACTORS:

Company to which the entity has assigned responsibility for the works, if they are not being carried out internally.

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EXECUTING COMPANY:

Company which actually carries out the works. This may be a contractor or one of its sub-contractors.

HIGH-RISK WORK/ SERVICES:

Work/service(s) performed by the staff of the entity or a contractor which represent a high-risk to goods, persons and/or the environment. The following operations are in particular considered as 'high-risk work':

- Line or capacity opening containing hazardous product (chemical/physical/other hazard),
- Sealing a leak,
- Intervention on hazardous machines,
- Work on electric installations or performing work in the vicinity of bare live power lines
- Hot work (naked flame),
- Hot work in explosion hazard areas with ignition points
- Digging or excavation work,
- Work at a height,
- Work in confined spaces,
- Cleaning/ degazing of capacity, or tanks
- Complex lifting,
- high-pressure cleaning, sand-blasting
- Radiography / gammagraphy.

under the conditions which may be specified in the corresponding chapters of this company rule (in the corresponding "scope" paragraphs).

This list is not exhaustive, in particular given the many business lines in the branch.

HIGHLY CRITICAL WORKS

In the "high-risk" work and operations category, a "highly critical" category can be defined. These are works that resulted in a significant records of fatalities in the workplace for the branch:

- work at height with a risk of falling more than 4 m,
- work in confined spaces,
- cleaning and degassing work in tanks with a manhole¹,
- high-voltage electrical work,
- work in the vicinity of uninsulated high-voltage overhead lines

FLAMMABLE LIQUID:

The term "flammable liquids" refers to products stored at a temperature above their flash points, or liquids with a flash point below 38 °C (Class I liquids – NFPA 30).

Products in this category include petrol (gasoline), MTBE, ETBE and ethanol.

Jet fuel, kerosene, diesel, domestic fuel oil, heavy fuel oil, bitumens and lubricants have a flash point of 38 °C or above and are not therefore flammable liquids unless these products are stored at a temperature above their flash point. Flammable liquids do not include liquefied products such as LPG and LNG.

ISOLATION:

Isolation consists of interrupting the power, fluid or product supply to equipment (machines, circuits, installations). Details of isolation conditions are given in Chapters 6 -Line or equipment opening and 9 -Work on electrical installations.

¹ The risk anticipated is unauthorised entry into a confined space.

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LOCKING:

Locking is the act of preventing the operation of equipment or its feeding of products via its control system or energy supply, or directly, by using the mechanical components of the equipment (isolation). Locking involves a locking mechanism (key, padlock or any other system which is difficult to override) which prohibits unauthorised recommissioning and comes with an associated signage (tag).

RELEASING ENERGY / PURGING - DEGASSING:

Releasing energy consists of eliminating all potential and residual energy or expelling hazardous products (also called purging or degassing when it involves products).

LOCKOUT:

Lockout includes all the provisions for making and keeping equipment safe (machines, circuits, installations) so that:

- the equipment is safe when it's shut down, de-energised and/or purged;
- it is not possible to change the state (re-starting, reconnecting energy or products) unintentionally or without authorisation (locking).
- this safe state is checked;

RECOMMISSIONING:

The recommissioning procedure includes all the provisions to get locked-out equipment (machines, circuits, installations) running again.

INHIBITION

Decommissioning of a mechanical, automatic system, in particular a safety system.

COLLECTIVE PROTECTIVE EQUIPMENT:

Device, mechanism, apparatus or installation that, by design (arrangement and constituent materials), is capable of effectively protecting staff against one or more occupational risks and limiting the consequences thereof. This equipment is integrated into or added to production means or workplaces. It is considered to be collective protection if it indiscriminately ensures the safety of the assigned staff (direct risk) and that of other people nearby.

PERSONAL PROTECTIVE EQUIPMENT (PPE):

Any device or means intended to be worn (or possibly held, like a gas detector) by an individual for protection against one or more hazards likely to threaten their health or safety.

COMPETENT PERSON

Person recognised as having a particular competence, as a result of experience, training or examinations, in the field in question (typically operation of machinery, technical checks and role in the work permit process).

QUALIFIED PERSON

Person who can formally prove his or her competence based on training and a knowledge test for specific competences in the field in the question (typically operation of machinery or technical checks).

AUTHORISED PERSON

Person authorised by the company or entity to which he or she belongs (by way of a list of names or as a result of the job level) to perform a particular task (typically operation of machinery, signature of permits or safety measures).

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4 - PREVENTION PLAN

4.1 - SPECIFIC TERMINOLOGY

PREVENTION PLAN²

All the provisions jointly taken by the entity and/or the contractors aimed at ensuring safety for all works/services carried out on the entity's site and management of concurrent activities on an entity site. These provisions are illustrated in a document of the same name.

4.2 - SCOPE:

- The prevention plan concerns works/services entrusted to contractors, at least for works classified as critical or potentially critical— terms understood within the context of document CR-MS-HSEQ-204 on HSE management for contractors. This concerns particularly :
 - "high-risk" ad-hoc jobs classified as potentially critical at least
 - annual work or services on site (security, cleaning, general maintenance)
- The prevention plan concerns industrial and non-industrial sites and service stations. It also applies, with certain modifications to operations and works carried out by an entity on installations considered to be non-operated (CODO and DODO stations, client installations)
- Transport services (including loading and unloading) are not included in the scope

4.3 - GENERAL PRINCIPLES

- The prevention plan shall comply with the regulatory provisions of the country in which the site is located.
- The prevention plan is put in place prior to carrying out works/services
- The prevention plan is drawn up for a length of time corresponding to the duration of the job/project. For repetitive jobs, annual prevention plans can be drawn up.
- The prevention plan is reviewed annually, if the works/services take place over more than one year
- If a prevention plan is associated with a project or operation that involves more than one company, it must be drawn up for all companies and not for each company.
- The responsibility for producing it lies with the operator or the order giver in the specific cases mentioned in the chapter

4.4 - JOINT PRELIMINARY INSPECTION

- The operator and/or instructing party shall inspect the place where the works/services are to be carried out jointly with the contractors. This joint inspection shall take place close to when the work commences³ (typically 1 week before).
- During this inspection, the following points shall be clearly addressed and defined:
 - risks associated with the site's activity or its environment, areas which may be hazardous for workers (interference with contractors activity)
 - operating area for each contractor, coactivity,
 - circulation routes used by workers, vehicles and machinery, parking areas, equipment storage areas,

³ No time restriction for annual prevention plans

³ No time restriction for annual prevention plans

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- circulation routes used by workers, vehicles and machinery, parking areas
- washrooms, living areas
- assembly points in the event of an emergency

4.5 - SHARING RISKS AND DEVELOPING PREVENTION MEASURES

- As a result of this joint inspection (potentially immediately afterwards), the person responsible for drawing up the prevention plan shall arrange a meeting with the contractors to perform a joint risk analysis and define the appropriate preventive measures to be implemented. The following points must be covered:
 - description of the planned task(s), their planning in relation to availability of installations,
 - identification of the different trades involved, the zones and the periods of concurrent activity,
 - identification of tools and methods to carry out the work and the associated risks,
 - definition of the preventive measures required to enable the work to be carried out.
 - identification of the isolation operations required,
 - decisions regarding the type of authorisation/permit required, depending on the nature of the tasks,
 - identification of first aid measures.
 - reminder of the main safety rules that apply on the site,
- Depending on the nature and complexity of the work to be performed, specific additional documents shall be prepared. For example this means:
 - technical documents associated with the work (lifting plans, excavation plans etc.),
 - the schedule of the various people involved,
 - documents supporting the provision of the equipment concerned (specific instructions, isolation diagrams, etc.),
 - miscellaneous evidence (training certificates, medical ability certificates, supporting documentation for the technical inspection of equipment)

4.6 - DRAFTING THE PREVENTION PLAN

- A summary document shall be formalised. The following points should be included in the prevention plan:
 - information relating to the operation to be carried out and to user companies and contractor(s),
 - documents submitted, include a site plan,
 - requisite staff qualifications,
 - resources made available to them,
 - risk analysis including potential interference with ongoing activities, preventive measures,
 - resources put in place to monitor the prevention plan, update it and effectively implement it on the ground.
 - coordination of emergency services,
- The prevention plan shall be signed by all the parties concerned:
 - Order giver (the entity's department responsible for the work: project manager or its representative)
 - first-tier contractors (their sub-contractors are not necessarily signatories)

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- Operator, if there is one (operators on an operated site, service station managers including CODO).⁴
- A suitable template, acting as both the permit and the prevention plan, can be used for service stations and customer facilities for day-to-day maintenance work

4.7 - USING THE PREVENTION PLAN

- The whole prevention plan shall be issued to contractors
- The prevention plan shall be issued and used particularly as the basis for training the workers involved
- The prevention plan must be sent to external subcontractors so that they can communicate with and inform their employees. This transmission must be traceable.

5 - WORK AUTHORISATION/WORK PERMITS

5.1 - SPECIFIC TERMINOLOGY

WORK AUTHORISATION/WORK PERMITS:

Authorisation given by the entity to carry out works/tasks (high risk) in the safety conditions specified. By extension, the term covers the form for this authorisation to work. The terms, work authorisation and work permit, can be used interchangeably.

5.2 - SCOPE

5.2.1 - Requirements

- The operational tasks that are part of routine work are normally not involved in the work authorisation / work permit process. These tasks can be entrusted to contractors (packaging, loading/unloading, logistics) but shall then be subject to work instructions.
- Work authorisation / work permits shall be issued for all high-risk work and operations listed in table below in any conditions which may be indicated in the specific rules
- This requirement applies whether the work and operations are carried out by contractors or directly by the entity staff. The specific rules may specify the applicable conditions regarding work authorisation / work permits for the entity staff.

⁵ Either because they are on a site that is not in operation or that is no longer in operation, or because the site is on a fenced off part of a site that has no operation on it.

High-risk operations and works

Type of high-risk work	Scope	Permit requirements (within the scope)
Opening of hazardous product line	§ 6.2 -	No exemption (§ 6.3 -General principles)
Tank cleaning/degassing		Associated with any operations to open lines or work in confined spaces (see the relevant chapters). See also any business line documents that are available
Temporary stopping of leaks	§ 7.2 -	Stopping of leaks <u>during operation</u> (§7.5 -)
Work on dangerous machinery	§ 8.2 -	Limited to contractors (§8.3 -)
Work on electrical installations	§ 9.2 -	Limited to contractors (§9.3 -)
Work in the vicinity of bare live power lines	§ 9.6 -	Limited to contractors (§9.6 -)
Hot work (naked flames)	§ 10.2 -	Possible exemptions for certain zones (§10.3 -)
Hot work in areas at risk of explosion	§ 11.2 -12.2 -	Explained in paragraph
Excavation and earthwork	§ 12.2	No exemptions (§ 13.3 -)
Work at height	§ 13.2 -	Explained in paragraph
Work in confined spaces	§ 14.2 -	No exemptions (§ 14.3 -)
Lifting	§ 15.2 -	Lifting plan required for complex lifting (§ 16.3 -)
High-pressure cleaning	§ 16.2 -	No exemptions (§ 16.3 -) given the scope
Sandblasting	§ 17.2 -	No exemptions (§17.3 -)
X-rays/gammagraphs	§ 18.2 -	No exemptions (§ 18.3 -)

- Work authorisation / work permits shall also be used for unusual or complex operations or works with high risk that requires particular safety rules to be formalised as well as manager approval at a certain level. The criteria for this is left to the discretion of the operational entity/affiliate/branch. That usually includes :
 - Unusual intervention leading to exposure of personel persons to hazardous substances (products, asbestos, etc...)
 - Demolition works involving heavy machineries or possible risk of collapse.

5.2.2 - Specific exclusions

- Where appropriate, the site or entity manager (or order giver) can deviate from the work authorisation/permit process for specific places, situations or tasks, especially for scenarios not provided for in this company rule.
- It must produce a list of the places, situations and tasks for which a work authorisation/permit is not required. Exemptions must be justified.
- The work authorisation/permit exemption does not diminish the need to put in place adequate prevention and protection measures.
- There can be no exclusions for confined spaces.

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- The scenarios in which exclusion is justified are:
 - **Maintenance workshops/maintenance area:** Typically, these zones do not need a hot work permit or other permits (HP cleaning, electrical work).
 - **New "independent" work sites:** New work sites, as long as they do not interfere⁵ with installations during operation, do not need work authorisations/permits subject to a prevention plan being drawn up and safety coordination and supervision being put in place.
 - **Demolition/decontamination work sites:** Demolition or decontamination sites, as long as they do not interfere with installations during operation, do not need work authorisations/permits subject to a prevention plan being drawn up and safety coordination and supervision being put in place.

5.3 - GENERAL PRINCIPLES - WORK AUTHORISATION / WORK PERMIT PROCESS

WORK PERMIT APPROVAL PROCESS

- The entity shall have an authorisation to work /work permit process which is based
 - on a written procedure which:
 - . describes each step involved in preparing, approving, carrying out the work and completing the work authorisation/work permit process, identifies how the roles and responsibilities of each personnel, specifies the type of document to be used depending on the nature of the risks, mentions the supporting documents required for the work authorisation/work permit (additional certificates, operating methods, isolation diagrams, safety data sheets for the products used or present and any other documents
 - . defines the rules for validity⁶ of the work authorisation/permit,
 - . lists any exclusion scenarios.

VALIDITY PERIOD

- The procedure shall take into account periodic revalidation of the work authorisation/work permits. The specific rules regarding high-risk works should specify the durations where appropriate.
- In the event that the work authorisation/work permit validity period covers a shift replacement, the information conditions for the replacement and/or new workers, as well as the revalidation conditions shall be specified in the procedure
- When the work authorisation/work permit validity period has expired, the entity shall initiate a new work authorisation/work permit.

PROCESS AUDIT

- The work permit process is a process which shall be audited as part of the HSE management system and technical audits.

⁵ Either because they are on a site that is not in operation or that is no longer in operation, or because the site is on a fenced off part of a site that has no operation on it.

⁶ This typically lasts one day (or one job if the site is subject to rotation of personnel)

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5.4 - FORMS ASSOCIATED WITH THE PROCESS

"STANDARD" WORK AUTHORISATION/WORK PERMITS

- Standard work authorisation/work permit shall consist of all collected information needed to initiate the request, such as, the task to be performed, the place of work, the identification number of the equipment concerned, the "product" risks, the isolation measures (provision, blinding, electrical insulation, inhibition, etc.), specific requirements (scaffolding, etc.), the duration of the work requested and the associated preventive and protective measures.

SPECIFIC PERMITS/SUPPLEMENTARY CERTIFICATES

- Some high-risk operations require specific data (atmospheric monitoring and lockout in particular) to be added to the work authorisation/work permit. The entity, depending on its organisation and the nature of the work encountered is free to adopt the following systems:
 - a) Work authorisation/work permit possibly accompanied by specific certificates/permits covering a particular risk (hot work...),
 - b) One single work authorisation/work permit bringing together all the necessary information including that for all specific risks,
 - c) A set of separate self supporting permits. There is a specific form for each risk (hot work permits, excavation permits etc.),

Solution a) is regarded as good practice

As an example, the table below gives a list of specific permits/certificates (the names of these may vary). The whole list is not relevant for the same site.

Description	Use
Hot work permit	The hot work permit covers the specific risks associated with work that may lead to the breakout of fire or an explosion.
Access permit	The access permit covers the specific risks associated with work in confined spaces
Excavation permit	The excavation permit covers the specific risks associated with digging, excavation or drilling work, in particular so as not to damage underground structures and to protect personnel against the risks of subsidence, collapse, crushing, falling objects, electrocution, etc.
Lifting permit	The lifting permit covers the specific risks associated with lifting operations
Work at height/roof permit	This type of permit covers the specific risks associated with work at height or, more specifically, roof work (falls, dropped tools and equipment, etc.)
Gammagraphy permit	The gammagraphy permit covers the specific risks associated with the use of radioactive sources (typically within the context of non-destructive testing).
Above-water work permit	This permit covers the specific risks associated with work on or in the immediate vicinity of water (jetty, harbour).
Diving permit	The diving permit covers the specific risks associated with the work of divers.
Isolation/lockout certificate	Certificate intended to formalise mechanical and electrical isolation work
Degassing certificate	This certificate is used to guarantee that a tank/vessel has been properly cleaned and degassed to enable work to proceed.

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ELECTRONIC WORK AUTHORISATION / WORK PERMITS

- Please refer to Group rule REG-GR-SEC-022: Work permit process for industrial sites

5.5 - STAGES OF THE WORK PERMIT PROCESS

5.5.1 - Risk analysis / drafting of authorization / work permits

RISK ANALYSIS

- This phase is normally carried out during the prevention plan. If there is no prevention plan available, the analysis provided for in chapter 4.5 -Sharing risks and developing prevention measures, shall be carried out before drafting the work authorisation/work permit
- The analysis carried out during the prevention plan shall be refined when the work authorisation/work permits are drafted
 - focus on the specific risks of the operation/work
 - take into account the current activity, the weather conditions
 - define the isolations for risks related to the presence of hazardous substances, electricity, or any other form of energy,
 - define collective protective equipment to be put in place and personal protective equipment (PPE) required.

GENERAL PRINCIPLES

- A single work authorisation/work permit cannot cover works involving different sites (or significantly different place in one site).
- Unlike the prevention plan, the work authorisation/permit must be issued for each company, taking into consideration concurrent activity with operations and, where appropriate, with other companies.

DRAFTING THE WORK AUTHORISATION/WORK PERMIT

- Drafting can be entrusted either to the entity (operator, instructing party) or to the contractor depending the organisational system chosen.
- The author (preparer) shall be competent.
- The work authorisation/permit must mention *a minima*:
 - the work area, the identification number of the equipment concerned (if applicable), the duration of the work to be carried out.
 - the nature of the work and the associated risks, the tools used,
 - the recommendations from the specific risk analysis and safety measures decided upon (wearing personal protective equipment in particular means of detection, fire-fighting equipment),
 - everyone's responsibilities in implementing preventive measures,
 - cross-referencing certificate/specific work permits as required,
 - adding specific documents associated with the work authorisation/work permits,
 - the workers (name of contractors, entity staff involved)
 - work authorisation/work permit validity period,
 - the duration of the authorisation/permit, the renewal frequency (if necessary) and an expiry date after which a new authorisation/permit must be issued.
- It is good practice to use a carbonless notepad as it ensures that the parties all get an identical copy of the document.

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5.5.2 - Acceptance and approval of the work authorisation/work permit

APPROVAL BY AN ENTITY REPRESENTATIVE

N.B.: this paragraph does not apply if the writer is the operator or an order giver acting as the operator.

- If the work authorisation/permit has been produced by an external company, formal approval by a representative within Total entity is mandatory. The approver must be competent.
- It is strictly forbidden to modify the terms of the work authorisation/work permit once approval has been sought.

APPROVAL AND ACCEPTANCE BY TASKS-EXECUTING COMPANY

- Acceptance by the executing company implies a full understanding of the tasks to be performed, the risks and preventive measures, the location of the work place, the constraints and interference related to joint activities.
- The executing company has a right and a duty to refuse an work authorisation/work permit if the planned preventive measures do not seem satisfactory for carrying out the work requested in light of the risks.
- The operator must give its approval by signing the authorisation/permit.
- The contractor's representative authorised to sign the work authorisation/permit must have been identified in the prevention plan, if one exists.

5.5.3 - Implementing preventive measures

- Before commencing work, any general preventive measures which may be defined in the prevention plan or the work authorisation/work permits (electrical lock outs, inhibitions, procedural isolations, atmospheric monitoring etc.) shall be carried out.
- The responsibilities for implementation of preventive measure (and provision of corresponding equipment) shall be clearly defined on the prevention and/or work authorization/ work permit
- The site / executing company shall have the necessary safety equipment⁷ for inspections and protection means. This shall be kept in good condition and checked/tested before starting the work. Before each operation, a pre-use check must be carried out.

5.5.4 - Issuing - Signing work authorisations/work permits

- Individuals may not issue work authorisation/work permits for themselves.
- Issue of the authorisation/permit entails signature thereof by the operator.
- Approval by the operator/instructing party can be combined with signature/issue if the same person is responsible.
- The signatory for the entity must be competent and authorised.

5.5.5 - Work coordination: carrying out the work

- Individuals involved in approving and issuing work authorization/work permits shall ensure that the tasks to be carried out take into account other ongoing or planned activities. This coordination requirement is to be covered as much as possible as part of the prevention plan.
- In all cases, one person shall be designated to ensure overall coordination within a given area. This task normally rests with the operator. It can be entrusted to a third-party service provider or a contractor if the work is on sites or in areas where the entity is not usually present (passive sites etc.).

⁷ Typically, gas detectors, site extinguishers.

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- Throughout the time when the work authorisation/work permit is used, the contractors shall apply the defined preventive measures. The outside company must ensure that all of the contractors are informed about the prevention measures contained in the work authorisation/permit.

5.5.6 - Supervision

THE ENTITY'S ROLE

- One or more individuals from the entity shall be designated to ensure that the services and work are monitored and/or coordinated and to check compliance with HSE requirements.
- If an extremely hazardous situation (act or condition) or changes to the safety conditions are observed, the work concerned shall be stopped.
- To ensure that workers comply with the various HSE provisions in force on the site and/or provided for in contracts, relating to performance of work, a site visit programme must be put in place with a frequency suited to the level of risk and the size of the site.
- For "highly critical" work, at least one site inspection must be performed, preferably at the beginning of the works. This inspection is carried out by a competent representative of the entity.
- In particular, the auditors must ensure that the prevention measures chosen are known and implemented by outside company personnel.
- These HSE audits/site visits must be followed by a debriefing with the relevant operational managers of the site and of the outside company. Minutes must be produced, accompanied where necessary by an action plan.

THE CONTRACTOR'S ROLE

- The contractor shall ensure that its work is supervised. A supervisor shall be designated.
- In addition to certain staff dedicated to the works/services⁸, specific HSE supervisors shall be in place.
- They shall point out any implementation issues (respecting operating methods, the tools provided for in the work authorisation/work permit) or even stop work in the event that the actual situation differs from the planned situation and this affects safety.

5.5.7 - Interruption of Works

- Provisions must be put in place to manage site interruptions, particularly at night (inspection of equipment at the end of the day, closure of gas cylinders).

5.5.8 - Concluding the work

- When works are completed, the contractor shall inform the operator. The entity shall then:
 - retrieve the work authorisation/work permit, accept the work and check the condition of the installation,
 - check that the isolations, lock outs, and inhibitions associated with this work authorisation/work permit can be removed, i.e. all the work authorisation/work permits using these certificates are withdrawn,
 - remove or arrange for the removal of the isolations, lock outs or inhibitions related to this work authorisation/work permit,
 - declare, in a joint agreement with the contractor, that the work has finished and highlight any outstanding issues after necessary tests are carried out.
 - complete the work authorisation/work permit and removing it from the list of "open" work authorisations/work permits,

⁸ Good practice means having an HSE supervisor for every 30 to 50 workers.

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- archive the work authorisation/work permit for a fixed period (archiving rule⁹).
- particular attention should be paid to the transitional phase combining recommissioning manoeuvres and acceptance testing.

5.6 - TRAINING AND SKILLS

- The entity shall ensure that its employees involved in the work permit process (author, approvers/signatories) are:
 - trained according to a formal detailed programme suitable for their roles and responsibilities, recycled frequently as defined.
 - specifically authorised for their role in the process if this is required in this rule.
- Outside contractors must also ensure that they:
 - train and authorise their own staff for their role in the work permit process,
 - ensure that this training and these authorisations are traceable.

6 - LINE OR EQUIPMENT OPENING

6.1 - SPECIFIC TERMINOLOGY

OPENING LINES OR EQUIPMENT

Operation consisting of breaking containments (capacities, pipework, other equipment) by dismantling, cutting, etc.

6.2 - SCOPE

- The rules outlined in this chapter apply to work which may expose workers to high-risk fluids such as:
 - hazardous products (flammable, corrosive, toxic, irritants and other types of hazards for staff including the risks related to long-term exposure, etc.)¹⁰. Fuels and combustible liquids (petrol, jet fuel, kerosene, diesel, domestic fuel, heavy fuel) as well as LPG are included with these products,
 - hot fluids (temperature > 65°C), steam,
 - high-pressure fluids (gas or liquids) even if non-hazardous (P > 4 bar for gases, 10 bar for liquids).
- Routine operating manoeuvres such as gauging, sample taking, purging, using hoses, loading/unloading, and opening mobile containers, are not affected by these rules but shall be subject to specific instructions.

6.3 - GENERAL PRINCIPLES

RISK ANALYSIS

- The risks associated with fluids (intrinsic hazards and risks related to temperature and pressure) shall be clearly identified.
- The intervention strategy based on a risk analysis shall aim to reduce workers' exposure as much as reasonably possible.

⁹ Five years is the archiving period regarded as good practice

¹⁴ The recommended thickness is 30 centimetres above and 30 centimetres below a structure.

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- Stopping leaks during operations is subject to specific rules outlined in chapter 7 -temporary Sealing of leaks

CONSIGNATION

- Barring exceptions (detailed below), the work shall be carried out after locking out the equipment concerned namely:
 - isolating the circuit (upstream and downstream),
 - lockout and signage for the isolation,
 - decompression, purging, cleaning and degassing (lines and tanks),
 - initial verification that there are no fluids.
- The capacity/pipework/equipment shall be specifically identified before opening. If there is a risk of confusion, painted marks or another system shall be used. For industrial sites an operator's representative shall be present at the first opening.

AUTHORIZATION / WORK PERMIT

- The operation requires a work authorisation/work permits to be issued.

6.4 - ISOLATION AND LOCKING

ISOLATION

- In the case of fluids or products, isolation is done by closing one or more valves, disconnecting a hose or sleeve, installing a paddle or fitting a full buffer. Taking into account the diverse situations that may be encountered, it is not possible to list general rules. The isolation choice must be based on a risk analysis that takes into account:
 - the nature of the risks and therefore the consequences of a potential failure of the isolation device,
 - the work time,
 - the options for the circuit (valves, disconnections, flanges in which a spade can be inserted, etc.).
- In general you should look for an isolation as close as possible to the place of intervention
- If equipment is connected to the rest of the process by numerous lines, you should begin with a diagram (pipework plan, piping and instrumentation diagrams) and transfer the isolations to a copy of these diagrams (blinding plan) and then the accuracy of the plans should always be checked on the ground. A good practice is to utilise a checklist.
- The responsibility for the isolation manoeuvres (operators of company executive tasks) shall be defined in advance.

LOCKING

- Locking shall be carried out unless the isolations are in the immediate vicinity and directly visible from the place of work throughout its duration (ex : replacement of a pressure gauge or other small equipment). The worker shall either have carried out this isolation himself, or have been advised not to carry out these isolations (visual recognition + red sign). If the same isolation is used for several interventions in remote places, locking is mandatory.
- Any locking carried out shall be reported on the permit either generally (box checked) or more accurately by attaching a plan, a diagram, or a specific locking approval for example.

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6.5 - RELEASING ENERGY/PURGING/CLEANING/DEGASSING

- The "metiers" documents specify the appropriate additional rules and good practices to be applied to the different types of equipment and products (inerting LPG capacities, cleaning/degassing hydrocarbon tanks etc.).
- Risk analysis should enable suitable procedures or operating methods to be established and determine the conditions and the most appropriate time to carry out draining, purging, cleaning, ventilation operations etc.
- It is to be ensured that for decompression / Purging, residual hazardous products are removed to a suitable area (purge network, repumping vehicles etc.). During these operations, protecting the environment shall also be subject to particular attention.
- Special attention should be paid to:
 - presence near to parts where purged fluids may build up (low points) and create an explosive atmosphere,
 - the sewage systems likely to spread the danger beyond the work zone,
 - the risks associated with static electricity, particularly in the event of flammable liquids collecting in mobile containers,
 - concurrent activity, particularly near to work that may lead to fire breaking out.
- If the operation requires entering a confined space, the requirements of chapter 14 -Working in a capacity or a confined space) must be respected (confined space entry permit).
- Cleaning operations / degassing performed with open manhole are classified as "highly critical" and therefore at least one site visit on the part of the entity is required preferably at the beginning of the work. This visit is conducted by a competent representative of the entity (operator, principal, or specialized service provider, ...).

6.6 - CHECKS

- Checks shall be carried out to make sure that there are no residual risks taking into account that lack of flow is only one indication (viscous products, products held at low points on the line).
- If it is not possible to check, you shall consider that it is possible that there are still fluids and take measures accordingly. In this case, the features of the personal protective equipment worn when the circuit and/or equipment was initially opened shall be compatible with the potential risks.

6.7 - RECOMMISSIONING

- Recommissioning should only be carried out after ensuring that the work on the equipment concerned has actually finished (properly reassembled, made safe for the workers involved etc.).
- The operating instruction shall ensure that the order and content of the operations intended to recommission the installation safely can be determined.

7 - TEMPORARY SEALING OF LEAKS

7.1 - SPECIFIC TERMINOLOGY

- None

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7.2 - SCOPE

- The rules outlined in this chapter apply to work to temporarily stop leaks using various repair methods such as: lamination with resin, bonding, using thin metal strapping with elastomer seals, clamps/boxes injected with sealant or other devices.
- The products/fluids referred to are the "hazardous" products/fluids defined in chapter 6.2 - Scope of chapter 6 -Line or equipment opening.

7.3 - GENERAL PRINCIPLES

- If a piece of equipment leaks, the operator may install a temporary leak-stopping device on in-service equipment as long as it is appropriate, so as to prevent prolong closure of equipment/installation due to repair works.
- A temporary measure to stop the leak shall be removed at the first opportunity after it has been installed, so that the equipment can be permanently repaired.

7.4 - PROCESS

- Temporary repairs shall be subject to a feasibility study and shall only be used as a last resort. The feasibility study shall check in particular that the proposed solution is compatible with the temperature and pressure constraints and the type of fluid.
- The final decision regarding temporary repairs shall be taken at a sufficiently high level.
- A work authorisation/permit is needed if this is done by an outside company.
- The equipment shall be drained and degassed if required before installing temporary repair measures.
- It shall be monitored carefully when it is recommissioned.
- Every time temporary repairs are made, they shall be recorded especially if they are not visible (insulation).
- The repairs shall be regularly monitored particularly to ensure that the leak does not reappear.

7.5 - SPECIFIC CASE OF STOPPING LEAKS ON-LINE

- Stopping leaks during operations is an exceptional operation. An authorisation /permit shall be issued.
- Before submitting the request, the operator shall verify and justify the following:
 - access to the leak area is or can be made satisfactory so that work can be carried out safely,
 - risks can be controlled, particularly those associated with: flammability, toxicity, pollution,
- A work authorisation/permit must be issued.
- An operating instruction for the operation shall be established in advance.
- There are particular risks involved in using clamps injected with sealant (emergency intervention, changing the device, reinjecting sealant or retightening bolts). These operations are very rare for the M&S branch and are covered by internal rule (REG-GR-SEC-024: Major REX - Stopping leaks during operations). This document which is not specifically transposed should be directly applied to the branch.

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8 - WORKING ON HAZARDOUS MACHINERY

8.1 - SPECIFIC TERMINOLOGY

HAZARDOUS MACHINERY

Machinery which may, because of its power or its operating conditions (temperature, speed of movement and rotation), inflict serious injury (death, permanent disability), despite wearing the required personal protective equipment. Typically, these are:

- machines which may trap, cut, strike, crush or shred all or part of a human body,
- machines with a risk of spraying fluids or objects,
- high temperature machinery, or machinery producing ionising radiation.

8.2 - SCOPE

- The rules outlined in this chapter apply to maintenance work and adjustment of dangerous machinery which exposes operators to the risks listed above.
- Electrical work is covered in chapter 9 - Work on electrical installations.

8.3 - GENERAL PRINCIPLES

LOCKOUT / TAGOUT

- Work on hazardous machinery shall only be carried out on machines which have already been stopped (isolation and energy release). The same applies to unblocking work.
- Good practice consists of using an emergency stop if there is one, i.e. isolation and energy dissipation.
- If the machinery controls are not directly visible to the worker, there shall be formal lock out / tag out.
- A start up test shall be carried out after isolation and energy dissipation
- Complex machinery using several different energies may require formalised procedures to be made safe.
- In the event that elimination of all the energy is not possible, we can resort to containing or confining energy (e.g. by mechanically chocking a suspended weight).
- Work on machinery whilst in operation can only be authorised for adjustment purposes. It should only be carried out by competent staff, familiar with the machinery and any risks.
- Particular attention shall be paid to: machinery which starts automatically or blocked or jammed machinery, where the blockage may have prevented energy dissipation.

WORK AUTHORISATION/PERMIT

- A work authorisation/permit is required for any work on the entity's hazardous equipment if this work is done by an outside company.
- If performed by the entity's personnel, the following points must be respected as a minimum:
 - establishment of instructions,
 - clear definition of the scope of what is authorised without a work authorisation/permit being needed,
 - the personnel carrying out the work must be competent

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- management shall ensure a periodic supervision to check if scope of authorised work is not exceeded

9 - WORK ON ELECTRICAL INSTALLATIONS

9.1 - SPECIFIC TERMINOLOGY

VOLTAGE DOMAINS

	Very low voltage	Low voltage	High voltage
Alternating	Voltage < 50 V	50 V < voltage < 1,000 V	Voltage > 1,000 V
Direct	Voltage < 120 V	120 V < voltage < 1,500 V	Voltage > 1,500 V

CONCEPT OF ELECTRICAL CONTACT AND VICINITY

Different domains are defined depending on the voltage and the distance from uninsulated, live parts

Voltage (U) in Volts 1 kV = 1,000 V	Direct contact or risk of arcing	"Electrical vicinity" Approach subject to conditions	"Outside vicinity" Approach with no particular monitoring
U < 50 V	No restrictions		
50 V < U < 500 V	Approach prohibited within 0.3 m without qualification and appropriate PPE	0.3 to 3 m with qualification or constant monitoring by a qualified person	> 3 m
500 V < U < 1,000 V			
1,000 V < U < 15 kV	Approach prohibited within 0.6 m	0.6 to 2 m with qualification and appropriate PPE 2 to 3 m with qualification or constant monitoring by a qualified person	> 3 m
15 kV < U < 50 kV			
50 kV < U < 100 kV	Approach prohibited within the distance given by the formula: U (kV)/200 + 0.5 m	Approach < 5 m not recommended even with qualification (consult a qualified electrician for this voltage domain)	> 5 m
100 kV < U < 250 kV			
250 kV < U < 500 kV			
U ≥ 500 kV			

- Personnel must be qualified to carry out works with voltage level and tasks involve as classified in the table above. PPE required are hard hat, insulating gloves, a visor and safety shoes appropriate to the voltage level.

ELECTRICAL WORK:

Works which may expose workers to the risk of direct contact with live parts (electrical wiring work, connection/disconnection) or exposure to electrical arc that may be formed from close proximity. Handling switches, circuit breakers or low-voltage isolation switches (< 1,000 V), disconnecting power sockets and replacing bulbs are not considered to be electrical work.

WORK IN THE VICINITY OF BARE LIVE POWER LINES:

Work that does not involve the risk of direct contact with uninsulated parts that may be live, or a risk of arcing, but performed close by and therefore needing specific protection measures.

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ELECTRICAL LOCK OUT:

Electrical lock out is the action of turning off an electrical device, equipment or element (or one powered by electricity) to carry out electrical work. This lockout shall include:

- turning off the equipment,
- checking there is no power,
- "Locking" the equipment or device to prohibit involuntary and non-authorized powering up.
- lockout only involves making the equipment concerned safe. It does not in itself authorize any work.

9.2 - SCOPE

- The rules outlined in this chapter apply to all low-voltage and high-voltage electrical work with the exception of:
 - negligible low voltage,
 - low voltage protected by a 30 mA differential circuit breaker (typically residential electricity).

9.3 - GENERAL RULES

PRIOR LOCKOUT

- Work for electrical equipment must only be carried out on material previously turned off (with the exception of measurement).
- Work in the vicinity of uninsulated, live parts also requires lockout unless the worker can prove he is competent to work in the immediate area, or if the work organisation, including monitoring of workers by a qualified person, can guarantee there will be no contact or arcing.
- A specific risk analysis will decide between isolating the power, physically protecting uninsulated live parts to prevent contact or working in the vicinity without special protection but under the surveillance of a qualified person.
- If work in a free access zone calls for a box/electrical cabinet containing uninsulated, live parts to be opened, special warning signs must be installed.

PROCEDURE AND PERMITS

- The entity must have a procedure governing electrical work, in particular lockout.
- A work authorisation/permit is required for any electrical work or work in the vicinity of electricity if this work is done by an outside company.
- If performed by the entity's personnel, the following points must be respected as a minimum:
 - instructions must be established,
 - the operations that can be performed without a work authorisation/permit being needed must be clearly defined,
 - the personnel carrying out the work must be qualified.

9.4 - STAFF SKILLS/ ELECTRICAL QUALIFICATION

- Individuals carrying out the following work shall be formally recognised as qualified to perform said work safely:
 - access without particular monitoring to "electrical rooms" and other premises where there are accessible bare live parts,
 - monitoring non-electrical work in "electrical rooms" or outside during work involving exposure to live power lines,
 - electrical lock out operations, particularly for third parties,
 - tests, electrical measurements and checks,

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- carry out repairs and modifications to electrical circuits,
- change fuses, reset circuit breakers and perform high-voltage operations.
- Each entity, depending in particular on the local regulation, shall establish an electrical qualification and authorisation procedure for the staff concerned. This qualification system can take into account different levels of voltage and different types of work.
- Electrical qualification can be obtained only after training is completed, with the theoretical and practical knowledge checked. These points can be delegated to a specialized training body.
- In the case of work entrusted to contractors, it the responsibility of the entity to check that the contractor has a similar qualification system providing the same guarantees.

9.5 - ELECTRICAL ISOLATION

SEPARATION

- The work equipment concerned and previously identified shall be separated from any electricity source.
- In any event, installing switches / isolation switches as close as possible to the area to be isolated should be given priority.
- This separation can be carried out in different ways:
 - by using an electrical switch/circuit breaker,
 - by disconnecting sockets or wiring, by removing fuses or other elements in the circuit¹¹.
- Separation must be done on all phases and the neutral.

LOCKING

- Separation components shall generally be locked to the open position using locking devices such as padlocks. This lockout must be accompanied by appropriate warning signs.
- The following may be waived from locking if the work is carried out directly in view of the separation component (unplugged equipment), by the same individual who has carried out this separation, without work being interrupted.

DISSIPATION

- Accumulated energy dissipation (set at the lowest energy level) shall include discharging any capacitors.
- It shall also include earthing and short-circuiting the conductors which is mandatory over 500 volts AC and highly recommended below. Only earthing and short-circuiting equipment designed to this effect and compliant with standards shall be used.

CHECKS

- These shall be carried out on each of the conductors including neutral¹².
- In all cases, zero voltage checks shall be performed as near to the place of work as possible. This may not be required in the low-voltage field if the separation is obvious (plug or wires disconnected).
- A power up test (or other check) shall be carried out before work starts to check that the current has been properly cut on the electrical component to be repaired.
- It is good practice to carry out a power up test (or other check) before work starts to check that the power to the electrical component to be repaired has been properly turned off.

¹⁴ The recommended thickness is 30 centimetres above and 30 centimetres below a structure.

¹⁴ The recommended thickness is 30 centimetres above and 30 centimetres below a structure.

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9.6 - WORKING NEAR OVERHEAD POWERLINES

- Special attention should be paid to the presence of uninsulated power lines nearby (risk of arcing). Unless local regulations are more restrictive, the minimum safety distances from uninsulated, live parts must be respected. Those distance are in table of chapter 9.1 -Specific terminology in column "Outside vicinity" Approach with no particular monitoring
- If preparation of the work reveals a risk associated with the proximity of power lines, operating personnel must have been informed of this risk and in particular the risk of arcing near to a line.
- The maximum height of scaffolding or platforms must be suitable, taking into account the fact that the height of a person in relation to the highest platform needs to be added (typically add 2 meters).
- In the case of the movement of vehicles, approach without specific monitoring (considered as out of the vicinity) can be reduced to 1 m up to 50 kV and 2 m beyond 50 kV.
- If required, floor marking or gauges must be used.
- When using a crane, and according risk analysis, a supervisor must be present.
- If work has to be done in the vicinity of an overhead powerline, the agreement of the power line manager must be beforehand obtained so that the line can be powered off or compensatory safety measures can be recommended.
- Those operations are classified as "highly critical" and therefore at least one site visit on the part of the entity is required preferably at the beginning of the work. This visit is conducted by a competent representative of the entity (operator, principal, or specialized service provider, ...).

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10 - HOT WORK

10.1 - SPECIFIC TERMINOLOGY

HOT WORK

In general, this includes all work:

- a) With naked flames (welding, cutting or sealing work using a blowtorch).
- b) Which produces sparks (slicing, grinding metal, arc welding, use of a pneumatic drill, etc.).
- c) Which might produce fire hazards because it generates high temperatures (thermal stripping etc.).
- d) Carried out in areas at risk of explosion with equipment that could cause ignition (*equipment using thermal or electric motors*) (see chapter 11 - Work in Explosion hazard locations).

Categories a), b) and c) are called "work involving fire risks".

10.2 - SCOPE

- The rules outlined in this chapter apply to hot work only. They do not relate to routine operations (furnaces, boilers, torches, laboratory equipment, kitchens etc.) which shall be subject to specific instructions or arrangements if they generate hot spots.

10.3 - GENERAL PRINCIPLES – HOT WORK PERMIT

- A permit is systematically prepared for all hot work. This permit is typically called a "hot work permit".
- For category d) Work with risk of explosion, the requirements of this chapter and chapter 11 - apply.
- Hot work permits have a limited validity period. They shall therefore be reassessed whenever one of their constituent elements changes (place, environment, process, nature of the work, workers etc.). Good practice is to limit them to one day or even one shift.
- There may be exemptions from the requirement to have a permit (see §5.2.2 - Specific exclusions) for defined zones such as maintenance workshops or for a new work site. These exemptions do not eliminate the need for the prevention measures described in this chapter.

10.4 - PREPARATION PHASE

RISK ANALYSIS

- Internal documents shall be taken reference from (plans of hazardous locations, safety data sheets) to identify possible specific risks.
- The work area shall be recognised to check for the presence of combustible products close by in adjacent premises or to draw attention to any elements likely to conduct heat (pipework, ducts etc.).

MAKING AREA/EQUIPEMENT SAFE

- Hollow capacities and volumes (tanks, pipelines etc.) shall be drained and degassed and isolated as close as possible to where the work is performed before hot work is carried out on the installation subject to hot work permits.

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- Combustible materials and products (rags, cardboard boxes, plastic, wood, containers etc.) shall be removed to a suitable distance (typically 10 m).
- The area shall be cleaned to remove all waste, dust, fatty deposits etc.
- Combustible elements which cannot be reallocated shall be protected and covered with fire retardant tarpaulins or plates jointed together. Additional sprinkling can be provided if necessary.
- Openings, gaps, drains etc. which could collect sparks shall be protected/covered with screens of non-combustible materials (sand, metal plates, tarpaulin etc.).
- If there is any doubt about the presence of flammable gases, a gas detection shall be carried out (see chapter 11 - Work in Explosion hazard locations).

Reminder: if the location is known as an explosion risk area, the requirements of chapter 11 - Work in Explosion hazard locations must also be applied.

10.5 - HOT WORK PHASE

- The condition of the tools used shall be checked before being used by the worker, particularly oxyacetylene torches.
- Suitable extinguishing and alarm measures for the risk shall be put in place in the immediate vicinity of the work area. At the very least, one fire extinguisher shall be available for work involving fire risks.
- Cooling equipment can be installed to avoid the dissipation of heat on the installation (pipes in particular).
- Combustible materials nearby which are difficult to protect can justify the presence of a fire watch (typically when combustible materials are less than 10m away from work involving fire risks).
- All exits shall be kept accessible.

10.6 - MONITORING PHASE DURING AND AFTER THE WORK

WORK INVOLVING FIRE RISKS

- Hot elements or parts of installations shall be cooled down. The place of work and its surroundings shall be:
 - inspected to check there are no hot surfaces,
 - monitored periodically after work has stopped, over a period to be determined (typically between 30 minutes and 2 hours depending on the structure's cooling speed) to reduce the risk of smouldering fire,
 - If possible, depending on the nature of the work and the period when it is completed (end of activity on the site), a surveillance patrol must be organised with the security company.

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11 - WORK IN EXPLOSION HAZARD LOCATIONS

11.1 - SPECIFIC TERMINOLOGY

DEFINITION OF ZONES:

- **Zone 0:** location where an explosive atmosphere consisting of a mixture of air with flammable substances in the form of gas, vapour or mist is always present or for long periods or frequently. This may, for example, be vents areas, inner of fixed roof tanks, closed decanters and separators.
- **Zone 1:** location where an explosive atmosphere consisting of a mixture of air with flammable substances in the form of gas, vapour or mist is likely to be present occasionally as part of routine operations. This may be the immediate environment around zone 0 and hydrocarbon filters in particular.
- **Zone 2:** location where an explosive atmosphere consisting of a mixture of air with flammable substances in the form of gas, vapour or mist is not likely to be present as part of routine operations, or if it does happen to be present it is only there for a short time. This may include locations around zones 0 and 1, pumps and compressors in particular.
- The geometry and size of these zones are not covered by this rule but are defined:
 - by "metiers" standards, which are themselves based on internationally recognized norms, standards and guidelines,
 - where appropriate by local regulations.

EQUIPMENT THAT CAN CAUSE SELF-IGNITION:

Equipment that generates naked flames and sparks, comprising of hot surfaces with no specific protective measures for operating in an explosive atmosphere. If the heat related to using a tool cannot be dissipated (sawing, drilling etc.), the tool shall be considered as a cause of self-ignition. even in the absence of electrical or combustion engines.

EQUIPMENT SPECIFICALLY DESIGNED TO OPERATE IN EXPLOSIVE ATMOSPHERE:

Equipment that complies with international standards (ATEX pour l'Europe) should have the necessary protective measures defined to ensure that they operate safely in an explosive atmosphere. The choice of equipment depends on the nature of the hazard (gas: combustible dust, on the nature of the product and the area where the equipment is going to be used). With regard to manual tools, only tools used in a way which might generate sparks (sledgehammers, hammers, striking wrenches) must be made from non-sparking alloy.

LEL:

Lower Explosive Limit (or flammability). The lowest concentration of gases or vapours in the air beyond which the gas-vapour/air mixture can be ignited. This value differs depending on the nature of the gas/vapours.

11.2 - SCOPE

- The rules outlined in this chapter apply to work which are likely to cause self-ignition carried out in the areas at risk of explosion They do not relate to routine operations carried out in these areas.
- These rules also apply when, regardless of the areas defined, explosiveness is suspected (similar to zone 2) or confirmed (similar to zone 1). This is particularly the case with work in the event of leaks.

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11.3 - GENERAL PRINCIPLES

RISK ANALYSIS

- Work in areas at risk of explosion shall be subject to risk analysis to determine if they may cause self-ignition. If they are by nature or if special precautions shall be taken to limit the cause of self-ignition, a permit should be prepared.
- In any event all endeavours will be made to neutralise the sources of flammable gas / vapours (temporary shutdown, degassing), which is tantamount to eliminating the area during the work.

AUTORIZATION / WORK PERMIT

- A work authorisation/permit is required for any work in explosion risk areas if this work is done by an outside company.
- If this work is done by the entity's personnel, a work authorisation/permit is required if the work is a cause of ignition.

SAFETY RULES TO BE FOLLOWED DEPENDING ON THE AREA

Areas	Safety rules
0	No work and no human presence should be authorised.
1	<ul style="list-style-type: none"> - work shall be limited as much as possible, - permanent flammable gas/vapour detection during the work. Work shall be stopped and staff evacuated if the 10% explosiveness limit is exceeded. - antistatic clothing and shoes shall be worn, - tools and equipment which do not by their nature cause self-ignition and equipment (particularly electrical) specifically designed to operate in an explosive atmosphere shall be used, It is possible to occasionally use equipments which are sources of ignition, once a risk analysis was performed and if an explosion detector is in use at the location where the equipment will be used.
2	The rules are generally the same as for zone 1 (including the requirement of permanent detection), except that tools and equipment that might cause self-ignition can be used.

SPECIFIC CASE IN WHICH THE SOURCES OF FLAMMABLE GAS/VAPOURS HAVE BEEN NEUTRALISED

- If the sources of flammable gas/ vapours have been neutralised (temporary shutdown, degassing), which is tantamount to making the area disappear, during the work, the above measures can be replaced by the following measures:
 - locking/isolating the equipment listed on the work permit,
 - preliminary checks for the presence of gas and vapours before starting the work (good practice is to carry out permanent checking).

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11.4 - MANAGEMENT OF EXPLOSIVENESS MEASURES

- The explosimeter shall be kept in good working order and shall be periodically recalibrated (at least once a year)¹³.
- Recalibration shall be done according to the gas/vapour to be detected. If several flammable gases/vapours are to be detected it will be based on the most dangerous.
- The results of the explosiveness check shall be used in the following manner:

Concentration of hydrocarbon or other flammable gases / vapours measured		
Result of the check		Work rules
HC detectable during the test		<ul style="list-style-type: none"> - Any value other than zero shall be explainable. - If there is no coherent explanation for the presence of explosiveness, no work should be undertaken
Origin of explosiveness, understood, stabilised and controlled	HC <2 %	<ul style="list-style-type: none"> - Work without particular restrictions
	2% < HC ≤ 10%	<ul style="list-style-type: none"> - The harmfulness of the vapours (petrol in particular) may mean that breathing protection is needed - Permanent control
	HC > 10% of LEL	<ul style="list-style-type: none"> - Work prohibited - Evacuation of the area

- If it is not permanent,
 - an explosiveness check shall be carried out at least once a day.
 - Checks should be more frequent if conditions are potentially progressive (high thermal amplitude in the morning / at noon, close proximity to an installation in operation).
 - The measured value shall be indicated on the permit.
- The detection equipment and its positioning must be selected by a competent person.

12 - EXCAVATION WORK

12.1 - SPECIFIC TERMINOLOGY

EXCAVATION WORK

Work consisting of earthworks, excavating or drilling the ground and driving posts mechanically or manually.

12.2 - SCOPE

- The rules outlined in this chapter apply to excavations under ground level, to a depth greater than 0.50m.

12.3 - GENERAL PRINCIPLES

- Excavations shall be subject to a permit, which should appropriately identify the work area.

¹⁴ The recommended thickness is 30 centimetres above and 30 centimetres below a structure.

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12.4 - RISKS RELATED TO UNDERGROUND WORK

IDENTIFICATION

- Any underground work shall be identified before a work permit is issued. It is good practice to do this when the prevention plan is being written and to include the necessary documents in it.
- Different types of work can be underground such as the following for example:
 - cables: high and low voltage electricity, telephone and computer network,
 - pipelines: gas, drinking water, fire fighting water, cooling water, drains (storm water, waste water etc.),
 - tanks, foundations etc.
- Industrial sites shall have an up to date plan of their underground work including disused works.

IDENTIFICATION

- Any underground works located in the work zone shall be physically identified on the ground, before the work starts, with staking or paint marks on the ground. This marking shall enable the outline of the underground works to be recognised unambiguously.
- If there is any doubt, excavations shall be carried out by hand.

MAKING WORKS SAFE

- Underground electrical cables (> 50 V) shall be made safe if excavations (mechanical) are made nearby (see work procedure section). Locking them out shall be included on the excavation permit or on a specific lockout approval.
- Other types of pipelines can also be made safe in order to be able to work with an excavator nearby (process, water, gas).

UNDERGROUND WORKS BELONGING TO THIRD PARTIES

- Work carried out less than 1.5m away from works belonging to third parties shall be subject to particular attention.
- In this respect, the companies or administrations concerned shall have been notified beforehand particularly to:
 - check, when a project is being developed, that it is compatible with the existing networks,
 - be aware of the technical safety recommendations that shall be applied during and after these works,
 - know whether it is necessary to perform additional investigations to clarify the location of networks. et de mettre en œuvre les mesures de mise en sécurité de leurs lignes si nécessaire.

WORK PROCEDURE

- Close to underground works which are in service, excavation shall be carried out by hand. Stopping the excavator shall meet the following criteria:
 - 1.50m away from the work when it involves live high voltage electrical cables (>1000 V),
 - 1.00m away from the work when piping or cable is identified from a plan or a marker, or in the case of low-voltage electrical cables (live),
 - 0.50m away from the work when piping is identified by electromagnetic sensing.
- If warning mesh is discovered mechanical excavations shall stop immediately.
- Manual excavation close to a live "high voltage" (> 1000v) electric cable should only be carried out with extreme caution (use of a cable detector recommended, digging work).

CLOSING THE TRENCH

- Warning mesh shall systematically be placed directly above the new underground works.

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- The characteristics of this warning mesh and its placement must comply with regulations in force. If there are no regulations, the rules defined by the entity or the profession must be followed.
- The work shall be buried on a bed of non-saline sand¹⁴ (buried stones can damage underground pipes).

UPDATING DOCUMENTS

- Site plans shall be updated immediately when new underground work has been carried out.
- With regards to existing work, this is an opportunity to take advantage of the works to improve the accuracy of existing plans, particularly by checking and marking them and taking photos.

12.5 - STABILITY OF EXCAVATIONS AND TRENCHES

- For deep excavations and depending on the nature of the terrain, a maximum slope is to be respected or bindings can be used (sheet piling for example).
- In the case of soft ground and in the absence of sloping¹⁵, excavations must be armoured if they are deeper than 1.50 m. If the excavated earth is heaped up less than 0.40 m from the trench, its height must be included in the calculation of the depth of the trench.
- A safety distance¹⁶ shall be applied between the position of the machinery and the edge of the trenches *or unreinforced excavations*.

12.6 - USING A MECHANICAL DIGGER

- Mechanical diggers shall only be driven by qualified drivers.
- If the driver's sight of vision is unclear, he shall be assisted by a third person to guide him.
- The ground on which the machinery is driven must be stable and strong enough to support its own weight (see section above).
- The staff concerned shall not stay within the operating or pivoting area of the machinery.
- The staff shall check and comply with the safety distance with regards to overhead electrical power lines. (cf. chapter 9.6 -Working near overhead powerlines).

12.7 - SITE SIGNAGE AND ACCESS

- The site shall be marked up (taped off at least). Road signs shall be put in place where appropriate.
- Hard protection (barriers, removable grids) shall be put in place if the excavation remains open at night or if it is freely accessible.
- Where appropriate, ways of crossing it shall be provided for staff and even vehicles.
- Safe access (Ladder, Ramp) to the bottom of the excavation (if necessary) shall be provide to prevent the risk of falling).

12.8 - SPECIFIC RISKS

POLLUTED LAND

- The risk of pollution shall be anticipated at the "prevention plan" stage as far as possible.

¹⁴ The recommended thickness is 30 centimetres above and 30 centimetres below a structure.

¹⁵ As soon as the slope is straighter than 45° or 1/1

¹⁶ Machinery must typically be moved vertically away from the bottom of the excavation at a distance equivalent to the depth of the excavation. This distance is increased to twice the depth of the excavation for soft or made ground

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- If the excavated soil appears to be polluted (strong smell), it shall be analysed in order to check whether individual PPE should be worn and/or particular monitoring (explosimeter) should be put in place.
- Polluted soil shall be treated or evacuated to respect the environment. Its temporary storage shall not spread the pollution excavated (skips, liners etc.).

OTHER RISKS

- A deep trench can become a confined space (see chapter 14 -Working in a capacity or a confined space).
- The potential presence of a water table must be checked insofar as it can affect the consistency of the soil and lead to the choice of armouring and a dewatering pump being installed.
- In the event of discovering an abnormal buried object (ammunition, hazardous waste, etc.) work shall be stopped. In this case, access to the area must be prohibited and the competent authorities or bodies must be notified.

13 - WORK AT HEIGHT

13.1 - TERMINOLOGY

WORK AT HEIGHT

Work involving exposure to a risk of falling from heights. Working at height may require the use of some specific equipment (scaffolding, mobile elevating work platforms, ladders), but also concerns situations which do not rely on such equipment (such as work on platforms, roofs, etc.).

POTENTIAL FALL HEIGHT

Distance from the feet of the individual working at height to the ground or a possible intermediate floor.

MOBILE ELEVATING WORK PLATFORMS (MEWP):

Machinery specifically designed for elevating staff comprising a work platform at least (cradle), an extendible structure and a chassis (self-propelled or moveable).

13.2 - SCOPE

- The rules outlined in this chapter apply to operations (including routine operations) with a risk of falling from a height of more than 2m even on water
- The following are not considered to be at risk of falling:
 - areas protected by solid walls, grilles or railings (with an intermediate middle rail) at least 1m high,
 - stairs, fixed ladders,
 - work at the edge of a bank with a slope less than 45° (typically work on a retention tank merlon),
 - the use of elevators.
- By contrast, the following are covered by these rules: the use of scaffolding, scissor lifts, suspended cradles, even if the work space is secure.

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13.3 - GENERAL PRINCIPLES

RISK ANALYSYS

- A thorough analysis of the installations on a site shall aim at limiting the frequency of work at height during their operation and maintenance.
- Gateways and stairs with collective protective equipment shall be used as a priority to access workplaces located at height.
- Special attention must be paid to the presence of power lines nearby (risk of arcing – see paragraphe 9.6 -Working near overhead powerlines).

AUTHORIZATION / WORK PERMITS

- A permit shall be established for all work at height carried out without collective protective equipment. This permit requirement does not apply to routine operating tasks covered by instructions and especially not to dome loading stations where a harness is worn.
- Even though it includes collective protective equipment, a permit is also required for work at height carried out on scaffolding.

APTITUDE

- Individuals carrying out work at height must be in good physical and psychological condition (no vertigo or fear of heights).

SURVEILLANCE

- When the fall hazard exceeds 4 meters, those operations are classified as "highly critical" and at least one site visit on the part of the entity is required preferably at the beginning of the work. This visit is conducted by a competent representative of the entity (operator, principal, or specialized service provider...).

13.4 - RULES REGARDING THE CHOICE OF ELEVATION RESOURCES

- All work at height shall be carried out with the appropriate elevation equipment taking into account the potential fall height and the ease of implementation. The rules regarding choice are summarized in the following table:

Height of potential fall during the work	height ≤ 3 m	3 m < height ≤ 6 m	6 m < height ≤ 40 m	Height > 40 m
Elevation equipment	-Ladder/stepladder (subject to reservations below) -Stepladder with guardrails -Secure mobile work platform -Scaffolding -Mobile scaffolding -mobile elevating work platforms	-mobile elevating work platforms -Scaffolding -Mobile scaffolding	- mobile elevating work platforms t - Scaffolding	-Scaffolding -Cradle suspended from a crane -Working with ropes

- As a means of access portable ladders can be used for heights up to 6m

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LADDERS/STEPLADDERS

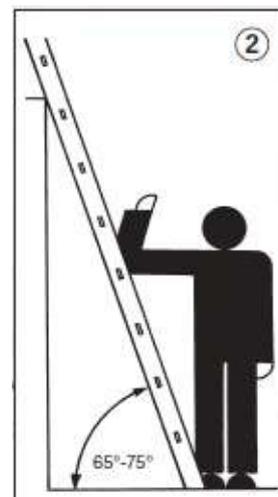
- Portable ladders or stepladders without guardrails shall be regarded as a means of access and should therefore not be used to carry out work.
- However, as an exception, their use is tolerated (all conditions shall be met)
 - for simple work, not requiring physical effort, that can be generally carried out with 3 points of contact (replacing bulbs, taking measurements, tightening screws, minor wiring work, etc.),
 - if the height of the fall does not exceed 3m.
 - if the load to be borne does not exceed 5 kg

GREAT HEIGHTS

- Using mobile elevating work platforms beyond 40m shall be strongly discouraged (the limit of the equipment)
- Using a cradle suspended from a crane shall be reserved for professionals insofar as it is subject to very restrictive conditions¹⁷. This restriction does not apply to suspended platforms found on very high buildings for window cleaning.

13.5 - SETTING UP AND USING PORTABLE LADDERS

- Before use it should be checked that the rungs and stiles are in good condition, there are anti-slip pads and any extension is not stuck.
- The ladder shall be placed on the ground in a stable manner with no risk of sliding or tipping over but:
 - anti-slip mats cannot be considered as a sufficient guarantee to prevent sliding on a smooth floor (concrete, resin etc.). Attaching the feet is a good preventive measure with regards to this risk, The ladder can also be held by a second worker,
 - with regards to the risk of tipping over, several preventive measures can be recommended such as attaching it at half height or full height, wedging the elements of the structure together or stabilising legs.
- It should be inclined in such a way that the vertical distance from the foot to the support point is at least one third or one quarter of its length.
- If a double extension ladder is used, the overlap should be around 1m.
- If a ladder is being used as a means of access, it should go beyond the work area by 1m at least.



13.6 - SCAFFOLDING

GENERAL RULES

- Scaffolding shall be reserved only for temporary works at height.

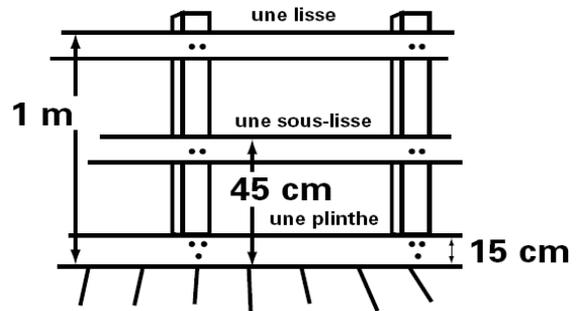
SIZING AND MATERIALS

- The type of scaffolding erected should be suitable for the work to be carried out, loads to be borne and the necessary height.
- The supporting structure must be made of metal or synthetic composite (not wood).
- The boarding shall be uniform and fixed to the structure, to prevent it from sliding
- The work platforms must be accessible by appropriate ladders or stepladders.

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GUARDRAILS

- The scaffolding guardrails shall be fitted¹⁸ with:
 - a rail about 1 m above the work platform,
 - a middle rail at half height,
 - a baseboard to prevent objects from falling.
 - more stringent values may be demanded by local regulations,
 - this system can be replaced by grilles or temporary nets of the same height.
- If the overall size means that a guardrail cannot be installed, a harness must be worn at all times.



ACCESS

- Above 2 m, the access ladder must be internal and intersect a floor every 4 m maximum.

ASSEMBLY

- In general assembling, securing, stabilising and dismantling scaffolding shall be entrusted to competent professionals. It is prohibited for non qualified staff to modify scaffolding.
- In the erection or dismantling phase, only personnel responsible for this type of job may be authorised to go onto the scaffolding.
- The end of scaffolding erection must be formalised (typically by the installation of a notice indicating access authorised/forbidden).

INSPECTION

- Before the first use, a thorough inspection should be performed regularly (every 3 months at least) by an authorised person¹⁹. These inspections which are typically carried out with a check-list shall be recorded. They are renewed every 3 months.
- A weekly routine inspection must also be carried out.
- An inspection should also be carried out after strong winds.

MOBILE SCAFFOLD TOWERS/ MOBILE PLATFORMS

- The scaffolding shall be immobilised (wheels locked, attachment points) before authorising access.
- It is prohibited to move mobile scaffold towers while staff is on-board.
- The risk of tipping particularly associated with the force exerted by staff working there shall be taken into account.
- When moving, special attention must be paid to the presence along the route of obstacles and overhead power lines.

PERSONAL PROTECTIVE EQUIPMENT

- The erectors shall wear a harness with a Y shaped lanyard or double lanyard permanently attached²⁰. They must wear hard hats with the chinstrap attached.
- Once the guardrail is in place, work on scaffolding no longer requires harnesses. If the nature of the work allows it, it is good practice to request the wear of the harness continuously.

¹⁸ If the scaffolding is supported by a structure, a guardrail is not needed on the structure if the space between the floor and the structure is less than 20 cm.

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SUSPENDED SCAFFOLDING

- The occupants of suspended scaffolding must have been given special training in advance on the equipment they will have to use.
- These occupants must wear harnesses at all times.
- The equipment, in particular the attachments, must be inspected daily.

13.7 - SPECIFIC AREAS WITH A RISK OF FALLING

- If it is not possible to secure the work area against the risk of falling with a guardrail or full walls, especially during the transitional assembly / disassembly phases:
 - safety nets shall be put in place (maximum fall height of 3 m),
 - temporary fall arrest platforms shall be put in place (maximum fall height of 2 m),
 - harnesses shall be worn.

13.8 - USING A SAFETY HARNESS

GENERAL INFORMATION

- The harness shall be tailored to the size and weight of the person it is protecting. It shall be snug against the thighs, the waist and the shoulders. Using a harness which only covers the thighs and the waist shall be prohibited.
- All the equipment (harnesses, lanyards, shock absorbers and inertia reels) shall comply with the recognised standards in the areas of use (European standards and CE marking in Europe).
- It should be prohibited to work alone²¹ on a site with a harness.
- Furthermore, as the harness is a fall arrestor, the operator does not have to work while suspended, pulling constantly on the lanyard. Such a situation falls under rope work.

ASSEMBLY

- The harness is connected to the attachment point using a lanyard (strap, cable or rope). The lanyard shall be as short as possible :
 - If the risk of falling is less than 2m²² a simple lanyard may suffice.
 - If the risk of falling is higher than 2m, a fall arrest system with retractors and slides or failing this, a shock absorber shall be installed during assembly:
 - The system should limit the effects of falling from heights not exceeding 2m,
 - the operator shall ensure that he does not risk hitting an obstacle before the lanyard and the fall arrest system are fully unfurled and in the stop position (a fall arrest system or a shock absorber needs 1 to 2 m to stop).
- If the operator moves, there shall be either an inertia reel or slide system, or two lanyards, one of which shall always be attached.
- The straps shall be attached with locking carabiners (mountaineering type).

ATTACHMENT POINT

- It is strongly recommended to hook on to attachment points which have been specifically put in place. If there are no structural components or handles, manholes can be used.
- It should be prohibited to attach directly to:
 - the rails and middle rails of guardrails,
 - cable trays,

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- suspended pipework.
- The strength of an attachment point (for a falling person) must be in the region of:
 - 750 kg for lanyard attachment points,
 - 2,000 kg for lifeline attachments.
- The attachment points and lifelines must be checked at regular intervals (at least every 5 years).

CHECKS

- Before use, the whole assembly shall be checked (this check can be carried out by the user himself), particularly:
 - that the harness (seams) is in good condition,
 - that the lanyard is in good condition²³ (straps / ropes which are soaked in oil or damaged shall be corrected).
- In the event of a fall, the rope, and the shock absorber shall be replaced. As for the harness, it shall be checked.

13.9 - WORKING WITH ROPES

- Using ropes to carry out works at height is prohibited except for exceptional work, if it is technically impossible to use other means (scaffolding for example) or if the risk assessment shows that using such equipment exposes the staff to a lower risk than other means which might be used (erecting scaffolding in particular)²⁴.
- Under no circumstances shall economic and time criteria be taken into account when carrying out this technical work.
- Only specialist companies with all the necessary certifications and extensive experience in this field shall be used. Rope workers²⁵ must be qualified individually.
- Workers on ropes shall be fitted with a harness (special).
- The system shall include at least one work rope, constituting a means of access, lowering and support, and a safety rope, equipped with a fall arrest system. These two devices are anchored separately.

13.10 - USING MOBILE ELEVATING WORK PLATFORMS

CHOICE

- The choice of type of mobile elevating work platforms (MEWP) and their use shall be compatible with:
 - the access route to the work area (height obstruction, electrical cables, unobstructed thoroughfares, nature of the ground) and the work to be carried out,
 - the maximum load to be raised (particular attention shall be paid to the weight of the equipment which may need to be dismantled and brought down to the ground).

POSITIONING

- Before use, the machinery shall be positioned on flat ground and be stabilised.

²⁵ Typically a rope worker professional qualification certificate (CQP), level 1 for operators, level 2 for the supervisor (France) or IRATA (Industrial Rope Access Trade Association), level 2 for independent rope work operators) and level 3 for the supervisor or a national equivalent of the same level.

²⁵ Typically a rope worker professional qualification certificate (CQP), level 1 for operators, level 2 for the supervisor (France) or IRATA (Industrial Rope Access Trade Association), level 2 for independent rope work operators) and level 3 for the supervisor or a national equivalent of the same level.

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- The work zone must be marked out.
- An aerial survey of obstacles must be carried out in particular to avoid the risk to be crushed against when the platform is moving.

USE

- The handling of MEWP shall be entrusted only to qualified and authorized people (unqualified personnel may be admitted but only as passengers).
- Staff in the cradle shall be equipped with a harness which shall be attached to the cradle.
- Staff capable of intervening²⁶ shall be present on the ground nearby. A radio link shall be put in place if possible when the person in the cradle cannot communicate orally with or directly see the ground staff.
- A control station shall be accessible at ground level when the equipment is in service.
- No staff shall remain on an elevated platform when the machinery is being moved on the ground. Exceptions are permitted if the cradle is specifically for this purpose and if the nature of the ground allows the machinery to be moved safely. A second operator on the ground shall ensure that all movement is safe.

CHECKS

- MEWP should have a maintenance programme and periodic checks.
- Before each use, the main MEWP components shall be visually inspected. Good general condition, stability, no hydraulic leaks, condition of guardrails.

USING FORKLIFT TRUCKS TO ELEVATE PEOPLE

- Lifting people in a secure cage adapted to the forks using a forklift truck is limited, in countries where the practice is not prohibited, to a height of 5m.
- An operator capable of handling forklift trucks shall remain on the ground at all times.
- Lifting people on a pallet using a forklift truck is strictly prohibited.
- Fixing a cradle via a sling, to the forks of a forklift truck is strictly prohibited.

13.11 - WORKING ON ROOFS

PROTECTION MEASURES

- The nature of protection measures depends on the slope of the roof:

Slope of roof	Protection measure for the roof slope
Flat roof	If the flat roof only has one parapet wall (usually at a height of 0.50m), the requirement for additional security measures or not must be carried out according to the nature of the work and its location in relation to the edge of the roof. It is good practice to mark out the work area to prevent people getting within 2 m of the eaves.
Slight slope < 20°	Downstream protection by guardrail, collection surface or nets is necessary.
Steep slope > 20°	Downstream protection by nets or slats is necessary. It is strongly recommended to wear a harness if an attachment point is available.

²⁶ This shaft shall be able to bring the platform in lower position

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Very steep slope > 45°	Installation of special work platforms to be able to stand upright. Collection systems must be installed downstream of the workstation to limit slipping on the roof at a height difference of 5 m. We strongly recommend wearing a harness if an attachment point is available.
Extreme slope > 60°	Equivalent to a vertical surface (rope work). Special attention is to be paid to the fall risk on the sides of the roof

- Regardless of the downstream protection linked to the slope of the roof, lateral fall protection must be installed.
- It must be prohibited to access a roof made slippery by the atmospheric conditions.

FRAGILE ROOFS (FIBRE CEMENT, TRANSLUCENT COMPONENTS, OPENINGS)

- Complementary safety measures²⁷ must be taken to prevent falls through the roof:
 - installation of a walkway or a roofer's ladder, harness to be worn that is attached to this walkway or another attachment point that may be available,
 - if the fragile elements or openings are limited in terms of surface area, it may be enough to wear the harness (attachment points must be available),
 - if there are no attachment points available, protective nets must be installed under the roof.

SERVICE STATION CANOPIES

- Unless they have a specific design, service station canopies must be considered to be fragile roofs.

13.12 - WORKING ON TANK ROOFS

- Access to tank roofs shall be regulated.
- Only the general rules are developed below. Further details concerning access to tank roofs are given in the warehouse rules: CR MS EXP 001 - Tank operation.

FIXED ROOFS

- Routine access to fixed tank roofs is only allowed via secure routes such as:
 - a) walkways with grating and guardrails, or
 - b) routes directly on metal roofs when they are clearly identified and specifically monitored and they meet **all** the conditions below:
 - the thickness of metal shall not be less than 4mm, except for limited areas,
 - the routes are clearly identified and marked,
 - the corresponding guardrails are in place,
 - the coating or the anti-slip material is in place and in good condition.
- Using a safety harness attached to a life line is mandatory if there are no secure routes such as described in a) or b). Access to the roof is then subject to formal authorisation from the operator.

FLOATING ROOFS

- Access to floating roofs when products are being moved shall be prohibited.
- Access to floating roofs in the low position comes under entering confined spaces.

FLOATING SCREENS

- Access to floating screens when products are being moved shall be prohibited.
- Access to floating screens inside tanks comes under entering confined spaces.

²⁷ In addition to the risk of falls from the roof

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Further details concerning access to tank roofs are given in the warehouse rules: CR MS EXP 001 - Operating the tanks.

13.13 - SIGNAGE: FALLING OBJECTS

- There shall be signage on the ground when:
 - there is a risk of falling objects/tools (especially during the assembly/dismantling of scaffolding)
 - It is necessary to protect the means of elevation (ladder, scissor lift etc.) from circulation routes
 - it is necessary to warn/protect people moving on the ground from the obstacle caused by the means of elevation
- If collective protective equipment (nets, guardrails etc.) have been removed, compensatory measures shall be adopted (signage, prohibited access etc.) in the area concerned so as to protect against any risk of staff falling.
- Particular attention must be paid to prevent tools from being dropped. Good practices include:
 - storage in boxes or baskets lifted after accessing the workstation at height,
 - strapping of tools, either to the worker or to an attachment point.

14 - WORKING IN A CAPACITY OR A CONFINED SPACE

14.1 - SPECIFIC TERMINOLOGY

CONFINED SPACE:

Partially or totally enclosed space which has not been designed and constructed to be occupied on a permanent basis by people, nor intended to be, but which, on occasion, may be temporarily occupied to carry out work (inspection, maintenance or repairs draining/loading) and within which the atmosphere can present risks to the health of the individual(s) who enter.

LEL:

Lower Explosive Limit (or flammability). The lowest concentration of gases or vapours in the air beyond which the gas-vapour /air mixture can be ignited. This value differs depending on the nature of the gas - vapours.

OELs: OCCUPATIONAL EXPOSURE LIMIT VALUES²⁸

The occupational exposure limit value for a chemical product represents the concentration in the air that an individual can breathe for a specified time. It aims to protect against **adverse health effects** related to exposure to the product under consideration.

The application of this rule refers to short-term and medium-term OELs and not long-term which are valid for a whole working life:

- The short-term exposure limit values (15min OELs) are intended to protect against peaks of exposure. They relate to a reference duration of 15 minutes.
- The exposure limit values of 8 hours (8hr OELs) are intended to protect the workers against long-term effects, measured or estimated over the duration of 8 hours at a workplace.

²⁸ These values can be found in the product's safety data sheet in the exposure control/personal protection chapter

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IMMEDIATELY DANGEROUS TO LIFE LIMIT / IRREVERSIBLE EFFECTS LIMIT:

Limit for which exposure of approximately 30 minutes is sufficient to cause death or irreversible toxic effects. Known in English under the name of IDLH (Immediately Dangerous to Life or Health).

14.2 - SCOPE

- The rules outlined in this chapter apply to any entry into a confined space, this includes any individual carrying out any action of passing, even partially with the head through an opening into a confined space.
- Capacities, reservoirs, tanks (tankers, tank-wagons etc.), ducts, pits, valve chambers, deep trenches, basins, sumps, drains, trenches, excavations as well as certain rooms can be considered as confined spaces.
- In particular, the following can be considered as confined spaces:
 - containers, tanks, underground vessels,
 - access to floating roofs when lowered (see 13.12 -Working on tank roofs **Erreur ! Source du renvoi introuvable.**),
 - tankers (mobile tankers, tank cars, etc.),
 - pipes, pits, valve chambers, underground vessel manhole stacks,
 - sumps, drains, pipe paths,
 - deep trenches.
- Particular attention will be paid to confined spaces created during work phases such as welding tents or spaces covered by tarpaulins.
- With regards to trenches, uncovered pits, or even basins, a space is regarded as confined when the depth is greater than 1.5 m and if the depth exceeds the smallest of the horizontal dimensions (length or width). A large retention basin is therefore not regarded as a confined space.

14.3 - GENERAL PRINCIPLES

- The type of containment for the work area must be assessed during preparation for the operation.
- All work in a confined space shall always be considered high risk and therefore, it should be considered only if there are no other reasonable ways to carry out the work or tasks required.
- All interventions, of any kind whatsoever, require a permit to be processed and issued
- The entity shall have a written procedure for working in confined spaces. This shall specify at least:
 - the isolation methods for confined spaces,
 - the permit approval and management methods,
 - the atmospheric monitoring methods and the acceptability criteria,
 - PPE requirements,
 - ventilation requirements,
 the work monitoring methods.

14.4 - PREPARATION FOR THE OPERATION/RISK ANALYSIS

- Risks shall be identified by the operator in conjunction with the contractor where appropriate. The following points shall be addressed:
 - provision methods for the equipment / installation to be carried out,
 - risks related to the products contained and the atmosphere remaining after provision: oxygen, toxicity, explosiveness etc,

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- risks associated with the tank's history, in particular for old tanks that contained leaded petrol²⁹,
- other risks related to the work environment: burial, drowning, falling, mechanisms, extreme temperatures etc.,
- types of planned work and associated risks: welding, cutting, applying coatings and risks and atmospheric conditions generated by this work: emission of harmful vapours, fumes.
- This risk analysis will define the prevention, protection, monitoring and rescue measures to be put in place.
- Any significant change regarding the work (nature, duration) or the conditions in which it is carried out will require rechecking that the risk analysis and the security measures defined are still valid.

14.5 - DEFINITION OF THE WORKING CONDITIONS AND THE PREVENTIVE AND PROTECTIVE MEASURES

ISOLATION

- Aspects to account for a safer preventive/protective measure:
 - products/ arriving via the supply lines,
 - potential return lines such as outlet lines, decanting lines, shared vent lines, balancing, thermal expansion relief valves, etc.
 - other injections of products, particularly for instrumentation, inerting and washing purposes,
 - heating systems (internal and external),
 - mechanisms such as stirrers,
 - ionising radiation sources,
 - fire protection systems such as foam canisters, powder extinguishers etc.
- Entering a capacity which has been isolated simply by closed valves shall be prohibited. Isolation shall be carried out at as much as possible by removing lines or by applying full seals,
- Exceptionally and when justified, exceptions are possible on the basis of specific risk analysis,
 - particularly in the context of fluids with a very low potential for danger (cold water etc.),
 - if isolation is impossible (drains, access to a roof or floating screen, etc.).

MEANS OF ACCESS

- The means of access provided shall allow for easy exit from as well as easy entry to the confined space.
- The means of access and in particular the size of the openings shall be compatible with a rescue operation.

VENTILATION/RESPIRATORY PROTECTION

- The confined space shall be properly ventilated, naturally or artificially. (preferably by blowing).
- Any entry into a confined space with filter masks (cartridges) for respiratory protection shall be subject to specific risk analysis in which details will be given about the process in place for monitoring the oxygen and toxicity levels and ensuring stable working conditions.

MAXIMUM NUMBER OF PEOPLE AUTHORISED TO ENTER SIMULTANEOUSLY.

- The number of people who can enter a confined space simultaneously shall be predefined and stated on the permit.

²⁹ See Refining – Chemical guide GM-RC-HSE 077

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TOOLS/LIGHTING

- If work is carried out, internal lighting shall be set up in confined spaces which do not have natural light.
- For metal capacities, power tools and lighting shall be powered either with 48v max (SELV), voltage reduced to 24v in damp conditions, or via an isolation transformer, i.e. with a **30 mA** ground fault **circuit breaker**. The transformer or the circuit breaker shall be located outside the capacity. These precautions do not eliminate the potential need to have electrical equipment suitable for use in explosive atmospheres.

14.6 - ATMOSPHERIC MONITORING AND PERMISSIBLE VALUES

MONITORING STRATEGY

- No confined spaces can be entered without atmospheric monitoring. As a minimum the oxygen content and risk of explosion should be monitored.
- Additional checks may be carried out depending on the risk analysis (hydrogen sulphide in particular for bitumens or hydrocarbon tanks where sludge has been deposited).
- As far as possible, atmospheric monitoring must be continuous. This is particularly the case if the risk analysis shows that the atmosphere is likely to change³⁰, Continuous monitoring, particularly by equipment worn by the people entering does not do away with the need for a preliminary inspection.
- This preliminary atmospheric inspection must be carried out by a competent person. The result must be indicated on the permit.
- Continuous atmospheric measuring shall be put in place.

ACCESS CRITERIA

- Any value other than normal (21% oxygen, 0% LEL, 0 ppm toxicity) means that there is a problem with isolating the capacity, there are product residues or a malfunction with the device.
- Entry into the confined space shall be suspended and the causes of the difference in expected values shall be analysed.
- If a logical explanation is found for the differences (for example because of product residues needing to be cleaned up), entering the capacity may be authorised under the conditions set out in the tables below.
- **N.B.:** an oxygen content 21% different can distort the other measurements.

This is also the case of warehouses in operation given the concurrent activity

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Oxygen content measured in the confined space	
O ₂ > 23.5%	Access prohibited regardless of respiratory protection
19.5% < O ₂ ≤ 23.5%	Access authorised
10% < O ₂ ≤ 19.5%	Access authorised with self-contained breathing apparatus (cylinders or air line)
O ₂ ≤ 10%	Access prohibited in all cases ³¹ regardless of respiratory protection
Concentration of hydrocarbon or other flammable gases / vapours measured in the confined space	
HC > 10% of LEL	Access prohibited
2% < HC ≤ 10% of LEL	Access authorised subject to continuous monitoring. The harmfulness of the vapours (petrol in particular) may mean that breathing protection is needed
HC ≤ 2% of LEL	Accès autorisé
Hydrogen sulphide (H2S)	
H2S > 100 ppm	Access prohibited regardless of respiratory protection
10 ppm < H2S ≤ 100 ppm	Access with Self-contained Breathing Apparatus (cylinders or air line)
1 ppm < H2S ≤ 10 ppm	Access authorised with respiratory protection: <ul style="list-style-type: none"> . self-contained breathing apparatus (cylinders or air line) . cartridge masks for short term operations (< 15 min)
H2S < 1 ppm	Authorised without specific respiratory protection
Carbon Monoxide (CO)	
CO > 1500 ppm	Access prohibited regardless of respiratory protection
50 ppm < CO ≤ 1500 ppm	Access with Self-contained Breathing Apparatus (cylinders or air line)
50 ppm < CO ≤ 500 ppm	Access authorised with respiratory protection: <ul style="list-style-type: none"> . Self-contained breathing apparatus (cylinders or air line) . cartridge masks for short term operations (< 15 min)
CO < 50 ppm	Access authorised without specific respiratory protection
Toxicity level measured in the confined space	
Toxic measurement > immediately dangerous to life limit	Access prohibited regardless of respiratory protection
Toxic measurement > 60 x OEL	Access authorised only with Self-contained Breathing Apparatus (cylinders or air line)
10% of OEL < Toxic measurement ≤ 60 x OEL	Access authorised with respiratory protection: <ul style="list-style-type: none"> . self-contained breathing apparatus (cylinders or air line) . cartridge masks (short term)
Toxic measurement ≤ 10% of OEL	Access authorised without specific respiratory protection

34 The limit is given in the instruction manual or on the manufacturer's plaque. It is good practice to fit the machinery with a wind gauge

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14.7 - PERMIT MANAGEMENT (FOR ENTRY)

- The final validation of the permit shall only be carried out after the atmospheric conditions have been checked, the isolation has been put in place and all the measures planned have actually been implemented.
- The validity period of the permit shall not exceed one day³². Beyond that, renewing the authorisation requires new atmospheric monitoring.

14.8 - WORK SUPERVISION

- As long as the conditions necessary for entry are not met, access shall be physically prevented (chains, barrier, manhole cover) and clearly visible signages prohibiting access shall be put in place ("entry prohibited").
- It is compulsory to have a supervisor outside when entering a confined space. This supervisor shall assume the following tasks:
 - check the entrants (wearing PPE, authorised staff),
 - update the list of people entering the confined space,
 - continuously observe working conditions and ensure that the measures in place are consistent with the risk management plan,
 - keep in constant contact with the staff in the confined space (verbal contact, walkie-talkies, radios, whistles, horns, ropes, or even life lines depending on the work conditions etc.). In all cases, these measures shall be adapted to the prevailing conditions inside and outside the confined space,
 - ensure that the ventilation is working properly,
 - order the area to be evacuated in the event of anomalies that could cause a dangerous environment in the confined space,
 - immediately alert the emergency services if there is a problem.
- If the supervisor has to leave his post, workers shall come out of the capacity.
- It is prohibited to work inside a metal capacity during a storm.
- Special attention shall be paid to the critical points that could trap hazardous products (floating screens, drainage tanks, drainage pipes from roofs and floating screens etc.).
- Where appropriate, suitable fire fighting equipment shall be positioned near the confined space and be ready for use.
- Those operations are classified as "highly critical" and therefore at least one site visit on the part of the entity is required preferably at the beginning of the work. This visit is conducted by a competent representative of the entity (operator, principal, or specialized service provider...).

14.9 - EVACUATION AND EMERGENCY PLAN

- There should be available evacuation and emergency operation plans.
- Intervention and emergency equipment,³³ as defined in the work permits, shall be made available.
- These plans and measures shall be tested before the first entry.
- Work in the confined space shall be interrupted if the evacuation and emergency team and equipment are not available.

³⁴ The limit is given in the instruction manual or on the manufacturer's plaque. It is good practice to fit the machinery with a wind gauge

³⁴ The limit is given in the instruction manual or on the manufacturer's plaque. It is good practice to fit the machinery with a wind gauge

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14.10 - STAFF SKILLS AND ABILITY

- Individuals who might be required to enter confined spaces or are associated with such interventions should be in good physical and psychological condition (non-claustrophobic).
- Staff from the entity or the contractors who required to enter confined spaces or to be associated with such interventions shall have followed the appropriate training for their role in the work, including knowledge of existing hazards and their associated risks and the rescue drill in confined space as a minimum.

15 - LIFTING OPERATIONS

15.1 - SPECIFIC TERMINOLOGY

LIFTING:

All operations aimed at lifting a load using mechanical means (overhead cranes, forklift trucks, cranes, hoists, etc.).

COMPLEX LIFTING (LIFTING WITH CRANES)

- Lifting operations do not all have the same complexity in terms of safety. Lifting is considered to be complex when at least one of the following conditions is met:
 - the load to be lifted is greater than 10 tonnes or requires the use of a crane with a capacity greater than 100 tonnes,
 - the weight of the load is greater than 85% of the permissible load specified on the crane chart,
 - the centre of gravity of the load is unknown, or its weight is uncertain,
 - two cranes at least are necessary to carry out the lifting operation,
 - lifting is "blind" (no visual contact between the crane operator and the person responsible for manoeuvre),
 - the load is close to an overhead power line or rigging,
 - the load is to be lifted more than 30 meters from the ground,
 - the load is particularly bulky (risk of being caught by the wind),
 - the consequences of the load falling could be significant (major accident, significant operating losses for example) particularly when there is lifting above an installation in service which might be damaged by the load,
 - the crane is equipped with a cradle for lifting people.

15.2 - SCOPE

- The general rules outlined in this chapter apply to all operations lifting loads of more than 100kg excluding:
 - lifting using manual force (ropes, pulleys, hoists),
 - routine mechanical handling operations associated with production or logistics, such as handling pallets, small containers, racks of gas cylinders particularly using forklift trucks.
- The concept of complex lifting only covers the use of the cranes.

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15.3 - GENERAL PRINCIPLES

GENERAL RULES

- The lifting methods chosen shall be adapted to the load to be lifted and its environment. The suitability of the lifting equipment for the weight to be lifted must be checked.
- Lifting is an area which is very often subjected to regulations. National and/or local regulations should hence be known and applied.

CHECKS

- The lifting methods shall be subject to periodic checks by an authorised person. The checks shall cover the following equipment (if used):
 - monorails (including its structural fixing points), general structure,
 - cables, disk brakes, brake systems,
 - slings, hooks,
 - hydraulic systems, engines,
 - stabilising equipment,
 - control and safety systems.
- The checks shall be recorded:
 - for the lifting resources which it owns, the entity shall be responsible for carrying out the checks properly and logging them in writing. It can use specialist organisations,
 - for lifting resources belonging to an contractor, the contractor shall be able to justify that the checks have been carried out properly.
- The lifting resources shall be checked before use (good general condition).

SKILLS / COPETENCIES

- The lifting equipment must be selected by a competent person.
- The driver and/or user of lifting machinery and/or equipment shall be competent.
- In the case of telescopic cranes, truck cranes, other mobile, motorised lifting machinery or tower cranes, users must be qualified and authorised to drive and/or use the machinery. This qualification shall be formalised and verifiable if an contractor is used.

ACCESS TO THE SITE

- Mobile motorised lifting apparatus shall satisfy the local access conditions for vehicles and motorised machinery on industrial sites.

EMERGENCY STOP: SAFETY

- All motorised lifting machinery shall be fitted with a manual emergency stop button,
- Overhead cranes, motorised cranes and hoists (with a capacity greater than 100kg) using cables/straps/chains wrapped around a winch shall be fitted with a safety switch to prevent the cables/straps/chains breaking when the hook (pulley block) comes into contact with the boom or drum.
- Loss of power supply must not result in sudden dropping of the load.

ORGANISATION OF THE LIFTING AREA/SIGNAGE

- It is strictly prohibited for people to pass underneath the load. If this is unavoidable, protection (in adequation with the weight of the load) shall be put in place. Exceptionally, a passage under load for a short period, may be allowed, if there is redundancy lifting equipment.

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- The range of the load shall be marked on the floor to prevent people passing under a load. Signage is not necessary however if the staff responsible for the manoeuvre are present in the immediate vicinity of the place where there is a risk of falling (when using a forklift truck or motorised hoist) or if the whole site is closed and access is restricted to staff who are notified.
- It is formally prohibited for people, other than those strictly assigned to lifting operations, to cross the marked limits of the lifting area.
- It shall be prohibited for the load being moved to pass over installations in service barring provisions arising out of risk analysis approved by the operator and specifying the precautions to be taken and the possible physical protection to be put in place for this equipment.
- The load may need to be guided by a rope.

MAXIMUM ALLOWED LOAD

- The maximum authorised weight not to be exceeded must be mentioned in accordance with current regulations on all lifting equipment by way of a sign or marking or a normalised colour code. This requirement does not apply to chains and cables.

LIFTING SLINGS, CHAINS OR STRAPS, HOOKS

- All slings, chains and straps used shall be visually examined before use.
- Slings and straps shall be marked to determine the maximum load which shall not be exceeded. This does not apply to chains and cables.
- Load lifting hooks shall be fitted with a system (safety latch) that ensures that the load cannot become disengaged.

15.4 - CRANES, TRUCK MOUNTED CRANES

LIFTING PREPARATION

- The operator shall bring together all the elements necessary to prepare for lifting and provide them for the crane company (if applicable). These elements typically include:
 - the plan of the equipment to be lifted if applicable,
 - an accurate estimate as possible for the centre of gravity, particularly for asymmetric equipment,
 - the mandatory anchor points if they are specified on the plans,
 - the weight of the load to be lifted. To determine the capacity of the crane to be used, a coefficient of 10% shall be applied to the weight of the load to be lifted,
 - the condition of the ground (concrete slab, earth, profile, etc.) and all particular known risks related to the subsoil in the lifting area,
 - the presence of obstacles in the immediate environment and electrical lines.

COMPLEX LIFTING

- All lifting defined as "complex" shall be subject to a work permit and a lifting plan. This lifting plan shall be provided by the company in charge of the work. It shall also include:
 - information previously issued by the operator during the preparation phase,
 - a plan view and a side view of the lifting operation,
 - the location of the machinery (crane(s) and truck(s)), the load to be lifted, the path of the load and the identification of potential obstacles,
 - the detailed slinging plan,
 - the maximum permissible wind speed, (take the weight and the surface area of the load into account),
 - the maximum pressure exerted on the ground by the lifting machinery.

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- The lifting plan shall be attached to the work permit.
- A supervisor shall be designated. He must be present during the operation.

MOVING/SETTING UP/WEDGING

- The crane booms and loading arm shall be in the low position when the machinery is moved to avoid colliding into structures or tipping.
- Mobile crane booms shall only be deployed once the machinery's stabilising legs have been correctly put in place.
- Where appropriate, depending on the nature of the ground, load distribution plates shall be put in place under the stabilising jacks and a safety distance must be maintained in relation to the excavations and trenches positioned (see § 12.5 - Stability of excavations and trenches).

BAD WEATHER

- Lifting operations shall be stopped in the event of storms or strong winds³⁴ et les dispositions préconisées par le constructeur de l'engin doivent être mise en œuvre comme par exemple :
 - Lay down the load and the lifting gear (slings, tool yoke, etc.),
 - Telescopic crane booms shall be retracted,
 - Tower cranes shall be put into free rotation.

15.5 - REMOVABLE MOTORIZED HOISTS

- Hoists shall be attached to a fixed point correctly provided to this effect or failing that, to a sufficiently solid structural component. It should never be attached to any pipeworks.
- When the hoists are fastened to a structure, the attaching slings used shall be protected against any sharp edges on the anchor points.

15.6 - BRIDGE CRANES

- Usage of a bridge crane should be reserved for the qualified and authorized.
- Stops or safety catches shall prevent the bridge from leaving its rails when it arrives at the end of its range.

15.7 - FORKLIFT TRUCKS

- Lifting loads other than easy to handle objects (pallets, containers, racks) using a forklift truck shall be done using special equipment mounted on the forks.
- It is prohibited to attach slings or ropes directly to the forks of a forklift truck.
- N.B.: the rules for operating forklift trucks are given in company rule CR-MS-HSEQ 201. For more information, please refer to the "Prevention of forklift truck accidents" best practice guide (written by: SEI - Reference: GM-GR-SEC-022 - December 2010).

16 - HIGH-PRESSURE CLEANING

³⁴ The limit is given in the instruction manual or on the manufacturer's plaque. It is good practice to fit the machinery with a wind gauge

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16.1 - SPECIFIC TERMINOLOGY

High-pressure cleaning is a cleaning technique using a water jet (or even other fluids), previously placed under high pressure for a wide variety of applications such as the following:

- cleaning industrial facilities (reservoirs, tanks, pipework, pipelines etc.)
- stripping corroded or dirty surfaces,
- removing residual and accumulated solid deposits.

16.2 - SCOPE

- This rule applies to work carried out using high-pressure cleaners :
 - whose pressure exceeds 25 bar and whose power exceeds 10 kW³⁵,
 - whose pressure exceeds 150 bar whatever the power.
- This rule does not apply to systems incorporated into manufacturing processes designed, for example, for cleaning mixers between production campaigns.

16.3 - GENERAL PRINCIPLES

WORK PERMIT/ AUTHORISATION

- A permit shall be issued.

CONTRACTOR SELECTION

- Choose companies whose staff have professional certification³⁶, attesting to specific skills in high-pressure cleaning.
- Depending on the operation to be carried out and the equipment to be used, the good practices contained in the "GM-GR-SEC-008 - High-pressure jet cleaning" guide can be integrated into calls for tenders and contracts given to companies, particularly for very high pressure (>1000 bar).

16.4 - PREVENTION PROTECTION MEASURES

MISCELLANEOUS

- The level of pressure used shall be reduced to the lowest possible level.
- Automated processes must be favoured to prevent a high-pressure nozzle being held by hand.
- The site shall be marked up. If necessary screens shall be put in place to protect against the jets.

PRELIMINARY CHECKS

- Preliminary checks shall be carried out
 - correct signage for the area,
 - no live power lines that could be affected by the jet above the work area,
 - hoses in good condition, hose is connected properly on the pump and hose side.

EQUIPMENT

- There should be a hold to run safety system (trigger, pedal) operated by the operator.
- There should be one emergency stop on the pump.
- All HP hoses must have rupture protection at their connections.

PERSONAL SAFETY

- When HP cleaning is done using a nozzle held by a manipulator, a second operator (coordinator), in visual contact with the manipulator, is necessary. This person must have quick access to an emergency stop.

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- Suitable PPE (including: helmet, gloves, hearing protection, visor, waterproof suits) shall be used in addition to collective protection measures.
- The risk of falling shall be taken into account when working at height .

17 - SANDBLASTING

17.1 - SPECIFIC TERMINOLOGY

"Sandblasting" or abrasive jet stripping is a process which consists of projecting at high speed a stream of abrasive particles using a high-pressure air flow for applications such as surface stripping and finishing etc.

17.2 - SCOPE

- This rule applies to all sandblasting work, when the projection is made via a hose held by an individual.

17.3 - GENERAL PRINCIPLES

AUTORISATION/PERMIS DE TRAVAIL

- A permit shall be issued.

SÉLECTION DE L'ENTREPRISE

- Choose companies whose staff have professional certification, attesting to specific skills in sandblasting.

17.4 - PREVENTION PROTECTION MEASURES

PRELIMINARY CHECKS

- Preliminary checks shall be carried out :
 - correct signage for the area,
 - the tools shall be in good condition particularly the hose, the trigger (or other safety device) shall work properly.

PERSONAL SAFETY

- There shall be a hold to run safety system (trigger or pedal) ctionnée par le manipulateur and an emergency stop in the compression/mixing unit
- Suitable PPE shall be used, particularly:
 - helmet + visor,
 - hearing protection,
 - gloves,
 - respiratory protection (filter mask or ventilated hood).
- The risk of falling shall be taken into account when working at height.

POSITIONING THE EQUIPMENT

- The compressors and compressed air tanks shall be positioned outside the retention tank if it is in operation.
- The length of the hoses shall be minimised so that decompression does not slow down the action of releasing the trigger.
- The site must be marked up.

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TECHNICAL CHECKS

- Air balloons and other capacities shall comply with the applicable regulations for high-pressure equipment. They must be fitted with safety valves.

MISCELLANEOUS

- Particular attention shall be paid to the possible toxicity of stripped products (lead paint etc.).
- Waste management (sand, paint residues, etc.) must be taken into account.

18 - RADIOGRAPHY / GAMMAGRAPHY

18.1 - SPECIFIC TERMINOLOGY

None.

18.2 - SCOPE

- This rule applies to work likely to emit ionising radiation :
 - using radioactive gamma sources,
 - X-ray generating.
- It does not apply to
 - the use of fixed, sealed radioactive sources, particularly used for instrumentation purposes (measurement of density, level, etc.) or laboratory analysis,
 - X-ray equipment used for safety purposes (scanner) or for medical purposes.

18.3 - GENERAL PRINCIPLES

PERMITS

- A permit shall be issued.

CHOICE OF CONTRACTOR

- The company selected shall submit serious references in this field.
- It shall have all of the official authorisations for handling radioactive sources or other devices emitting ionising radiation.

MANAGEMENT OF THE RADIOACTIVE SOURCE (WHERE APPROPRIATE)

- Management of the radioactive source must be formalised, especially if the work lasts for more than one day (location of source, protection of the source on the site in a sealed box, etc.).

WARNING SIGNS/PREVENTING RADIATION RISKS

- Preferably work shall be carried out outside of normal operational phases (at nights and weekends) to minimise the risk of exposure.
- Warning signs or fencing shall be put in place. It should take into account safe distances determined according to the strength of the radiation emitted (normally provided by the company in charge of the operation).

Life-Saving Checks

Practical guide

Date of publication in REFLEX: 03/08/2020
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REVISION	DATE	PURPOSE	WRITTEN BY	CHECKED BY	APPROVED BY
00	27/07/2020	Creation	PSR/HSE/FHOS/CSPT Michiel De Koster	PSR/HSE/FHOS/REE S. Roulier	PSR/HSE/FHOS A. Abzizi

	Groupe Guide and Manual		
	Life-Saving Checks		
PSR/HSE Division	HSE		GM-GR-HSE-121 Rev. no. 00 Date: 27/07/2020

Foreword	This English version is translated from the original French reference version.
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1 PURPOSE

This guide provides recommendations for performing “life-saving checks”, which are compliance checks carried out in the field. These checks relate to the most significant life-threatening activities

2 SCOPE OF APPLICATION

The best practices in this guide can be implemented by all entities¹ and affiliates² of the Group (including in construction projects or on construction sites), in compliance with their respective decision-making rules and without prejudice to applicable local laws and regulations.

3 OBJECTIVES OF THE LIFE-SAVING CHECKS

The main objective of carrying out life-saving checks is to **avoid fatal accidents**.

For this, **specific checklists (see Chapter 4.7 and Appendix 1) for life-threatening activities can be used in the field**. These checklists describe the essential conditions and actions which, when taken together, can save one or more lives when carrying out activities with fatal risk.

“Life-threatening activities” mean, at a minimum, the high-risk works mentioned in Chapter 4.1 of this guide.

These controls make it possible to:

- **strengthen the supervision in the field** of life-threatening activities by carrying out a large number of checks on a regular and systematic basis;
- **position** the managers of the Group and those of contractors as the main drivers of operational discipline (see Chapter 4.2);
- **observe** the employees of the Group and those of contractors and give them immediate feedback on good practices and/or anomalies to be corrected (see Appendices 3 and 4), or even intervene and stop a work in progress in the event of non-compliance with the applicable rules or when uncontrolled actions or risks are observed (see Appendix 2);
- **motivate and recognise** the best players in the operational discipline by posting local results of field checks;
- **assess and monitor the compliance rate** of activities by entities and affiliates and use it locally as a management tool;
- **create a competitive spirit** between contractors, by posting their respective compliance rates locally;
- over time and based on historic data, **identify at branch level, entities and affiliates whose risk level increases**.

¹ Group "entity" refers to a Group branch, division, department, or other business segment (Local Business Unit).

² Group "affiliate" refers to a company in which TOTAL SE holds, directly or indirectly, most of the voting rights.

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4 DETAILED DESCRIPTION

4.1 What to Check?

Life-saving checks relate to **life-threatening activities** carried out by personnel from the Group or by that of contractors. **At a minimum:**

- work at height (see **CR-GR-HSE-425**);
- work on de-energised systems;
- lifting operations;
- work in confined spaces;
- hot work (defined in **CR-GR-HSE-402**).

Entities and affiliates are encouraged to carry out life-saving checks for other life-threatening risk activities that they could identify within their scope (pressure tests, etc.). These additional checks may be carried out according to a standard specific to each activity, and the checklists in Appendix can serve as templates.

4.2 Who Performs Life-saving Checks?

Life-saving checks are carried out by personnel from the Group's entity or affiliate, or from contractors: first level supervisors, middle managers, executives or any other person identified/designated by each party.

Life-saving checks are not carried out by the personnel carrying out the work, nor necessarily carried out jointly (i.e. the entity or affiliate with the contractor).

It is essential that a large number of life-saving checks are carried out and that the entire hierarchical line, in addition to the HSE teams, is involved.

Who ?	Objective
Supervisory level of the Group entity/affiliate or of the contractor company <ul style="list-style-type: none"> ▪ 1st level supervisors ▪ HSE staff (preventers or equivalent) 	Carrying out a large number of field checks
Intermediate level <ul style="list-style-type: none"> ▪ Hierarchical line of the Group entity/affiliate (beyond the supervision level, excluding members of the Management Committee (Codir)) ▪ Hierarchical line of the contractor (beyond the supervision level, excluding management based off-site) 	Management involvement and visibility in the field
Management Committee level <ul style="list-style-type: none"> ▪ Management Committee of the entity/affiliate of the Group ▪ Management of the contractor (based off-site - at the level of a local agency or headquarters, depending on the organization of the company) 	Management involvement and visibility in the field

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4.3 Where to Carry Out Life-saving Checks?

The checks are carried out in the field, where the life-threatening activity takes place.

4.4 When to Carry Out Life-saving Checks?

The observation of life-threatening activities takes place **during the execution of the work**. The checks are brief (15 minutes) in order to **multiply the number carried out each day**.

Note that carrying out these checks may temporarily interrupt the work of the observed team.

4.5 How to Carry Out Life-saving Checks?

The checks are carried out **using checklists for each life-threatening activity**.

The templates presented in Appendix 1 are good practices available to entities and affiliates. Their content and format can be adapted and/or supplemented by the entities and affiliates according to their particularities.

The use of these checklists and the associated diagrams facilitates the **observation of good practices and the identification of possible non-conformities**.

If a non-conformity is observed, the person carrying out the field check has the authority to stop the activity if necessary, for example by using the Stop Card (see Chapter 5.1 and **GM-GR-HSE-122**).

At the end of the check, a compliance rate for the observed life-threatening activity is calculated (see Chapters 5.4 and 5.5). The results of these checks are recorded, consolidated each week and displayed locally, specifying the results per company (the Group's entity or affiliate and the various contractors).

The purpose of this local display is to communicate on the level of management of the riskiest works, and to progress collectively.

The names of individuals are not noted during field checks, but only that of the company observed (the entity or affiliate, or a contractor).

4.6 Reporting

The key performance indicators (KPIs) to be monitored locally are defined as follows:

- **the control rate (%) of life-threatening activities**, that is to say the number of field checks carried out in relation to the monthly target that the entity or affiliate sets itself;
- **the compliance rate (%) of each company** (the Group entity or affiliate and its various contractors), i.e. the average of the compliance rates of the life-saving checks carried out over a given period.

The **number of life-saving checks carried out** is communicated each month to the relevant HSE Division of the branch, for a consolidation at Group level.

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4.7 Tools

In Appendix 1, checklists are proposed for the 5 activities representing the highest number of fatal accidents in the last 10 years within the Group's perimeter.



We find **on the front** of each card:

- a diagram representing the life-threatening activity;
- the points to check, with numbers that can be found in the checklist on the back;
- a reminder of the number of fatal accidents recorded for this type of activity;

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and **on the back**:

- the checklist;
- fields to be completed: the place, the date, the name of the company observed, the reference number of the work permit, the compliance rate, any comments, the name of the person carrying out the check, the name of their company and their signature

All the points proposed in the checklists are observable, proven and they contribute to saving one or more lives when they are respected. They were selected from the "musts" and "must nots" of the Group's Golden Rules, supplemented by other sources such as the IOGP³ Life Saving Rules.

4.8 Carrying Out Life-saving Checks

Ideally, life-saving checks take place according to the following steps.

1. Prepare

Organise the life-saving check by taking the schedule of life-threatening activities into account and by contacting the operational manager (or any designated person).

2. Go into the Field

With the agreement of the operational manager, go to the work site on the date and at the agreed time, with the appropriate PPE and the checklist(s) corresponding to the activity.

3. Introduce Yourself

On arrival at the work site, introduce yourself and explain to the participants the objective of the life-saving check.

4. Observe

Observe the activity using the checklist and question the workers if necessary.

Keep in mind: this is a compliance check based on observable and indisputable elements, not a safety tour. It is therefore recommended to limit exchanges with the workers to the points to be checked in the checklist.

5. Check

Using the diagram on the front, fill out the checklist corresponding to the controlled activity, by checking "YES", "NO" or "N/A" for each point to be checked, and calculate the compliance rate.

6. Intervene

Intervene and if necessary, stop the activity for example by using the Stop Card (see [GM-GR-HSE-122](#)) in the event of an observed non-compliance, or any other situation liable to develop into an accident.

³ International Association of Oil and Gas Producers

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7. Feedback

If the result of the check justifies it, it is important to immediately give feedback to the worker(s). In particular, give positive feedback on any good practice or exemplary behaviour observed.

8. Report

Ensure the recording of the life-saving check results, in particular the compliance rate which will be consolidated at the level of the entity or affiliate.

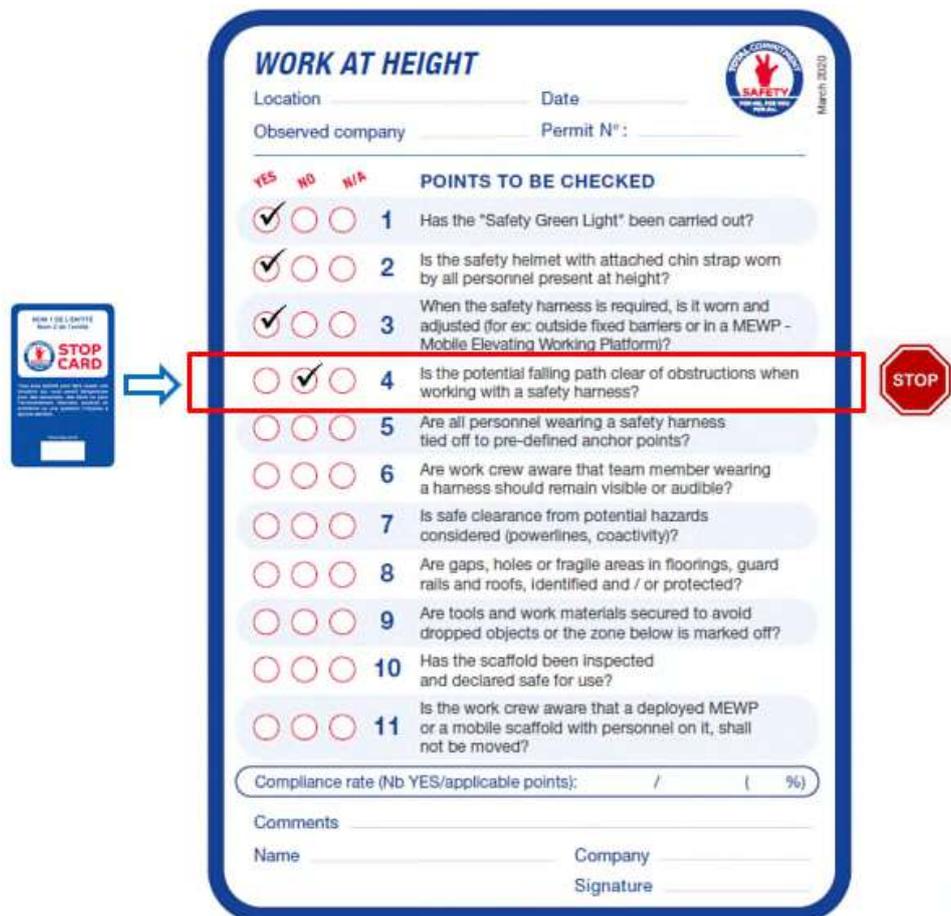
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5 SPECIAL INSTRUCTIONS

5.1 Observation of a Non-conformity

If a non-compliant point is observed:

1. The person carrying out the life-saving check intervenes, in the form of a simple question to ensure that there is no risk or stops the work in progress if necessary. This interruption makes it possible to initiate a discussion with the workers and their supervisor, or even with other managers, to resolve the observed non-compliance.
2. If necessary, modifications to the way of working are made before resuming the work in progress.
3. If the problem cannot be resolved immediately, work is suspended pending the implementation of appropriate measures.
4. The use of the Stop Card is then the subject of feedback at the level of the entity or affiliate, in order to identify areas for improvement and facilitate the sharing of experiences.



WORK AT HEIGHT

Location _____ Date _____

Observed company _____ Permit N°: _____

YES NO N/A POINTS TO BE CHECKED

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	Has the "Safety Green Light" been carried out?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2	Is the safety helmet with attached chin strap worn by all personnel present at height?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3	When the safety harness is required, is it worn and adjusted (for ex: outside fixed barriers or in a MEWP - Mobile Elevating Working Platform)?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4	Is the potential falling path clear of obstructions when working with a safety harness?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	Are all personnel wearing a safety harness tied off to pre-defined anchor points?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6	Are work crew aware that team member wearing a harness should remain visible or audible?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	Is safe clearance from potential hazards considered (powerlines, coactivity)?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8	Are gaps, holes or fragile areas in floorings, guard rails and roofs, identified and / or protected?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9	Are tools and work materials secured to avoid dropped objects or the zone below is marked off?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10	Has the scaffold been inspected and declared safe for use?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11	Is the work crew aware that a deployed MEWP or a mobile scaffold with personnel on it, shall not be moved?

Compliance rate (Nb YES/applicable points): _____ / _____ (%)

Comments _____

Name _____ Company _____

Signature _____

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5.2 De-energised Systems Checklists

For work on de-energised systems, there are 2 checklists covering:

- work on process de-energised systems;
- work on electrical de-energised systems.

Depending on the system on which the work takes place, one or both of these checklists can be used.

**WORK ON PROCESS
DE-ENERGIZED SYSTEMS**

March 2020

Location _____ Date _____

Observed company _____ Permit N° _____

YES	NO	N/A		POINTS TO BE CHECKED
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	1	Has the «Safety Green Light» been carried out?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	2	Has the representative of the workers received the validated isolation certificate(s) corresponding to the equipment involved in the work to be done?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	3	Is the circuit or equipment on which the work is to be carried out identified in the field by an authorised person and in the presence of a representative of the workers?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	4	Is the personnel performing the activity equipped with task-specific PPE and, in an area with a potentially explosive atmosphere, non-sparking tools?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	5	Are isolation devices set in the identified position as per approved isolation diagram / plan? (master copies to be checked in the dedicated place)
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	6	Are isolation devices locked and tagged?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	7	Has the absence of energy been demonstrated by an authorized person and in the presence of a representative of the workers?

Compliance rate (Nb YES/applicable points): _____ / _____ (%)

Comments _____

Name _____ Company _____
Signature _____



**Checklist for work on
process de-energized
systems**

**WORK ON ELECTRICAL
DE-ENERGIZED SYSTEMS**

March 2020

Location _____ Date _____

Observed company _____ Permit N° _____

YES	NO	N/A		POINTS TO BE CHECKED
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	1	Has the «Safety Green Light» been carried out?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	2	Has the representative of the workers received the validated isolation certificate(s) corresponding to the equipment involved in the work to be done?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	3	Is the circuit or equipment on which the work is to be carried out identified in the field by an authorised person in the presence of a representative of the workers?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	4	Do personnel performing the activity wear specific PPE for the task?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	5	Are separation devices set in the identified position as per approved isolation diagram / plan? (master copies to be checked in the dedicated place)
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	6	Are separation devices locked and tagged?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	7	Has the zero voltage testing been carried out by an authorized person and demonstrated to the representative of the workers?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	8	Has the grounding / short circuiting been carried out on all conductors including neutral?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	9	Are hazards on adjacent live parts signalled and are protections in place?

Compliance rate (Nb YES/applicable points): _____ / _____ (%)

Comments _____

Name _____ Company _____
Signature _____



**Checklist for work on
electrical de-energized
systems**

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5.3 Referral to Other Checklists

One of the points to check in the "Hot work" and "Confined spaces" checklists refers to the checklists concerning de-energised systems mentioned in the previous chapter.

➔

HOT WORK

Location _____
Date _____

Observed company _____
Permit N° _____

YES

NO

N/A

POINTS TO BE CHECKED

1 Has the "Safety Green Light" been carried out?

2 Is the hot work permit validated?

3 Use the checklist "Work on de-energized systems" for each energy and answer: do all applicable points comply?

➔

CONFINED SPACES

Location _____
Date _____

Observed company _____
Permit N° _____

YES

NO

N/A

POINTS TO BE CHECKED

1 Has the "Safety Green Light" been carried out?

2 Use the checklist "Work on de-energized systems" for each energy and answer: do all applicable points comply?

Example: inspection work in a storage tank with agitator.

The following checklists are used:

- Checklist "Work on de-energised process systems": isolation of the tank;
- Checklist "Work on de-energised electrical systems": electrical isolation of the agitator;
- Checklist "Confined spaces": entry into the tank for inspection.



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5.4 Conformity Assessment

If a point to be checked concerns several elements, and one of these elements is not in conformity, then the point will be marked as "NO" (not in conformity).

The conformity of a point to be checked corresponds to the initial situation observed, that is to say before correction/adjustment of the situation if this was necessary for the resumption of the works.

Example: checklist "Hot work", point #7:

It is observed that among the 3 drains present in the hot work zone there is one which is not shielded.

➔ *Point #7 must be evaluated as non-compliant*

HOT WORK


March 2020

Location _____ Date _____
 Observed company _____ Permit N° _____

YES NO N/A

POINTS TO BE CHECKED

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	4	Do personnel performing the activity wear specific PPE for the task?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	5	In an area with a potentially explosive atmosphere, has a gas test been completed prior to hot work?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	6	In an area with a potentially explosive atmosphere, is continuous monitoring of the atmosphere or is gas testing with a defined frequency carried out, and results monitored?
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	7	Are drains, openings and vents shielded?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	8	Have all combustible materials been removed, covered or kept wet in the hot work area?

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5.5 Calculation of Compliance Rate

The compliance rate is calculated after each life-saving check:

$$\text{Compliance rate} = \frac{\text{number of points evaluated as « YES » (compliant)}}{\text{number of points evaluated as « YES » (compliant) + number of points evaluated as « NO » (non-compliant)}}$$

Note: the points assessed as "N/A" (not applicable) are not considered for the calculation of the compliance rate.

Example : checklist « Work at height »

WORK AT HEIGHT

Location _____
Date _____

Observed company _____
Permit N°: _____


March 2020

YES	NO	N/A	POINTS TO BE CHECKED
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Has the "Safety Green Light" been carried out?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2 Is the safety helmet with attached chin strap worn by all personnel present at height?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3 When the safety harness is required, is it worn and adjusted (for ex: outside fixed barriers or in a MEWP - Mobile Elevating Working Platform)?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4 Is the potential falling path clear of obstructions when working with a safety harness?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5 Are all personnel wearing a safety harness tied off to pre-defined anchor points?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6 Are work crew aware that team member wearing a harness should remain visible or audible?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7 Is safe clearance from potential hazards considered (powerlines, coactivity)?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8 Are gaps, holes or fragile areas in floorings, guard rails and roofs, identified and / or protected?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9 Are tools and work materials secured to avoid dropped objects or the zone below is marked off?
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	10 Has the scaffold been inspected and declared safe for use?
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11 Is the work crew aware that a deployed MEWP or a mobile scaffold with personnel on it, shall not be moved?

Compliance rate (Nb YES/applicable points): / (%)

Comments _____
 Name _____ Company _____
Signature _____

→ Compliance rate = 7 / 9 (78%)

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6 REFERENCE DOCUMENTS

Reference	Title – Group Documents
CR-GR-HSE-402	Permit to Work Process
CR-GR-HSE-425	HSE Requirements for Work at Height
GM-GR-HSE-122	Stop Card

7 LIST OF APPENDICES AND SUPPLEMENTARY DOCUMENTS

Reference	Titre
APPENDIX 1	Checklists
APPENDIX 2	Recognition: a key lever for improving HSE performance
APPENDIX 3	How to react in the event of a shortfall

8 DISTRIBUTION AND EFFECTIVE DATE

Publication in REFLEX (Group document depository).

9 REVISIONS

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APPENDIX 1

Checklists

<h4>Work at Height</h4>  <p>12 fatalities related to work at height occurred within the Group in the last 10 years.</p>	<h4>WORK AT HEIGHT</h4> <p>Location: _____ Date: _____ Observed company: _____ Permit N°: _____</p> <p>POINTS TO BE CHECKED</p> <ol style="list-style-type: none"> Has the "Safety Green Light" been carried out? Is the safety harness and attached life-line stop work by its permanent anchor at height? When the safety harness is required to be worn, is it always fastened to a secure anchor point in a MSA? Must it always be fully fastened? Is the person being put under an observation when working with a safety harness? Are all prepared working points fastened (not left to the user) and/or secured? Are work zone areas that must remain empty (e.g. safety zones) clearly marked and secured? Are all work zone areas clearly marked and secured (e.g. safety zones) clearly marked and secured? Are all work zone areas clearly marked and secured (e.g. safety zones) clearly marked and secured? Are all work zone areas clearly marked and secured (e.g. safety zones) clearly marked and secured? Are all work zone areas clearly marked and secured (e.g. safety zones) clearly marked and secured? Are all work zone areas clearly marked and secured (e.g. safety zones) clearly marked and secured? Are all work zone areas clearly marked and secured (e.g. safety zones) clearly marked and secured? <p>Comments: _____ Name: _____ Company: _____ Signature: _____</p>	<h4>Confined Spaces</h4>  <p>1 fatality related to confined space occurred within the Group in the last 10 years.</p>	<h4>CONFINED SPACES</h4> <p>Location: _____ Date: _____ Observed company: _____ Permit N°: _____</p> <p>POINTS TO BE CHECKED</p> <ol style="list-style-type: none"> Has the "Safety Green Light" been carried out? Are the "Safety Green Light" and "Safety Green Light" for confined spaces? (see the "Safety Green Light" for confined spaces) Has the atmosphere been checked prior to entry (confined space)? Is the atmosphere monitored or checked regularly during the confined space work? Is the entry well designed and equipped at all times? Is the number of workers monitored or regularly checked at all times while working in a confined space? Is communication between entry points and exits established and regularly tested (e.g. radio or light)? Is the confined space ventilated (natural or mechanical ventilation)? When required by the work permit, is an adapted respiratory protection used? Is the rescue plan known and ready to be initiated? <p>Comments: _____ Name: _____ Company: _____ Signature: _____</p>
<h4>Lifting Operations</h4>  <p>7 fatalities related to lifting operations occurred within the Group in the last 10 years.</p>	<h4>LIFTING OPERATIONS</h4> <p>Location: _____ Date: _____ Observed company: _____ Permit N°: _____</p> <p>POINTS TO BE CHECKED</p> <ol style="list-style-type: none"> Has the "Safety Green Light" been carried out? Is an approved lifting plan validated? Has the lift plan content not been considered by the operator before the beginning of the work? Is the operator/worker appointed and licensed? Has the lifting operation been planned in writing (certificate) or authorized document to operate the equipment? Is a restricted zone (exclusion zone) established and clearly marked and secured in the vicinity of the suspended load? Is the lifting operation executed according to the lifting plan (e.g. lifting speed, lifting angle, etc.)? Is the personnel performing the activity equipped with the specific PPE and in an area with a controlled exposure atmosphere (non-working zone)? Is the working load controlled while being lifted? <p>Comments: _____ Name: _____ Company: _____ Signature: _____</p>	<h4>Hot Work</h4>  <p>2 fatalities related to hot work occurred within the Group in the last 10 years.</p>	<h4>HOT WORK</h4> <p>Location: _____ Date: _____ Observed company: _____ Permit N°: _____</p> <p>POINTS TO BE CHECKED</p> <ol style="list-style-type: none"> Has the "Safety Green Light" been carried out? Is the hot work permit validated? Is the hot work permit validated and signed by the competent person for each change and activity at all activities? Is the hot work permit validated and signed by the competent person for each change and activity at all activities? Is the hot work permit validated and signed by the competent person for each change and activity at all activities? Is the hot work permit validated and signed by the competent person for each change and activity at all activities? Is the hot work permit validated and signed by the competent person for each change and activity at all activities? Is the hot work permit validated and signed by the competent person for each change and activity at all activities? Is the hot work permit validated and signed by the competent person for each change and activity at all activities? Is the hot work permit validated and signed by the competent person for each change and activity at all activities? Is the hot work permit validated and signed by the competent person for each change and activity at all activities? <p>Comments: _____ Name: _____ Company: _____ Signature: _____</p>
<h4>Work on De-energized Process Systems</h4>  <p>14 fatalities related to work on powered systems occurred within the Group in the last 10 years.</p>	<h4>WORK ON PROCESS DE-ENERGIZED SYSTEMS (GAS, LIQUIDS, SOLIDS)</h4> <p>Location: _____ Date: _____ Observed company: _____ Permit N°: _____</p> <p>POINTS TO BE CHECKED</p> <ol style="list-style-type: none"> Has the "Safety Green Light" been carried out? Has the responsibility of the workers involved in the operation been verified (according to the equipment involved in the work to be done)? Is the control or equipment on which the work is to be carried out identified in the field by an authorized person and in the presence of a representative of the employer? Is the person performing the activity equipped with the specific PPE and in an area with a controlled exposure atmosphere (non-working zone)? Is the isolation device set in the identified position and the equipment isolated (e.g. open, closed, locked, tagged) in the identified position? Are isolation devices locked and tagged? Has the absence of energy been demonstrated by an authorized person and in the presence of a representative of the employer? <p>Comments: _____ Name: _____ Company: _____ Signature: _____</p>	<h4>Work on De-energized Electrical Systems</h4>  <p>10 fatalities related to work on powered systems occurred within the Group in the last 10 years.</p>	<h4>WORK ON ELECTRICAL DE-ENERGIZED SYSTEMS</h4> <p>Location: _____ Date: _____ Observed company: _____ Permit N°: _____</p> <p>POINTS TO BE CHECKED</p> <ol style="list-style-type: none"> Has the "Safety Green Light" been carried out? Has the responsibility of the workers involved in the operation been verified (according to the equipment involved in the work to be done)? Is the control or equipment on which the work is to be carried out identified in the field by an authorized person and in the presence of a representative of the employer? Is the person performing the activity equipped with the specific PPE for the task? Are separation devices set in the identified position and the equipment isolated (e.g. open, closed, locked, tagged) in the identified position? Are separation devices locked and tagged? Has the absence of energy been demonstrated by an authorized person and in the presence of a representative of the employer? Has the presence of a non-authorized person been prevented by an authorized person and in the presence of a representative of the employer? Has the presence of a non-authorized person been prevented by an authorized person and in the presence of a representative of the employer? Has the presence of a non-authorized person been prevented by an authorized person and in the presence of a representative of the employer? <p>Comments: _____ Name: _____ Company: _____ Signature: _____</p>



Groupe Guide and Manual

Life-Saving Checks

PSR/HSE Division

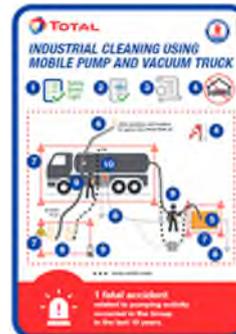
HSE

GM-GR-HSE-121
Rev. no. 00
Date: 27/07/2020

Manual HP Cleaning



Industrial Cleaning (Pumping)

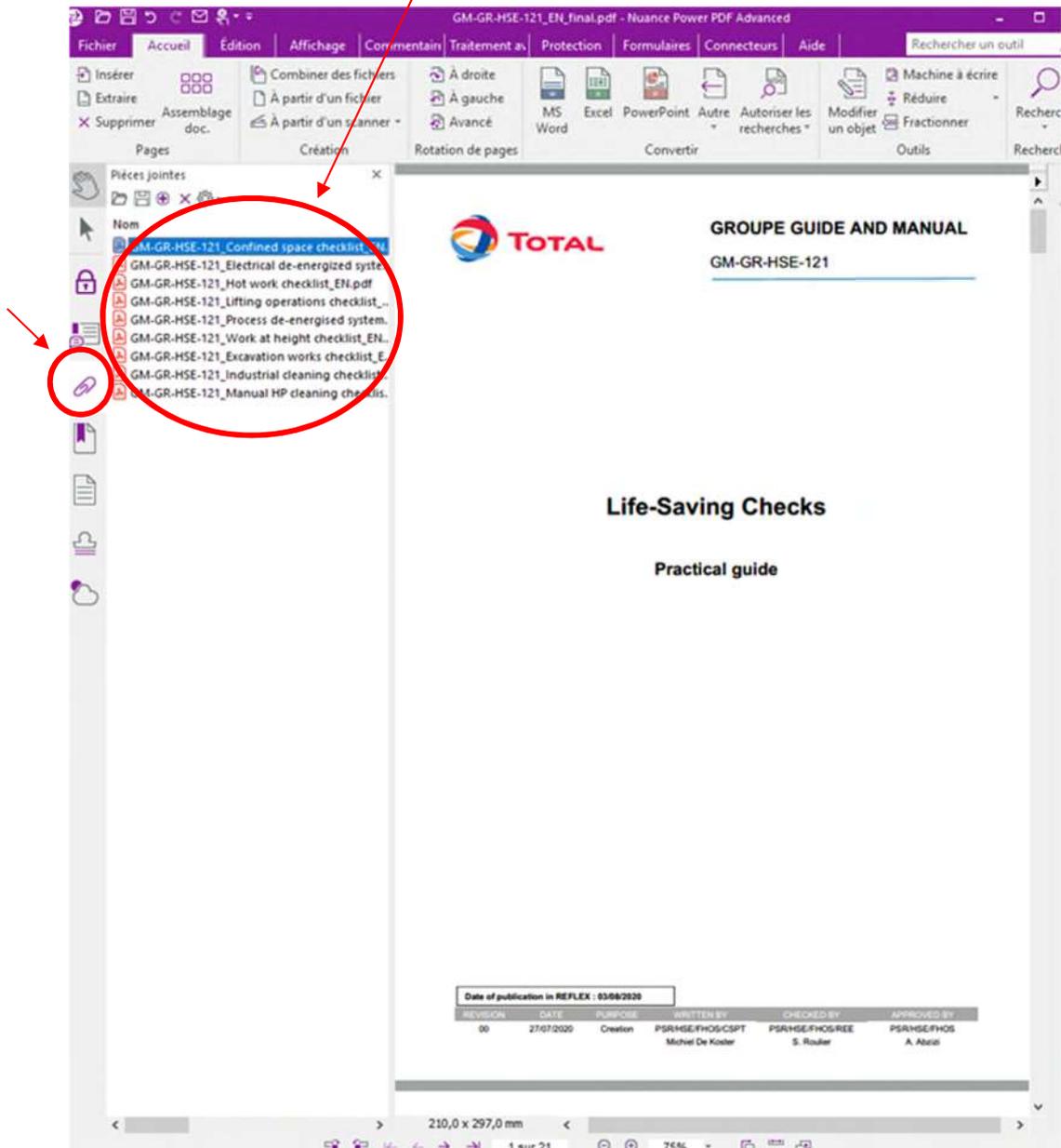


Excavation works



	Groupe Guide and Manual		
	Life-Saving Checks		
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See files attached to this guide



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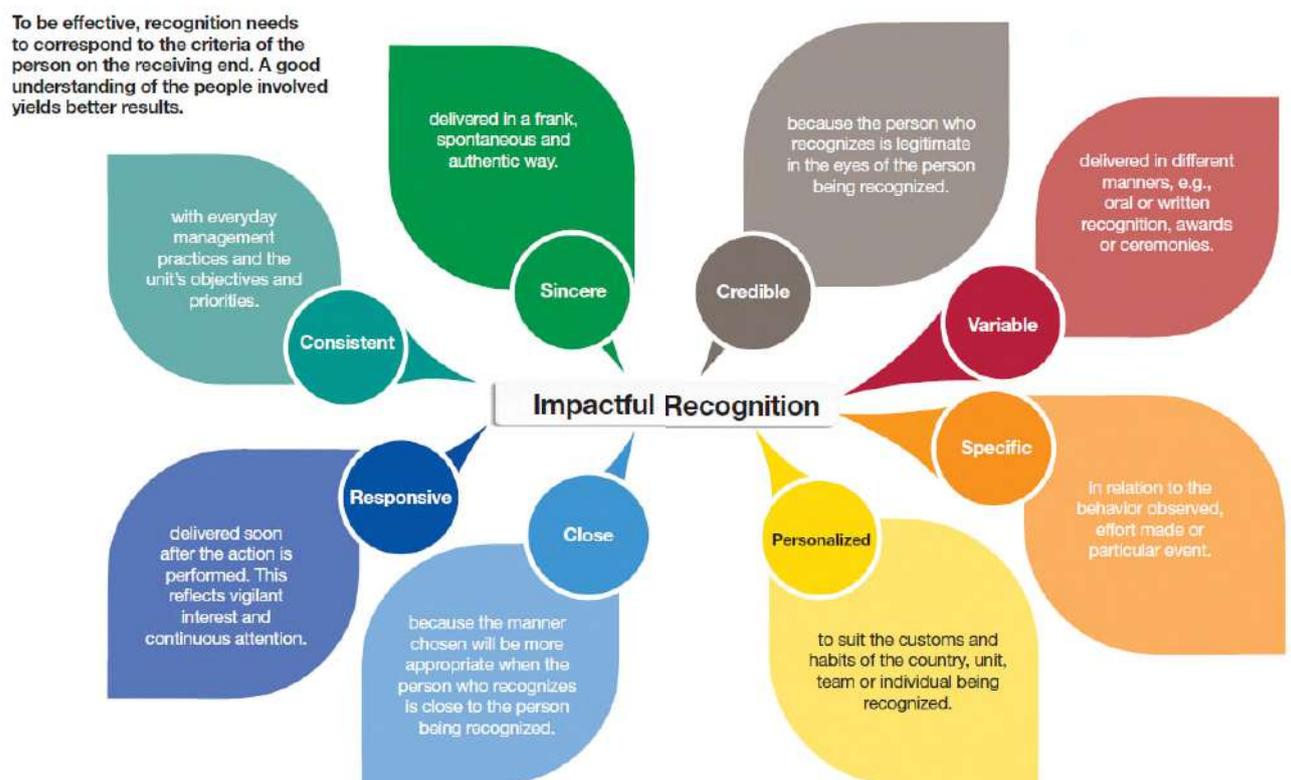
APPENDIX 2

Recognition: a Key Lever for Improving HSE Performance

The diagram below shows the important signs of recognition for it to be **impactful**.

Expressing these signs of recognition in a positive and immediate manner during a life-saving check will help to reinforce good HSE practices and good behaviour in the people who receive them.

Acts of positive recognition are an essential lever to individually and collectively motivate our employees, our colleagues but also our service providers and thus act on behaviours to sustainably improve our performance.



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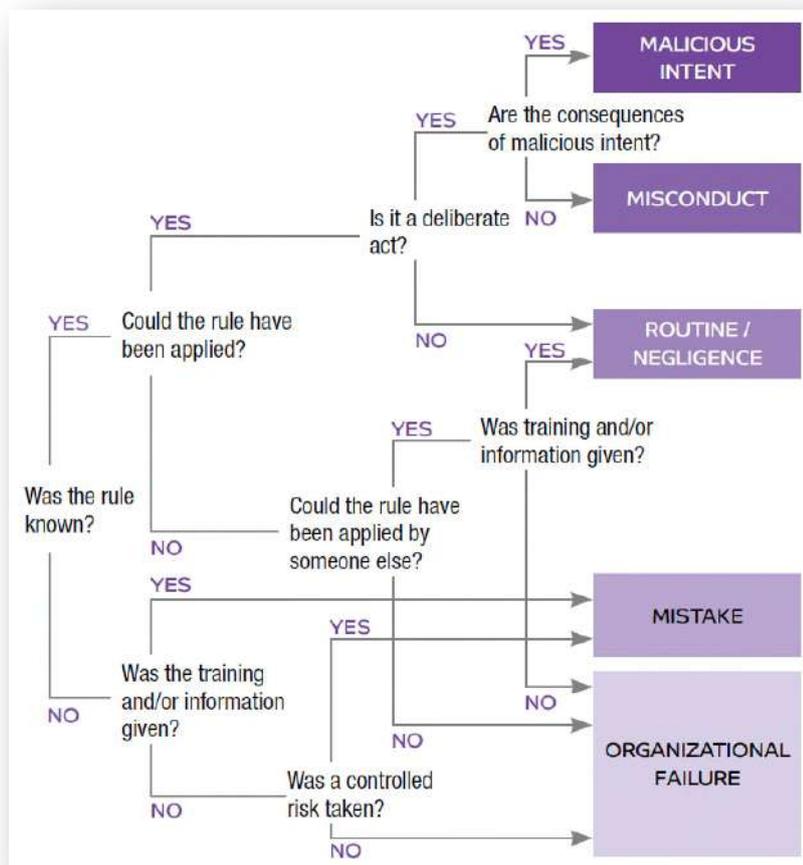
APPENDIX 3

How to React in the Event of a Shortfall

Whether one observes positive behaviour, non-compliance or a risky situation, in order to act on the behaviour of the people concerned, **our reaction is necessarily immediate, concrete and systematic.**

The flowchart below helps us to **better assess the nature of the deviation observed and then to react appropriately.**

1. Flow Diagram to Help with the Analysis of a Shortfall



	Groupe Guide and Manual		
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2. React in the Event of a Shortfall

- **Admit the right to make a mistake**
 - ✓ Discuss the matter directly with the person concerned and allow them to say exactly what happened, even before the analysis of the incident, if applicable.
 - ✓ Evaluate the professionalism, and knowledge of the person.
 - ✓ Systematically consider the role and responsibility of the other players, including the hierarchical line.
- **React**
 - ✓ Talk to the person face to face, remind them of the rule and obtain their commitment to apply the rule in future.
- **Formal warning**
 - ✓ Give written notification for a repeat offence or carelessness.
- **Sanction**
 - ✓ Apply the sanctions indicated in the company regulations.

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	Group Rule		
	HSE Requirements for Contractors		
PSR/HSE Division	HSE		CR-GR-HSE-501 Rev. N°: 00 Date : 17/05/2018

APPENDIX 1

High risk activities list.

Task or activity	Exceptions
Work on electrically powered systems	- tension <48 volts
Electric power isolation	- operation of low voltage power breakers or switches (< 1000 V) - Systems protected by differential breaker <30 mA
Working at height (>2 m) including use of elevation platforms	- spaces protected by solid walls, glazing, grating or guardrails (with intermediate sub-beam) of at least 1 m high
Welding, cutting	- brazing on electronic circuits, on sewage pipes
Excavation, earthworks	- refer to specific rule
Work conducted in confined spaces	
Activities in extreme weather conditions" (>40°C or <-10°C, These values can be adapted locally.	
Difficult conditions such as remote location, isolation or hostile environment (e.g. jungle survey, isolated seismic campaign, etc.)	
Lifting operations	- lifting with manual force (ropes, pulleys, hoists), - mechanical handling (pallets, gas bottle racks etc.), notably using self-propelled forklifts and pallet trucks - use of lifts/elevators
High pressure waterjet works and sand blasting	- refer to specific rule
Use of X-ray or gamma ray sources; work on stationary radioactive sources (level measurement, laboratory apparatus, medical device, etc.)	
Intervention on equipment/structure containing asbestos or in the presence of asbestos dust or refractory ceramic fibers.	
Hydraulic/pneumatic tests	
Diving	
Public transport	
Transportation of hazardous materials (land, sea, river, rail)	- capacities <1000L or 1000 kg in the same vehicle

This list is not exhaustive. The entity or affiliate must add to or complete this list with the high-risk tasks and activities identified through the risk analysis and with the support of HSE specialists.

	Group Rule		
	HSE Requirements for Contractors		
PSR/HSE Division	HSE		CR-GR-HSE-501 Rev. N°: 00 Date : 17/05/2018

APPENDIX 3

Modulation of HSE requirements

The HSE requirements are modulated according to the risk level of the service and the contractual mode.

The following table gives the indications of this modulation for each of the requirements within the rule.

Phase	Exigences	Mode 1	Mode 2	Mode 3
Preparation	3.2.1 to 3.2.5	yes	yes	yes
HSE Prequalification	3.3.1	for M/H risks	for M/H risks	for H risks
HSE Clauses	3.3.2 to 3.3.5	yes	yes	yes (audit)
Tenders HSE evaluation	3.3.6	for M/H risks	for M/H risks	for H risks
HSE Plan	3.4.1	joint (entity or affiliate-leader/contractor)	joint (entity or affiliate/contractor-leader)	contractor
Kick-off meeting	3.4.2	for M/H risks	for M/H risks	not mandatory
Pre-mob/mob inspection	3.4.3	for M/H risks	for M/H risks	not mandatory
Measuring and Reporting HSE performance	3.4.4 ; 3.4.5	by entity or affiliate	by contractors	by contractors
In case of fatal accident	3.4.6	Yes	Yes	Yes
Joint HSE review	3.4.7	for M/H risks	for M/H risks	not mandatory
Inspection at end of services	3.5.1	for M/H risks	for M/H risks	not mandatory
Final HSE performance evaluation	3.5.2	yes	yes	yes
HSE monitoring	3.6.1	yes	yes	Yes

Table 2 : modulation of HSE requirements

	Group Rule		
	HSE Requirements for Contractors		
PSR/HSE Division	HSE		CR-GR-HSE-501 Rev. N°: 00 Date : 17/05/2018

APPENDIX 4

Indicative content of the HSE Plan applicable according to the nature of the services.

The following elements of the HSE plan are to be considered.

Preparation

- Detailed description of the tasks to be carried out, the worksite where they will be carried out, and the planned execution methods/procedures (including, where applicable, products, materials, equipment, tools, machinery, etc.).
- Identification of hazards and associated risks (activities risks, worksite risks and other adjacent activities risks/hazards, environmental/climate risks, etc.)
- Means and procedures for risk reduction to be put in place
- Residual risk levels
- Identification of the Contractors' person in charge for the HSE aspects of the contract/service (point of contact) and the mobilized/available HSE resources
- Copy of the applicable site rules, procedures and other general instructions

Execution

- HSE training and certifications including new and temporary employees.
- Quality control procedures and means (PPE, materials, equipment, tools, etc.).
- HSE management plan addressing subcontractors interventions.
- Organization and control of worksite and/or services
- Industrial hygiene risk management plan including working hours/rest (notably accommodation, catering, transport).
- Monitoring plan, HSE inspection and audit plan, permit to work procedures, and specific procedures for high-risk activities.
- Handover procedure/crew change.
- Transportation/Travel Management Plan/Procedure and Road Safety.
- Exposure control plan for hazardous materials (chemical, radioactive, carcinogenic, etc.).
- Environmental protection plan (waste management, releases, emissions, etc.).
- Procedure for managing changes.
- Demobilization management plan.
- The HSE performance measurement plan and internal reporting for the entity or affiliate.
- HSE communication plan.
- Planning of HSE meetings and typical agendas.
- Motivation plan/promotion of good practices.

Emergency preparedness

- Anomaly/near-miss/incident management plan or procedure.
- Emergency plan, medical assistance, evacuation plan.
- Emergency drills.

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General requirements:

- The contractor is obligated to declare all the subcontractors he intends to use, and the nature and extent of the services that will be subcontracted to them.

- TotalEnergies Marketing Egypt doesn't work with subcontractors; accordingly, TotalEnergies Marketing Egypt has the right to refuse subcontractors proposed by the contractor on the basis of HSE criteria.

- The contractor is obligated to comply with applicable HSE laws and regulations.

- The contractor is committed to provide competent and qualified personnel and is obligated to inform the TotalEnergies Marketing Egypt of the presence of new personnel (<6 months in the business or on site) and to have an HSE support plan.

- The contractor is committed to comply with all applicable local regulations and TotalEnergies Marketing Egypt HSE rules (can be added to the contract templated).

- Stricter requirements for services with medium and high risks in mode 1 (Golden Rules training ,medical fitness certificates, HSE qualifications/certifications, HSE plan, and safety observations (in addition to ICC clause).

- Prevention plan shall be implemented before starting any work and mitigation measures will be discussed and cascaded to all staff .

- The Contractor's program for the works shall be based upon a critical path analysis chart ,preferably computerized. Immediately after receiving the P.O.

- The contractor is committed to provide all the required PPE for the entire project staff.

- The contractor is committed to prepare a project time and progress chart and to validate it from Total Energies Marketing Egypt Before starting the project.

The Contractor shall respect and comply with any updates or modifications for the Prevention plan and work permits templates as per TotalEnergies Marketing Egypt HSE rules.

- * •Labor insurance certificate is mandatory to be submitted (as per the local law requirements the contractor is obliged to open file at the social insurance fund and to pay the social insurance contributions due on every invoice and well as obtaining a certificate for each invoices.

- * •General insurance certificate (covering insurance on the works, workers and third parties 'liabilities); will be mandatory against theft, damage, fire and fatality with a well know approved insurance company (to be approved by TotalEnergies Marketing Egypt). Will be mandatory to be submitted before commencing the work with the awarded contractor.

- A written commitment from the contractor to comply with all the applicable local regulations and TotalEnergies Marketing Egypt HSE rules that are incorporated into the contract.

- For high risk activities, a contractor conformity inspection conducted (this inspection is not necessary if the contractor has a certification of its HSE management system by a recognized 3rd Party).

A commitment from the contractor to provide competent and qualified personal to perform the type of service envisaged and to control the associated risk. In all cases the contractor shall not hire day laborer to perform the activity

Minimum HSE contractual clauses in mode 1 contracts, the following minimum clauses are included:

- The contractor obligation to comply with the applicable HSE laws and regulations, as well as the defined HSE requirements as set out in the contract, and to take into account any additional opportunities for HSE risk reduction.
- The obligation to specify, based on HSE criteria, the part or parts of the service that cannot be subcontracted.
- The contractor obligation to declare all the subcontractors it intends to use, and the nature and extent of the services that will be subcontracted to them.
- The contractor obligation to set up an HSE qualification process for its subcontractors.
- The contractor obligation to contractually impose on its subcontractors that they will comply with the applicable HSE laws and regulations as well as with the HSE requirements stipulated in the contract.
- The possibility for TotalEnergies Marketing Egypt to refuse subcontractors proposed by the contractor on the basis of HSE criteria (not applicable to rail transport);
- The obligation to inform TotalEnergies Marketing Egypt of the presence of new personnel (<6 months in the business or on site) and to have an HSE support plan.
- The option for TotalEnergies Marketing Egypt to decide to suspend execution of the contracted activities in the event of a fatal work-related accident.
- The ability of TotalEnergies Marketing Egypt to decide the suspension or termination of the contract in the event of a contractor breach of the applicable HSE laws and regulations or to the HSE requirements set out in the contract.
- The right to publish and communicate on a monthly basis HSE performance of contractors on TotalEnergies Marketing Egypt facilities or industrial sites.
- The right for the contractor staff and those of its subcontractors to step in and stop ongoing work if they feel that an action or situation is unsafe or could lead to an incident, with no sanction guaranteed.
- **Additional HSE contractual clauses in mode 1**
- The contractor ensures that its staff and those of its subcontractors involved in the execution:
 - follow the HSE orientation program provided on the site where the service is being provided.
 - are trained on the Golden Rules with a knowledge validation test.
 - have the required HSE qualifications/certifications.
 - have the required medical fitness certificates.
- The contractor has an HSE management system which ensures that the personnel of the contractor its subcontractors are qualified and able to carry out the required tasks and that the processes, tools, materials and the equipment they use are correctly maintained and adapted to the HSE risks associated with the performance of the service.

- The contractor participates in the preparation and ongoing updates of the HSE plan with the TotalEnergies Marketing Egypt .
- The contractor ensures that regular safety observations, covering all of their personnel involved in high-risk tasks are conducted and that the results are communicated (see appendix 1 for high risk).

Minimum HSE contractual clauses in mode 2 contracts, the following minimum clauses are included:

- The contractor obligation to comply with the applicable HSE laws and regulations, as well as the defined HSE requirements as set out in the contract, and to take into account any additional opportunities for HSE risk reduction.
- The obligation to specify, based on HSE criteria, the part or parts of the service that cannot be subcontracted.
- The contractor obligation to declare all the subcontractors it intends to use, and the nature and extent of the services that will be subcontracted to them.
- The contractor obligation to set up an HSE qualification process for its subcontractors.
- The contractor obligation to contractually impose on its subcontractors that they will comply with the applicable HSE laws and regulations as well as with the HSE requirements stipulated in the contract.
- The possibility for the TotalEnergies Marketing Egypt to refuse subcontractors proposed by the contractor on the basis of HSE criteria (not applicable to rail transport);
- The obligation to inform the TotalEnergies Marketing Egypt of the presence of new personnel (<6 months in the business or on site) and to have an HSE support plan.
- The option for TotalEnergies Marketing Egypt to decide to suspend execution of the contracted activities in the event of a fatal work-related accident.
- The ability of the TotalEnergies Marketing Egypt to decide the suspension or termination of the contract in the event of a contractor breach of the applicable HSE laws and regulations or to the HSE requirements set out in the contract.
- The right to publish and communicate on a monthly basis HSE performance of contractors on TotalEnergies Marketing Egypt facilities or industrial sites.
- The right for the contractor staff and those of its subcontractors to step in and stop ongoing work if they feel that an action or situation is unsafe or could lead to an incident, with no sanction guaranteed.
- The contractor ensures that its staff and those of its subcontractors involved in the execution:
 - follow the HSE orientation program provided on the site where the service is being provided.
 - are trained on the Golden Rules with a knowledge validation test.
 - have the required HSE qualifications/certifications.

- have the required medical fitness certificates.
- The contractor has an HSE management system which ensures that the personnel of the contractor its subcontractors are qualified and able to carry out the required tasks and that the processes, tools, materials and the equipment they use are correctly maintained and adapted to the HSE risks associated with the performance of the service.
- The contractor participates in the preparation and ongoing updates of the HSE plan with the entity or affiliate.
- The contractor ensures that regular safety observations, covering all of their personnel involved in high-risk tasks are conducted and that the results are communicated (see appendix 1 for high risk).

- **Additional HSE contractual clauses in mode 2**

- The contractor uses adequate risk analysis methods.
- The contractor proposes a preliminary HSE plan.
- The contractor has an inspection and internal audit plan including the relevant Golden Rules for which it undertakes to communicate the results to TotalEnergies Marketing Egypt

Minimum HSE contractual clauses in mode 3 contracts, the following minimum clauses are included:

- The contractor obligation to comply with the applicable HSE laws and regulations, as well as the defined HSE requirements as set out in the contract, and to take into account any additional opportunities for HSE risk reduction.
- The obligation to specify, based on HSE criteria, the part or parts of the service that cannot be subcontracted.
- The contractor obligation to declare all the subcontractors it intends to use, and the nature and extent of the services that will be subcontracted to them.
- The contractor obligation to set up an HSE qualification process for its subcontractors.
- The contractor obligation to contractually impose on its subcontractors that they will comply with the applicable HSE laws and regulations as well as with the HSE requirements stipulated in the contract.
- The possibility for TotalEnergies Marketing Egypt to refuse subcontractors proposed by the contractor on the basis of HSE criteria (not applicable to rail transport);
- The obligation to inform TotalEnergies Marketing Egypt of the presence of new personnel (<6 months in the business or on site) and to have an HSE support plan.
- The option for TotalEnergies Marketing Egypt to decide to suspend execution of the contracted activities in the event of a fatal work-related accident.
- The ability of TotalEnergies Marketing Egypt to decide the suspension or termination of the contract in the event of a contractor breach of the applicable HSE laws and regulations or to the HSE requirements set out in the contract.
- The right to publish and communicate on a monthly basis HSE performance of contractors on entity or affiliate facilities or industrial sites.
- The right for the contractor staff and those of its subcontractors to step in and stop ongoing work if they feel that an action or situation is unsafe or could lead to an incident, with no sanction guaranteed

ARTICLE 1: COMPLIANCE WITH RULES, STANDARDS AND PROCEDURES

1.1 GENERAL PROVISIONS

The Provider shall perform the Agreement in a professional manner, with all requisite care and, in particular, shall comply with, and cause its personnel and the personnel of any Subcontractors it may use to comply with:

- Public Policy Provisions;
- The standards, laws and regulations in force or that may be adopted during the performance of the Services, in particular those applicable to the fields relevant to the Services and its business activities in the countries where the Services are performed;
- Industry practice and best practices of the trade;
- The specifications, standards and rules defined in the Agreement, or in effect on TOTAL EGYPT's premises, or that TOTAL EGYPT may provide to the Provider throughout the performance of the Services;
- The strictest safety standards with regard to the protection of persons and property;
- The labor laws and employment legislation and employee protection rules in force in the City where the Services are performed;
- In the event work is performed on TOTAL EGYPT's information systems, with the operating procedures for the hardware and software and the constraints specific to the IT environment.

1.2 SPECIFIC PROVISIONS APPLICABLE TO SITES IF NECESSARY

If the Services are performed at a TOTAL EGYPT Site, the Provider shall comply with, and cause any Subcontractors it may use to comply with, the procedures in effect on the Site where work is performed, in particular:

- The working hour constraints of the Site, unless the Parties expressly agree otherwise;
- The constraints specific to regulated access to the Site;
- Technical procedures and instructions that are provided to it at the time it performs work at the Site.

In the event of non-compliance with any of these rules, the Provider and/or any Subcontractors it may use may be denied access to or be expelled from the Site. The Provider shall bear all consequences of non-compliance with these rules, including if it is refused access to or expelled from the Site

ARTICLE 2: REGISTRATIONS, AUTHORIZATIONS AND ACCREDITATIONS

The Provider represents that both it and any Subcontractors it may use hold all registrations, authorizations and accreditations necessary to perform the contractual obligations under the Agreement (in particular, authorizations and registrations granted by administrative authorities, and accreditations or certifications granted by professional organizations), and undertakes to maintain all registrations, authorizations and accreditations they hold up to date, and to file any additional, new or amended applications that may be necessary.

The Provider shall promptly inform TOTAL EGYPT of any statutory or regulatory amendment that has an impact on the registrations, authorizations and accreditations it holds, and it shall inform TOTAL EGYPT of the actions it has taken vis-à-vis the relevant national authorities in order to keep or obtain the legal or regulatory registrations, authorizations and accreditations necessary due to statutory or regulatory amendments in the relevant country.

The Provider shall promptly inform TOTAL EGYPT in the event any of the registrations, authorizations and accreditations necessary to perform the relevant Services are suspended or cancelled. A suspension or cancellation of registrations, authorizations and accreditations held by the Provider or its Subcontractors due to their violations vis-à-vis any national or international authorities shall not be deemed a force majeure event. In such case, the Provider and TOTAL EGYPT, respectively, may terminate the Agreement in accordance with the requirements of the article entitled "Termination for Breach".

The Provider shall indemnify and hold TOTAL EGYPT harmless from all financial consequences that may ensue from non-compliance with the obligations set forth in this article.



The Provider and its eventual Subcontractors shall obtain and preserve, throughout the duration of the performance of the Works and Services, the registrations, certifications, accreditations and authorizations deemed necessary by the nature or the place of performance of the Works and Services. The Provider shall provide the Customer with all supporting documentation. The non performance or the withdrawal of such "authorizations" allows the Customer to immediately terminate the Agreement as they are often related to security requirements deeming immediate reaction when violated.

ARTICLE 3: HEALTH, SAFETY AND ENVIRONMENT

3.1 GENERAL PROVISIONS

The Provider undertakes both on its own behalf and on behalf of its personnel and any Subcontractors it may use, to:

- Comply with the Public Policy Provisions and laws applicable in this field;
- Prevent the risks of injury to persons and damage to property and the environment in connection with the performance of the Services;
- Set up a health and safety management system for the personnel assigned to perform the Services.

3.2 SPECIFIC PROVISIONS APPLICABLE TO SITES

The Provider shall comply with, and cause its workers, representatives, personnel and the personnel of any Subcontractors it may use to comply with the rules in effect on Sites with respect to working conditions, health, hygiene, safety and the environment, as well as the laws applicable in these fields depending on the Site where performance takes place.

For these purposes the Provider shall:

- Ensure compliance with the specific requirements transmitted by TOTAL EGYPT with respect to working conditions, health, hygiene, safety and the environment concerning specific training, medical certifications or required preventive measures, depending on the place where the Services are performed;
- Facilitate coordination of the performance of the Services with the activities of TOTAL EGYPT and of third parties performing work on the Site;
- Ensure that none of the Services is performed by its personnel or the personnel of any Subcontractors it may use under the influence of alcohol, drugs, any other prohibited substance or any other

substance that would be incompatible with performing the Services safely, in accordance with the Site's internal rules and regulations on these aspects.

- Ensure that its personnel and the personnel of any Subcontractors it may use are qualified and accredited to use all machinery, equipment and tools necessary to perform the Services;
- Immediately and at its own expense, put a stop to any situation or activity within its control that is dangerous or harmful to health, hygiene, safety or the environment;
- Ensure that its personnel and the personnel of any Subcontractors it may use who are present on the Site take part in scheduled fire and safety drills and do not evade this obligation;
- Take part in drafting the accident prevention plan prepared by the Parties and comply with the provisions thereof [If need be].

In the event of non-compliance with any obligation listed above, and without prejudice to TOTAL EGYPT's right to terminate the Agreement in accordance with the requirements of the article entitled "Termination", TOTAL EGYPT:

- May, immediately and without any prior formality, at the Provider's expense, take or cause to have taken all appropriate measures if it deems that the Provider has not taken such measures or implemented them with sufficient speed
- Reserves the right to refuse access to or expel the Provider and/or any Subcontractors it may use from the Site.

The Provider shall bear all consequences of non-compliance with any of these obligations, including measures taken by TOTAL EGYPT in the event of the Provider's default or negligence or if it is refused access to or is expelled from the Site.

 The respect by the Provider and its eventual Subcontractors of the rules related to work conditions, health, hygiene, security and environment is essential regarding the environment in which the Works and Services may be performed (classified industrial sites where the prevention of risks is essential, multiplicity of operators, many of workers on site etc.). Any rules specific to each Site must be transmitted or acknowledged by the Provider in order to be enforceable; the Customer will consequently be able to oppose to the defaulting Provider any breach to such rules in order to sanction him.

ARTICLE 4: PROVIDER'S TEAMS

The Provider shall set up an organization and allocate the resources necessary for proper performance of the Services.

It is expressly agreed that in connection with the Agreement the Provider shall act solely as an independent service provider and that nothing in the Agreement or in the relationship between the Parties shall be construed as creating a hierarchical relationship or partnership between TOTAL EGYPT and the Provider or the Provider's personnel. The Provider shall manage and supervise its teams in such a manner as to guarantee the proper performance and quality of the Services. The Provider shall be solely responsible for the management and discipline of its personnel. Accordingly, the Provider's personnel shall remain under the Provider's sole authority, management and supervision, and the Provider, in its capacity as employer, shall be responsible for administrative, accounting and labor matters concerning its employees. Furthermore, the fact that TOTAL EGYPT may give indications or make requests to the Provider's primary contact persons shall not create any hierarchical relationship between such primary contact persons and TOTAL EGYPT.

4.1 ONSITE WORK

If the Services are to be performed, in whole or in part, at TOTAL EGYPT's Sites, the Provider shall obligatorily ensure that its personnel and the personnel of any Subcontractors it may use comply with the internal rules and regulations of the Site, all standards, regulations and procedures in effect on the

Customer's premises, in particular, but not limited to, safety, health, hygiene and environmental standards.

The Provider shall cause its personnel and the personnel of any Subcontractors it may use to wear any type of identification requested by TOTAL EGYPT (such as a badge) during the entire time they are present on the Site.

4.2 EXPERTISE AND STABILITY

The Provider shall, in particular, assign a sufficiently staffed team to the performance of the Services whose members have all technical and/or functional expertise, knowledge and training required to ensure the proper performance and quality of the Services. Accordingly, the Provider shall ensure that the members of its personnel and of any Subcontractors it may use are fully competent to use, in a completely safe manner, the tools and all equipment supplied or used in performing the Services, that they have sufficient experience and have received adequate training, at the Provider's expense, to perform the Services in accordance with the Agreement. In particular, the Provider shall ensure that throughout the performance of the Agreement they have and maintain the necessary expertise.

If required by the nature of the Services, the Provider shall ensure that its personnel and that of any Subcontractors it may use hold all accreditations and certifications required to perform the Services.

In light of the need for the Provider's personnel to be fully familiar with the Sites where the Services are performed and TOTAL EGYPT's requirements in order to perform the Services expected, the Provider shall take all necessary measures to ensure, to the extent possible, the stability of its teams during the time required to perform the Services. The Provider shall use its best efforts to minimize the impact of any reassignment of any worker of the Provider. In any event, the Provider shall give TOTAL EGYPT prior notice of any changes to the members of its personnel who hold key positions in the performance of the Services.

In the event of the departure and/or arrival of an employee of the Provider who is assigned to the performance of the Services, the Provider shall implement and pay for all necessary measures (such as additional resources, coverage periods, training, etc.) required to maintain the Service Levels and comply with all of its contractual obligations.

ARTICLE 5: AUDITS

The Parties agree that TOTAL EGYPT may, at their own expense, during the entire term of the Agreement audit the manner in which the Provider and any Subcontractors it may use perform all or any part of the Services awarded pursuant to the Agreement. Such audit may be carried out by TOTAL EGYPT's in-house audit staff or by an external firm, which shall be subject to a confidentiality obligation.

TOTAL EGYPT shall give the Provider at least ten (10) calendar days prior written notice of its intention to carry out an audit, either on the Provider's premises or on the premises of its Subcontractors. In the latter case, the Provider shall inform the relevant Subcontractor of the audit.

If an external audit firm is to be used, TOTAL EGYPT shall inform the Provider of the identity of such firm.

An audit may be carried out at any time, and may concern, but shall not be limited to, the following points:

- Compliance with the Provider's contractual obligations;
- Compliance with applicable legal obligations;
- Compliance with applicable standards and rules, in particular with respect to hygiene, health, safety, working conditions and the environment;
- Compliance with the best practices of the trade;
- Compliance with the laws on personal data, in particular concerning the security and confidentiality of personal data, by:

- Granting access to premises, information systems and programs used to process personal data;
- Providing all documents certifying that effective security measures are implemented, in particular the data processing security policy;
- Compliance with billing-related obligations;
- Compliance with confidentiality-related obligations;
- Compliance with obligations in connection with the anti-corruption rules referred to in the article entitled "Anti-corruption", the "Fundamental Principles of Purchasing" referred to in that article and in the Attachment entitled "Fundamental Principles of Purchasing" [To include if not yet included].

For the purposes of these audits, the Provider and/or its Subcontractors undertake to cooperate fully, without reservation and in good faith. The Provider or its Subcontractors shall facilitate the access of TOTAL EGYPT and/or any service provider appointed by TOTAL EGYPT to all premises, installations, documents and information, or to any other item that may be of use for properly carrying out the audit, and shall facilitate their task, in particular by answering all questions and granting them access to all tools and resources necessary for the assignment, it being agreed that information obtained shall not be used for any purpose other than the audit.

A copy of the audit report shall be provided to the Provider free of charge.

In the event the audit report reveals the Provider's non-compliance with its obligations, the Provider shall, pursuant to an action plan, implement, at its own expense, the corrective measures necessary to cure such non-conformities within a period of ten (10) calendar days **[to be adapted]** from the date the audit report is delivered.

If the conclusions of the audit contain recommendations for the modification or improvement of the rules and procedures audited, such recommendations shall be implemented pursuant to a contractual amendment.

In any event, the Parties agree that regardless of whether or not the audit procedure is carried out the Provider shall in no way be exonerated from compliance with its contractual obligations, the carrying out or not carrying out the audit procedure shall not be deemed to constitute acceptance of the quality of the Services performed.

If the Provider fails to propose a satisfactory action plan or fails to cure the non-conformities within the period agreed upon, TOTAL EGYPT shall be entitled to terminate, in whole or in part the Agreement, respectively, in accordance with the terms and conditions of the article entitled "Termination". In such case, no compensation shall be owed by TOTAL EGYPT.

 The Customer may carry on audits and/or quality controls in the Provider's or its eventual Subcontractors' premises. Such audit/control shall be notified to the Provider ten (10) calendar days prior to such audit/control. This provision allows carrying on a quality monitoring regarding the conditions of the performance of the Agreement or on any other contractual, legal or administrative obligation undertaken by the Provider. The information gathered may not be used for any other purpose than the audit and its eventual consequences.

ARTICLE 6: SUSPENSION

In the event the Provider breaches any of its obligations under the Agreement, TOTAL EGYPT may suspend, at its own discretionary, the performance of the Agreement for a given period of time, defined in the formal written notice sent by registered letter with acknowledgement of receipt in order to make the Provider performed its obligations. The obligations of TOTAL EGYPT shall be suspended for that period

and he shall not be expected to place any Order or to continue to perform any pending Order until the breach is remedied and as such TOTAL EGYPT shall not be held liable.

TOTAL EGYPT may terminate the Agreement with an additional notice of thirty (30) calendar days if the Provider does not remedy the breach after expiry of the suspension period and/or the period of renewal of the suspension.

ARTICLE 7: TERMINATION

For all cases of termination described in this article, it is expressly agreed that only TOTAL EGYPT and the Provider that is the signatory of the Agreement shall be entitled to terminate the Agreement on the grounds of a breach of the rights and obligations of TOTAL EGYPT and the Provider that is the signatory of the Agreement.

7.1 TERMINATION FOR BREACH

7.1.1 BREACH OF THE PROVIDER

In the event the Provider or one of his subcontractors breaches any of the obligations under the Agreement, TOTAL EGYPT may, no earlier than Ten (10) calendar days after having given the other Party notice to perform its obligations, by certified mail, return receipt requested, with which the Provider fails to comply, automatically terminate all or any part of, respectively, the Agreement, without prejudice to the right to claim damages. Such termination shall take effect

7.1.2 BREACH OF TOTAL EGYPT

In the event TOTAL EGYPT breaches any of its obligations under the Agreement, respectively, the Provider may, no earlier than thirty (30) calendar days after having given TOTAL EGYPT notice to perform its obligations, by certified mail, return receipt requested, with which TOTAL EGYPT fails to comply, automatically terminate all or any part of the Agreement, and after having given three (3) months' prior notice by certified mail, return receipt requested, without prejudice to the right to claim damages.



This option to terminate the Agreement is bilateral: it can be implemented by both Parties: TOTAL EGYPT and the Provider. For the Provider, the most frequent cases of contractual non performance are delays of performance of its obligations, default of Compliance to the Works and Services, breach of implementing rules of the Works and Services (breach of standards, of HSE rules, of legal provisions on subcontracting), or any other breach of any contractual obligation (*such as the breach of confidentiality*). For TOTAL EGYPT, it should be noted that the nonpayment on the due date of the invoice is assimilated to a breach allowing the Provider to terminate the Agreement.

7.2 TERMINATION WITHOUT PRIOR NOTICE AND WITHOUT NOTICE TO CURE THE BREACH

TOTAL EGYPT may also automatically terminate, without giving prior notice to cure the breach, respectively, all or any part of Agreement, without any compensation being owed to the Provider, and without prejudice to any damages TOTAL EGYPT may be entitled to claim, but only in the situations described below. TOTAL EGYPT gives notice of such termination to the Provider by certified mail, return receipt requested. In light of its operational constraints, TOTAL EGYPT shall be entitled to postpone the effective date of termination. The letter giving notice of termination shall specify such postponed effective date. If no postponed effective date is specified, termination shall be effective immediately, as of the date the letter sent by certified mail, return receipt requested, is first presented for delivery.

The following are the only situations in which termination without prior notice and without notice to cure the breach is possible:

- In the event of the Provider's blatant failure to comply with safety, health, hygiene or environmental protection rules;
- In the event of the Provider's breach, if the consequences thereof are manifestly irreparable;
- In the event of an unjustified interruption in the Services;
- In the event the Provider hires a Subcontractor to perform all or part of the Services if said Subcontractor has not been authorized before hand in writing by TOTAL EGYPT, or in the event of noncompliance with the provisions of the article entitled "Subcontracting";
- In the event the Provider files for bankruptcy, if judicial reorganization or liquidation proceedings are initiated against the Provider or if a temporary trustee is appointed for the Provider, subject to applicable Public Policy Provisions;
- In the event a competitor of TOTAL EGYPT obtains direct or indirect control of the Provider. Accordingly, the Provider shall notify TOTAL EGYPT of all planned transactions that will result in closer ties with a direct or indirect competitor of TOTAL EGYPT, giving sufficient prior notice to enable TOTAL EGYPT to assess the need to terminate the Agreement before the completion of the planned transaction. TOTAL EGYPT shall handle such information in a confidential manner. For the purposes of this article, the term "control" shall mean directly or indirectly holding the majority of voting rights or of corporate capital.

7.3 CONSEQUENCES OF TERMINATION

- (a) In the event of "termination for breach" or "termination without prior notice and without notice to cure the breach" due to a breach of the Provider, or in the other specific cases of termination specified in the articles of Agreement entitled "Combating Illegal Labor", "Assignment" and "Force Majeure", all payments already made by TOTAL EGYPT for Services that have not been performed, are incomplete or have not been accepted shall be immediately repaid to TOTAL EGYPT, Furthermore, TOTAL EGYPT shall be entitled to appoint any other third party to replace it or the Provider to perform, at the Provider's expense, the Services remaining to be performed under the Agreement that has been terminated.
- (b) In the event of the partial termination of one or more Services, if the Agreement is not terminated, they shall remain in force between the Parties, excluding the Services or components terminated by TOTAL EGYPT. In such case, the financial terms and conditions applicable under the Agreement shall be adjusted to take into account the partial termination.

- (c) In the event of the “termination for breach or termination without prior notice and without notice to cure the breach due to a breach of the provider, if the issues in questions concerns service awarded to a subcontractor TOTAL EGYPT may at its sole discretion and as an alternative to termination request that the provider find another subcontractor or any appropriate contractual organization able to perform the Services in accordance with the provisions of the Agreement, in particular, in compliance with the Service Levels agreed upon for the Services, and to guarantee the Conformity of the Services. In such case, within ten days (10) from TOTAL EGYPT’s notification, the Provider shall present alternative proposed solution(s). If TOTAL EGYPT agrees, the Provider shall be responsible for terminating the contract with the relevant Subcontractor and hiring new Subcontractor(s) to take over the Services, at no additional cost to TOTAL EGYPT and without any interruption in the Services.

7.4 TERMINATION WITHOUT BREACH AT TOTAL EGYPT’S INITIATIVE

TOTAL EGYPT shall be entitled to unilaterally terminate all or part of the Agreement, even if the Provider has not breached any of its obligations. TOTAL EGYPT shall not be required to give its reasons for such decision.

Such decision shall be communicated to the Provider in a letter sent by certified mail, return receipt requested, giving 15 days prior notice.

TOTAL EGYPT shall pay the Provider all amounts owed for the Services in question at the time of termination, taking into account advances paid. Furthermore, the Provider shall be paid for all work that it performs during the notice period until the end of such period.

In addition, TOTAL EGYPT shall pay the Provider termination compensation, which shall be a final settlement and exclusive of any other payment, in an amount equal to **two percent (2%)** of the balance owed on firm Services ordered that are in the process of being performed and that are being terminated. This compensation shall be an all-inclusive amount in addition to the wasted raw material been purchased or delivered to the project site reference to the formal invoices of this materials without any profit margin for the provider .

Reference to Africa HSE memo dated 21st of December 2019

TotalEnergies shall decide to suspend or terminate the contract in the event of contractor failure to comply with Safety rules based on Safety audit or ICC inspection poor performance results .

Africa Management Committee has decided to reinforce ICC program by implementing additional rules from January 2019:

- Order works exclusively from contractors who have been inspected and reached ICC status yellow or green,
- A contractor who is responsible of a severe or potentially severe accident (which may cause permanent disability, fatality or Hipo 4) should be downgraded by two level independently of his status. When he is not suspended (red status), a new inspection has to be planned as soon as possible,
- The non-respect of one or several golden rules by a contractor, observed during a visit, during ICC inspection or through surveillance cameras, which has been consigned in a formal report, should lead to a downgrade by one level,
- A contractor who reach red status after being downgraded should leave the panel except in case of derogation by the Senior Vice President of the zone,
- A contractor who has been banned (red or twice orange) could join the panel again under the following conditions:
 - Derogation request,
 - re-inspection to be planned,
 - obtaining a yellow status minimum.
- ICC should be expanded to all risky works which may be performed by the contractor, they may be qualified in one discipline and not in another one,

- If there are no ongoing affiliate's works being performed by the contractor, the inspection could take place on a worksite belonging to an third party company after a written authorization. If the ICC result is positive, the contractor may start working for the affiliate and a new inspection should be planned in order to assess the early performances of the contractor,
- A crossed inspections system is encouraged where first inspection and follow-up inspection are implemented by two different inspection companies.



TotalEnergies

GM-HSE-MS

STS/HSE/MS

GUIDE AND MANUAL

GUIDE AND MANUAL

SAFETY OF WORKS AT SERVICE STATIONS AND INDUSTRIAL SITES

REVISION	DATE	PURPOSE	WRITTEN BY	CHECKED BY	APPROVED BY
00	13/04/2022	Creation	STS/HSE/MS/SHI Ali Haouchine	STS/HSE/MS Peter Theunissen	STS/HSE/MS Paul Mannes

	GM - Safety of works at service stations and industrial sites		
	Process for drawing up and implementing the HSE Plan, work permits and associated documents		
STS/HSE/MS	HSE	Effective date June 2022	GM--HSE-XXX REV No.: 00 Date:13/04/2022

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I. GENERAL PROVISIONS

I.1 PURPOSE

The purpose of this guide to the process of drawing up and implementing the HSE Plan and work permits is to **harmonise practices within the Marketing & Services branch** and to **specify**, in addition to the HSE Company Rules, **the recommendations and requirements for preparing for and performing work and operations posing risks**. These requirements may be supplemented or specified by Métiers rules. They include the compulsory provisions for services and works, permit management and the standard documents attached (HSE Plan, general work permit, specific permits, certificates, etc.). These rules are in addition to the laws and regulations in force in the country, which prevail in every instance.

A documented procedure that incorporates the elements of this guide as a minimum must be prepared locally for each entity / subsidiary.

I.2 SCOPE

This guide to the process of drawing up and implementing the HSE Plan and work permits **is intended for all of the MS Branch entities that are in the area operated by the Company**. It covers all the work and services ordered and organised by the TotalEnergies entity and carried out by External Companies in the service station and industrial site networks. It also applies to work at airport stations.

I.3 REFERENCE DOCUMENTS

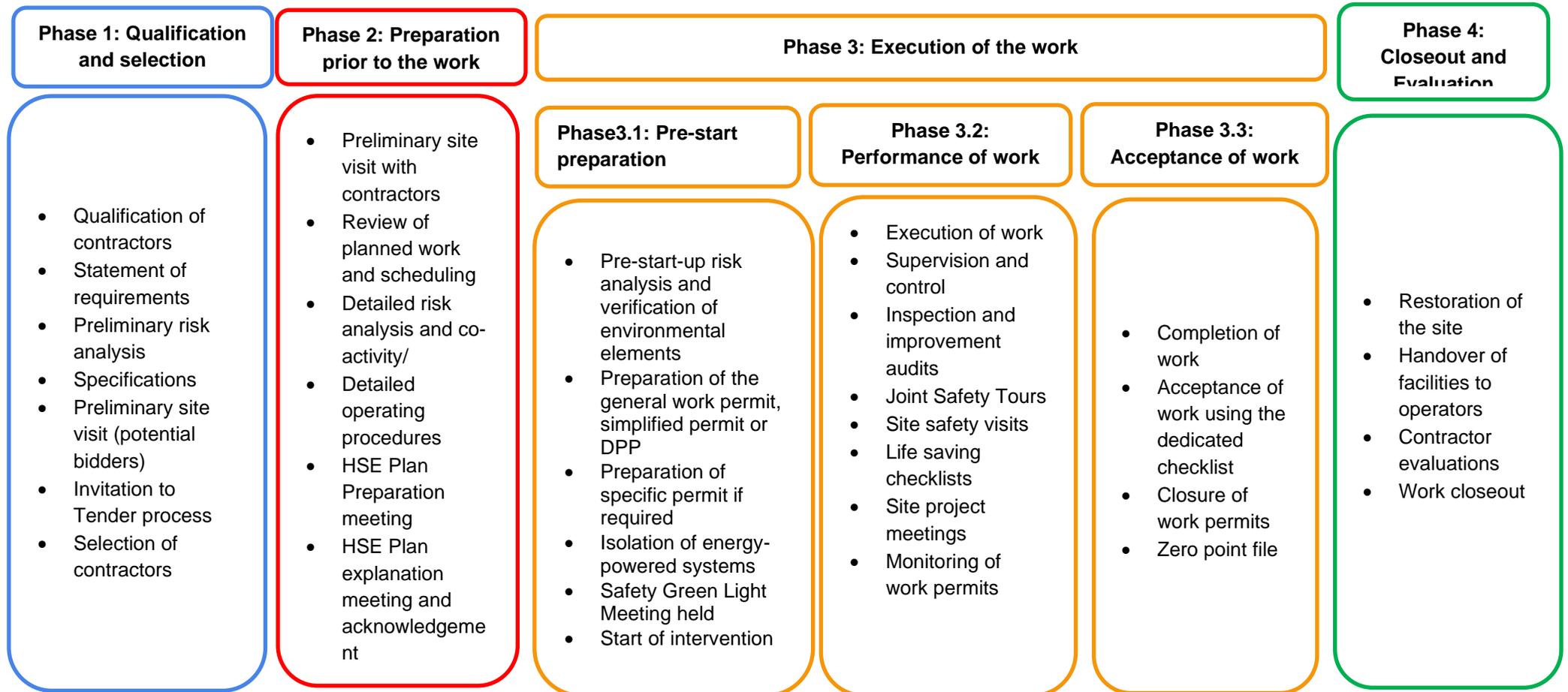
Company Rules	Other documents
<ul style="list-style-type: none"> • CR-GR-HSE-001 One Maestro HSE Expectations • CR-GR-HSE-302 Change management • CR-GR-HSE-402 Work permit process • CR-GR-HSE-406 Personal protection equipment • CR GR HSE-418 Site traffic • CR-GR-HSE-419 Excavation work • CR-GR-HSE-420 Lifting operation • CR-GR-HSE-425 Working at height • CR-GR-HSE-428 Lockout/Tagout procedure • CR-GR-HSE-429 Confined spaces • CR-GR-HSE-501 HSE requirements for services provided by external companies • CR-GR-HSE-801 Feedback on event management 	<ul style="list-style-type: none"> • Template of Prevention Plan and PSR/HSE/MS/AFR appendices • F-APMO-HSE • IMPERATOR New works/ Maintenance instructions • Risk Analysis Guide March 2019 • CR-MS-HSEQ-202FR • Network Work Safety Manual - 2020 • Total Lubrifiant Rouen HSE APPENDIX • GM-GR-HSE-460 • GM-GR-HSE-463 • GM-AFR-HSEQ-201 • INRS documents

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I.4 DATE OF APPLICATION: 01 June 2022

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I.5 PHASING OF WORK AT SERVICE STATIONS AND INDUSTRIAL SITES



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PHASE 1: QUALIFICATION AND SELECTION

As a reminder, this phase is included in the overall process to show all the steps and the connection between them. This phase prior to the work is very important to ensure that the work is carried out in optimal safety conditions. The successful completion of the work depends on how well this upstream phase has been prepared. The following elements should be considered for this phase:

- Statement of requirement
- Drawing up of the specifications
- HSE qualification of contractors
- Preliminary risk analysis
- Contracting method and contractual clauses
- Invitation to Tender documents
- Evaluation of bids and award of contracts
- Selection of contractors

PHASE 2: PREPARATION PRIOR TO THE WORK

This phase includes the following steps to be organised and prepared before the work

- Activity matrix
- Role and responsibilities
- Separation of roles
- Training and authorisation
- Demarcation of areas under the control of a permit issuer
- Conditions for drawing up the HSE plan
- Organisation, implementation and monitoring
- Organisation, implementation and monitoring
- Use of subcontracting
- Joint preliminary visit
- Risk analysis
- Drafting of the HSE plan
- Communication of the HSE plan
- Start of works meeting

II- ORGANISATION OF THE HSE PLAN AND WORK PERMIT PROCESS AND ASSOCIATED DOCUMENTS

II.1 ACTIVITY MATRIX

The activity matrix defines the different types of work and services based on the risk level

- High-risk activities
- Moderate-risk activities
- Low-risk activities

The comprehensive list of the work that can be done is drawn up based on risk analyses. It is reviewed and approved by the appropriate line authority at least once a year.

All work requires a work permit except for work carried out in the normal operation of the facilities and/or equipment and infrastructure.

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③ Matrice des activités et opérations à risque (construction, réhabilitation, maintenance)			
Nature des travaux	Activités à risque élevé	Activités à risque modéré	Activités à faible risque
Point Chaud	<ul style="list-style-type: none"> Travaux avec risque d'inflammation (Possible formation d'étincelles/flammes) à l'intérieur de zones dangereuses (Voir définition correspondante) 	<ul style="list-style-type: none"> Travaux avec risque d'incendie hors de zones dangereuses 	
Espaces confinés	<ul style="list-style-type: none"> Travaux de Stratification de cuve de stockage Ouverture de ligne/capacité de produit à risque Nettoyage / dégazage de capacité Travaux dans des puits d'une profondeur > 1,30 m Travaux dans des séparateurs Travaux dans des réservoirs Travaux dans des espaces définis selon la réglementation locale comme espace confinés 	<ul style="list-style-type: none"> Travaux dans des puits d'une profondeur ≤ 1,30 m 	
Hauteur	<ul style="list-style-type: none"> Travaux en hauteur supérieurs à > 1,50 m en l'absence de dispositifs de sécurité. Travaux avec risque de chute en cas de dénivelé > 1,50 m (au bord d'une fosse, d'un puits, d'une séparation, en l'absence de dispositifs de sécurité) Travaux avec des plateformes élévatrices supérieurs à 3 m 	<ul style="list-style-type: none"> Travaux en hauteur inférieurs □ 3 m et en présence de dispositifs de sécurité. Travaux à l'intérieur des bâtiments sur les faux plafonds Travaux avec des plateformes □ 3 m 	
Levage	<ul style="list-style-type: none"> Travaux de levage de la catégorie 3 (critique) et de la catégorie 2 (Standard). Voir fiche de catégorisation : Levage de cuve, charpente, virole pour dépôt, totem, portique de lavage, blindage, auvent, prémur, Prémur, Bungalow, groupe électrogène, La charge à lever ≥ à 2 tonnes 	<ul style="list-style-type: none"> Travaux de levage de la catégorie 1 (simple). Voir fiche de catégorisation Levage d'appareil de distribution À charge à lever < 2 tonnes Levage par Chariot élévateur, engin de terrassement Levage de palette 	

Example of activity matrix template (see Appendix 05)

The simplified work permit can be implemented provided that the following three conditions are met:

- Low-risk work
- Recurring work
- Work that does not generate any co-activities

NB: transport services (unloading, deliveries, etc.) carried out by an External Company are not covered by an HSE Plan but by a safety protocol in accordance with PATROM rules.

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II.2 ROLES AND RESPONSABILITIES

The responsibility for drawing up the HSE Plan, work permit and certificates lies with the approving authority (the operator or the instructing party). During the preparation of the HSE Plan, the approving authority sets out the procedures for issuing work permits and certificates, and provides the list of persons qualified to issue these documents. The roles and responsibilities are defined below:

Title	Position	Role and responsibilities
<u>Approving Authority / Permit Issuer</u> - Operator or instructing party - HSE Manager - Head of depot / site - Operational manager - Technical Manager Operations/Network Director	Designated position within the entity/subsidiary, checks the permit in the preparation phase, approves the work permit including the planned risk control measures. They issue the work permit, authorise the execution of the work and close the work permit.	<ul style="list-style-type: none"> • carry out an on-site risk analysis and validate it with the managers of external companies • draw up the HSE plan in conjunction with the ECs • check that all associated documents related to the operation are present • confirm the completion of the operations for making the facilities available • identify any potential interference with other activities in the vicinity • ensure the permit is completed properly (coherence, relevance, comprehensive consideration of risks) • establish a permit register that is updated daily • inform staff affected by the work permit • ensure on site that the operative knows where they will be working, the hazards they are exposed to and the preventive/protective measures to be put in place • Ensure that staff are trained and competent to carry out their role. • Approves and signs the permit • They can fill in the work permit • Issues the work permit • Authorises the work to be performed • Closes the work permit.
<u>Executing Authority / Worker</u> - EC Manager - Worksite Manager - Technical Manager - Operative - Technician	Designated position within the external company, in charge of executing the work acknowledging that they understand the work permit conditions. They accept the work permit at the approval stage, and countersign when the permit is issued before	<ul style="list-style-type: none"> • Accepts and signs the permit • Carry out the work in accordance with the work permits they have been granted, • Implement all preventive and protective measures defined in the work permit • Stop work and notify the operator/instructing party as soon as working conditions change (weather, environmental conditions, additional equipment, co-activity, etc.) • Restore the work location • Supervise the teams carrying out the work • They can fill in the work permit in certain cases • They may perform the work or supervise a group of people performing some work

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<p>- Worker</p>	<p>the work begins and when it is closed after the work has been finished.</p>	<ul style="list-style-type: none"> • End of work, Acceptance and Closeout
<p>Applicant Preparer/ Initiator</p> <ul style="list-style-type: none"> - Project Engineer - Station Manager - Assistant Site Manager - Worksite Manager - Operative (EC) - Technician (EC) - Mandated third party 	<p>Designated position within the entity/subsidiary or external company, initiates and prepares the work permit and accompanying documents.</p>	<p>The applicant applies for a work permit from the approving authority (or its representative). The permit must state:</p> <ul style="list-style-type: none"> • the work to be carried out and its different phases • the equipment concerned • the location of the intervention, date and time • the identified risks, the equipment used • the number of workers • the associated documents • They also hand over the operating procedure showing the stages of the work, the risks identified for each of these stages and the appropriate preventive measures. They carry out a risk analysis jointly with the operator / instructing party at the work location and identify the preventive/protective measures to be put in place. While the work is being carried out, they ensure that preventive and protective measures are implemented.
<p>Site Supervisor (Checker)</p> <ul style="list-style-type: none"> - Supervisor / Entity Supervisor - Mandated third party 	<p>Designated position within the entity/subsidiary, carries out checks of the special safety conditions before, during and after the work.</p>	<ul style="list-style-type: none"> • check on site that safety measures are properly implemented before work starts • permanently monitor work and operations posing risks • shut down the worksite if the safety conditions are no longer met, and immediately notify the operator or the instructing party.
<p>Auditor</p> <ul style="list-style-type: none"> - HSE Manager - HSE engineer - Internal auditor 	<p>Designated position within the entity/subsidiary responsible for the audit process</p>	<ul style="list-style-type: none"> • Check that the risk assessment methodology is applied correctly • Audit the process to ensure that the HSE Plan and work permits are being implemented correctly during the work • Incorporate feedback into the entity's procedures • Check that the risks incurred by operatives are acceptable.
<p>Technical advisor (in some organisations and for some activities a technical advisor is appointed)</p>	<p>Authorised and competent person for the position(s) and responsibilities assigned to them according to the activity, in particular for lifting operations</p>	<ul style="list-style-type: none"> • Checks risk analysis, permits and associated certificates before approval • Checks operating procedures • Monitors technical regulatory developments • Provides advice and technical assistance <p>In the particular case of lifting operations:</p> <ul style="list-style-type: none"> • Checks the lifting plan or file mainly for Category 3 and if necessary Category 2 operations • Checks that the lifting equipment used is appropriate for the work to be carried out

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Specific case of a lifting operation		
<u>Lifting Supervisor</u>	The person responsible for carrying out a lifting operation and the only person authorised to give instructions to the operator of the lifting appliance	<ul style="list-style-type: none"> • Is easy to identify during the operation • Controls the lifting area and directs the movement and placement of loads. • Ensures that equipment and loads are inspected before use. • Ensures that there are no unsecured objects that could fall, that the accessories are appropriate and that the load is free from restraints before it is lifted off the ground. • Maintains a direct view of the moving load at all times. • Maintains clear communication with the operator of the lifting appliance. • Is aware of other ongoing operations
<u>Lifting appliance operator:</u> - Crane operator - Overhead crane operator - Forklift operator	The person who drives/operates the powered lifting appliance and has been authorised to do so.	<ul style="list-style-type: none"> • Holder of a valid training certificate • Only uses the lifting appliance under the conditions for which he/she was trained and authorised and in accordance with the manufacturer's instructions. • He/she carries out visual inspections before and after operations and reports any anomalies. • He/She checks that the weight of the load does not exceed the maximum effective capacity of the lifting appliance. • He/She ensures that the visual inspection and verification of the load capacity of the required lifting accessories have been carried out before each lifting operation is performed. • Does not leave a suspended load unattended or an appliance with the key in the ignition. • Ensures that communication and directions between him/her and the supervisor are clear and direct. • Responds only to the orders/signals of the designated supervisor.
<u>Sling operator</u>	Person, trained and instructed, in charge of attaching and detaching lifting accessories to and from the load and the lifting appliance	<ul style="list-style-type: none"> • selects, inspects and uses lifting accessories correctly, ensuring that certification is valid. • Connects/disconnects lifting accessories to loads and lifting appliances according to the lifting file. • Secures the load correctly (packing, wrapping, strapping, etc.). • Checks the mass of the load and any unsecured objects that may fall during lifting. • Maintains communication with the supervisor • Checks that the load is free from restraints before it is lifted off the ground. • Oversees the lifting area • Uses guide ropes and handling tools according to specifications.

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II.3 ALLOCATION AND SEPARATION OF ROLES AND RESPONSIBILITIES

It is possible to assign several of the roles and responsibilities defined above to one person, provided that the HSE Manager is independent. A person cannot approve or issue a work permit or certificate for work that he or she is required to perform himself or herself.

II.4 TRAINING AND ACCREDITATION

Whatever their title, the person who produces the HSE Plan and the work permits must be accredited by the entity due to meeting the following conditions:

- he/she has taken the worksite safety training course and passed it
- he/she is trained in the work permit procedure
- he/she has at least 1 year's experience in operations and/or works (external experience is taken into account)
- he/she has formal authorisation from the entity (Managing Director level or a delegated representative at level N-1).

If there are no local directly authorised persons from the entity, especially for sites more than 100 km away, the operator or the instructing party may delegate this responsibility to:

- a person under his or her command, provided that this person also meets the above criteria
- an external authorised person who has met the above conditions of competence, who must be subject to a contract clearly defining the responsibilities and the mission.
- failing that, the service station manager (COCO, CODO, DODO) under the responsibility of the entity as to the assessment of his/her competence, who must have taken and passed the worksite safety training course as a minimum.

This must be renewed every 3 to 5 years.

The operator or the instructing party keeps an updated list of the people qualified to issue the HSE plan and the work permit. There can be different levels of such accreditation depending on the type of permit the qualified person can issue:

- General or simplified work permit, but not specific permits
- General work permit plus simplified permit plus specific permit

This list should be included in the HSE Plan.

Temporary staff or trainees cannot, regardless of their training, be qualified to issue an official work document on the site (work permit and associated documents)

The EC must ensure that:

- It trains and qualifies its staff and defines their roles in the process of establishing and implementing the HSE plan and work permits
- It trains its staff qualified to conduct the work permit procedure
- It records and traces all authorisations
- It makes its staff aware of the risks associated with the work to be carried out.

The EC undertakes to provide competent and qualified staff to carry out the envisaged service and to control the associated risks.

Needs and requirements in terms of HSE competences should be documented in the HSE plan

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II.5 AREA DEMARCATION

- Identify and accurately demarcate the intervention area (It must indicate the worksite footprint which corresponds to the maximum perimeter of the work area including the worksite preparation area, storage area and the area where machinery moves around. For service stations there can be two areas: one kept in operation and the other in the enclosed worksite.
- A work permit and/or certificate may not include work at different sites or at locations within the same site that are significantly different in terms of risk.

II.6 CONDITIONS FOR DRAWING UP THE HSE PLAN

The MS branch defines the specific health and safety requirements applicable to work carried out in its entities by an External Company. It requires an HSE Plan to be drawn up using the **template attached in Appendix 01** between the User Company (entity) and the External Company/Companies carrying out the operation and likely to introduce risks of interference and in accordance with the activity matrix defined above.

For regular services or recurring maintenance operations without any risk or with low or controlled risk, (see attached activity matrix), the HSE Plan is drawn up 1 - 3 months in advance for a maximum period of one year; it must be reviewed on the expiry date following the same procedure - it is not automatically renewed.

If a company carrying out routine operations and with an annual HSE Plan for these operations needs to carry out work and operations posing risks which are not included in the annual HSE Plan, a specific HSE Plan for this work must be produced. The maximum duration of a specific HSE Plan is also linked to the duration of the operation to be carried out.

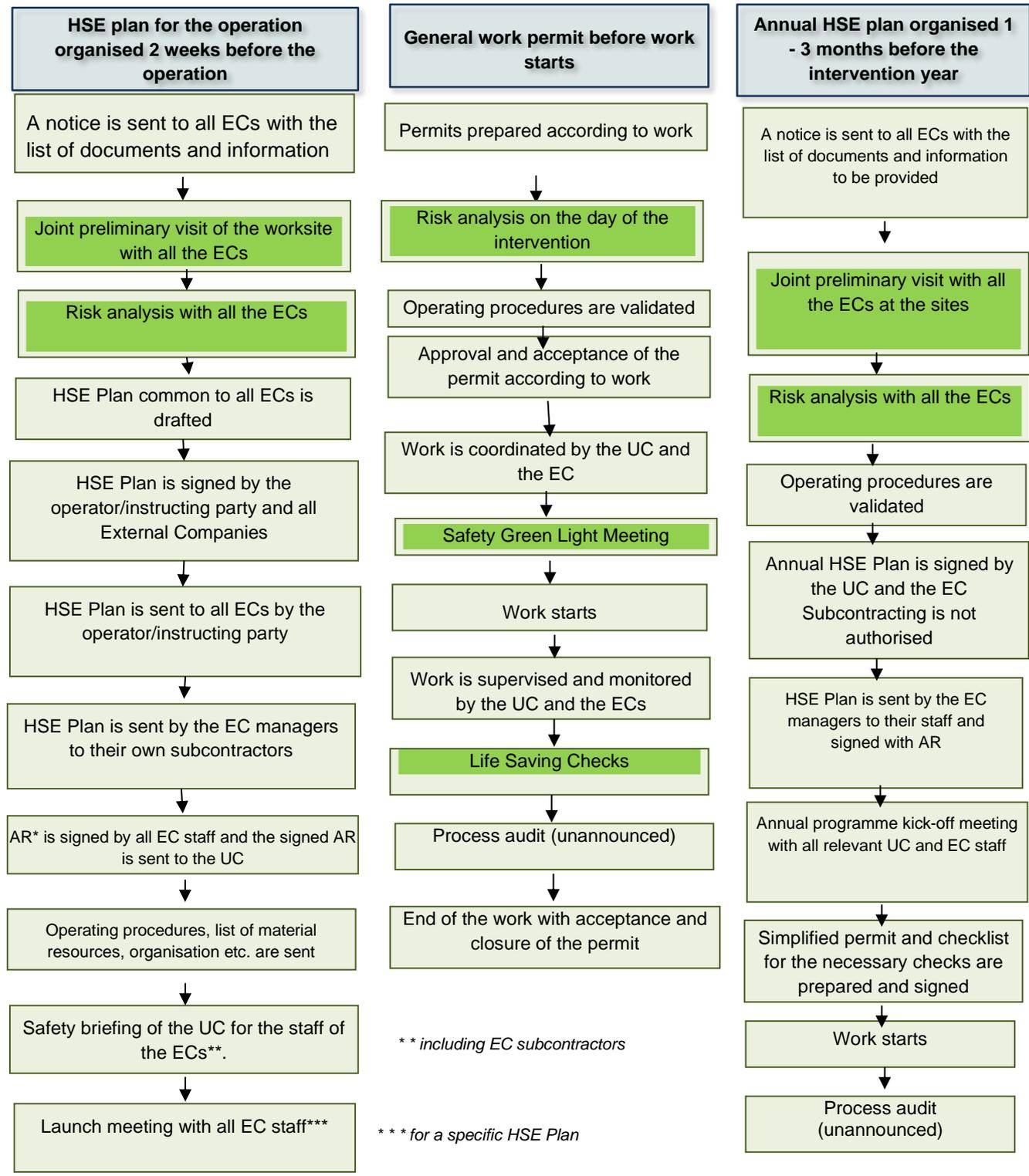
If an HSE Plan is associated with a project or operation that involves more than one company (interference and co-activity), it must be drawn up for all companies and not for each company.

Unless in an emergency, the HSE Plan is produced at least two weeks before the start of the work.

Emergency situations, for which it is not possible to establish an HSE Plan in advance, are managed through operating procedures.

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II.7 ORGANISATION, IMPLEMENTATION AND MONITORING OF THE HSE PLAN AND WORK PERMIT



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II.8 CONVENING EXTERNAL COMPANIES FOR THE HSE PLAN

In the case of a specific HSE Plan, notice must be sent to the external companies by the operator or the instructing party at least 15 days before the date of the HSE Plan.

For an annual HSE Plan for annual services with no work or operations posing risks or an annual HSE Plan for recurring maintenance operations, the HSE Plan must be drawn up 1-3 months before the External Company starts providing the services

The operator or instructing party must request the required documents from each External Company. It requires the presence of the works manager and/or worksite manager of each External Company.

For an annual HSE Plan for recurring maintenance interventions, a detailed operating procedure using the attached form must be provided for each type of intervention. Any other intervention involving risks will be covered by a specific HSE Plan.

It is essential for External Companies to provide all of this information no later than the day of the HSE Plan, otherwise it cannot be completed in full and the operations will need to be postponed.

II.9 USE OF SUBCONTRACTING

The number of subcontractors should be limited and the trades/activities to be subcontracted should be defined in advance by the entity in the call for tenders.

The external company must ensure that processes and procedures are in place for the pre-qualification, evaluation, selection and management of subcontractors to ensure that they have the necessary HSE performance, competence, experience and capability to manage the risks inherent in the performance of the contract. These processes and procedures should be in place before the pre-qualification, evaluation and selection of subcontractors begins. The external company provides the entity with the list of selected subcontractors and their HSE performance resulting from the qualification phase.

The entity also has the right to carry out HSE audits (on-site and/or in the offices) on subcontractors at any time before selection or during the service.

The entity has the power to reject any SUBCONTRACTOR which does not meet the entity's safety standards. Subcontractors must also be present throughout the drawing up of the HSE Plan and the joint pre-signature visit, and must meet the same requirements as the main contractors and provide the same documentation.

The external company is fully responsible for the HSE performance of its subcontractors. As such, the external company must ensure that its subcontractors fully comply with the HSE requirements of the contract and that they demonstrate improvements in their HSE performance.

II.10 JOINT VISIT PRIOR TO THE PREPARATION OF THE HSE PLAN

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A preliminary site visit must be carried out under the initiative of the operator or the instructing party with all the worksite managers and/or Works Managers appointed by the External Companies involved in the operation. The operator or the instructing party and all worksite managers of the External Companies proceed together with the joint preliminary visit. During this visit, the following points must be covered:

- risks associated with the entity's activity or its environment (in particular overhead power lines, various networks, groundwater, the neighbourhood, etc.)
- areas which may present interference hazards with the activity of external companies
- the area of intervention of each external company or co-activity
- traffic routes used by workers, vehicles and machinery, parking areas, equipment storage areas and green zones (areas where PPE is not required)
- washing and toilet facilities, living areas, emergency assembly point, first aid kits and signage.

During this visit the operator or instructing party must also:

- demarcate the External Companies' intervention sector
- establish the zones in this sector which may represent a danger to staff
- communicate its safety instructions applicable to the operation, which will concern all the employees of these companies when they work or move around.

The detailed content and plan(s) or diagram(s) related to the above elements are defined in the HSE Plan. A report of this joint visit must be drawn up using the **template attached in Appendix 02**

II.11 RISK ANALYSIS DURING THE PREPARATION OF THE HSE PLAN

Immediately after this joint preliminary visit, the operator or the instructing party must organise a coordination meeting with the External Companies concerned in order to take stock of the risks and define the appropriate preventive and protective measures to be implemented. Risk assessment is necessary for any work regardless of its expected risk level

The preliminary analysis carried out in the project phase must be included in this detailed risk analysis. This analysis should be carried out as follows:

- Breakdown of the operation into tasks
- Identification of the hazards of each task
- Assessment of initial risks

All the risks identified during this analysis must be explicitly included in the HSE Plan, together with the preventive and protective measures required to enable the work to be carried out safely.

The risk analysis guide associated with the HSE Plan groups together, according to the type of operation, the most commonly used and appropriate preventive measures for preventing the risks of incidents or accidents involving people, the environment or property or equipment associated with these activities. These measures must, in all cases, be adapted and supplemented in relation to the specific characteristics of the entity and the work to be performed.

II.12 DRAFTING OF THE HSE PLAN

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The HSE Plan must be written jointly by the User Company and the various worksite managers of the External Companies or their representatives. It aims to reach agreement on the means of prevention and protection to be implemented, specifying the company that will be responsible for them.

The following points must be covered for an annual or specific HSE Plan:

- description of planned operations, their planning in relation to availability of facilities
- identification of the different trades involved, the areas and periods of co-activity
- identification of the tools and resources necessary to carry out the work and the associated risks
- decision on the type of permit required, depending on the nature of the operations
- identification of first aid measures
- reminder of the main safety rules applicable to the entity
- waste management
- information relating to the External Companies
- information relating to the operation to be carried out
- site map,
- risk analysis according to the risk analysis guide, taking into account potential interference between ongoing activities and the various external companies
- preventive and protective measures (indicated on the risk analyses)
- resources put in place to monitor the HSE Plan, update it and implement it effectively
- organisation of emergency response within the User Company
- chain of command
- allocation of the installation and maintenance of the washing and toilet facilities and catering premises between the User Company and the External Company
- list of the different types of permits and certificates required depending on the nature of the operations
- list of User Company staff qualified to issue work permits and certificates
- list of User Company and External Company staff trained in first aid (there must be at least one person trained for emergencies for every twenty people)
- location of first aid kits available
- if necessary, the list of positions occupied by employees likely to be covered by special medical monitoring, due to the risks associated with the work carried out in the User Company.
- if necessary, the list of positions subject to special medical monitoring due to the activities of the External Company, which must be provided by the head of the External Company or their agent
- list of risks that were identified in the HAZOP risk analysis during the project study phase.

The HSE Plan must be signed by all the parties concerned:

- operator or instructing party,
- main contractor managers
- subcontractor managers

The HSE Plan must be updated or supplemented based on:

- developments in the work and the risks
- the intervention of new External Companies.

The attachments are an integral part of the HSE Plan and should be referred to and fully attached to the HSE Plan.

Any External Company that was unable to participate in the joint preliminary visit and the HSE Plan coordination meeting may be included in the HSE Plan provided the HSE Plan is updated with:

- a prior meeting between the User Company and the External Company
- an analysis of the risks and possible interference generated by the External Company

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- distribution of the updated HSE Plan to all External Companies present on the worksite (with acknowledgement of receipt for all External Companies that have signed the HSE Plan).

Employees of External Companies must in all cases benefit from the regulatory provisions of the labour regulations of the country of the entity concerned.

Depending on the nature and complexity of the work to be carried out, specific additional documents must be prepared. For example this means:

- technical documents associated with the work (lifting plan, excavation plan, etc.)
- the different workers' schedule
- the documents accompanying the provision of the equipment concerned (special instructions, blinding plan, degassing certificate, etc.)
- various supporting documents (training certificates, medical fitness certificates, technical inspection certificates for equipment, compliance certificates, etc.).

The detailed content of the components of the HSE Plan is specified in the attached HSE Plan template.

The External Company undertakes to provide all relevant information and to remain responsible for the implementation of the preventive measures necessary for the protection of its staff.

II.13 COMMUNICATION OF THE HSE PLAN TO ALL WORKERS OF ALL COMPANIES INVOLVED

Before any work starts, it is necessary to ensure that each employee involved in the work (external companies, subcontractors and the user company) is fully aware of the safety measures defined in the HSE Plan and has fully understood them. **Each employee must sign the acknowledgement of receipt of the instructions included in the HSE Plan template attached in Appendix 01.**

The complete HSE Plan must be sent to the various External Companies and made available to the UC staff involved and the local authorities according to the regulations in force.

The HSE Plan should be used as a basis for training the staff involved.

The HSE Plan must be sent by the contracting External Companies and to the External Companies subcontracted by them, for communication and information purposes with respect to their employees. The sending of the HSE Plan must be able to be traced through the acknowledgement of receipt of the instructions.

The operator or the instructing party must:

- ensure that the employees of External Companies and their subcontractors have been informed of the risks and the preventive and protective measures taken in the HSE Plan (it ensures that it has in its possession all the acknowledgements of receipt of the instructions from the various External Companies and their subcontractors)
- organise the safety briefing for employees of External Companies, including subcontractors of External Companies.

It is good practice to organise a presentation of the HSE Plan within the User Company to all employees of all External Companies involved, including subcontractors, directly after it has been completed.

II.14 START OF WORKS MEETING

For a specific HSE Plan, a start of works meeting is compulsory just before the work starts. All the staff of the External Companies, contractors and subcontractors, must attend. During this meeting, an operator or instructing

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party will remind the workers of the safety instructions, the risks identified and the associated preventive and protective measures. It checks that:

- all safety measures are in place before the work starts
- the proposed organisation is in keeping with the organisation chart provided
- the equipment and materials announced are present and in order
- staff have the required accreditations
- the expected worksite surveillance system is implemented.

It can only authorise the start of the work under these conditions.

If all the safety conditions are met, the operator or instructing party sets the date for the start of works and fills in the date in the joint preliminary visit report.

PHASE 3 EXECUTION OF THE WORK

- **Work permit process**
 - Validity of work permit
 - Types of work permits and certificates
 - Simplified work permit
 - Work allowed without a work permit
 - Acknowledgement of receipt of HSE plan
 - Joint visits for high-risk work
 - Content of work permit
 - Approval of documents
 - Acceptance by the operative
- **Coordination**
 - Verification of the location
 - Verification of simultaneous operations and co-activity
 - Verification of weather conditions
- **Work permit issuance/authorisation**
- **Checks and inspections**
 - Safety Green Light Meeting before starting
 - Availability of the work permit at the work location
 - Life saving checks
 - Joint safety visit
 - Inspections
- **Field surveillance**
 - Organisation of surveillance
 - Safety visits
 - Camera surveillance
 - Suspension of work permit
 - Resumption of activities and changeover

III- EXECUTION OF THE WORK AND DOCUMENT MANAGEMENT

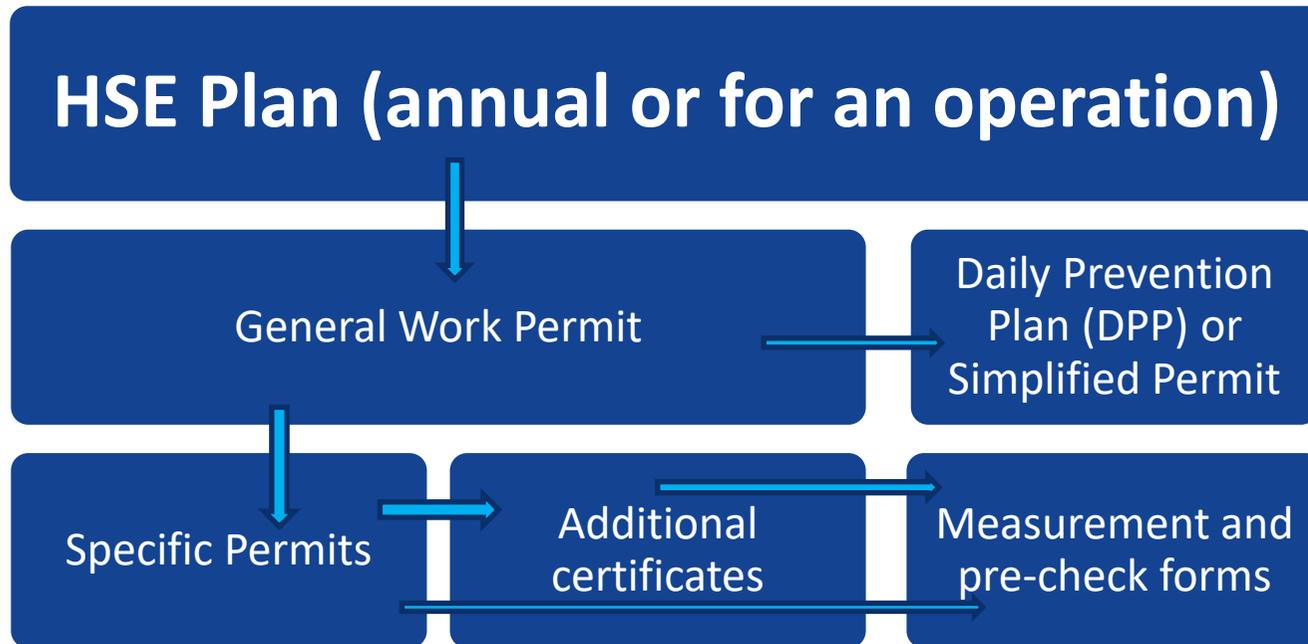
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III.1 HSE PLAN, WORK PERMIT AND ASSOCIATED DOCUMENTS

III.1.1 DESCRIPTIONS AND OBJECTIVES

The **general work permit or DPP (Daily Prevention Plan), the specific permits and certificates** are documents for dialogue and information that allow the various stakeholders involved in a job to **transcribe and establish the safety requirements**. These documents are an integral part of the HSE Plan for the work and should be referenced in it.

The operational tasks that are part of routine work are not involved in the work permit process.



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Nature		Description and objectives	Form / template
HSE plan for the operation or project	HSE Plan	The HSE plan for the operation or project is the document which formalises all the measures taken jointly by the entity and the external company or companies to ensure the safety of the work/services and the management of co-activity carried out on the entity's site. These provisions are set out in a document of the same name. An HSE plan is therefore associated with a project or operation that may involve several companies and not per company. It incorporates all the elements defined in the former HSE plan.	APPENDIX 01
	Joint Preliminary Visit report	A preliminary site visit must be made. The operator or the instructing party and all the worksite managers of the External Companies must jointly carry out a preliminary inspection of the work locations, facilities and equipment provided. This visit is formalised by a report and allows the HSE plan to be prepared	APPENDIX 02
	Risk analysis	<p>For hazardous work, a risk assessment is essential in order to prepare the work permit. It consists of three phases:</p> <ul style="list-style-type: none"> • A preliminary analysis is conducted in the project phase (before the call for tenders) by the subsidiary engineering teams or by a commissioned engineering consulting firm. • A detailed risk analysis is carried out when the HSE plan is drawn up and following the joint preliminary site visit by the appropriate staff from the subsidiary and all the external companies involved in the operation. This analysis makes it possible to incorporate the risks inherent in the activity of each company and those associated with interference and co-activities. • Pre-commencement risk analysis to be carried out on site on the day of the intervention prior to the signature of the permits by performing field checks prior to the signature of the permits. 	
	Activity matrix and risk level	<p>The purpose of the activity matrix is to provide a list of construction, rehabilitation and maintenance works on the network and other industrial sites with the associated risk level</p> <ul style="list-style-type: none"> • High-risk activities • Moderate-risk activities • Low-risk activities <p>This Matrix is drawn up after specific risk analyses, and approved by the appropriate line authority at least once a year</p>	APPENDIX 05
	Operating procedures	The operating procedure is a chronological and detailed description of the intervention to be carried out. It must take into account the workers' actual intervention conditions (e.g. the environment in which the activity is carried out) and specify the stages, equipment, materials and resources used. The operating procedure covering the stages of each intervention/activity is drawn up by the external company and validated by the instructing party.	APPENDIX 03

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	Acknowledgement of Receipt	This ensures that all workers have received the HSE plan and that the risks associated with the intervention and the preventive measures to be put in place have been explained to them	APPENDIX 01
	Declaration of night and weekend work	This is a formal authorisation issued to carry out work outside standard working hours.	APPENDIX 04
Annual HSE Plan		This document is used for repeated work (typically maintenance work or recurring work) carried out by external companies during the year. The scope of the work and the associated risks remain the same. This document formalises all the measures taken jointly by the entity and the external company to ensure the safety of the work/services and the management of co-activity carried out on the entity's site. These provisions are set out in a document of the same name. An annual HSE Plan is therefore associated with the company in charge of the intervention.	APPENDIX 01

Nature	Description and objectives	Form / template
General work permit	<p>The general permit is required for all works covered by a permit. It incorporates all the general preventive measures, recommendations on basic PPE and compulsory safety measures applicable to all works. Depending on the nature of the work and its risk level, certain specific permits or certificates may be joined to the general permit. It must include all the information necessary to initiate the request, such as the task to be carried out, the work location, the identification of risks, etc.</p> <ul style="list-style-type: none"> • It is necessary and compulsory for all works covered by a permit and/or certificate. • It is drawn up on a weekly basis, but signed each day. • It authorises the start of the work except in the case where a specific permit or certificate is required 	APPENDIX 07
	<p>Special case of the Daily Prevention Plan (DPP): The daily prevention plan (DPP) performs the same functions as the general prevention plan. This is required by French regulations. It is used in France and in some other French-speaking countries at service stations.</p>	
Simplified work permit	A "simplified" work permit can only be used for recurring, low-risk work that does not involve co-activity or simultaneous operations. The work permit procedure includes a comprehensive list of work that can be covered by a simplified work permit. This list is drawn up after specific risk analyses, and approved by the appropriate line authority at least once a year. The simplified permit is valid for one day	APPENDIX 08

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	Nature	Description and objectives	Form / template
All specific permits are valid for 1/2 a day			
<u>Hot work</u>	Hot work permits	<p>The Hot Work Permit covers hot work. It is accompanied by atmospheric measurement forms and a lockout/tagout certificate as appropriate.</p> <p>It covers work that meets one or more of the following criteria:</p> <ul style="list-style-type: none"> ▪ likely to produce a naked flame ▪ produces projected sparks ▪ creates a fire hazard as operating at high temperatures ▪ carried out in explosion risk zones with equipment that may be a source of ignition <p>Please note: hot work cannot be carried out after cleaning a tank; only degassing with a result of 0% LEL allows this work to be carried out without risk of explosion</p>	APPENDIX 09
	Atmospheric measurement form (if required)	See definition in the common documents below	APPENDIX 27
	Lockout/Tagout certificate (if required)	See definition in the common documents below	APPENDIX 15
<u>Work at height</u>	Work at height permit	The Work at Height Permit covers any work involving a risk of falling from a height of 1.50 m or more, which may require the use of certain specific equipment (scaffolding, mobile elevating work platforms, ladders), and also covers situations not requiring the use of such equipment (e.g. work on platforms, roofs, etc.)	APPENDIX 01
	Checklists	The Work at Height Permit requires prior checks of the equipment used before it is signed: scaffolding, MEWPs, roofs, ropes, harnesses and ladders as a means of access. They are formalised in checklists and certify that the equipment is safe to use.	APPENDICES 21 - 26
<u>Cleaning and degassing work</u>	Cleaning / Degassing Permit	<p>Cleaning/Degassing Permit, for cleaning/degassing any enclosed container and for the preliminary phase of lowering the feet at roof or floating screen level. A cleaning/degassing certificate must be given to the operator or instructing party after this intervention.</p> <p>All cleaning and degassing operations are subject to a work permit, called a cleaning and degassing permit, before they are started. They consist of removing the hydrocarbon residues inside. These residues are toxic, flammable and potentially explosive, and pose a hazard. It is therefore necessary to remove them to avoid all risks and to guarantee the workers' safety. Cleaning and degassing operations are carried out by a professional qualified and approved for this type of activity, as they require know-how and specific equipment.</p>	APPENDIX 11

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	Atmospheric measurement form (compulsory)	See definition in the common documents below	APPENDIX 27	
	Cleaning/degassing certificates	This certificate certifies that the enclosed container (tank, vessel, etc.) that is the subject of the request has been cleaned and degassed. It specifies the nature and quantity of the products found and removed. This certificate is valid for a limited period set by the company in charge of the operation at the end of the intervention	APPENDIX 16	
	Lockout/Tagout certificate (compulsory)	See definition in the common documents below	APPENDIX 15	
<u>Work in confined spaces</u>	Confined Space Entry Certificate	<p>It is forbidden to enter a confined space without permission.</p> <p>Any operation involving entering a confined space requires the instruction of a certificate. Entry only takes place if no other alternatives have been identified. The certificate does not authorise physical entry or the start of work. The certificate must be associated with the general work permit and/or specific permits depending on the nature of the work to be carried out inside the confined space. The certificate is produced in order to:</p> <ul style="list-style-type: none"> • Allow the set number of authorised (qualified) workers to enter the confined space simultaneously or individually • Define the maximum length of time they can stay in the confined space and the associated break times • Certify that the intervention can be carried out without risk or damage to staff (• ple preparatory visit or to carry out work under permit) • Confirm that no problems have been identified before entering. <p>It also certifies that the following preconditions have been checked:</p> <ul style="list-style-type: none"> • Required confined space isolations • Permitted atmospheric conditions • Effective implementation of the measures defined in the risk management and emergency response plans 	APPENDIX 17	
		Atmospheric measurement form (compulsory)	See definition in the common documents below	APPENDIX 27
		Work permit	The work permit is required depending on the nature of the work: general work permit and/or specific permits.	APPENDIX 07 and APPENDICES 08 - 14 as appropriate
		Lockout/Tagout certificate (compulsory)	See definition in the common documents below	APPENDIX 15

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<u>Excavation work</u>	Excavation permit	This permit covers excavation work by mechanical or manual means to a depth of more than 10 centimetres. It first requires an excavation certificate	APPENDIX 12
	Excavation certificate	The excavation certificate is required to identify buried structures or networks. It is a prerequisite for the work permit and is accompanied by a plan detailing any buried structures, the general safety instructions to be followed and particularly those relating to the means of excavation. It informs the Contractor of the location and nature of the buried structures present in the excavation area.	APPENDIX 18
	Atmospheric measurement form (if required)	See definition in the common documents below	APPENDIX 27
	Lockout/Tagout certificate (compulsory)	See definition in the common documents below	APPENDIX 15
<u>Lifting Work</u>	Lifting permit	The lifting permit covers all lifting operations.	APPENDIX 13
	Lifting operations categorisation form	The categorisation form categorises all lifting operations according to 3 category levels, taking into account the criticality level: Category 1: simple lifting; Category 2: standard lifting; Category 3: critical lifting	APPENDIX 28
	Lifting plan or file	A lifting file is prepared for any lifting operation involving a suspended load and for any Category 2 or 3 handling operation. The lifting file is the culmination of a documented process that is produced by a competent person, with the aim of defining how the lifting operation will be carried out safely.	APPENDIX 20
<u>Radiographic testing</u>	Radiographic Testing Permit	This permit covers work that may produce ionising radiation and radioactive contamination. In particular, it enables the safety radius to be calculated	APPENDIX 14
<u>Work at the water's edge</u>	Certificate for Work at the water's edge	The certificate covers work at the water's edge, ensuring that workers are equipped with personal life-saving equipment (buoyancy aids). And also that the collective safety equipment is in place.	APPENDIX 19
	Work Permit	The work permit is required depending on the nature of the work: general work permit and/or specific permits.	APPENDIX 07 and APPENDICES 08 - 14 as appropriate
Common documents for certain work covered by specific permits:			
Hot work - Excavation - Cleaning / Degassing - Confined space			
<u>According to the above work</u>	Atmospheric measurement form	The atmospheric measurement form formalises the atmospheric checks and measurements that must be carried out at all the necessary points depending on the configuration (top, middle, centre, corners, low points, etc.), measuring for at least one minute per point and making sure the entire work area is covered. In the case of confined space, measurements will be taken from	APPENDIX 27

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		the outside before entering. If the hole is too deep, too wide, etc. special equipment, such as an extender, a rod, a specific arm, etc. must be used. The checks should be carried out in the following order: Oxygen levels, flammability of the atmosphere and finally the toxicity of the atmosphere if necessary.	
<u>Lockout/Tagout operation</u>	Lockout/Tagout certificate	<p>The Lockout/Tagout certificate identifies the type of lockout/tagout procedure to be carried out and lists the items to be isolated. It covers the implementation phases:</p> <ul style="list-style-type: none"> • Separation • Locking • Signage • Power discharge • No-power check <p>It also includes the lockout/tagout removal phase</p>	APPENDIX 15
	Lockout/tagout - lockout/tagout removal list	This document lists all the lockout/tagout and lockout/tagout removal operations carried out and identifies the signatories	

Nature	Description and objectives	Form / template
<u>The Safety Green Light Meeting</u>	The Safety Green Light Meeting is held for all work carried out under a work permit, when the work is ready to be started (work permit signed). Each worker reflects on four open-ended questions and interacts with his or her colleagues. Each worker validates the back of the work permit or equivalent before starting. This is a quick and brief activity; it is the last opportunity to speak out and have a say before starting the work.	APPENDIX 30
<u>Life Saving Checks</u>	Life saving checks are field checks aimed at preventing fatal accidents. These checks are formalised via checklists specifically for activities involving fatal risks (work at height, work on de-energised systems, lifting operations, work in confined spaces, hot work).	APPENDIX 31
<u>Joint safety tours</u>	This is a joint ritual in the field conducted by the management of the Company's entities and subsidiaries and their service providers.	APPENDIX 32

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III.1.2 TYPES OF DOCUMENTS AND FORMS REQUIRED DEPENDING ON THE NATURE OF THE WORK

Depending on the work to be carried out, the following documents are compulsory as a minimum, according to the corresponding work, in addition to the general work permit. The operator or instructing party and the External Company must organise and classify all these documents.

Documents required according to the activity matrix			
Documents required	High-risk activities	Moderate-risk activities	Low-risk activities
HSE Plan for the operation	Yes	No	No
Annual HSE Plan	Yes for recurring maintenance activities without co-activity	Yes Compulsory	Yes Compulsory
General work permit DPP	Yes	Yes	No
Simplified work permit	No	Yes, in some cases Defined in local procedure	Yes
Specific work permit	Yes / depending on the nature of the work	No	No
Certificate	Yes/ related to specific permits	Yes, in some cases	No
Measurement and checklist forms	Yes/ related to specific permits	Yes/ related to specific permits	No
Safety Green Light Meeting	Yes	Yes	Yes (necessary, but not compulsory)
Life saving checklists	Yes	Yes	No
Joint Safety Tour	Yes	No	No

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Summary of required documents and forms

Compulsory documents for all types of work	Type of work	Associated permits	Associated certificates	Associated checklist
HSE Plan per operation or Annual	Hot work	Hot work permit	Lockout/Tagout certificate	Atmospheric measurement form (if required) Work acceptance form
	Work at height	Work at height permit	N/A	Checklist - Scaffolding Checklist - MEWPs Checklist - Roof work Checklist - Rope access work Checklist - Mobile ladder as a means of access Checklist - Harnesses Work acceptance form
General Permit or Simplified Permit				
Joint Preliminary Visit report	Excavation work	Excavation permit	Excavation certificate Lockout/Tagout certificate	Work acceptance form
Operating procedures				
Declaration of weekend work	Cleaning / Degassing work	Cleaning / Degassing permit	Degassing certificate Lockout/Tagout certificate	Atmospheric measurement form Work acceptance form
Activity matrix	Work in confined spaces	General work permit	Confined Space Entry Certificate Lockout/Tagout certificate	Atmospheric measurement form Work acceptance form
Risk analysis	Lifting Work	Lifting permit	Lifting plan or file	Lifting operations categorisation form Work acceptance form
Worksite Safety Visit checklist	Radiographic testing	Radiographic testing permit	N/A	Work acceptance form
	Work at the water's edge	General work permit	Certificate for work at the water's edge	Work acceptance form
	Lockout/Tagout work	General work permit	Lockout/Tagout certificate	Work acceptance form
	Work not listed above and not covered by a specific permit	General Work Permit or Simplified Work Permit	N/A	Work acceptance form

Each document is drafted in 4 copies. One of these copies must be filed and archived in a binder, the other 3 are intended for display, the External Company's worksite manager and the site supervisor respectively.

III.1.3 CONTENT OF DOCUMENTS AND FORMS

The permits are constructed in the same way. They include the following information as a minimum before approval respectively:

- reference to the HSE Plan to which they are attached
- the date on which the work is performed / the document validity period

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- the company name of the External Company
- the nature and location of the operation: the description of the work to be carried out and the place where the work will be carried out
- the risks identified and the preventive measures to be respected
- the results of explosimeter measurements where required by the nature of the work
- the signature of the various persons responsible: approving authority, executing authority, supervisor, etc.
- the tools and resources used
- the references of accompanying documents, if applicable.

The work permit and associated documents are written in the locally spoken language as a minimum. On sites where several languages are spoken, the entity or subsidiary ensures that the content is understood and assimilated by all those involved

Documents including the permit are available and displayed permanently at the place where the work is performed so that those who need to know or refer to them can do so without difficulty.

Managing one or more jobs on more than one piece of equipment makes risk analysis and the risk control measures to be put in place more complex. Limiting the scope to one work permit per piece of equipment is recommended.

These documents must be drawn up in the presence of the External Company's representative.

III.1.3.1 THE GENERAL WORK PERMIT OR DAILY PREVENTION PLAN (DPP)

The general work permit is compulsory for any operation whatever its nature and duration, **except** for **regular or routine operations (guarding/cleaning)** which are covered by an annual HSE Plan, as well as routine operations which are covered by an annual HSE Plan with operating procedures.

For work and operations posing risks, it is essential to draw up a general work permit for each intervention on the site in addition to the HSE Plan. This general work permit refines the risk analysis carried out during the HSE Plan just before the work starts.

Unlike the HSE Plan, the work permit and associated documents must be drawn up for each company, taking into account the co-activity with the operation of the service station or industrial site and, if applicable, with other companies.

The general work permit per company must be issued by a qualified person from the entity. It is issued on its own or in association with specific permits

Where two or more maintenance operations take place at the same time in the same work area, a general work permit must be issued for each of the companies carrying out these operations.

The weekly general work permit avoids having to fill in the whole document again every day; however, it still needs to be validated every day after checking on site that all safety measures are in place. If this is not the case, or if the nature and/or conditions of the work change, a new permit must be written with a new risk analysis.

III. 1.3.2 SPECIFIC WORK PERMITS

Specific permits and additional certificates are used to cover the specific risks associated with interventions that may cause a serious accident. Whatever the operation, the permit does not dispense with the need to draw up a

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general work permit for the External Company involved. The templates for the various permits and certificates to be used are attached in the appendices.

III. 1.3.3- THE SIMPLIFIED WORK PERMIT AND WORK AUTHORISED WITHOUT A PERMIT

The comprehensive list and conditions governing the preparation of work that can be carried out without a work permit or with a simplified work permit are drawn up based on risk analyses. The list of such work is reviewed and approved by the appropriate line authority at least once a year.

Work carried out without a work permit or with a simplified work permit may only be work carried out as part of the normal operation of the facilities and/or equipment and infrastructure or for recurring work with a low level of risk and which does not generate any co-activity or simultaneous operations.

This work must be carried out by trained staff, in accordance with procedures, operating methods or instructions that take the risk analysis into account and with equipment, tools and, where necessary, protective equipment, that are appropriate and used in accordance with their manufacturers' recommendations.

III. 1.3.4 WORK AUTHORISED WITHOUT A WORK PERMIT AND UNDER THE RESPONSIBILITY OF THE EXECUTING AUTHORITY

The services to be provided in the absence of a mandated approving authority must be clearly identified after a detailed risk assessment and must be subject to a local procedure validated by the appropriate hierarchy. The four-eyes principle is a minimum requirement: the eyes of the approver/issuer and the eyes of the the person performing the work.

III.1.3.5 CERTIFICATES

The certificate is a pre-requisite document prepared in some cases of work to ensure that safety conditions are met before work starts. The certificate is not a work permit and does not authorise the start of work. The purpose of the certificate is to:

- Certify that the intervention can be carried out without risk or harm to staff
- Confirm that no problems have been identified before starting the work
- Certify that the following prerequisites have been checked:
 - Required confined space isolations
 - Permitted atmospheric conditions
 - Effective implementation of the measures defined in the risk management and emergency response plans

III.1.3.6 MEASUREMENT AND PRE-CHECK FORMS

Measurement and pre-check forms should be prepared before the work permit is signed:

- For work at height, it enables the condition, conformity and suitability of the equipment to be checked.
- For work to be carried out in ATEX zones, an atmospheric measurement form must be filled in throughout the duration of the work.
- For lifting, a categorisation form should be prepared in advance to determine what type of requirements should be provided according to the level of difficulty of the lifting operation.

Finally, one last form needs to be filled in at the end of the work: the work acceptance form

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III.1.3.7 OPERATING PROCEDURES

In addition to the work permits and associated documents, **an operating procedure must be drafted for all work**. The template to be used for this document is attached in the appendices.

The operating procedure must contain the following information, in accordance with **the template attached in Appendix 03**:

- the activities posing risks to be carried out and the associated risks
- the implementation stages and methods
- cases of emergency interventions, degraded situations
- adaptations to the types of intervention (e.g. co-activity situation)
- lists of equipment and protective measures (personal and collective) to be adapted according to the interventions and worksites.

A generic operating procedure makes it impossible to understand precisely how the EC will proceed. The operating procedure should not only specify the work to be done, but should detail how the work will be done. The EC should detail in chronological order the different activities/tasks to be performed by the workers. The level of detail expected should allow an outsider to easily visualise the “way to do” things. To make it easier to understand, the operating procedure may be accompanied by additional information (time to perform interventions, photographs, diagrams, etc.).

III.2 PREPARATION AND APPROVAL OF WORK PERMITS AND CERTIFICATES

III.2.1 NEW JOINT PRE-INTERVENTION VISIT

On the day of the intervention, in order to guarantee good preparation, a new visit to the site must be carried out under the initiative of the operator or the instructing party with all the worksite managers and/or Works Managers appointed by the External Companies involved in the operation. The operator or the instructing party and all the worksite managers of the External Companies read the HSE plan together and inspect and check together all the elements of the HSE plan, in particular the risk analysis already carried out and the content of the work permits and the additional certificates. They complete the attached joint preliminary site visit report, which must be signed on site.

The operator/instructing party and the manager of the external company conduct a joint visit of the work locations to check

III.2.2 ADDITIONAL PRE-INTERVENTION RISK ANALYSIS

It is important that the detailed risk analysis carried out during the preparation of the HSE plan, taking into account the preliminary analysis carried out during the tender phase, is completed on the day of the intervention and before the permits are signed, by checking the following elements in the field:

- The work location
- The specific risks of the operation/work
- The workers and the equipment/materials
- The processes (Operating procedure)
- The definition of the isolations
- The definition of the collective protection to be put in place, the personal protective equipment (PPE) and other necessary means of prevention.
- The weather conditions

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- Co-activity, operation and any interference from outside the site

III.2.3 VALIDATION OF OPERATING PROCEDURES

The operating procedures are precise and must be fully adapted to the permits issued under the HSE Plan. These documents must be updated according to changes in the equipment used, feedback from worksites, risk analyses, etc.

They must be checked and validated before the work starts.

III.2.4 CHECKS AND INSPECTIONS CHECKLIST

Prior to the approval of work permits, checks and inspections of the required equipment and tools should be carried out using the usual checklists, for example: checks on scaffolding, MEWPs, etc.

For maintenance work, an inspection checklist of all the phases of the intervention must be checked.

III.2.5 REQUIRED LIMIT VALUES FOR ATMOSPHERIC MEASUREMENTS

The limit values are indicated on the atmospheric measurement form and must be considered in the light of the results reported on the same form, completed before the permit is signed and the work starts. These measurements include:

- The oxygen level
- LEL (Concentration of hydrocarbons or other flammable gases/vapours measured)
- Hydrogen sulphide (H₂S)
- Carbon monoxide (CO)
- Toxicity measurements

III.2.6 APPROVAL AND VALIDATION OF THE WORK PERMIT

The work permit is approved by the approving authority and accepted by the executing authority. Any changes to the terms of the permit need to be approved by the approving authority and accepted by the executing authority again.

The work permit can be approved by a third party as long as the third party is acting on behalf of the entity, is trained in and qualified for the entity's permit procedure and has site-specific knowledge.

In addition to the compulsory signatories for any general work permit and any permit, staff authorised to enter a confined space or staff in charge of work at height and staff responsible for the safety support of such work must write their name on the permit and sign it. The signature constitutes acceptance of the intervention conditions mentioned on the permit and certifies that they have been fully understood.

Different people can be designated as approving authorities in accordance with the activity matrix and roles defined above, even within the same area, depending on the level of risk. When approving the work permit, the approving authority shall check that:

- The required accompanying documents have been produced and are consistent
- The risk analysis is relevant and the associated risk control measures have been identified
- The risks associated with known interference have been taken into account

In addition, the approving authority shall ensure that the executing authority is informed of the following in order to accept them:

- The tasks to be performed, the risk analysis and associated risk control measures and the precise location of the workplace
-

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- The working environment regarding the risks of the work itself
- And work on the surrounding activities.

The internal documents necessary for drawing up the permit must be consulted (map of explosion risk zones, safety data sheets for products in the intervention area, etc.) in order to identify any particular risks.

Any buried structures or equipment must be identified before the Permit is prepared. The operator or the instructing party must also carry out a soil study if required. When working at height, particular attention must be paid to the presence of power lines in the vicinity. The equipment used, particularly scaffolding, must be inspected and validated by staff qualified to assemble and dismantle scaffolding. Any lifting defined as “complex” must be covered by a lifting plan in addition to the general work permit and the lifting permit. This lifting plan must be provided by the company in charge of the work

Interventions with **radiation** risks should preferably be carried out outside normal activity phases (night, weekend) to minimise exposure risks. Signage must be put in place. It must take into account the safety distances determined according to the power of the radiation emitted (normally communicated by the company in charge of the operation).

III.2.7 ACCEPTANCE BY THE OPERATIVE

The External Company’s manager and the operative(s) (belonging to the User Company or a third party) are also signatories. The External Company’s manager may in some cases also be the operative.

- The operative’s acceptance of a general or simplified work permit as an additional permit implies a good understanding of the risks and preventive measures, the location of the work site, the constraints and the interference related to the activities.
- The operative has a right and a duty to refuse a general work permit or an additional permit if the planned preventive measures do not seem satisfactory for carrying out the work requested in light of the risks.
- The operative must formalise his/her approval by signing the general work permit and the specific permit where applicable.
- The countersignature of the work permit by the executing authority implies:
 - that the executing authority is satisfied, prior to the commencement of any work, that the planned risk control measures are in place and that the accompanying documents are valid
 - that there are no potential difficulties in implementing the permit that could lead to its cancellation (e.g. operating procedures or tools initially planned prove to be unsuitable, modification of the risks taken into account by the work permit).

III.2.8 VALIDITY OF WORK PERMITS AND ADDITIONAL CERTIFICATES

The general work permit is valid for one day; where the work lasts longer than one day, it can be issued for one week (provided that the work and the working environment are strictly identical every day) with daily validation before the work is resumed. The purpose of this system is to streamline the system by avoiding the need to fill in an identical document every day, but it does not in any way dispense with the daily risk analysis before work starts each day.

The maximum validity of a work permit is defined according to the nature of the work. When the validity of a permit expires, the work in question cannot be started or continued without a new work permit.

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If a new risk is identified during the risk analysis, and/or if the nature of the work changes, then a new permit must be issued.

III.3 VERIFICATION AND COORDINATION OF WORK

In the coordination phase, the necessary checks must be carried out to avoid risks related to co-activity, simultaneous operations between the External Companies and between the External Companies and the entity, and finally the location.

It is the responsibility of the authority (preparer, etc.) to monitor the status of the permits issued by the entity.

III.3.1 VERIFICATION OF THE WORK LOCATION

Before signing, the operator or instructing party must personally check the location of the work and ensure that all the preventive and protective measures indicated are in effect.

III.3.2 VERIFICATION OF CO-ACTIVITY AND SIMULTANEOUS OPERATIONS

On the day of the work, the operator or instructing party must ensure that the tasks to be performed take into account other ongoing or planned activities. This need for coordination is addressed as much as possible in the HSE Plan. The number of permits to be issued in the area and the risks associated with simultaneous operations should be taken into account. This ensures that the number of permits issued is in line with the number of people monitoring the worksite

In all cases, one person should be designated to ensure overall coordination in a given area. This task is normally the responsibility of the operator or instructing party. It may be entrusted to a third party meeting the accreditation criteria listed in Section I.6.4, particularly for work on sites or areas where an operator is not usually present.

During the entire period of use of the general work permit, the operatives must apply the defined preventive measures. The External Company must ensure that all the operatives on the list of approved permits are informed of the preventive and protective measures contained in the general work permit.

III.3.3 VERIFICATION OF WEATHER CONDITIONS

On the day of the work, the operator or the instructing party, together with the External Companies concerned, must ensure that the weather conditions are suitable for carrying out the scheduled tasks.

III.3.4 ON-SITE COORDINATION

Depending on the nature of the operation and the work, regular meetings involving the parties concerned should take place. At these meetings the following points could be discussed: Type of work scheduled, the associated permits, the implementation stages and methods, equipment and organisation required, areas to be isolated, etc.

III.4 EXECUTION OF WORK

III.4.1 ISSUANCE OF WORK PERMITS

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Any start of work is subject, at least once a day, to the prior issue of the work permit by the permit issuer and its counter-signature by the executing authority which ensures that the accompanying documents are valid and that there are no difficulties that could lead to the permit being cancelled. For “high-risk work”, the permit is issued after the permit issuer or verifier has checked the performance conditions and the risk control measures at the place where the work is performed.

The issuance of the work permit implies that the issuer and the executing authority are satisfied that the equipment and the place where the work is performed have been precisely identified. The “high-risk work” check ensures that:

- The equipment or facilities and the place where the work is performed have been made safe in accordance with the work permit;
- Any other activities at or near the work location have been taken into account in the work permit risk analysis and do not create any additional risks.

Depending on the entity’s organisation, all of these requirements must be implemented in compliance with the activity matrix defined above.

Before starting or restarting work, the executing authority explains to the workers the risks identified in the work permit and the associated risk control measures.

In the case of a single worker carrying out the work, a pre-work checklist is examined.

Before work starts, the site supervisor must check on-site that the preventive measures mentioned on the general work permit and the permits are being implemented.

III.4.2 DURING EXECUTION

The condition of the tooling used must be checked by the operative before each use throughout the execution phase

The necessary fire extinguishing equipment must be permanently available - at least two fire extinguishers of the appropriate fire class provided by the entity and two fire extinguishers of the appropriate fire class provided by each External Company.

Entity plans must be updated immediately when new underground work has been carried out. Throughout the work, it is necessary to ensure that the excavations and trenches are stable. Excavators should only be operated by qualified drivers. If the driver does not have sufficient visibility, they must be assisted by a third person to guide them. The worksite must be marked up (taped off at least). Road signs should be put in place where appropriate. Hard protection (barriers, removable grids) should be installed if required. A deep trench can become a confined space.

Whilst the necessary conditions for entry are not met, access must be physically prevented (chain, barrier, crossbar on the manhole) and signs prohibiting access (“No Entry”) must be visibly displayed.

If it is impossible to secure the work area against the risk of falling by means of a guardrail or solid walls, particularly during the transitional phases of erecting/dismantling scaffolding, one of the following protective measures must be put in place:

- safety nets (maximum fall height of 3 m)
- temporary fall arrest platforms (maximum fall height of 2 m)
- wearing of a safety harness.

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Special attention should be paid to the presence of uninsulated power lines in the vicinity (risk of arcing). Unless local regulations are more restrictive, the minimum approach distances for live power lines are given in the table below - (outside the neighbourhood - approach without special supervision column)

During the work phases, the essential lockout/tagout and lockout/tagout removal operations must be carried out in accordance with procedure EXP/DEP/87 Lockout/Tagout / Lockout/Tagout removal operations for equipment in depots, with in particular:

- the drafting of a written operating procedure, including a circuit diagram
- an on-site inspection by a qualified entity manager
- lockout/tagout by authorised staff.

The lockout/tagout of equipment is compulsory as a minimum for the following work and operations posing risks:

- Work on dangerous machines
- Opening of enclosed container/line for product posing risks
- Work on electrical facilities
- Work in confined spaces
- Cleaning/degassing of enclosed containers, etc.

Checks should be carried out with a suitable and compliant absence of voltage tester. It is good practice to carry out the commissioning test (or other check) before any work is carried out to ensure that the power has been switched off to the electrical component to be repaired.

All these steps are detailed in the risk analysis guide for work on electrical facilities.

In the case of opening a line or equipment for hazardous products, the work must be carried out after the equipment concerned has been locked out and tagged out, i.e:

- it has been isolated from the circuit (upstream and downstream)
- the locking and labelling of the isolation
- its decompression, purging, cleaning and degassing (lines and tanks)
- prior verification of the absence of fluid.

Work on dangerous machines must only be carried out on machines that have been shut down beforehand (isolation and complete dissipation of energy). The same applies to unblocking work.

Work is only authorised if it complies with the work permit procedure

III.4.3 PROHIBITION OF MODIFICATION, SUSPENSION AND RESUMPTION OF ACTIVITY

It is strictly forbidden to change the terms of the work permits once the acceptance has been signed by the operative.

Neither a general work permit nor a specific permit can be modified once validated; if conditions so require, a new risk analysis must take place and a new document (general work permit and/or additional permit) must be drafted and validated according to the procedure stated in the previous sections.

In the following cases, the work, and therefore the work permits, are suspended:

- general alarm
- specific instruction to stop work, including by Stop Card
- failure to comply with any of the requirements imposed in the permits
- modification of the intervention's operating procedure
- changes in the environmental conditions of the place where the work is performed
- the time allocated to the work covered by the work permit is exceeded
- the occurrence of any event not covered by the prior risk analysis.

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Following a suspension of work, the conditions for its resumption are subject to a risk assessment. If the measures defined in the work permits are still adequate, the resumption of work is authorised by the work permit issuer. If not, a new work permit is issued according to the process described in the previous sections. In the case of a modification, suspension and resumption of activity (e.g. in case of illness) the 4 Safety Green Light questions must be repeated

At the time of staff changeover (entity or subsidiary), the information is transmitted as specified in the work permit procedure, i.e. transmission of a list of permits and their contents signed by the permit issuer.

III.4.4 WORKSITE INTERRUPTION

Provisions must be made to manage worksite interruptions, particularly during the night (checking equipment at the end of the day, turning off gas cylinders, tidying up the area, etc.).

III.4.5 AVAILABILITY OF ADDITIONAL PERMITS

During the course of the work, the work permits and associated additional certificates and accompanying documents shall be permanently accessible to all workers at the place where the work is carried out.

III.4.6 PROVISION OF THE EQUIPMENT OR FACILITY ON A SITE IN OPERATION

Prior to the issuance of any general or simplified work permit and any additional permit, the operator or instructing party of a site in operation shall make the equipment or facility available by carrying out the following tasks (non-exhaustive list):

- Emptying and cleaning
- Lockout/Tagout (electrical, mechanical, fluids, etc.)
- Inhibition
- Ventilation
- Cooling of equipment
- Atmospheric checks
- Demarcation of work area, etc.

This information will be provided by the issuer of the permit, including the demarcation of the area.

The list of these tasks will have been previously defined in the HSE Plan.

III.4.7 IMPLEMENTATION OF PREVENTIVE AND PROTECTIVE MEASURES

Before starting work, the preventive and protective measures defined in the HSE Plan, the general or simplified work permit and the additional permits must be implemented.

The responsibilities for the implementation of these measures should be clearly defined in advance during the risk analysis.

The entity and the External Company must have the necessary equipment (e.g. explosimeter, worksite marking, worksite extinguishers, etc.) for the inspections and means of protection. This equipment must be kept in good working order and tested before each intervention, with an inspection before use.

III.4.8 SAFETY GREEN LIGHT MEETING

Before starting or restarting work, or before any changeover of workers, the executing authority explains to the workers, at the place where the work is to be carried out, the operating procedure, the risks identified in the work permit and the associated risk control measures. This safety update is documented and signed by the executing authority and each worker. This safety update also includes a discussion based on 4 open-ended questions

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attached in the appendix to encourage reflection and obtain a clearer perspective regarding the possible risks of fatal accidents, and to enable the Stop Card to be used if necessary. It can be supplemented by a pre-defined checklist.

If there is a safety red light, the work is stopped and the hierarchy (supervisor, team leader, Total works manager, service station manager, etc.) is contacted through feedback. The permit will possibly be cancelled, even in emergencies.

The Safety Green Light procedure is also valid for an executing authority acting alone

III.4.9 SUPERVISION AND MONITORING OF WORK AND OPERATIONS POSING RISKS

III.4.9.1 SUPERVISION BY THE UC

Work requiring an HSE plan and a work permit (except for the simplified permit) must be supervised at all times by a designated entity manager or a third party qualified to supervise the work. Such supervision makes it possible to comply with the measures defined in the permit, the Golden Rules, suspend work and issue warnings if necessary.

No hazardous work may be done without a work supervisor. If competent third parties are used to supervise the work, the relationship should be set out in a contract that clearly defines the tasks and competences.

III.4.9.2 SUPERVISION BY THE EC

The External Company must supervise its work. A supervisor / worksite manager must be designated. When sites are isolated, the operator or the instructing party must ensure that the manager of each External Company carries out weekly inspections regarding the compliance of the worksite (equipment, HSE Plan, work permit, PPE, etc.) and records the findings in the site logbook. The operator or the instructing party in charge of the work is required to check the inspections carried out by the External Company every week and to ensure the worksite is compliant.

Operatives must report any difficulties in implementing the safety requirements. If a serious hazardous situation (act or condition) is found, or a change in safety conditions, the work concerned must be stopped.

III 4.9.3 WORKSITE VISITS

The following worksite visits are compulsory for work and operations posing risks:

- Managerial Safety Visit: at least one worksite visit while the work is being performed if it last more than one month, carried out by the entity
- RSV (Regular Safety Visit): regular visits (weekly and daily for closed sites) carried out by:
 - the people in charge of the work (daily for industrial sites, weekly otherwise)
 - the HSEQ department (at least one visit per month)
- USV (Unannounced Safety Visit): “works” mystery visits by a competent third-party organisation.
- JST (Joint Safety Tours)

These worksite visits are also compulsory for External Companies. The findings of these visits are recorded in the site logbook. An example of a worksite visit checklist is attached.

Joint safety visits must be organised between the entity and the External Company at least once a month to check compliance with the rules and procedures and to assess on the ground how effective the system of preventive measures put in place actually is. The purpose of this safety tour is to talk about fatal accidents; it is not an audit

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or an inspection. It will be a time for safety observations to be made, both by the EC representative and the entity or subsidiary representative.

III 4.9.4 PHASE REQUIRING CAMERA SURVEILLANCE

Notwithstanding the presence of the work supervisors, the critical phases of certain work posing risks may require camera surveillance, which should be put in place as part of this overall surveillance system.

III.4.11 LIFE SAVING CHECKS

The aim of these checks based on specific checklists is to prevent fatal accidents. These on-site inspections concern the activities posing the most risks for the entities. They are conducted by Total or contractor staff. They do not need to be conducted jointly.

These on-site inspections are carried out during the execution of the work by the work supervisors, business engineers, middle management, top management or any person identified and designated by each party. They should be carried out in a short period of time (about 15 minutes) to increase their number. The aim is to observe non-conformities. Should non-conformities be found, the inspector must intervene and stop the work.

The on-site inspection will be based on the points to be checked in the checklist. The workers (operatives) can also be interviewed if necessary. It is important to note that non-compliance must be observable and evidence-based. It is not just a safety tour that is limited to discussions with workers (operatives) concerned by the points to be checked in the checklists attached in the appendices.

III.4.12 NIGHT AND WEEKEND WORK

This work must be carried out in the presence of an entity manager qualified to supervise the work. The form attached in the appendix must be filled in and sent to the entity's Manager, the Operations Manager, the N+1 Manager, the HSE Manager and the on-call staff. If necessary, the External Company must notify the relevant authorities according to the regulations in force in each country.

PHASE 4: CLOSEOUT AND EVALUATION

This final phase will include the following:

- Completion of work
- Acceptance of work according to a dedicated checklist
- Closure of work permits
- Preparation of the zero point file
- Restoration of the site
- Handover of facilities to operators
- Contractor evaluations
- Works closeout

IV- ACCEPTANCE OF WORK, CLOSEOUT AND EVALUATION

IV.1 CLOSURE OF WORK PERMITS AND ASSOCIATED DOCUMENTS

IV.1.1 ACCEPTANCE OF WORK

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When the work is completed, the operative must check the work done and inform the operator or the instructing party in order to proceed with the acceptance of the work.

Acceptance is carried out between the technical departments and the contractor(s), with the active participation of the operator. These checks ensure that the equipment installed is compatible and that the modifications made comply.

The acceptance of the work is carried out jointly with the EC in the presence of the technical departments of the contractor(s), the engineering department and the operator. It is carried out based on a checklist containing the detailed description of the work (specifications). An example of a checklist is attached in the appendix.

IV.1.2 CLOSURE OF WORK PERMITS

The closure of the HSE plan, permits and other certificates should be done in the reverse order of the initial preparation and drawing-up process. After completion and acceptance of the work, the corresponding work permit shall be closed in accordance with the procedures defined in the work permit procedure, which shall include as a minimum:

- recovering the general work permit and the permit(s)
- checking that the isolation, lockout/tagout and inhibition associated with these permits can be removed
- triggering the removal of the corresponding isolation and labelling systems
- removing or arranging the removal of isolation, lockout/tagout and inhibition systems related to the permits
- cleaning and tidying up the work location
- declaring, by mutual agreement with the operative, the acceptance of the work or facility after the compliance and performance tests have been carried out and issuing reservations if necessary
- the end of works signature (handwritten or electronic) by the executing authority and by the issuer of the work permit, after checks at the place where the work has been carried out
- closing the general work permit and specific permits, and the associated accompanying documents, removing them from the list of "open" permits
- archiving the general work permit and permit(s)
- managing long-term isolation and inhibition systems or those retained for longer than the permit.

In the case of high-risk work, a joint report is prepared with the executing authority and the permit issuer following an on-site check.

The closure of the work permit does not authorise the commissioning of the equipment or facility

A great deal of attention will be paid to the transitional phase combining the recommissioning and acceptance tests. At the end of this stage, the executing authority informs, if necessary, the preparer or the permit issuer of the working conditions to be taken into account (difficulties encountered, proposed improvements). All the tools and documents then used for the coordination of the work must be updated.

The work permit and associated documents are also closed if:

- the work is completed in accordance with the required specifications
- the validity date has expired
- the work is stopped (general alarm, specific instruction, bad weather, the conditions defined are no longer met) and the complete re-evaluation of the working conditions, the risks incurred and the compensatory measures has not validated immediate resumption.

The last two cases require an application for a work permit.

IV.2 AUDITS AND IMPROVING PERFORMANCE

A programme of field audits and unannounced visits should be set up to check the implementation of:

- the work permit procedure and in particular the simplified permit
- the terms of work permits

This audit programme may take the form of:

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- Daily monitoring (if possible) by the facility manager, approving authority, security staff, supervisors, permit issuer, etc.
- Regular inspections
- An annual review of the whole process by independent persons

A performance review to evaluate and improve the work permit process is held at least once a year. In particular by setting up and monitoring indicators.

IV.3 HSE REVIEW AND KPI MONITORING

A joint HSE review must also be organised (except for subsidiary off-site work) for moderate- and high-risk work.

The following KPIs could be discussed:

- Number of LTIRs / Tier1&2 in relation to the work permit
- Number of approved work permits/approving authority/day
- Number of permits issued/issuer/day
- High-risk work permits (hot work, work at height, lifting operations, work involving power lockout/tagout, etc.)
- Number of on-site audits carried out and the number of anomalies observed

IV.4 HSE PERFORMANCE EVALUATION REPORT

An HSE performance evaluation report covering all phases of the project should be produced. The HSE assessment of the services is to be carried out.

IV.5 RESTORATION AND CLOSURE OF THE WORKSITE.

The sites must be restored to the condition agreed in the contract. A zero point file including all plans and documents must be prepared. A formal closure of the worksite must be pronounced.

IV.6 ARCHIVING

- HSE Plans are archived for 10 years.
- Permits and associated documents from the current and previous years are archived.

V ACCOMPANYING DOCUMENTS

HSE PLAN AND GENERAL DOCUMENTS

- APPENDIX 01: HSE Plan
- APPENDIX 02: Joint Preliminary Visit report
- APPENDIX 03: Operating procedures
- APPENDIX 04: Declarations of night and weekend work
- APPENDIX 05: Activity matrix
- APPENDIX 06: WSV worksite safety visit checklist

GENERAL AND SPECIFIC PERMITS

- APPENDIX 07: General work permit or DPP
- APPENDIX 08: Simplified work permit
- APPENDIX 09: Fire Hot Work Permit
- APPENDIX 10: Work at height permit
- APPENDIX 11: Permit for interior cleaning-degassing without human intervention (tank, vessel, container, etc.)

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- APPENDIX 12: Excavation permit
- APPENDIX 13: Lifting permit
- APPENDIX 14: Radiographic testing permit

CERTIFICATES

- APPENDIX 15: Lockout/Tagout certificate
- APPENDIX 16: Cleaning/degassing certificate
- APPENDIX 17: Confined Space Entry Certificate
- APPENDIX 18: Excavation certificate
- APPENDIX 19: Certificate for work at the water's edge
- APPENDIX 20: Lifting plan or file

MEASUREMENT AND PRE-CHECK FORMS

- APPENDIX 21: Checklist - Scaffolding
- APPENDIX 22: Checklist - MEWPs
- APPENDIX 23: Checklist - Roof work
- APPENDIX 24: Checklist - Rope access work
- APPENDIX 25: Checklist - Mobile ladder as a means of access
- APPENDIX 26: Checklist - Harnesses
- APPENDIX 27: Atmospheric measurement form
- APPENDIX 28: Lifting operations categorisation form
- APPENDIX 29: Work acceptance form

OUR LIVES FIRST AND FOREMOST

- APPENDIX 30: Safety Green Light Meeting
- APPENDIX 31: Life Saving Checks
- APPENDIX 32: Joint safety tour

GLOSSARY

- APPENDIX 33: Glossary



2020 Catalogue

TOTAL MS GENERAL

Personal Protective Equipment



July 2020





PERSONAL PROTECTIVE EQUIPMENT



1 - EYE AND FACE PROTECTION

4 to 10



2 - HEARING PROTECTION

11 to 16



3 - HEAD PROTECTION

17 to 23



4 - RESPIRATORY PROTECTION

24 to 30



5 - HAND PROTECTION

31 to 48



6 - FOOT PROTECTION

49 to 60



7 - BODY PROTECTION

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8 - FALL PROTECTION

79 to 89



9 - FIRST AID AND MISCELLANEOUS

90 to 98



FOREWORD

We think it useful to remind you that the use of PPE is only required when the implementation of technical and organisational means aiming to eliminate or reduce the source of risks proves to be insufficient or impossible to deploy. PPE must only be considered as the last resort. Furthermore, PPE requirements are consequently essential in the risk analysis that must be done for both usual tasks and occasional work.

When the use of PPE proves to be essential, particular attention must be given to the choice of equipment, operator training and information and compliance with the rules on wearing it. Depending on circumstances, management of the equipment made available to employees must be set up, particularly taking into account any expiry dates. The equipment made available can also be validated by tests performed with the operators and the distributor.

Finally, the nature of the risk must guide the choice of a PPE type and determine its characteristics.

All PPE must be accompanied by its instruction manual.

HOW TO ORDER?

By fax, letter or e-mail to our **GC2 Customer Service Department** dedicated to monitoring your file:

INTERSAFE FRANCE

ZI Paris Nord II - 18, place des Nymphéas - CS 59398 Villepinte

95943 ROISSY CDG cedex

Tel.: 01 48 17 96 66

Fax: 01 48 17 73 39

email: GC2@intersafe.fr

By **on-line ordering** via our website **www.intersafe.fr** after obtaining a login from our Customer Service Department.

146681

Costs for individual packaging



1

Eye and face protection



eye and face protection

European Standards

Basic standards

- EN 166 Specifications
- EN 167 Optical test methods
- EN 168 Non-optical test methods

Standards by type of use

- EN 169 Filters for welding
- EN 170 Ultraviolet filters
- EN 171 Infrared filters
- EN 172 Sunglare filters for industrial use
- EN 175 Equipment for eye and face protection during welding and allied processes
- EN 207 Laser eye-protectors
- EN 208 Laser adjustment eye-protectors
- EN 379 Automatic welding filters

Marking on the Frame

The frame markings must include the CE symbol and the manufacturer's identification (logo or mark).
If the spectacles refer to the EN standard, the EN standard number is compulsory, with the different symbols for the field of use and mechanical strength, depending on the tests required by the manufacturer.

Field of use symbols:

- 3. Liquid drops or splashes.
- 4. Projection of large particles > 5 microns.
- 5. Gases and fine dust < 5 microns.
- 8. Electric arc from short circuit.
- 9. Molten metal and hot solids.

Mechanical strength symbols:

- S. Reinforced strength, resists a 43 g 22 mm ball falling from 1.30 m.
- F. Low energy impact, resists a 0.86 g 6 mm ball at 45 m/s.
- B. Medium energy impact, resists a 0.86 g 6 mm ball at 120 m/s.
- A. High energy impact, resists a 0.86 g 6 mm ball at 190 m/s.

Eyepiece markings

The eyepiece markings must include:
The protection factor number for filtering eyepieces. The manufacturer's identification (logo or mark recommended by the manufacturer).

Optical class symbols

- 1. Continuous work
- 2. Intermittent work
- 3. Occasional work, with continuous wearing forbidden.

Field of use symbols

- 9. Molten metal and hot solids.

Mechanical strength symbols:

- S. Reinforced, resists a 43 g 22 mm ball falling from 1.30 m at 5.1 m/s.
- F. Low energy impact, resists a 0.86 g 6 mm ball at 45 m/s.
- B. Medium energy impact, resists a 0.86 g 6 mm ball at 120 m/s.
- A. High energy impact, resists a 0.86 g 6 mm ball at 190 m/s.
- K. Resistance of surfaces to damage by fine particles (optional).
- N. Fog resistance (optional).
- T. The letter T, immediately after the mechanical strength symbol, authorises use for particles thrown at high speed at extreme temperature.

Warning

- F. Maximum protection for temple type safety spectacles.
 - F. Maximum protection for goggles.
 - A. Maximum protection for facial protection.
- If the symbols S, F, B and A are not common to the eyepiece and the frame then the lowest level must be the one assigned to the complete protective equipment.



Source: Bollé Safety

eye and face protection

Protective glasses

UVEX I-VO

- * Standards: EN 166 - EN 170 - EN 172 - EN 169 (Welding version)
- * Frame material: dual density thermoplastic elastomer
- * Upper (brow arch), lower (nose bridge) and side protection
- * 2 models available: with tilting and extending temples, or with adjustable elastic strap
- * Eyepiece material: polycarbonate
- * Double spherical screen, optimum side field of view coverage
- * Strap model can be combined with ear muffs
- * Weight: 34 g
- * Colour: blue/grey, blue/orange
- * Packaging: unit

130587

UVEX I-VO spectacles blue/grey
Manuf. ref: 9160.285
Manufacturer: UVEX HECKEL



143662

UVEX I-VO SPECTACLES
blue/orange
Manufacturer's ref.: 9160.064
Manufacturer: UVEX HECKEL



153810

5X6 high quality optical clear polycarbonate spectacles
Manufacturer's ref.: 5X6.03.11.00
Manufacturer: Univet

- * Standards: EN 166 - EN 170
EN 172 (IN/OUT and G15 solar versions)
- * Eyepiece material: clear polycarbonate
- * Scratch and fog resistant coating
- * 100% UV filtration
- * Adjustable nose pads
- * Colour: gunmetal/green
- * Weight: 26 g
- * Packaging: unit



167094

553Z clear polycarbonate spectacles
Manufacturer's ref.: 553Z.01.00.00
Manufacturer: Univet

- * Standards: EN 166 - EN 170
- * Material: clear polycarbonate
- * Multi-layer scratch and fog resistant coating on both sides
- * Injected nose bridge
- * Weight: 19 g
- * Colour: translucent
- * Packaging: unit



153813

UNIVET 503 Clear Spectacles
Manufacturer's ref.: 503
Supplier: Univet

- * Standards: EN 166 - EN 170
- * Material: clear polycarbonate
- * Notched temple length adjustment
- * Weight: 29 g
- * Packaging: 10 units



162055

UVEX I-3 spectacles
Manufacturer's ref.: 9160.281
Manufacturer: UVEX HECKEL

- * Standards: EN 166, EN 170, EN 172 (tinted)
- * Very enclosing model that adapts to all faces Softflex nose bridge technology to guarantee long term comfort
- * Pressure free due to flexible temples
- * Tilting temples with flex zone to adapt to all face widths
- * Exclusive UVEX supravision scratch and fog-resistant coating
- * Packaging: unit



eye and face protection

Protective glasses

159649

UVEX I-VO welding spectacles

Manufacturer's ref.: 9160.045

Manufacturer: UVEX HECKEL

* Standards: EN 166 - EN 170 -
EN 172 - EN 169 (welding version)

* Frame material: dual density thermo-
plastic elastomer

* Upper (brow arch), lower (nose bridge) and side protection

* Eyepiece material: polycarbonate

* Double spherical screen, optimum side field of view coverage

* Infra-dura AF: UV and IR protection, anti-fog

* Weight: 34 g

* Colour: black/green (welding)

* Packaging: unit



135779

BOLLE Contour Smoke Lens

Safety Spectacles

Manufacturer's ref.: CONTESP

Manufacturer: Bollé

* Eyepiece with anti-scratch ESP coating



135778

BOLLE Contour Clear Lens Safety spectacles

Manufacturer's ref.: CONTPSI

Manufacturer: Bollé

* Clear eyepiece with anti-scratch coating



Bollé Contour

* Standards: EN 170 - EN 172 (tinted version)

* Non-slip nose bridge

* TIPGRIP non-slip temples

* Anti-static

* Weight: 21g

* Packaging: unit

172362

Pheos Cx2 spectacles

Manufacturer's ref.: 9198.257

Manufacturer: UVEX

* Standards: EN 166, EN 170

* Blue-grey frame/W 166 FT CE

* Clear polycarbonate shield, UV 400

* Excellent resistance to scratches
on the outside and resists fogging on the inside

* Metal-free closing mechanism

* Flexible nose and forehead support

* Perfect protection for the entire area of the eye and
the upper part in particular

* 2C-1.2 W 1 FTKN CE

* Packaging: unit



177010

5X1 water-repellent clear polycarbonate spectacles

Manufacturer's ref.: 5x1.04.00.00

Manufacturer: Univet

* Standards: EN 166 - EN 170

* Eyepiece material: clear polycarbonate

* Scratch and fog resistant coatings, water-repellent

* Flexible branches with Softpad technology

* Adjustable elastomer nose bridge

* Colour: metallic grey/green

* Weight: 29 g

* Packaging: unit



135871

UVEX Skyper Blue

Supravisión spectacles

Manufacturer's ref.: 9195265

Manufacturer: UVEX

* Standards: EN 166 - EN 170

* Frame material: Permaflex

* Upper (brow arch), lower
(nose bridge) and side protection

* Tilting, extendable temples with flexible tips

* Eyepiece material: clear polycarbonate

* Contoured lens with outstanding field of vision

* Anti-reflection side shields

* Supravisión HC-AF coating (scratch-resistant outside, anti-fog inside)

* Weight: 30 g

* Packaging: unit



135736

BOLLE Viper spectacles

Manufacturer's ref.: VIPPSI

Supplier: Bollé

* Frame standard: EN 166

* Frame material: nylon

* Extendable arms

* Eyepiece standard: EN 170

* Eyepiece material: clear polycarbonate

* Scratch and fog resistant coating

* Extra-wide field of vision

* Integrated side shields

* Weight: 28 g

* Supplied with cord

* Packaging: unit



eye and face protection

Over spectacles

153811

5X7 clear clip-on spectacles

Manufacturer's ref.: 5X7.03.11.00

Manufacturer: Univet

- * Standards: EN 166 - EN 170
- EN 172 (coloured versions)
- EN 169 (welding version)
- * Eyepiece material: clear polycarbonate
- * Scratch and fog resistant coating
- * 100% UV filtration
- * Branches adjustable in length
- * Injected nose bridge
- * Floating shield
- * Weight 39 g
- * Packaging: unit



153815

UNIVET Visitors' spectacles

Manufacturer's ref.: 520

Manufacturer: Univet

- * Standards: EN 166 - EN 170
- * Frame material: polycarbonate
- * Visitor's safety spectacles that can be worn as over spectacles
- * 100% UV Filtration
- * Eyepiece material: polycarbonate
- * Injected nose bridge
- * Weight: 43 g
- * Packaging: unit



140489

BOLLE Squal Clear over spectacles

Manufacturer's ref.: SQUPSI

Manufacturer: Bollé

- * Standards: EN 166 - EN 170
- * Temple material: polycarbonate and nylon
- * Extendable temples
- * Lower and upper protection
- * Integrated side shields
- * Eyepiece material: clear polycarbonate
- * Anti-scratch, anti-fog and anti-static coating
- * Optimum protection for wearers of prescription spectacles
- * Weight: 43 g
- * Packaging: unit



155442

UNIVET 511 spectacles

Manufacturer's ref.: 511

Manufacturer: Univet

- * Standard: EN 166
- * Frame material: nylon
- * Side shields
- * Notched adjustable temples
- * Eyepiece material: clear polycarbonate
- * One-piece lens
- * Scratch-resistant coating
- * Colour: blue
- * Packaging: unit



143904

UVEX Super OTG over spectacles

Manufacturer's ref.: 9169.065

Manufacturer: UVEX HECKEL

- * Standards: EN 166 - EN 170
- * Frame material: PA/TPU
- * Flexible, extra-flat, extremely strong XST temples with flexible tips
- * Lens provides all-round vision and has integrated side shields
- * Eyepiece material: clear polycarbonate
- * Scratch-resistant coating
- * Colour: navy blue
- * Weight: 37 g
- * Packaging: unit



eye and face protection

Goggles

110092

UVEX-HECKEL Ultravision goggles

Manufacturer's ref.: 9301.05

Manufacturer: UVEX HECKEL

- * Standards: EN 166 - EN 170
- * Frame material: Flexible PVC
- * 25 mm wide adjustable strap, elastic or elastic and synthetic fabric depending on model
- * Peripheral lip, indirect over and under eye ventilation
- * Eyepiece material: clear polycarbonate, Supravision HC-AF coating (outside scratch-resistant, inside anti-fog)
- * Suitable for prescription spectacle wearers
- * Weight: 119 g
- * Packaging: unit



167091

Gunmetal green goggles

Manufacturer's ref.: 6x3

Manufacturer: Univet

- * Standards: EN 166 - EN 170
- * Material: clear polycarbonate
- * Scratch and fog resistant coatings
- * Indirect ventilation
- * Injected nose bridge
- * Adjustable elastic headband, nylon
- * Colour: green/grey
- * Packaging: unit



110091

UVEX Hydro Ultravision goggles

Manufacturer's ref.: 9301714

Manufacturer: UVEX HECKEL

- * Anti-fog acetate eyepiece.

Face protection

135756

BOLLE RELRSI face shield

Manufacturer's ref.: RELRSI

Manufacturer: Bollé

- * Standards: EN 166 - EN 170
- * Material: clear acetate, polypropylene headband
- * Anti-fog visor
- * Adjustable headband
- * 190 x 290 mm flip-up front
- * Approved for short-circuit electric arc (acetate version)
- * Weight: 200 g
- * Packaging: unit



eye and face protection

Accessories

143663

UVEX Cord

Manufacturer's ref.: 9959.002

Manufacturer: **UVEX HECKEL**

- * Polyamide braid cord, colour black
- * Temple fitting rings
- * Packaging: unit



143342

Case of 10 SI INTERNATIONAL spectacle cleaning sachets

Manufacturer's ref.: SO200E

Manufacturer: **SI**

- * Case of 10 cleaning sachets
- * Packaging: unit



137013

SCOTT disinfectant wipes

Manufacturer's ref.: 013.025.01 1017652

Manufacturer: **Scott**

- * Packaging: box of 100



155012

BOLLE spectacle bag

Manufacturer's ref.: ETUIFS

Manufacturer: **Bollé**

- * Microfibre bag - compatible with all models of goggle
- * Dimensions: 190 x 100 mm
- * Packaging: unit



2

Hearing protection



hearing protection



The new regulation 2016/425 defines that hearing protection becomes a PPE of Category 3 in the same way as respiratory protection or fall protection, and regards harmful noise as a «nature irreversible» health hazard.

Technical standards

EN 352/1	Ear-muffs
EN 352/2	Ear-plugs
EN 352/3	Ear-muffs attached to an industrial safety helmet
EN 352/4	Level dependent ear-muffs
EN 352/6	Ear-muffs with electrical audio input
prEN 352/8	Entertainment audio ear-muffs
EN 458	Recommendations for selection, use, care and maintenance of personal protective equipment (PPE)

NOISE THERMOMETER

The noise intensity doubles every 3 dB

In the workplace

Artillery fire - 162 dB

Pneumatic drill - 130 dB

Oxygen torch - 121 dB

Compactor - 116 dB
Lorry acceleration - 114 dB
Hammer drill - 102 dB
Bulldozer - 100 dB
Fire alarm - 95 dB
Electric circular saw - 93 dB
Handsaw - 85 dB
Forklift truck - 87 dB

Electric lathe - 81 dB

Normal conversation - 60 dB
Transformer - 50 dB

Outside the workplace

Rifle - 162 dB

Motor race - 130 dB

Rock concert - 120 dB

Chainsaw - 118 dB
Crying baby - 110 dB
CD/MP3 player - 105 dB
Motorbike - 105 dB
Lawnmower - 94 dB
Underground railway - 90 dB
Cockpit - 88 dB

Hair dryer - 80 dB

Radio-alarm - 75 dB

Rain - 50 dB

Immediate physical damage - 160 dB

Immediate pain threshold - 130 dB

A short exposure to this level can cause hearing damage and buzzing in the ears - 120 dB

Compulsory hearing protection - 85 dB

Hearing protection must be available - 80 dB

Non-hazardous noise - 75 dB

Comfortable sound - 50 dB

Disposable earplugs

113976-S

HOWARD-LEIGHT Earplugs BILSOM 303S

Manufacturer's ref.: 1006187
Manufacturer: Honeywell

- * Standard: EN 352-2
- * Attenuation: H=32, M=29, L=29, SNR=33
- * Material: polyurethane foam
- * Cylindrical shape
- * Colours: yellow/white
- * Size: S
- * Packaging: box of 200 pairs loose for LS400 dispenser



114819-L

HONEYWELL Bilsomat 400 ear-plug dispenser

Manufacturer's ref.: 1006202
Manufacturer: Honeywell

- * Standard: EN 352-2
- * SNR = 33 dB
- * Patented polyurethane foam earplugs
- * Conical shape
- * Smooth surface with good dirt resistance
- * Packaging: unit



113976-L

HOWARD-LEIGHT BILSOM 303S Earplugs

Manufacturer's ref.: 1006186
Manufacturer: Honeywell

- * Size: L
- * Packaging: box of 200 pairs loose for LS400 dispenser

110844

3M EAR CLASSIC Earplug Manufacturer's ref.: PP-01-002 Manufacturer: 3M

- * Attenuation: H=30, M=24, L=22, SNR=28
- * Material: polymer foam
- * Single use
- * Moisture-resistant
- * Packaging: box of 250 pairs



128853

3M Disposable Earplugs Manufacturer's ref.: ES-01-001 Manufacturer: 3M

- * Attenuation: H=34, M=34, L=31, SNR=36
- * Material: polyurethane
- * Single use
- * Soft and very flexible
- * Good seal and high level of comfort due to rounded tip
- * Colour: fluorescent yellow
- * Packaging: dispenser containing 250 pairs



Reusable earplugs

113980

HOWARD-LEIGHT Clarity size S earplugs Manufacturer's ref.: 1005328 and size L Manufacturer's ref.: 1005329 Manufacturer: Honeywell

- * Standard: EN 352-2
- * Attenuation: SNR=22
- * Material: thermoplastic
- * Washable and reusable - With cord
- * Sizes: S and L
- * Packaging: pair



135992

MOLDEX Ear Plugs Manufacturer's ref.: 6401 Manufacturer: Moldex

- * Attenuation: H=31, M=26, L=24, SNR=30
- * Material: Kraton, PVC
- * So that they are fully detectable, there is a metal insert in the ear plugs and the cord also contains metal
- * Packaging: box of 50 pairs



hearing protection

Reusable earplugs

110856

3M Ultrafit Earplugs

Manufacturer's ref.: UF.01.000

Manufacturer: 3M

- * Standard: EN 352-2
- * Attenuation: H=33, M=28, L=25, SNR=32
- * Material: thermoplastic elastomer
- * Reusable - 3 flexible, thin flanges
- * Removable blue vinyl cord
- * Packaging: box of 50



Caps

110860

3M Ear Cap Banded Earplugs

Manufacturer's ref.: EC0100

Manufacturer: 3M

- * Standard: EN 352-2
- * Attenuation: H=27, M=19, L=17, SNR=23
- * Material: band with polyurethane foam pods
- * Perfectly suited to all face shapes
- * Disposable or reusable due to availability of replacement pods
- * Hemispherical pod shape
- * Packaging: unit



171829

UVEX X-Cap Banded Earplugs

Manufacturer's ref.: 2125.341

Manufacturer: UVEX

- * Standard: EN 352-2
- * Attenuation: H=72, M=19, L=18, SNR=24
- * The innovative "oval" shape of the disposable earplugs fits the ear perfectly, guaranteeing excellent comfort
- * Packaging: box of 10 bands



136012

3M Ear Cap Replacement Pods

Manufacturer's ref.: ES0130

Manufacturer: 3M

- * Packaging: box of 10 pairs



135961

UVEX X-Cap Disposable Earplugs

Manufacturer's ref.: 2125.351

Manufacturer: UVEX

- * Packaging: box of 60 pairs



159701

MOLDEX WaveBand Banded Earplugs

Manufacturer's ref.: 6810

Manufacturer: Moldex

- * Standard: EN 352-2
- * Attenuation: H=30, M=23, L=22, SNR=27
- * Material: Polyurethane, polyoxymethylene (POM)
- * Protects against intermittent noise
- * Flexible, replaceable polyurethane foam earplugs
- * PVC-free
- * Packaging: box of 8 bands



Helmet earmuffs

129484

**Pair HONEYWELL
Clarity C1H helmet earmuffs**
Manufacturer's ref.: 1011262
Manufacturer: Honeywell

- * Standard: EN 352-3
- * Attenuation: H=26, M=23, L=19, SNR = 26 dB
- * Clarity earmuffs offer uniform attenuation blocking low frequencies but allowing the higher voice and warning signal frequencies to pass without deformation, but attenuated.
- * Dielectric construction suitable for all electrical applications
- * Uniform earmuff pressure distribution suiting all head shapes for increased comfort during prolonged use
- * Click in pads for fast, easy replacement
- * Quick-Click adjustment does not move during wearing
- * Work in compressor areas
- * Packaging: unit



130561

**Pair HONEYWELL
Clarity C3H helmet earmuffs**
Manufacturer's ref.: 1011264
Manufacturer: Honeywell

- * Standard: EN 352-3
- * Attenuation: H=28, M=28, L=28, SNR = 30 dB
- * Uniform attenuation blocking low frequencies, but allowing the higher voice and warning signal frequencies to pass through without deformation, but attenuated
- * Dielectric construction suitable for all electrical applications
- * Uniform earmuff pressure distribution suitable for all head shapes for increased comfort during prolonged use
- * Click in pads for fast, easy replacement
- * Quick-Click adjustment does not move during wearing
- * Packaging: pair



110872

**3M OPTIME III H540P3E
helmet earmuffs**
Manufacturer's ref.: H540P3E
Manufacturer: 3M

- * Standard: EN 352-3
- * Attenuation: H=40, M=32, L=22, SNR = 34
- * The Optime III has been developed for particularly noisy environments.
- * Optimum high and low frequency attenuation
- * Also protects against low frequency sound and extreme noise
- * Packaging: pair



Compatible with all MS
selection helmets

Earmuffs

110871

**3M PELTOR – Optime™ Earmuffs
35 DB**
Manufacturer's
ref.: H540A-411-SV
Manufacturer: 3M

- * Standard: EN 352-1
- * Attenuation: H540A: H=40, M=32, L=23, SNR = 35 dB
- * The Optime III has been developed for particularly noisy environments.
- * Optimum high and low frequency attenuation
- * Also protects against low frequency sound and extreme noise
- * Packaging: unit



160939

**3M PELTOR X-A earmuffs
37 DB**
Manufacturer's ref.: X5-A
Manufacturer: 3M

- * Standard: EN 352-1
- * Attenuation: H = 37, M = 35, L = 27, SNR = 37 dB

Innovative technology that has allowed exceptional performance to be achieved. This technology is used not only for the earmuff version but also for the helmet version, which fits a large range of industrial safety helmets.

- * Remarkable attenuation from the combination of foam integrated into the earcups and the sealing rings
- * Colour: black
- * Packaging: unit



hearing protection

Earmuffs

128103

HONEYWELL Viking V1 Earmuff
Manufacturer's ref.: 1010925
Manufacturer: Honeywell

- * Standard: EN 352-1
- * Earmuff with 1-point fixing of earcups to headband
- * Large, soft, smooth cushions don't irritate skin
- * Specially designed for high noise levels with a predominant low frequency component
- * Non-deforming foam-covered plastic headband means that earmuffs stay firmly in place when the headband is worn behind the head
- * Weight: 235 g
- * Attenuation:
 - V1: H = 32, M = 28, L = 21, SNR = 30
- * Packaging: unit



110875

3M PELTOR Optime II Earmuffs
Manufacturer's ref.: H520A
Manufacturer: 3M

- * Standard: EN 352-1
 - H520A: H=34, M=29, L=20, SNR = 31
 - * For very severe sound environments, even at low frequencies.
 - * The mixed liquid and foam sealing rings provide perfect sealing with low contact pressure and optimum comfort
 - * Offers protection against low frequency sounds and very high sound intensities
- The helmet version is supplied with 30 mm adaptors
- * Packaging: unit



144244

Tactical XP helmet earmuffs
Manufacturer's ref.: MT1H05
Manufacturer: 3M

- * Compliant with ATEX, class EEx ib IIC T4.
- * Attenuation: SNR=31dB H=32dB M=25dB L=20dB
- * Ex certified batteries supplied
- * Integrated safety functions which communicate if the batteries are flat
- * Noise modulation function which allows you to hear surrounding sounds
- * Equipped with the following functions: volume control for the noise modulation function, balance, adjustable tripping time, equalizer and volume for external input and external input mode
- * Low battery warning signal before cutout.
- * Battery life approximately 1000 hours
- * Packaging: unit





3

Head protection



head protection

Main European head protection standards

EN 812	Industrial bump caps
EN 397	Industrial safety helmets
EN 14052	High performance industrial helmets
EN 50365	Electrically insulating helmets for use on low voltage installations (1000 Vac or 1500 Vdc)
EN 12492	Helmets for mountaineers
EN 443	Helmets for fire fighting

Other head protection related standards

EN 13463-1	Non-electrical equipment for use in potentially explosive atmospheres
EN 50365 1000 V	Electrically insulating helmets for use on low voltage installations

Marking of the shell

Standard EN 397 includes several additional approvals that a safety helmet must comply with. Information on this subject is available inside the helmet shell.

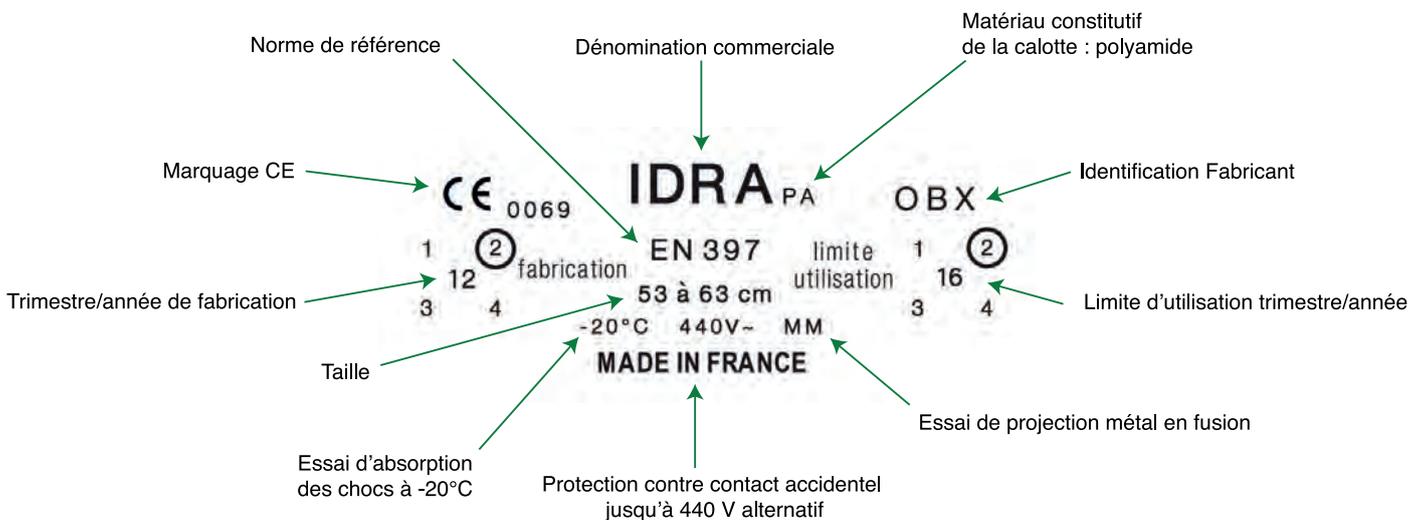
The following information must always be stated:

- CE marking: CE marking indicates that the product satisfies the EU directives (European conformity);
- number after or under the CE marking: this is the number of the independent certification body;



The optional information is:

- 440 Vac: resistance to contact with electrical cables up to 440 V;
- -20°C or -30°C: suitable for use at low temperatures;
- +150°C: suitable for use at high temperatures;
- MM (Molten Metal): resists molten metal splashes;
- LD (Lateral Deformation): the safety helmet resists lateral pressure, for example when the helmet is jammed.



head protection

MSA Helmets

V-Gard 930 - Expiry date 60 months after date of first use

171587-400

V-Gard 500 helmet white non ventilated without logo

Manufacturer's ref.: GV559

Manufacturer: MSA

- * Standards: Certified in accordance with ELECTROSTATIC-INERIS certification rules (tested in accordance with EN 13463-1). Suitable for use in potentially explosive atmospheres, hazardous areas 1, 2, 20, 21, 22
- * Ideal helmet for electricians; complies with EN 397 440 V AC, EN 50365 1000 V AC and used for tests on «Arc Flash» shields GS-ET-29 class 1+2
- * ABS shell with UV stabilisers offering good scratch resistance
- * Integrated rain trough for outdoor use
- * Fas-Trac III suspension (with ratchet/wheel adjustment)
- * Colour: white
- * Packaging: unit



169685-400

V-Gard 500 helmet white non ventilated with Total logo

Manufacturer's ref.: GV519-0000000-O36

Manufacturer: MSA

- * Standard: EN 397, EN 13463-1
- * Material: ABS
- * Non-vented
- * Large wheel/ratchet system
- * Standard 30 mm lateral contours for optimum integration of accessories such as earmuffs
- * Foam headband
- * Colour: white
- * Packaging: unit



MS and RC recommendation

171587-300

- Colour: blue

186871-400

V-Gard 500 White non-vented helmet without logo and 4 point chinstrap attached

NEW

170839-400

MSA V-Gard 930 ventilated helmet

Manufacturer's ref.: GVC1A-0000000-000

Manufacturer: MSA

- * Standard: EN 397
- * Material: ABS
- * Over spectacles for protection against level «B» impacts
- * Fas-Trac® III headpiece with knurled wheel adjustment and 6 anchor points
- * PREMIUM sweatband
- * Colour: white (other colours on request)
- * Packaging: unit



186873-400

MSA V-Gard 930 ventilated helmet with attached 4-point chinstrap

NEW

172460-400

MSA V-Gard 930 non-vented helmet with badge holder

Manufacturer's ref.: GVD1A-0000500-000

Manufacturer: MSA

- * Standard: EN 397
- * Material: ABS
- * Over spectacles for protection against level «B» impacts
- * Fas-Trac® III headpiece with knurled wheel adjustment and 6 anchor points
- * PREMIUM sweatband
- * Colour: white
- * Packaging: unit



186912-400

MSA V-Gard 930 non-vented helmet with badge holder and attached 4-point chinstrap

NEW

186872-400

V-Gard 500 Helmet White non-vented with Total logo and attached 4-point chinstrap

NEW

V-Gard 930 non-vented MSA helmet

Manufacturer: MSA

- * Standard: EN 397
- * ABS shell, providing maximum strength (LD = Lateral Deformation option)
- * Slanting helmet edges, which help to drain rain and debris
- * Ventilation holes located on top of the helmet
- * For use in an ATEX/explosive environment (ELECTROSTATIC INERIS certified)
- * Eyepiece for protection against level «B» impacts
- * Fas-Trac® III headpiece with knurled wheel adjustment and 6 anchor points
- * PREMIUM sweatband: absorbent material, covers the forehead, washable (50 times) and replaceable
- * Packaging: unit



MS and RC recommendation

170840-400

- Colour white

Manufacturer's ref.: GVC1A-0000000-000

170840-300

- Colour blue

Manufacturer's ref.: GVD5A-0000000-000

170840-100

- Colour red

Manufacturer's ref.: GVD1A-0000000-001

186913-400

V-Gard 930 white non-vented MSA helmet with attached 4-point chinstrap

NEW

head protection

MSA Helmets

170967-400

MSA V-Gard 950 non-vented helmet with integrated shield

Manufacturer's ref.:

GVF1A-80A0000-000

Manufacturer: MSA

- Standards: EN 397 440 V AC, EN 50365, EN 166
- For use in an ATEX/explosive environment (ELECTROSTATIC INERIS certified)
- Material: ABS shell
- Fas-Trac® III headpiece with knurled wheel adjustment and 6 anchor points
- PREMIUM sweatband
- Scratch and fog resistant facial shield
- Compatible with corrective spectacles
- Delivered with 4-point fitted chinstrap
- * Colour: white
- Packaging: unit



170968-400

V-Gard 950 electrician's helmet with integrated shield, 4-point chinstrap and HV ear defenders

Manufacturer's ref.:

GVF1A-80A000G-000

Manufacturer: MSA

- Standards: EN 397 440 V AC, EN 50365, EN 166
- For use in an ATEX/explosive environment (ELECTROSTATIC INERIS certified)
- Material: ABS shell
- Fas-Trac® III headpiece with knurled wheel adjustment and 6 anchor points
- PREMIUM sweatband
- Scratch and fog resistant facial shield
- Compatible with corrective spectacles
- Delivered with 4-point chinstrap fitted, for better helmet support
- * Colour: white
- Packaging: unit



JSP Helmets

186724-400

JSP EVO@VISTAlens™ smoked hood + grey stickers + 4-point chinstrap

Manufacturer's ref.: AMA240-405-F00

Manufacturer: JSP

- Standards: EN 397:2012; EN 50365; EN166 2C-1,2 1 AKN; EN170
- Material: ABS
- Non ventilated
- Harness: 6 points
- Inner material: textile cover
- Micro peak 25 mm
- Knurled wheel adjustment
- Colour: white
- Weight: 490 g
- Packaging: unit

NEW

With stickers and chinstrap



166185-400

JSP EVO3 Micro Peak white Helmet

Manufacturer's ref.: AJG250-000-100JSP

Manufacturer: JSP

- * Standards: EN 397, EN 50365 (1000 V) class 0
- * Material: polyethylene (HDPE)
- * 6-point fabric harness for Evo3
- * Micro peak
- * "3D" depth adjustment system
- * Universal accessory mounting slots
- * **Expiration date 60 months after the date of first use**
- * Packaging: unit



Fire fighting helmet

145306

4-point universal chinstrap

JSP EVO

Manufacturer's ref.: AHV200-000-000

Manufacturer: JSP

- Packaging: unit

NEW



168648

MSA GALLET F1 helmet

Manufacturer's ref.: GXM2111100201-BB35

Manufacturer: MSA GALLET

- * Standards: Helmet complies with EN 443:2008, type B. Face shield complies with EN 14458:2004. Ocular visor complies with EN 14458
- * Shell: injection-moulded high temperature thermoplastic materials
- * Impact liner: shock-absorbing polyurethane foam with overmoulded aramid reinforcement. 3-point adjustable padded chin strap
- * Face shield made from thermoplastic material with high temperature coating
- * Colour: aluminised
- * Packaging: unit

New version



Industrial bump cap

170053-306

Scott First Base 3 HC24 Bump Cap reduced peak, 55 mm

- Standard: EN 812/A1:2001
- Material: Shell: ABS, fabric: 100% polyester - standard and high visibility, mesh: 100% polyester
- Mesh location: side
- Size: 52 - 65 cm
- * Colour: navy blue
- * Packaging: unit



171899-306

AEROLITE Bump cap, 5 cm navy blue visor Manufacturer's ref.: AAF000-002-100 Manufacturer: JSP

- * Standard: EN 812:2012
- * Designed to protect the head from impacts and injury. Fully adjustable for perfect support. Solid high density polyethylene (HDPE) shell, with expanded polypropylene impact reinforcement (EPP)
- * Short visor
- * Weight: <135 g
- * Colour: navy blue
- * Packaging: unit



160814-945

SCOTT HC23 Elite Bump Cap Manufacturer's ref.: HC23/ELT/RP BLACK/GREY

Manufacturer: Scott

- * Standard: EN 812/A1:2001
- * Material: shell: ABS, fabric: 100% polyester - standard and high vis, mesh: 100% polyester
- * Reduced peak, 54 mm
- * Mesh location: side/top
- * Weight: 205 g (RP)
- * Size: 52 - 65 cm
- * Colour: black/grey
- * Packaging: unit



160148

SCOTT HC23/WINTER/RP Bump cap, Manufacturer's ref.: HC23/ WINTER/RP Manufacturer: Scott

- * Standard: EN 812
- * Material: ABS shell
- * Packaging: unit



Heat protection

168960

HELLY HANSEN Fakse Balaclava Manufacturer's ref.: 79872 Manufacturer: Helly Hansen

- * EN ISO 11612 A1B1C1 Protection against heat and flames
- * EN CEI 61482 cl 1 (4 kA) Protection against thermal arc hazards of an electric arc
- * EN 1149 Protection against static electricity
- * 48.5% wool, 48.5% viscose, 3% stainless steel
- 170 g/m² Fireproof
- * Anti-static
- * Certified against electric arcs
- * Contrasting seams
- * Packaging: unit



head protection

Bouffant caps

136080

HOPEN Bouffant Cap
Manufacturer's ref.: 70.101
Manufacturer: Hopen

- * Material: polypropylene
- * Grammage: 12 g/m²
- * Elasticated with welded ends
- * Latex free
- * Covers all the hair as required by HACCP procedure
- * Colour: white
- * One size
- * Packaging: bag of 100



136094

HOPEN PLP Round Bouffant Cap
Manufacturer's ref.:70.011
Manufacturer: Hopen

- * Material: polypropylene
- * Grammage: 12 g/m²
- * Stitched and elasticated
- * Latex free
- * Light for improved user comfort
- * Fits different head sizes
- * Colour: white
- * Diameter: 53 cm
- * Packaging: box of 100



136786

HOPEN White Hairnet Cap
Manufacturer's ref.: 70.401
Manufacturer: Hopen

- * Material: polypropylene
- * Grammage: 40 g/m²
- * Stitched and elasticated
- * Latex free
- * Protects all of the hair
- * Particularly suitable for users with long hair
- * Top-of-the-range product, conveys a reassuring, professional image
- * Colour: white
- * One size
- * Packaging: bag of 100 units



Bollé accessories

135756

Pare-visage BOLLE RELRSI
Réf. fabricant : RELRSI
Fabricant : Bollé

- * Normes : EN 166 - EN 170
- * Matériau : acétate incolore, bandeau polypropylène
- * Ecran traité antibuée
- * Serre-tête réglable
- * Face relevable de 190 x 290 mm
- * Homologué pour l'arc électrique de court-circuit (version acétate)
- * Poids : 200 g
- * Conditionnement : unité



MSA accessories

159792

MSA V-GARD Universal Frame
Manufacturer's ref.: 10115822
Supplier: MSA

* Packaging: unit



185143

Universal 4-point chinstrap
V-Gard
Manufacturer's ref.: GA90047
Manufacturer: MSA

* Compatible with all MSA industrial helmets: V-Gard and ThermalGard ranges

• **Easy to mount directly onto Push-Key or Fas-Trac® III suspens**

• Adjustable

for a perfect fit

• Compatible with ear defenders

• Narrow, soft, comfortable OEKOTEX®-certified fabric strap

• Can be used with a chin cup (to be ordered separately)

• No metal parts for use in electrical applications

• Packaging: unit



159914

MSA Retractable Chin Protector
Manufacturer's ref.: 10115828
Supplier: MSA

* Packaging: unit



159909

MSA V-GARD PC Visor
Manufacturer's ref.: 10115837
Supplier: MSA

* Packaging: unit



160300

MSA Nomex neck flap
Manufacturer's ref.: T1900700
Manufacturer: MSA

* Packaging: unit



169732

MSA V-GARD Sweatband
Manufacturer's ref.: 10153518
Supplier: MSA

* Packaging: box of 10



170982

Colourless replacement over spectacles (with connectors)
Manufacturer's ref.: GA90035
Supplier: MSA

• Packaging: unit



170979

Fas-Trac III 6-point cap with replaceable foam sweatband
Manufacturer's ref.: GA90041
Supplier: MSA

• Packaging: unit



170981

Electric arc visor for V-Gard series 900
Manufacturer's ref.: GA934
Supplier: MSA

• Packaging: unit



176888

Transport bag for V-Gard 930 helmet
Manufacturer's ref.: GA90039
Supplier: MSA

• Packaging: unit



4

Respiratory protection



European Standards

Disposable masks

EN 149:2001 Filtering facepieces against particles 3 protection
+A1:2009. classes exist: FFP1, FFP2 and FFP3.

Reusable masks

EN 140:1998 Half masks and quarter masks, for use with filters and
AC:1999 respiratory protective devices (compressed air BA, assisted ventilation, etc.)

EN 136:1998 Full face masks, for use with filters and
AC:2003 respiratory protective devices (Compressed air, free air or autonomous BA, assisted ventilation, etc.)

EN 148 1/2/3 Threads for facepieces. This standard describes
:1999 different types of connections of PPE and filters to masks. The most common is EN 148-1, which defines the Rd40 x 1/7" thread

EN 143:2000 Particle filters for negative pressure respiratory protective
A1:2006 devices.

They are most effective against dust and fibres, and most fumes, liquid mists and bacteria. Suitable for EN 140-compliant half masks or or EN 136-compliant full face masks There are 3 Classes: P1: Low filtration efficiency, P2: Medium efficiency, P3: High efficiency

EN 14387:2004 Gas filter(s) and combined filter(s) for negative pressure
+A1:2008 respiratory protective devices.

They are classified according to their type and class. There are three classes that correspond to a different in filter capacity and a maximum permissible toxic concentration in the polluted air (Class 1: 0.1%, Class 2: 0.5 %, Class 3: 1%)

EN 405:2001 Valved filtering half masks to protect against gases or
+A1:2009 gases and particles

Powered devices

EN 12941 Powered filtering devices incorporating a helmet or hood.3 classes for all equipment: TH1, TH2, TH3. Particle filtration cartridges are marked: TH1P, TH2P, TH3P.

EN 12942 Power assisted filtering devices incorporating full face masks, half masks or quarter masks.. The 3 protection classes are: TM1, TM2, TM3

Compressed air line breathing apparatus

EN 14594:2005 Continuous flow compressed air line breathing apparatus

Self-contained apparatus

EN 137:2006 Self-contained open-circuit compressed air breathing apparatus with full face mask

EN 145:1997/ Self-contained closed-circuit breathing apparatus
A1:2000 compressed oxygen or compressed oxygen-nitrogen type

EN 1146:2005 Respiratory protective devices. Self-contained open-circuit compressed air breathing apparatus incorporating a hood for escape.

EN 402:2003 Respiratory protective devices. Lung governed demand self-contained open-circuit compressed air breathing apparatus with full face mask or mouthpiece assembly for escape.

respiratory protection

Hygiene mask

136808

HOPEN 2-fold white hygiene mask

Manufacturer's ref.: 60.101

Manufacturer: HOPEN

- * Not covered by standards
- * Material: (non-woven) polypropylene
- * Grammage: 53 g/m²
- * 2-ply, welded edges, 2 ear-loops
- * Nose bridge
- * Pleasant to wear due to non-woven material that is not damaged by moisture, unlike paper masks
- * Colour: white
- * For use in catering, industry and food processing and/or by visitors
- * Packaging: box of 50 units



FFP2 disposable mask

186782-ML

Flexinet FFP2 822 JSP

Manufacturer's ref.: 822

Manufacturer: JSP

- * Standard: EN 149:2009
- * Protection class: FFP2
- * Limit for use: 10xVME
- * With valve
- * Protective grid
- * Optimal facial seal
- * Packaging: box of 10 pièces



FFP3 disposable masks

186789

Flexinet FFP3 832 JSP

Manufacturer's ref.: 832

Manufacturer: JSP

- * Standard: EN 149:2009
- * Protection class: FFP3
- * Limit for use: 50xVME
- * With valve
- * Protective grid
- * Optimal facial seal
- * Packaging: box of 5 pièces



182957-ML

Springfit 435 JSP

Manufacturer's ref.: 435

Manufacturer: JSP

- * Standard: EN 149:2009
- * Protection class: FFP3
- * Limit for use: 50xVME
- * With valve
- * Nasal half-joint
- * Non reusable
- * Complies with Dolomite clogging tests
- * Packaging: box of 10 pièces



respiratory protection

FFP3 disposable masks

129711

MOLDEX Metric Air Plus mask

Manufacturer's ref.: 3505

Manufacturer: Moldex

- * Standard: EN149:2001 + A1:2009
- * Protection class: FFP3
- * Filter medium, Internal layer, DuraMesh®: Polypropylene, Ethylene vinyl acetate
- * Face seal: Thermoplastic elastomer
- * Straps: Polyester, natural rubber
- * Exhalation valve with Ventex® valve: Natural rubber
- * Limit for use: 50 x VLEP
- * Colour: white
- * Packaging: box of 5



155751

3M mask

Manufacturer's ref.: 9332+

Manufacturer: 3M

- * Standard: EN 149:2001+A1:2009
- * Protection class: FFP3
- * Limit for use: 50xMEV
- * Not reusable
- * Patented flat-fold form designed in 3 panels
- * The preformed nose panel fits to the nose and the contours of the face
- * 3M Cool Flow valve
- * Woven elastic
- * Complies with Dolomite clogging tests
- * Individual wrapping
- * Packaging: box of 10 items



Disposable half mask with integrated filters

3M half mask

- * Standard: EN 405:2002
- * Material: thermoplastic elastomer
- * All-in-one gas, vapour and dust mask
- * With 2 inhalation valves and 1 parabolic exhalation valve
- * Straps with adjustable harness
- * Low breathing resistance and fast air removal
- * Hermetic individual inner packaging
- * Weight: 260 g (depending on model)
- * Packaging: unit



110629

3M FFA1P2 R D half mask

Manufacturer's ref.: K4251

Manufacturer: 3M

- * Packaging: unit

185291

NEW

3M FFABE1P3RD half mask

Manufacturer's ref.: 4277+

Manufacturer: 3M

- * Packaging: unit

185292

NEW

3M FFABEK1P3RD half mask

Manufacturer's ref.: 4279+

Manufacturer: 3M

- * Packaging: unit

Reusable half mask

178857

Demi-masque Force 8 JSP

Manufacturer's ref.: Force 8

Manufacturer: JSP

- * Standard: EN 140:1998
- * Material: elastomer
- * CR2 Reflective
- * Weight without filters: 85 g
- * Weight with filters ABEK1P3: 355 g
- * Available in 3 sizes: S, M, L
- * Packaging: unit



169223

Filter P3 JSP

Manufacturer's ref.: BMN990-001-700

Manufacturer: JSP

169222

Filter A2P3 JSP

Manufacturer's ref.: BMN740-000-600

Manufacturer: JSP



170817

Filter ABEK1P3 JSP

Manufacturer's ref.: BMN750-000-600

Manufacturer: JSP

Filters JSP

- * Standards: EN 143/A1:2006 or EN 14387+A1:2008
- * Packaging: set of 2 / per 10

respiratory protection

Scott full face mask

167121

SCOTT Sari Full Face Mask
Manufacturer's ref.: 5011685
Supplier: Scott

- * Standards: EN 136 – EN 148 – EN 12942 TM3
- * One size
- * Wide sealing edge
- * Approved for use with Pro2000 filters, Proflow SC and Proflow powered units
- * Packaging: unit



For full face masks and powered devices an annual check is mandatory

110674

SCOTT PF 10 P3 Filter
Manufacturer's ref.: 5052670
Manufacturer: Scott

- * Packaging: unit



110693

SCOTT AX Filter
Manufacturer's ref.: 5042970
Manufacturer: Scott

- * Packaging: unit



110685

SCOTT AXP3 Filter
Manufacturer's ref.: 5042770
EC239R
Manufacturer: Scott

- * Packaging: unit



110687

SCOTT CF32 A2B2E2K2P3 Filter
Manufacturer's ref.: 5042799
Manufacturer: Scott

- * Packaging: unit



JSP full face mask

185577

Masque Force™ 10 Typhoon™ JSP
Manufacturer's ref.: Force™10
Manufacturer: JSP

- * Standard: EN 136:1998
- * Material: thermoplastic elastomer and polypropylene
- * Polycarbonate lens. Panoramic and anti-scratch
- * Typhoon exhalation valve: case made of polycarbonate
- * Thermoplastic elastomer harness and ABS loops
- * Weight: 385 g (medium)
- * Available in 3 sizes: S, M, L
- * Packaging: unit (supplied without filter)



Cartouches JSP

- * Standards: EN 143/A1:2006 or EN 14387+A1:2008
- * Packaging: set of 2 / per 10

169223

Filter P3 JSP
Manufacturer's ref.: BMN990-001-700
Manufacturer: JSP



169222

Filter A2P3 JSP
Manufacturer's ref.: BMN740-000-600
Manufacturer: JSP

NC

Storage bag F8
Manufacturer's ref.: BPT 170-011-00
Manufacturer: JSP



170817

Filter ABEK1P3 JSP
Manufacturer's ref.: BMN750-000-600
Manufacturer: JSP

3M™ Versaflo™ powered devices

169716

Motor only TR-602E 3M™ Versaflo™

The TR-600 filter unit used in combination with 3M coverheads has been tested and approved according to EN 12941

- * Protection against dust and water splash- es from all directions according to EN 60529 IP54
- * Protection against dust and temporary submersion up to 1 meter according to EN 60529 IP67
- * Nominal protection factor (NPF): TH2/TH3 depending on the chosen face piece
- * Possibility to select 3 different air flow rates for increased comfort: 190 l/min, 205 l/min, 220 l/min
- * The regulated air flow remains constant, even if the battery is discharged or the filter is charged with particles
- * The display shows the battery charge level, filter clogging and flow rate level
- * Packaging: unit



Lightweight hood 3M™ Versaflo™ S-657

- * Standards: EN 12941 class TH3 used with the filter unit 3M™ Jupiter™ or the filter units 3M™Versaflo™ TR-300+ and TR-600, EN 166
- * Light white hood inner shroud
- * Hair, neck, shoulder, eye and face protection according to EN 166 - protection against liquid splashes and low energy impacts. The S-657 hood is equipped with a double shroud.
- * Premium suspension
- * After use the suspension is kept, only the hood can be replaced
- * Polypropylene coated nonwoven polypropylene
- * FNP = 500
- * Compatible with the wearer's glasses and barbs
- * Weight of cuff without breathing tube: 310 g
- * Packaging: unit



154517

3M Versaflo Helmet Manufacturer's ref.: M-306 Manufacturer: 3M

- * EN12941 TH3 when used in conjunction with the 3M™ Versaflo™ TR-300 powered air purifying respirator (Assigned Protection Factor= 500) EN 166 1:B:3; EN 397
- * EN12941 TH2 when used in conjunction with the 3M™ Jupiter™ powered air turbo (Assigned Protection Factor= 50) EN 166 1:B:3; EN 397
- * Comfort faceseal plus woven nylon coated polyurethane and flame-resistant polyester on M-307
- * Head protection in accordance with EN 397
- * Polycarbonate shell - Coated polycarbonate visor
- * Fully adjustable polyolefin harness
- * Deflector enables user to direct the flow of air inside the faceseal for increased control and improved comfort
- * Weight (without air hose): 832 g
- * Packaging: unit



152882

Lightweight hood 3M™ Versaflo™ S-657

- * Packaging: unit

152825

Lightweight replacement hood 3M™ Versaflo™ S-607

- * Packaging: per 10

169670

Pre-filter TR-6600 (for TR600) 3M



169668

Standard batterie (for TR600) 3M



169667

Decontaminable belt 3M Manufacturer's ref.: TR-627 Manufacturer: 3M



169988

Filter ABE2K1HgP TR6580E- per 5



169990

Filter cover for TR6580E 3M



169992

Individual charger for TR-600 3M load support included



169993

Multi-station loader for TR-600 3M 4 posts



145155-ML

BT20 hose 3M Manufacturer's ref.: BT-20 Manufacturer: 3M

- * Polyurethane
- * ML size = 90 cm



respiratory protection

Welding

154567

3M Welding Helmet
Manufacturer's ref.: 751120
Manufacturer: 3M

- * Optoelectronic cassette standard: EN 379
- * Welding helmet standard: EN 175
- * Welding helmet
- * Auto-darkening filter provides excellent optical quality and is suitable for most arc welding processes, including MIG/MAG and numerous TIG applications
- * Packaging: unit



Asbestos Kit

171149

EIF "CPO Special Production" Asbestos Kit
Manufacturer's ref.: CPO Special
Manufacturer: EIF

- * Description pending
- * Packaging: unit



Evacuation

110401

DRÄGER Parat Half mask
Manufacturer's ref.: R57981
Manufacturer: DRÄGER

- * Standards: ATEX type approval (use in dust explosion risk zones 20, 21 and 22, and in gas explosion risk zones 0, 1 and 2). DIN 58647-7
- * Escape half mask with special ABEK filter guaranteeing you protection for a minimum of 15 minutes.
- * Allow adaptation to all face morphologies
- * Pictograms on the box restate the order of use
- * Small size (17x11x9 cm) and light weight (360 g) mean it can be transported in a pocket or on a belt
- * Storage duration 4 years in sealed packaging. Filter change every 4 years in use. Lifetime 12 years
- * Compatible with use of other PPE: spectacles, helmets, etc.
- * Packaging: unit



Gas Detection

168630

Clip-on CO gas alert detector 24 months
Manufacturer's ref.: BWC2-M50200
Manufacturer: BW

- * CE 0539 II 1G; Ex ia IIC T4 Ga IP66/67; DEMKO 14 ATEX 1356
- * Zero maintenance, zero support portable gas detector
- * H2S/CO/O2/SO2 versions
- * Compact, light and easy to handle: a single button
- * Visual alarm/Audible alarm ~ 95 dB
- * Operation without calibration
- * Packaging: unit





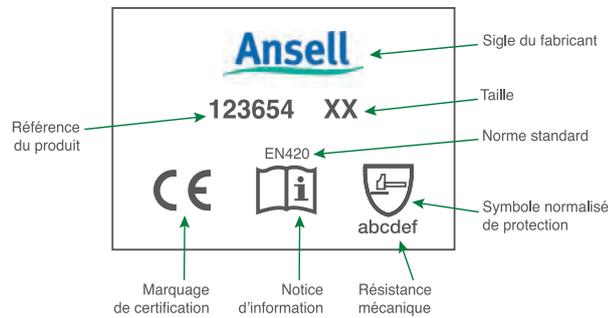
5

Hand protection



hand protection

Exemple de marquage



Normes



EN 420 • General requirements



EN 388 • Mechanical risks protection gloves

a abrasion resistance	number of cycles
b blade cut resistance	index
c tear resistance	Newtons
d puncture resistance	Newtons

e EN ISO 13997 cut resistance in Newtons
f impact protection in accordance with EN 13594
 (x not tested for this risk)

Niveaux de performance					
0 - résultat obtenu inférieur au minimum requis pour niveau 1					
1	2	3	4	5	
≥100	≥500	≥2000	≥8000	-	
≥1,2	≥2,5	≥5,0	≥10,0	≥20,0	
≥10	≥25	≥50	≥75	-	
≥20	≥60	≥100	≥150	-	
A	B	C	D	E	F
≥2	≥5	≥10	≥15	≥22	≥30
Réussite ou Echec					



EN 1082 • Protective clothing - Gloves and arm guards against cuts and knife slashes



EN 381-7 • Protective clothing for users of hand-held chain saws Part 7: requirements for gloves providing protection against chain saws



EN 511 • Gloves for protection against the cold

a resistance to convective cold	thermal insulation in m ² , °C/W
b resistance to contact cold	thermal resistance in m ² , °C/W
c permeability by water - level 1 impermeable for at least 30 min.	

(x not tested for this risk)

1	2	3	4	5
≥0,10	≥0,15	≥0,22	≥0,30	-
≥0,025	≥0,050	≥0,100	≥0,150	-



EN 407 • Gloves protecting against thermal risks (heat and/or fire)

a resistance to flammability	after-burn time
b resistance to contact heat	≥ 15 seconds at
c resistance to convective heat	heat transmission
d resistance to radiant heat	heat transmission
e resistance to small splashes of molten metal	number of drops necessary to increase the temperature by 40°C
f resistance to large splashes of molten metal	mass (grammes) of molten iron necessary of molten metal to cause a superficial burn

(x not tested for this risk)

1	2	3	4	5
≤20"	≤10"	≤3"	≤2"	-
100°C	250°C	350°C	500°C	-
≥4"	≥7"	≥10"	≥18"	-
≥5"	≥30"	≥90"	≥150"	-
≥5	≥15	≥25	≥35	-
≥30	≥60	≥120	≥200	-

EN 12477 • Protective gloves for welders

Protective gloves for welders protect against minor splashes of molten metal, short term exposure to a limited flame, convective heat, contact heat and against UV radiation emitted by an arc.

Normes



EN ISO 374-1 • Chemical protection gloves

It is based on 3 testing methods:

- Penetration test according to the standard EN 374-2: 2014
- Permeation test according to the standard EN 16523-1: 2015 which replaces the standard EN 374-3
- Degradation test according to the standard EN 374-4: 2013

Type A Sealing (EN 374-2) - Transit time \geq 30 minutes for at least 6 products from the new list (EN 16523-1)

Type B Sealing (EN 374-2) - Transit time \geq 30 minutes for at least 3 products from the new list (EN 16523-1)

Type C Sealing (EN 374-2) - Transit time \geq 10 minutes for at least 1 product from the new list (EN 16523-1)

A	Methyl alcohol	G	Diethylamine
B	Acetone	H	Tetrahydrofuran
C	Acetonitrile	I	Ethyl acetate
D	Dichloromethane	J	n-heptane
E	Carbon bisulphide	K	40% sodium hydroxide
F	Toluene	L	96% sulphuric acid

Nouveau

M	65% nitric acid
N	99% acetic acid
O	25% ammonia
P	30% hydrogen peroxide
S	40% hydrofluoric acid
T	37% formaldehyde



EN ISO 374-5 • Micro-organisms protection gloves

Gloves must pass the sealing test according to the EN 374-2 standard: 2014. The option to claim protection against viruses was added if the glove passes the ISO 16604 test: 2004 (method B).



EN 421 • Ionizing radiation and radioactive contamination protection gloves

The glove must pass the sealing test and undergo certain special tests according to its use.



EN 60903 • Work in the presence of live voltages - Insulating material gloves



EN 659 • Protective gloves for firemen



Food contact

The glove meets statutory or standard requirements guaranteeing that there no risk of toxicity caused for food or beverages.



hand protection

○ Dry environment - No risk of cutting

Leather gloves

129928

PROCOVES gloves
Manufacturer's ref.: ELECTRADEX
Manufacturer: Procovès

- * Material: palm, artery protection and back in water repellent grain leather goatskin
- * American cut glove, webbed thumb
- * Elasticated cotton cuff
- * Colour: straw
- * Sizes: 7, 8, 9, 10, 11
- * Packaging: pair



2 1 2 1 A

153908

LEBON Hydro Glove
Manufacturer's ref.: HYDRO
Manufacturer: Lebon

- * Material: water-repellent cow grain leather
Water repellent
- * Elasticated cuff. Artery protection
- * American cut with seam along index
- * Colour: straw
- * Use: mechanical risks, for general use in dry and slightly damp environments
- * Sizes: 7, 8, 9, 10, 11
- * Packaging: pair



3 1 2 2 x
 x 1 x x x x

161744

LEBON Hydro 27 Glove
Manufacturer's ref.: HYDRO 27
Manufacturer: Lebon

- * Material: water-repellent cow grain leather
- * Elastic tensioner on the back
- * American cut with seam along index
- * Length: 27 cm
- * Colour: straw
- * Use: mechanical risks, for general use in dry and slightly damp environments
- * Sizes: 8, 9, 10
- * Packaging: pair



3 1 2 2 x
 x 1 x x x x

161912

LEBON FCM 15 Grain Leather Palm Split Back Glove
Manufacturer's ref.: FCM15
Manufacturer: Lebon

- * Material: 5-finger glove with natural cow grain leather palm, cow split back
- * American cut with rolled index
- * 15 cm cow split gauntlet
- * Sizes: 9, 10
- * Packaging: pair



3 1 2 2 x
 4 1 3 2 4 x

137860

SACOBEL Moniteur All Leather Glove
Manufacturer's ref.: L-2N
Manufacturer: Sacobel

- * Grey cow grain leather glove
- * Side panel and thumb bead
- * Notch on little finger side
- * Elasticated cuff
- * Length: 240-255 mm
- * Sizes: 8, 9, 10, 11
- * Packaging: pair



2 1 4 3 x

134191

INTERSAFE Dextrium Pro Glove
Manufacturer's ref.: 134191
Manufacturer: INTERSAFE

- * Material: natural cow grain leather
- * American cut, straight thumb
- * Elastic tensioner
- * Use: mechanical risks, for general use in dry environments
- * Sizes: 7, 8, 9, 10, 11
- * Packaging: 10 pairs



2 1 2 1 x

hand protection

Dry environment - No risk of cutting

Leather gloves

168922

Refining

**ESPUNA operator's copper gloves
STANDARD 27475.05
Manufacturer's ref.: 27475.05
Manufacturer: Espuna**

- * Material: cowhide (thickness 0.8 to 1.1mm), grained leather palm water-repellent, water-repellent split back
- * Split leather long sleeve
- * Elastic back tensioner
- * Use: handling in a damp environment
- * Sizes: 6, 7, 8, 9, 10, 11
- * Packaging: pair



4 3 1 3 2

160062

**Tegera 321 microfibre gloves
Manufacturer's ref.: 321
Manufacturer: Ejendals**

- * Material: synthetic microfibre
- * Zero chrome and zero silicone
- * Reinforced index finger
- * Colour: black/grey
- * Use: light and medium handling in dry environment
- * Sizes: 07 to 11
- * Packaging: 6 pairs



Alternate leather

4 2 1 3 1 x

PU coated handling gloves

169032

**Honeywell Perfect Poly PU
Gloves grey Manufacturer's ref.:
2100250
Supplier: Honeywell**

- * Material: Polyamide
- Coating material: Polyurethane
- Coating type: Palm
- Gauge: 13
- Total length: 250 mm
- Thickness: 0, 90 mm
- Colour: Grey
- Size(s): 6 to 11
- * Packaging: 10 pairs



4 1 2 1 x

167344

**EJENDALS Tegera 866 PU Black Glove
Manufacturer's ref.: 866
Supplier: Ejendals**

- * Material: knitted polyester, polyurethane coating on the palm and fingertips
- * Elasticated knitted cuff
- * Gauge 13
- * Length: 220 - 260 mm
- * Colour: black coating on black liner
- * Use: light and medium handling in dry, slightly greasy environments
- * Sizes: 7, 8, 9, 10, 11
- * Packaging: pair



4 3 1 2 1 x

Heat protection

159198

Heat 100°C

**MAPA Temp-Dex 710 Glove
Manufacturer's ref.: 71012
Supplier: MAPA**

- * Material: nitrile, seamless knitted liner
- * Dots - Silicone free
- * Length: 240 - 280 mm
- * Colour: black coating on yellow liner
- * Use: handling hot parts and objects up to 125°C
- * Sizes: 7, 9, 11
- * Packaging: pair (50 pairs for size 11)



4 1 1 1 x x 1 x x x x x

hand protection

Dry environment - Risk of cutting - middle level

163573

DIFAC Maxiflex cut gloves
Manufacturer's ref.: 34-8743
Manufacturer: Difac

- * Material: knitted plated nylon liner, high tensile strength fibre seamless assembly, solvent free, silicone free and DMF free, reinforced index finger, nitrile coating
- * Elasticated knitted cuff
- * Gauge 15
- * Length: 240 mm
- * Colour: black coating on green liner
- * Use: handling cutting objects in dry or slightly greasy and soiling environments
- * Sizes: 6, 7, 8, 9, 10, 11
- * Packaging: pair



4 3 3 1 B

137906

MAPA Krytech 557 Coated Knitted Glove
Manufacturer's ref.: 55741
Supplier: Mapa

- * Material: polyurethane, HDPE fibre based seamless knit
- * Anatomic shape
- * Smooth outside surface
- * Colour: grey
- * Sizes: 6, 7, 8, 9, 10, 11
- * Packaging: pair



4 3 4 3 B

169750

Krytech 557R HDPE support gloves, PU coating, nitrile reinforced
Manufacturer's ref.: 557R
Supplier: Mapa

- * Material: polyurethane, HDPE fibre based seamless knit
- * Length: 220-270 mm
- * Colour: grey
- * Sizes: 6, 7, 8, 9, 10, 11
- * Packaging: pair



4 3 4 3

170571

HONEYWELL Terry Heavy Gloves
Manufacturer's ref.: RQE9607A
Manufacturer: Honeywell

- * Material: 100% cotton terry
- * Straight thumb
- * 15 cm gauntlet
- * Length: 36 cm
- * Good protection against mechanical and thermal risks up to 250°C
- * One size
- * Packaging: pair



Heat 250°C

2 3 3 1 x 2 x x x x

5

Dry environment - Risk of cutting - high level

167589

Food contact

ANSELL Versatouch gloves
Manufacturer's ref.: 72-400
Manufacturer: Ansell

- * Material: stainless steel - polyester - Lycra® - HPPE - glass fibre liner
- * Knitted cuff
- * Gauge 10
- * Length: 230-267 mm
- * Colour: blue
- * Food contact
- * Sizes: 7, 8, 9, 10
- * Packaging: per 2



3 x 4 x E

160176

HONEYWELL Glove
Manufacturer's ref.: 2232533
Manufacturer: Honeywell

- * Material: para-aramid, nylon, steel fibre, nitrile foam palm coating
- * Seamless knitted glove, gauge 10
- * Length: 300 mm
- * Colour: black coating on mottled grey liner
- * Use: handling cutting and/or hot items in dry or greasy environments
- * Sizes: 6, 7, 8, 9, 10, 11
- * Packaging: 10 pairs

Heat 100°C



4 5 4 3 x 1 x x x x

hand protection

Dry environment - Risk of cutting - high level

167359

ATG Maxi Cut Ultra Glove
Manufacturer's ref.: 44-3755
Manufacturer: ATG

- * Material: 3/4 nitrile foam coating
- * Thickness: 1 mm
- * Silicone free
- * Colour: black
- * Sizes: 7, 8, 9, 10, 11
- * Packaging: 12 pairs



4 5 4 2 C

185472

1CRNB gloves
Manufacturer's ref.: 1CRNB
Manufacturer: Europrotection

- * Material: HPPE + mineral fibre + Nylon + Spandex seamless knit
- * Black nitrile micro-foam palm coating
- * Elasticated cuff
- * Gauge 13
- * Colour: mottled grey
- * Sizes: 7, 8, 9, 10, 11
- * Packaging: 10 pairs



4 4 4 3 D

137800

PROCOVES Hotmax Carbone M II
13 Cut Protection Glove
Manufacturer's ref.: 992L/13AC
Supplier: Procovès

- * Material: Kevlar® fibre and preoxidised polyacrylic outside glove thread, 100% wool lining thread
- * Fire retardant treated cow split gauntlet cuff
- * Colours: yellow and green/brick gauntlet cuff
- * Handling cutting and hot objects up to 250°C
- * Sizes: 7, 9, 10
- * Packaging: pair



2 5 4 x 4 2 4 2 x x

Heat 250°C

Oily or damp environment - No risk of cutting

Nitrile coated handling gloves

134442

COMASEC Hyflex gloves
Manufacturer's ref.: 11-920
Manufacturer: Ansell

- * Material: light knitted nylon liner, Grip Technology™ nitrile coating
- * Uncoated back. Impermeable to oil
- * Length: 208 - 273 mm
- * Colour: blue coating on blue liner
- * Use: handling light, greasy metal parts, for assembly and finishing (better grip)
- * Sizes: 6, 7, 8, 9, 10, 11
- * Packaging: pair



3 1 3 1 A

161199

LEBON Nitriflex Black glove
Manufacturer's ref.:
Nitriflex black
Manufacturer: Lebon

- * Material: 100% textured polyamide
- * Seamless gauge 13 knitted
- * Nitrile coating on the palm and fingertips
- * Elastic cuff
- * Sizes: 6, 7, 8, 9, 10, 11
- * Packaging: pair



4 1 2 1 x

hand protection

○ Oily or damp environment - No risk of cutting

Nitrile coated handling gloves

113859

ANSELL Hyflex Foam Glove
Manufacturer's ref.: 11-800
Manufacturer: Ansell

- * Material: knitted, nitrile film coating on palm and fingertips, uncoated back
- * Seamless knitted liner with nitrile foam coating on palm
- * Spandex elastic. Silicone free
- * Elasticated cuff. Length: 24 cm
- * Colour: grey
- * Sizes: 6, 7, 8, 9, 10, 11
- * Packaging: 12 pairs



3 1 3 1 A

162965

EJENDALS 737 Double-Dipped Glove
Manufacturer's ref.: 737
Manufacturer: Ejendals

- * Material: nylon/Lycra® lining, coating/polymer, full coated nitrile/nitrile micro-foam
- * Colour: black coating on blue liner
- * Use: object handling in dry or damp and greasy environments
- * Sizes: 7, 8, 9, 10, 11
- * Packaging: pair



4 1 3 1 x

170359

SINGER NYM213NIG Glove
Manufacturer's ref.: NYM213NIG
Manufacturer: Singer

- * Material: polyamide liner Elasticated cuff. Coating: nitrile foam; ventilated back version
- * One-piece seamless knitted glove
- * Gauge: 15
- * Colour: black coating on black liner
- * Sizes: 7, 8, 9, 10
- * Packaging: pair



4 1 2 1

178853

ATG 42-847 gloves
Manufacturer's ref.: 42-847
Manufacturer: ATG (DIFAC)

- * Material: Nylon body/Lycra coating nitrile foam on palm and at fingertips
- * Finish with dots on the palm
- * Gauge: 15
- * Length: 250 mm
- * Thickness: 1.10 mm
- * Colour: black
- * Sizes: 07 to 11
- * Packaging: 12 pairs



4 1 3 1 A

138173

MAPA Ultrane 55343
Manufacturer's ref.: 55343
Manufacturer: Mapa

- * Grey knitted polyamide glove coated with black nitrile foam on the palm and fingers.
- * Anatomic shape.
- * Elastic knitted cuff.
- * Smooth outside surface.
- * Sizes: 6, 7, 8, 9, 10.
- * Packaging: pair



4 1 2 1 x

155329

DIFAC Maxidry 56-425 Glove
Manufacturer's ref.: 56-425
Manufacturer: ATG

- * Material: nylon liner, 3/4 solvent and DMF-free nitrile double coating
- * Elasticated cuff
- * Colour: black coating on grey liner
- * Use: mechanical risks, for general use in dry, greasy environments
- * Sizes: 5, 6, 7, 8, 9, 10, 11
- * Packaging: 12 pairs



4 1 2 1 A

Oily or damp environment - No risk of cutting

Nitrile coated handling gloves

170910

SINGER NYM34GB Glove
Manufacturer's ref.: NYM34GB
Manufacturer: Singer

- * Material: Liner: polyamide fibre with nitrile coating on palm and back
- * One-piece seamless knitted glove
- * Gauge: 15
- * Colour: black coating on black liner
- * Sizes: 8, 9, 10, 11
- * Packaging: pair



152357

HyFlex® 11-919 Ansell Glove
Manufacturer's ref.: 11-919
Manufacturer: Ansell

- * Material: Nylon
- Support material: Nylon
- Coating material: Nitrile
- Type of coating: Complete
- Finish: Rough
- Gauge: 13
- Food contact
- Total length: 220-260 mm
- Silicone free
- Certified OEKO-TEX® standard 100
- Colour: Blue/white
- Sizes: 7 à 10
- * Packaging: 12 paires



Latex coated waterproof gloves

138050

Heat 100°C

MAPA Jersetlite gloves
Manufacturer's ref.: 307 31
Manufacturer: Mapa

- * Material: natural latex, knitted cotton inside
- * Granite weave outside finish
- * Length: 31 cm
- * Thickness: 0.75 mm
- * Colour: mauve
- * Sizes: 5/5.5, 6/6.5, 7/7.5, 8/8.5, 9/9.5
- * Packaging: pair



hand protection

Oily or damp environment - No risk of cutting

Nitrile coated waterproof gloves

MS and RC recommendation

130003

High chemical risk

COMASEC Alphatec nitrile glove
Manufacturer's ref.: 58-535W
Manufacturer: Ansell

- * Material: knitted inner liner, fully nitrile coated
- * Seamless
- * Length 356 mm
- * Colour: green, black hand
- * Use: handling hazardous chemicals
- * Sizes: 7, 8, 9, 10, 11
- * Packaging: pair



182478

High chemical risk

AlphaTec 58-735
Manufacturer's ref.: 58-735
Manufacturer: Ansell

- * Material: Nitrile coating, Intercept yarn liner
- * Gripping surface: ANSELL GRIP™
- Technology
- * Gauntlet cuff
- * Thickness: 1 mm
- * Length: 350 mm
- * Colour: green
- * Sizes: 7, 8, 9, 10, 11
- * Packaging: 6 pairs



177002

High chemical risk

Gants Tegera 71000 nitrile protection chimique
Réf. fabricant : 71000
Fabricant : Ejendals

- * Matériau : Nitrile, PVC (Vinyle), Doublure Nylon
- * Jauge 18, Granulé
- * Longueur : 320 mm
- * Sans phtalate
- * Résistant aux huiles et aux graisses
- * Coloris : noir/bleu
- * Tailles : 7, 8, 9, 10, 11
- * Conditionnement : 6 paires



113802

High chemical risk

HONEYWELL Camatril Flock 730 Glove
Manufacturer's ref.: 730
Supplier: Honeywell

- * Material: green nitrile without liner
- * Flocked lining
- * Textured palm
- * Length: 300-320 mm
- * Colour: green
- * Sizes: 7, 8, 9, 10, 11
- * Packaging: 10 pairs



113826

High chemical risk

ANSELL Solvex Nitrile glove
Manufacturer's ref.: 37-675
Supplier: Ansell

- * Material: extremely sturdy flexible nitrile film
- * Cotton suede finish
- * Raised pattern
- * Length: 33 cm - Thickness: 0.38 mm
- * Colour: green
- * Sizes: 6, 7, 8, 9, 10, 11
- * Packaging: pair



Protection COVID-19



Oily or damp environment - No risk of cutting

PVA coated waterproof gloves

111112

COMASEC PVA gloves
Manufacturer's ref.: 15-554
Manufacturer: Ansell

- * Material: polyvinyl alcohol coating on liner
- * Completely coated
- * Gauntlet model
- * 2 part soft knitted liner
- * Comfortable anatomic glove with anatomically-shaped fingers and thumb
- * Length: 35.5cm
- * Warning! The PVA® coating is water soluble, do not use in aqueous solutions
- * Sizes: 9, 10
- * Packaging: pair



High chemical risk
Warning! The PVA® coating is water soluble, do not use in aqueous solutions



PVC coated waterproof gloves

HONEYWELL Trawler King Gloves

- * Material: Green PVC
- * Cotton lining
- * Textured finish
- * Sizes: 8, 9, 10
- * Packaging: 12 pairs

High chemical risk



ANSELL COMASEC Finimat Plus Glove

- * Material: fine-gauge knitted liner, 100% cotton, texti-contact, full PVC coating
- * Anatomic shape with curved fingers and tapered fingertips
- * Assembly of the two parts by chain stitch
- * Micro-granulated finish
- * Use: handling in aggressive chemical and petrochemical environments
- * Sizes: 8, 9, 10, 11
- * Packaging: 10 pairs

High chemical risk



170505

HONEYWELL Trawler King 830FWG PVC 27 cm Gloves
Manufacturer's ref.: 830FWG
Manufacturer: Honeywell
 * Length: 270 mm

170506

HONEYWELL Trawler King 40 cm 860FWG Gloves
Manufacturer's ref.: 860FWG
Manufacturer: Honeywell
 * Length: 400 mm

140996

ANSELL COMASEC Finimat Plus 40 Glove
Manufacturer's ref.: Normal Finimat Plus 40
Manufacturer: ANSELL
 * Length: 400 mm

143839

ANSELL COMASEC Finimat Plus 27 Glove
Manufacturer's ref.: Normal Finimat Plus 27
Manufacturer: ANSELL
 * Length: 270 mm

132712

MAPA Telblue gloves
Manufacturer's ref.: 351
Manufacturer: Mapa

- * Material: PVC-coated textile liner
- * Granite weave finish
- * Thickness: 1.5 mm
- * Length: 300 mm
- * Colour: blue
- * Use: handling in aggressive chemical and petrochemical environments
- * Sizes: 7, 8, 9, 10
- * Packaging: pair

High chemical risk



hand protection

Oily or damp environment - No risk of cutting

PVC coated waterproof gloves

169524

High chemical risk

COMASEC Normal Plus 40 MI Gloves
Manufacturer's ref.: Normal Plus 40
Manufacturer: Ansell

- * Material: cotton interlock liner, cut and sewn, integral PVC coating
- * Length: 400 mm
- * Colour: brown
- * Sizes: 8, 9, 10, 11
- * Packaging: pair



113803

High chemical risk

COMASEC Multiplus 40 RRM MI gloves
Manufacturer's ref.: MULTIPLUS 40
Manufacturer: Ansell

- * Material: PVC coating on 100% cotton interlock liner
- * Granite weave finish
- * Length: 400 mm
- * Thickness: 1.35 mm
- * Sizes: 8, 9, 10, 11
- * Packaging: pair



144757

High chemical risk

ANSELL Versatouch gloves
Manufacturer's ref.: 23-200
Manufacturer: Ansell

- * Material: PVC-coated cotton liner
- * Roughened sandblast finish
- * Length: 300 mm
- * Thickness: 1.60 mm
- * Colour: blue
- * Sizes: 7, 8, 9, 10
- * Packaging: pair



161006

High chemical risk + cold

ANSELL Versatouch gloves
Manufacturer's ref.: 23-202
Manufacturer: Ansell

- * Material: PVC-coated acrylic liner
- * Roughened sandblast finish
- * Length: 300 mm
- * Thickness: 1.60 mm
- * Colour: blue
- * Sizes: 8, 9, 10
- * Packaging: pair



138082

High chemical risk

MAPA Telsol gloves
Manufacturer's ref.: 361 142
Manufacturer: Mapa

- * Material: PVC-coated cotton knit
- * Seamless - Anatomic shape
- * Granite weave non-slip finish on hand
- * Length: 35 cm
- * Colour: green
- * Sizes: 9/9.5, 10/10.5
- * Packaging: pair



134158

High chemical risk

SHOWA 660 Long 30cm Gloves
Manufacturer's ref.: 660long
Manufacturer: Showa

- * Material: PVC-dipped cotton
- * Fully coated, with additional coating on entire hand
- * Special hydrocarbon coating
- * Textured finish on entire surface
- * Seamless - Smooth gauntlet
- * Length: 300 to 320 mm
- * Thickness: 1.5 mm
- * Colour: blue
- * Sizes: 8, 9, 10, 11
- * Packaging: pair



Oily or damp environment - No risk of cutting

Nitrile short use

Protection COVID-19

ANSELL Touch N Tuff Gloves

- * Material: nitrile
- * Powder-free
- * Rolled edge
- * Smooth
- * Thickness: 0.12 mm
- * Colour: green
- * Packaging: box of 100 gloves

113854



ANSELL Touch N Tuff Gloves

Manufacturer's ref.: 92-600

Manufacturer: Ansell

- * Length: 240 mm
- * Sizes: 6.5/7, 7.5/8, 8.5/9, 9.5/10

144203

ANSELL Touch N Tuff Gloves

Manufacturer's ref.: 92-605

Manufacturer: Ansell

- * Length: 300 mm
- * Sizes: 6.5/7, 7.5/8, 8.5/9, 9.5/10, 10.5/11

160226

ANSELL Versatouch 92-200 Gloves

Manufacturer's ref.: 92-200

Manufacturer: Ansell

- * Material: nitrile
- * Powder-free
- * Roughened fingertips
- * Rolled edge
- * Thickness: 0.075 mm
- * Length: 240 mm
- * Colour: blue
- * Sizes: 6.5/7, 7.5/8, 8.5/9, 9.5/10, 10.5/11
- * Packaging: box of 100 gloves



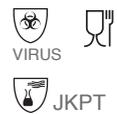
113853

ANSELL Touch N Tuff Gloves

Manufacturer's ref.: 92-500

Manufacturer: ANSELL

- * Material: 100% nitrile, disposable
- * Powdered inside
- * Colour: green
- * Length : 24 cm
- * Thickness: 0.12 mm. CE 0493
- * Sizes: 6.5/7, 7.5/8, 8.5/9, 9.5/10
- * Packaging: box of 100 gloves



161252

TEGERA 849 disposable nitrile gloves

Manufacturer's ref.: 849

Manufacturer: Ejendals

- * Material: Unpowdered nitrile
- * Length: 290 mm
- * Thickness: 0.19 mm
- * Colour: black
- * Size(s): 07 to 12
- * Packaging: Box of 50 gloves



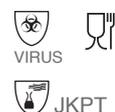
168944

ANSELL Touch N Tuff Gloves

Manufacturer's ref.: 93-250

Manufacturer: Ansell

- * Material: nitrile coating, no liner
- * Rolled edge
- * AQL: 1.5
- * Powder-free
- * Length: 245 mm
- * Colour: anthracite grey
- * Sizes: 6.5/7, 7.5/8, 8.5/9, 9.5/10
- * Packaging: box of 100 gloves



Nitrile short use

170918

EJENDALS Tegera Powder-Free

Nitrile Glove

Manufacturer's ref.: 848

Manufacturer: Ejendals

- * Material: nitrile
- * Powder-free
- * Length: 290 mm
- * Colour: purple
- * Sizes: 6, 7, 8, 9, 10, 11
- * Packaging: box of 100 gloves



140977

HOPEN Medicum Safe Touch 1198

Manufacturer's ref.: 1198

Manufacturer: Hopen

- * Material: nitrile, textured fingertips
- * Lightly powdered
- * Rolled edge, ambidextrous
- * Hypoallergenic (latex-free)
- * Length: 240 mm
- * Colour: blue
- * Sizes: S, M, L, XL
- * Packaging: box of 100 gloves



hand protection

Oily or damp environment - No risk of cutting

Neoprene short use

176757

TEGERA 836 gloves
Manufacturer's ref.: 836
Manufacturer: Ejendals

- * Material: neoprene, inside not powdered
- * Colour: green
- * Length: 240 mm
- * Thickness: 0.12 mm
- * Sizes: 7, 8, 9, 10
- * Packaging: box of 100 gloves



Oily or damp environment - Risk of cutting middle level

159081

ATG Maxiflex Oil 34-305 Glove
Manufacturer's ref.: 34-305
Manufacturer: ATG

- * Material: knitted plated nylon for greater comfort. High-tenacity fibre assembly guarantees excellent cut resistance. Liquid-repellent nitrile and structured nitrile for optimum grip on oily objects
- * Double coating on palm, 3/4 back
- * Colour: black and grey coating on green liner
- * Use: cutting object handling in dry or damp and greasy environments
- * Sizes: 7, 8, 9, 10, 11
- * Packaging: 12 pairs



4 3 3 1 B

177039

Hyflex 11-937 gloves
Manufacturer's ref.: 11-937

- Supplier: Ansell**
- * Material: Dyneema® Diamond Technology medium, palm nitrile coated polyurethane
 - * Gauge 18
 - * Length: 212-261 mm
 - * Colour: black and grey
 - * Sizes: 6, 7, 8, 9, 10, 11
 - * Packaging: pair



4 x 4 2 B

Oily or damp environment - Risk of cutting high level

177000

Tegera 8807 level 5 cut-resistant gloves

Heat 100°C

Manufacturer's ref.: 8807
Manufacturer: Ejendals

- * Material: Nitrile foam/aqueous base PU, coated palm, CRF® technology, glass fibre wire, nylon, spandex, gauge 15, * Adhesive foam motif
- * Withstands contact with heat up to 100°C
- * Anatomical design, for assembly work
- * Colour: black, yellow
- * Sizes: 6, 7, 8, 9, 10, 11
- * Packaging: 6 pairs



4 x 4 3 D



x 1 x x x x

Cold protection gloves

138261

ANSELL Therm A Knit gloves
Manufacturer's ref.: 78-101
Manufacturer: Ansell

- * Material: hollow fibres
- * Knitted cuff
- * Length: 240 - 260 mm
- * Ambidextrous
- * Colour: blue
- * Use: light, external handling. Can be used as an inner glove. Protects against cold
- * Sizes: 7, 9
- * Packaging: pair



166702

MAPA Temp-ICE 700 Glove
Manufacturer's ref.: 70041
Manufacturer: Mapa

- * Material: 3/4 coated with special nitrile-based GRIP&PROOF coating
- * Knitted cuff
- * Inner finish: knitted thermal protection
- * Water repellent on coated textile liner
- * Length: 240 - 270 mm
- * Colour: blue liner, black coating
- * Sizes: 7, 8, 9, 10
- * Packaging: pair



153991

SINGER Ninja Ice Glove
Manufacturer's ref.: N100
Manufacturer: Singer

- * Material: 100% polyamide knit, 2 layers, polyurethane-coated palm
- * Warm brushed lining
- * Elasticated cuff
- * Treated with Actifresh®
- * Gauge 15
- * Colour: black
- * Use: mechanical risks, for general use in dry and slightly damp environments
- * Sizes: S, M, L, XL, XXL
- * Packaging: pair



172366

ATG Maxitherm 30-202 gloves
Manufacturer's ref.: MaxiTherm 30-202
Supplier: ATG

- * Material: Looped acrylic/polyester medium for maximum comfort
- * Natural latex coating on palm and 3/4 back
- * Protection against cold
- * Sizes: 6, 7, 8, 9, 10, 11
- * Packaging: pair



111114

Winter Monkey Grip gloves
Manufacturer's ref.: 23-191
Manufacturer: Ansell

- * Material: cotton jersey medium, PVC coating, coated completely
- * Knitted cuff
- * Cut sewn
- * Length: 290-315 mm
- * Colour: brown
- * Sizes: 10, 11
- * Packaging: pair



hand protection

Welding

159956

ANSELL Welding Gloves
Manufacturer's ref.: 43-216
Manufacturer: Ansell

- * Material: calf split leather/Kevlar
- * Cut and stitched - Gauntlet model
- * Protection from molten metal
- * Length: 410 mm
- * Colour: yellow
- * Use: mechanical and thermal risks for welders
- * Sizes: 9, 10, 11
- * Packaging: pair



3 2 4 3 B 4 1 3 x 4 x

138127

LEBON ANTI/15 Leather Gloves
Manufacturer's ref.: ANTI/15
Manufacturer: Lebon

- * Material: cow split with heat protection treatment
- * 150 mm cow split gauntlet
- * 100% para-aramid thread seams
- * Colour: brick/grey
- * Use: mechanical and thermal risks for welders
- * Size 10
- * Packaging: box of 10 pairs



4 1 4 4 x 4 1 3 2 4 x

Electricians

138099

REGELTEX 2500V 36CM gloves
Manufacturer's ref.: GLE36 CLASS 00
Manufacturer: Regeltex

- * Material: Natural latex
- * Sawn edges
- * Length: 360 mm
- * Colour: beige
- * Sizes: 07 to 11
- * Packaging: Pair



Fire fighters

170360

High chemical risk

ESPUNA 23274 Glove
Manufacturer's ref.: 23274
Manufacturer: Espuna

- * Standards: EN420, EN ISO 15383
- * Material: cow grain leather
- * Hand lined with cut-resistant cotton-plated technical fibres
- * Artery protection and beads at base of fingers
- * Split leather gauntlet, closed by hook and loop tape
- * Elasticated wrist on the back
- * Use: Fire fighting, search and rescue operations
- * Sizes: 6, 7, 8, 9, 10, 11, 12
- * Packaging: pair



Steel chainmail gloves

137882

MANULATEX 0GCM

Manufacturer's ref.: 0GCM.130.02.150.00

Manufacturer: Manulutex

- * Standard: EN 1082-1
- * Material: stainless steel chainmail, polyurethane strap
- * 15 cm chainmail cuff
- * Wire: 0.5 mm
- * Reversible
- * Press stud fastening on hygienic strap
- * Use: extreme cut risk; abattoirs, food industry
- * Sizes: 5/5.5, 6/6.5, 7/7.5, 8/8.5, 9/9.5, 10
- * Packaging: unit



High chemical risk

163434

MANULATEX OFGCML white glove stiffener

Manufacturer's ref.: OFGCML.100.01

Manufacturer: Manulutex

- * Packaging: bag of 100



Food contact

152877

MAPA Tempcook 476 Glove

Manufacturer's ref.: 47612

Supplier: MAPA

- * Material: nitrile
- * Thermal protection up to 150°C
- * Non-slip embossing
- * Food contact
- * Length: 450 mm
- * Colour: white
- * Use: handling hot and cutting parts in dry or damp environments.
- * Sizes: 9, 11, 12
- * Packaging: pair



hand protection

Oversleeves

128776

ANSELL Cut & Heat Resistant Safe-Knit Oversleeve
Manufacturer's ref.: 59-416
Supplier: Ansell



* Material: Kevlar®; Lenzing FR®

* Welder's oversleeve

* Handling metal parts close to high temperature objects

* Length: 660 mm

* Colour: brown

* Use: welder's oversleeves for protection against mechanical and thermal risks

* One size

* Packaging: unit



Knitted cotton gloves

137911

DELTA PLUS gloves
Manufacturer's ref.: COB40
Manufacturer: Delta Plus



* Minor risks

* Material: bleached cotton knitted glove

* Town cut

* Hemmed cuff

* Sizes: 6, 7, 8, 9

* Packaging: pair

Miscellaneous

171169

Glove holder and operator key
Manufacturer: DUMONT
SECURITE



* Holds 1 lamp, 1 pair of SP gloves and wrench or adjustable wrench

* Leather case

* Packaging: unit



6

Foot protection



foot protection

Standards and legislation

EN ISO 20344 corresponds to the requirements and test methods for occupational footwear.

EN ISO 20345: "footwear provided with a protective toe cap resisting an impact less than or equal to 200 joules".

EN ISO 20346: "footwear provided with a protective toe cap resisting an impact less than or equal to 100 joules".

EN ISO 20347: "footwear without toe cap"

Standards

The footwear marking indicates the protection level covered

Occupational use		Symbols						
		Code 1				Code 2		
		Footwear made from leather or similar material				Boots (shoes) entirely polymer rubber		
	EN ISO 20345 (200J toe cap)	SB	S1	S2	S3	SB	S4	S5
	EN ISO 20346 (100J toe cap)	PB	P1	P2	P3	PB	P4	P5
	EN ISO 20347 (No toe cap)	OB	O1	O2	O3	OB	O4	O5
Risks covered								
	Fundamental	X	X	X	X	X	X	X
	Closed back	o	X	X	X			
A	Anti-static footwear	o	X	X	X	o	X	X
E	Heel energy absorption	o	X	X	X	o	X	X
WRU	Upper resistance to water penetration and absorption	o		X	X			
P	Puncture resistance	o	o		X	o		X
C	Conducting footwear	o	o	o	o	o	o	o
HI	Heat insulation	o	o	o	o	o	o	o
CI	Cold insulation	o	o	o	o	o	o	o
WR	Water resistance	o	o	o	o			
M	Metatarsal protection	o	o	o	o	o	o	o
AN	Malleolus protection	o	o	o	o	o	o	o
CR	Cut resistance	o	o	o	o	o	o	o
HRO	Sole heat resistance	o	o	o	o	o	o	o
FO	Sole hydrocarbon resistance (for footwear without toe cap)	o	o	o	o	o	o	o

X Mandatory requirements

o Optional (additional)

Source: Honeywell Safety Products, Jalgroup, Etché Sécurité

Sole resistance to slipping

MARKING	FLOOR	LUBRICANT	FRICTION COEFFICIENT	
			FLAT	HEEL
SRA	Ceramic tiles	Sodium Lauryl Sulphate	> 0.32	> 0.28
SRB	Steel	Glycerol	≥ 0.18	≥ 0.13
SRC	Meets the requirements of the two tests above (SRA & SRB)			

Men's high safety boots = MS standard

162184

LEMAITRE Boot

Manufacturer's ref.: APOLON

Manufacturer: Lemaitre

- * Standard: EN ISO 20345:2011 S3 CI SRC
- * Non-magnetic model
- * Material: smooth full grain leather water-repellent upper
- * Smooth full grain leather tongue
- * Quarter lining: three-dimensional textile
- * Polycarbonate safety toe cap
- * PU2D bottom assembly
- * High-tenacity textile puncture-resistant sole
- * Colour: black
- * Sizes: 35 to 48
- * Packaging: pair



MS and RC recommendation

168607

ELTEN Boot

Manufacturer's ref.: LAURENZO PU

Manufacturer: Elten

- * Standard: EN ISO 20345 S3 SRC
- * Material: cow leather upper
- * ESD Equipment
- * Steel toe cap
- * PU sole
- * Non-metallic puncture-resistant insert
- * Colour: black
- * Sizes: 36 to 50
- * Packaging: pair



169496

S24 Boot

Manufacturer's ref.: KICK5402

Manufacturer: S24

- * Standard: EN ISO 20345 S3 HRO SRC
- * Material: black full grain leather upper
- * Foam padding
- * STC composite toe cap
- * SPIDERGRIP nitrile rubber bottom assembly
- * SMS+ composite puncture-resistant sole
- * Colour: black
- * Sizes: 36 to 47
- * Packaging: pair



168606

ELTEN Lorenzo Rubber HRO Boot

Manufacturer's ref.: 766941

Supplier: Elten

- * Standard: EN ISO 20345 S3 SRC
- * Material: cow leather upper
- * ESD Equipment
- * Steel toe cap
- * PU Nitrile HRO sole
- * Non-metallic puncture-resistant insert
- * Colour: black
- * Sizes: 36 to 50
- * Packaging: pair



128655

COFRA Boot

Manufacturer's ref.: Protector

S3 M Manufacturer: Cofra

- * Standard: EN ISO 20345:2011 S3 M HRO SRC
- * Engineering Industry Specific
- * Material: water-repellent grain leather upper
- * Excellent metatarsal protection, malleolar padding
- * Stainless steel toe cap
- * Bottom assembly: PU/Nitrile rubber
- * Non-metallic APT Plate puncture-resistant sole
- * Colour: black
- * Sizes: 39 to 48
- * Packaging: pair



Risk of impact on instep

152600

COFRA Puskas S3 Boot

Manufacturer's ref.: PUSKAS

Manufacturer: Cofra

- * Standard: EN ISO 20345 S3 SRC
- * Material: water-repellent leather upper
- * Lining: SANY-DRY® breathable anti-bacterial fabric
- * Insole sock: Removable scented polyurethane Cofra Soft
- * Extra light aluminium toe cap
- * Bottom assembly: PU/TPU
- * Non-metallic APT Plate puncture-resistant sole
- * Colour: black/red
- * Sizes: 36 to 47
- * Packaging: pair



foot protection

Men's high safety boots = MS standard

170260

JALAS Boot

Manufacturer's ref.: DRYLOCK 1818

Manufacturer: JALAS

- * Standard: EN ISO 20345 S3 SRC CI WR HRO
- * Material: full grain leather upper
- * Aluminium safety toe cap
- * PU midsole, rubber outsole
- * Stainless steel puncture-resistant insert
- * Sizes: 36 to 48
- * Packaging: pair



160051

LEMAITRE Boot

Manufacturer's ref.: DUNE

Manufacturer: Lemaitre

- * Standard: EN ISO 20345 S3 SRC
- * Non-magnetic model
- * Material: soft leather upper with textile inserts
- * Retro-reflective strips
- * Bellows tongue
- * Outer toe cap
- * Toe cap: polycarbonate
- * Dual density PU bottom assembly
- * Flexible puncture-resistant sole: textile
- * Colour: black
- * Sizes: 35 to 48
- * Packaging: pair



166399

COFRA Land Bis S3 SRC Boot

Manufacturer's ref.: LAND

BIS S3 SRC

Manufacturer: COFRA

- * Standard: EN ISO 20345:2011 S3 SRC
- * Material: water-repellent nubuck upper
- * TEXELLE breathable lining
- * Steel safety toe cap
- * PU2D bottom assembly
- * Non-metallic APT Plate puncture-resistant sole
- * Colour: brown
- * Sizes: 36 to 48
- * Packaging: pair



171086

Jalsequoia type Rangers boots

Manufacturer's ref.: JJE42

Manufacturer: Jallatte

- * Standard: EN ISO 20345 S3 CI SRC
- * Material: water-repellent full grain leather
- * Polymer toecap
- * Softane™ double PU sole density
- * Stainless steel puncture-resistant sole
- * Colour: brown/black
- * Sizes: 38 to 47
- * Packaging: pair



158630

JALLATTE Jalsiberien Boot JJV33

Manufacturer's ref.: JJV33

Manufacturer: Jallatte

- * Standard: EN ISO 20345 S3 CI WR HRO SRC
- * Non-magnetic model
- * Material: water-repellent grain leather upper
- * Lining: GORE-TEX® membrane and Thinsulate® thermal insulation
- * Confort-Tech sock lining
- * Aérane-Tech perforated polymer toecap
- * Bottom assembly: Vibram® Kompact rubber
- * FleXtane™ HP by Jallatte non-metallic puncture-resistant midsole
- * Colour: black
- * Sizes: 38 to 47
- * Packaging: pair



171038

Jalfir S3 CI SRC Jallatte boots

Manufacturer's ref.: Jalfir

Manufacturer: Jallatte

- * Material: water-repellent full-grain leather upper, PULL-UP finish, with stark reinforced toecap. Protection of the lateral malleoluses by the Ankle Protector system
- * Padding of the gusset and top of the upper
- * Lining: 3D mesh cell structure
- * Toecap: Polymer Springtane 200 J.
- * Stainless steel puncture-resistant sole
- * Sole assembly: Softane™ bimaterial
- * Sizes: 38 to 47
- * Packaging: unit



Men's high safety boots = MS standard

184972

Jallatte Jaldynam S3 CI SRC Safety Shoes

Manufacturer's ref.: JYJY103

Manufacturer: Jallatte

- * Standard: EN ISO 20345 S3 CI SRC
- * Material: water-repellent nubuck and water-repellent abrasion resistant textile. Rear and lateral reinforcement system in TPU
- * Lining: 3D mesh with honeycomb structure
- * PREM-Alu 200 J aluminium toe-cap
- * Zero millimetre puncture-resistant Flexthane™ HP by Jallatte® midsole
- * J-ENERGY sole with BASF Infinergy® insert
- * Sizes: 35 to 48
- * Packaging: pair



170054

DGUV 112-191: models adapted for insertion of an orthopaedic sole

Jupiter J alas® 1828 boots

Manufacturer's ref.: 1828 Jupiter

Manufacturer: Ejendals

- * Standard: EN ISO 20345 S3 CI HRO SRC ESD
- * DGUV 112-191: adapted for insertion of an orthopaedic sole
- * Material: leather (thickness 1.6-1.8) PU coating
- * Polyester lining, polyamide
- * Internal sole FX2 Pro = Textile, flexible E.V.A, polyester-based electrical conductive fibre, double impact absorption zone in Poron® XRD®
- * Aluminium safety toe cap
- * Anti-perforation steel insert
- * PU-rubber sole assembly
- * Sizes: 35 to 50
- * Packaging: pair



170774

DGUV 112-191: models adapted for insertion of an orthopaedic sole

J alas® 1625 boots

E-Sport S3 SRC CI

Manufacturer's ref.: 1625

Manufacturer: Ejendals

- * Standard: EN ISO 20345:2011, S3 SRC CI
- * Upper material: PU coated leather, split leather
- * Polyester lining, polyamide
- * Aluminium safety toecap
- * Plasma treated composite (PTC) textile puncture-resistant sole
- * Asymmetric plastic shank sole, PU outer sole
- * FX2 Classic insole = Textile, flexible E.V.A, electrically conducting polyester-based fibre, Ergothan impact absorption zone
- * Colour: black/grey/red
- * Sizes: 36 to 47
- * Packaging: pair



6

Men's low safety boots

160052

LEMAITRE Shoe

Manufacturer's ref.: DURAN

Manufacturer: Lemaître

- * Standard: EN ISO 20345 S3 SRC
- * Non-magnetic model
- * Material: soft leather upper with textile inserts
- * Retro-reflective strips
- * Bellows tongue
- * Outer toe cap
- * Toe cap: polycarbonate
- * Dual density PU bottom assembly
- * Flexible puncture-resistant sole: textile
- * Colour: black
- * Sizes: 35 to 48
- * Packaging: pair



160150

COFRA Boot

Manufacturer's ref.: DRAFT

Manufacturer: Cofra

- * Standard: EN ISO 20345 S3 SRC
- * Material: water-repellent nubuck leather and breathable CORDURA® upper
- * Lining: breathable, anti-bacterial abrasion-resistant fabric
- * Light aluminium toe cap
- * Dual-density PU bottom assembly
- * APT Plate textile puncture-resistant sole (EN 12568:2010)
- * Supplied with two pairs of laces
- * Colour: black
- * Sizes: 39 to 47
- * Packaging: pair



foot protection

Men's low safety boots

151966

COFRA Shoe Zatopec

Manufacturer's ref.: Zatopec
Manufacturer: Cofra

- * Standard: EN ISO 20345 S3 SRC
- * Material: water-repellent leather upper
- * Lining: SANY-DRY® breathable anti-bacterial fabric
- * Insole sock: Removable scented polyurethane Cofra Soft
- * Extra light aluminium toe cap
- * Bottom assembly: PU/TPU
- * Non-metallic APT Plate puncture-resistant sole
- * Colour: black/red
- * Sizes: 36 to 47
- * Packaging: pair



162185

LEMAITRE Aron Shoe

Manufacturer's ref.: ARON
Supplier: Cofra

- * Standard: EN ISO 20345 S3 CI SRC
- * Non-magnetic model
- * Material: water-repellent smooth full grain leather upper
- * Smooth full grain leather tongue
- * Quarter lining: three-dimensional textile
- * Polycarbonate safety toe cap
- * PU2D bottom assembly
- * High-tenacity textile puncture-resistant sole
- * Colour: black
- * Sizes: 35 to 48
- * Packaging: pair



169894

ELTEN Lorenzo Low MID Shoe

Manufacturer's ref.: 726841
Manufacturer: ELTEN

- * Standard: EN ISO 20345 S3 SRC
- * Material: cow leather upper
- * Breathable textile lining
- * Closed, padded tongue
- * Steel toe cap
- * Full ESD PRO black insole
- * Non-metallic midsole
- * PU/PU sole with large Safety-Grip studs
- * Reinforced PU toe cap
- * Colour: black
- * Sizes: 36 to 50
- * Packaging: pair



162908

LEMAITRE Drive S3 CI SRC Shoe

Manufacturer's ref.: DRIVE S3 CI SRC

Manufacturer: LEMAITRE

- * Standard: EN ISO 20345:2011 S3 CI SRC
- * Material: water-repellent oiled leather upper
- * Leather and textile bellows tongue
- * Lining: three-dimensional textile
- * Polycarbonate safety toe cap
- * PU2D bottom assembly
- * High-tenacity textile puncture-resistant sole
- * Colour: brown
- * Sizes: 38 to 47
- * Packaging: pair



162453

LEMAITRE Black Viper Men's Shoe S3 CI SRC

Manufacturer's ref.: BLVIS30NR
Manufacturer: LEMAITRE

- * Standard: EN ISO 20345 S3 CI SRC
- * Suede finish water-repellent split leather upper
- * Toe cap: stainless steel
- * Stainless steel puncture-resistant sole
- * Dual density polyurethane bottom assembly
- * Colour: black
- * Sizes: 35 to 48
- * Packaging: pair



171039

Jaloak S3 CI SRC Jallatte boots

Manufacturer's ref.: Jaloak
Manufacturer: Jallatte

- * Standard: EN ISO 20345 S3 CI SRC
- * Material: water-repellent full-grain leather upper, PULL-UP finish, with stark reinforced toe-cap. Protection of the lateral malleoluses by the Ankle Protector system
- * Padding of the gusset and top of the upper
- * Lining: 3D mesh cell structure
- * Toecap: Polymer Springtane 200 J.
- * Stainless steel puncture-resistant sole
- * Sole assembly: Softane™ bimaterial
- * Sizes: 38 to 47
- * Packaging: unit



Women's high safety boots = MS standard

168530

PARADE S3 SRC Boot
Manufacturer's ref.: RAMA
Manufacturer: PARADE

- * Standard: EN ISO 20345 S3 SRC
- * Anti-static boots
- * Microfibre synthetic upper
- * 100% polyamide quarter lining
- * Removable textile sock lining on anti-bacterial foam
- * Composite toe cap (200 Joules)
- * Rubber outsole
- * Non-metallic puncture-resistant insert (1,100 N)
- * Colour: black
- * Sizes: 36 to 42
- * Packaging: pair



170256

Libert'in S3 boots
black
Manufacturer's ref.: LIBHS30NR
Manufacturer: Lemaitre

- * Standard: EN ISO 20345 S3 SRC
- * Material: full-grain water-repellent flexible leather upper. Textile lining
- * 3D micro-aerated, high breathing capability
- * Polycarbonate toecap
- * Sole assembly: Parabolight/PU2D
- * Puncture-resistant sole: high strength «0» penetration textile composite
- * Colour: black
- * Sizes: 35 to 42
- * Packaging: pair



Women's low safety boots

170255

LEMAITRE Shoe
Libert'in S3 SRC
Manufacturer's ref.: Libert'in bas noir S3
Manufacturer: Lemaitre

- * Standard: EN ISO 20345 S3 SRC
- * Water-repellent embossed grain leather upper
- * Micro-ventilated three-dimensional textile lining. Highly breathable
- * PARABOLIGHT/PU2D Sole
- * Colour: black
- * Sizes: 35 to 42
- * Packaging: pair



155614

COFRA Shoe
Manufacturer's ref.: ALICE
Manufacturer: COFRA

- * Standard: EN ISO 20345 S3 SRC
- * Material: water-repellent nubuck
- * Sany Dry fabric lining
- * Extra-light aluminium toe cap
- * Removable Cofra Soft insole sock
- * Bottom assembly: polyurethane/TPU
- * Non-metallic APT Plate puncture-resistant sole
- * Colour: grey/pink
- * Sizes: 36 to 41
- * Packaging: pair



Leather safety boots

153587

COFRA Boot
Manufacturer's ref.: NEW CASTLE UK
Manufacturer: Cofra

- * Calf-length boot, water-repellent leather
- * Ecological wool lining for thermal insulation
- * Polyurethane outer toe cap
- * Safety toe cap
- * Puncture-resistant steel sole
- * Colour: beige
- * Sizes: 39 to 47
- * Packaging: pair



169528

Malawi S3 CI HRO SRC boots
Manufacturer's ref.: Malawi
Manufacturer: Cofra

- * Standard: DIN ISO 20345:S3-CI HRO SRC standard
- * 100% metal-free
- * Material: water-repellent embossed leather
- * Environmentally friendly wool inner lining.
- * Toecap: non-metallic TOP RETURN, resistant to 200 J
- * Anti-abrasion polyurethane toecap
- * Polyurethane/resistant nitrile rubber sole assembly to +300 °C for contact (1 minute)
- * Puncture-resistant sole: non-metallic
- * Colour: black
- * Sizes: 39 to 48
- * Packaging: pair



foot protection

Leather safety boots

158979

HECKEL Guardian 2 Leather Boots
Manufacturer's ref.: GUARDIAN 2
Manufacturer: HECKEL

- * Standard: EN ISO 20345:2011 S3 CI SRA
- * Material: oiled full grain leather upper
- * Fleece lining
- * Steel safety toe cap
- * PU2D bottom assembly
- * Puncture-resistant stainless steel sole
- * Colour: brown
- * Sizes: 39 to 47
- * Packaging: pair



Impermeable safety boots

171101

Dunlop Reliance boots, vibram sole and Purofort upper
Manufacturer's ref.: CC22A33.CH
Manufacturer: Dunlop

- * Standard: EN ISO 20345 S5 CI SRA
- * Sole: Large external «notches» for improved stability, non-marking, anti-twist scale grip
- * Upper, comfortable to wear, 50% lighter than traditional rubber or PVC, no cracking or drying out
- * Special big toe zone for better adhesion and safer landing while walking
- * Premium PU sole assembly
- * Sizes: 39 to 49/50
- * Packaging: pair



MS recommendation
Resistant to hydrocarbons

176956

Dunlop Expander boots, vibram sole and Purofort Reliance upper, high version
Manufacturer's ref.: CC22A33
Manufacturer: Dunlop

- * Standard: EN ISO 20345:2011 S5 CI HRO CR SRC
- * Material: Purofort® upper, Vibram® sole
- * Steel toe cap
- * Premium PU sole assembly
- * Puncture-resistant steel sole
- * Colour: anthracite, black sole
- * Sizes: 39-49/50
- * Packaging: pair



MS recommendation
Resistant to hydrocarbons

176958

Dunlop Explorer boots, vibram sole and Purofort upper, for extreme conditions
Manufacturer's ref.: C922033
Manufacturer: Dunlop

- * Standard: EN ISO 20345:2011 S5 CI HI HRO CR AN SRC
- * Material: Purofort® upper, Vibram® sole
- * Steel toe cap
- * Premium PU sole assembly
- * Puncture-resistant steel sole
- * Colour: anthracite, black sole
- * Sizes: 39-49/50
- * Packaging: pair



MS recommendation
Resistant to hydrocarbons

114081

DUNLOP Boot PUROFORT C 462
Manufacturer's ref.: C462931.fr
Manufacturer: Dunlop

- * Standard: EN ISO 20345 S5
- * Material: Purofort
- * Puncture-resistant steel toe cap and sole
- * Colour: green upper, black sole
- * Resistance: acids, bases, oils and greases, various chemicals
- * Sizes: 37 to 48
- * Packaging: pair



Impermeable safety boots

159716

NETCO Normal Sec Boot
Manufacturer's ref.: 00A2212
Manufacturer: Netco

- * Standard: EN ISO 20345 S5 SRA
- * Material: PVC upper
- * Cotton jersey internal lining
- * Steel toe cap
- * Black PVC/nitrile bottom assembly, self-cleaning studs
- * Puncture-resistant steel midsole
- * Colour: bottle green
- * Sizes: 37 to 48
- * Packaging: pair



114071

DUNLOP Acifort Heavy Duty S5 Boot
Manufacturer's ref.: A442031
Manufacturer: DUNLOP

- * Standard: EN ISO 20345 S5 SRA
- * Protective toe cap + midsole
- * Colour: black
- * Sizes: 39 to 48
- * Resistance: mineral, animal and vegetable oils and greases, disinfectants, various chemicals
- * Packaging: pair



114083

DUNLOP Purofort Rig Air Boot
Manufacturer's ref.: C462743
Manufacturer: Dunlop

- * Standard: EN ISO 20345 S5 CI SRA
- * Material: polyurethane
- * Waterproof, leather pull-on lugs
- * Puncture-resistant steel toe cap and sole
- * Acid-resistant sole
- * Colour: brown
- * Sizes: 39 to 48
- * Packaging: pair



MS recommendation
Resistant to hydrocarbons and acids

136952

DUNLOP Protomaster 142PP Boots
Manufacturer's ref.: 142PP
Manufacturer: Dunlop

- * Standard: EN ISO 20345 S5.
- * Material: PVC/nitrile.
- * Steel toe cap and sole.
- * Nitrile bottom assembly. Resistance: animal, vegetable and mineral oils and greases, various chemicals, disinfectants
- * Anti-static, energy absorbing
- * Colour: black
- * Length: 37 cm
- * Sizes: 36 to 48
- * Packaging: pair



114085

Stuffed Dunlop Rig Air Boot
Manufacturer's ref.: C462743.FL
Manufacturer: Dunlop

- * Stuffed version

140151

Acifort Heavy Duty full safety S5
Manufacturer's ref.: A442631
Manufacturer: Dunlop

- * Standard: EN ISO 20345 S5 SRA
- * Material: PVC/Rubber nitrile
- * Steel toe cap and midsole acier
- * Black outsole with a third intermediate layer for a direct visibility (safety)
- * Colour: green
- * Excellent resistance to various substances and liquids and high strength
- * Sizes: 39-49/50
- * Packaging: pair



NEW

Leg straps

151754

Dunlop Loiresecu Thigh Wader
Manufacturer's ref.: 142VP.PP
Manufacturer: Dunlop

- * Standard: EN ISO 20345 S5 SRA
- * Material: PVC upper
- * Resistance: mineral, animal and vegetable oils and greases, disinfectants, chemicals
- * Sizes: 39 to 47
- * Packaging: unit



foot protection

Fire fighter boots and rangers

169163

HAIX 33cm Yellow Fire Boot
Manufacturer's ref.: 500004
Manufacturer: Haix

- * Standards: CE 0197 EN 15090:2006 HI3 CI SRC - Category F2A, compliant with EN ISO 20345:2004/EN 15090:2006
- * Outer material: Breathable (5.0 mg/cm²/hr) waterproof leather with hydrophobic treatment, 2.3 - 2.5 mm thick
- * Breathable inner lining
- * Safety toe cap
- * Light puncture-resistant sole
- * Hollow nitrile rubber sole
- * Retro-reflective strip
- * Sizes: 36 to 49
- * Packaging: pair



176940

EAGLE HAIX firemen's Rangers
Manufacturer's ref.: 507501
Manufacturer: Haix

- * Standard: CE 0197 EN 15090:2012 HI3 CI M SRC - Type F2A
- * Leather thickness 2.0 – 2.2 mm, waterproof, breathing, resistant to viruses and to bacteria owing to the CROSSTECH® Laminate technology, upper height 23 cm, antistatic, XP 017 sole
- * Sizes: 35 to 51
- * Packaging: pair



177049

Black Eagle safety Mid 50 firemen's Rangers
Manufacturer's ref.: 620010
Manufacturer: Haix

- * Standard: CE EN ISO 20345:2011 S3 HRO HI CI WR SRC
- * Leather, waterproof and extremely breathing with the GORE-TEX® Extended system, upper height 20 cm, antistatic, ESD, sole 019
- * Sizes: 35 to 51
- * Packaging: pair



Accessories

139812

Boot socks
JLF PRO insulated
Manufacturer's ref.: 399
Manufacturer: JLF PRO

- * Standards: EN 12746, EN 13571, EN 13572
- * For people working in difficult conditions - insulated from cold
- * Anti-mycosis, anti-bacterial, anti-odour
- * Sizes: 36 to 47
- * Packaging: pair



136940

GASTON MILLE Millenium Protect TPU KIT
Manufacturer's ref.: MLPPUK
Manufacturer: Gaston Mille

- * Standard NF EN 12568
- * Elastic strap
- * Non-slip sole
- * Ideal for visitors
- * Steel toe cap resists 200 J static crushing
- * Packaging: Box of 5 toecaps
- 1 pair of S (35 to 39)
- 2 pairs of M (40 to 44)
- 2 pairs of L (45 to 48)



Accessories

138885

ERDOGYNE GRIP6300 Studded Non-Slip Sole

Manufacturer's ref.: GRIP6300
Manufacturer: Ergodyne

- * Genuine slip protection that fits all shoes
- * Very light and flexible, hugs or fits against the sole
- * Sizes: M, L, XL.
- * Packaging: pair



153324

Studded Non-Slip Sole IMPLUS YAKTRAX PRO

Manufacturer's ref.: YAKTRAX PRO
Manufacturer: Implus

- * Slip protection suitable for all shoes (interior use)
- * Ensures safety on packed snow and ice - No studs
- * Patented technology: Skid-Lock (coil system)
- * Sizes: S, M, L, XL
- * Packaging: pair



163429

LEMAITRE Visitors overshoes

Manufacturer's ref.: SUR-CHAUSSURES BOUT VISITEUR

Manufacturer: LEMAITRE

- * Complies with: EN 12568, EN ISO 12387
- * Safety overshoes with protective aluminium/titanium toe cap
- * Non-slip sole
- * Velcro closure at back to fit all types of shoe
- * 3 sizes (S: 34-38, M: 39-43 and XL: 44-50)
- * Packaging: pair



163513

S24 Rubber overshoes

Easy Grip
Manufacturer's ref.: EASY GRIP 118
Supplier: S24

- * Exceptional adhesion coefficient
- * Self-cleaning studs
- * Tailored design and comfort
- * Fits most shoes due to stretch
- * Watertight
- * Sizes: S 34-36/M 37-40/L 41-44/XL 45-48
- * Packaging: pair



139810

JLF Industries Image Insoles of cleanliness

Manufacturer's ref.: 0182VS
Manufacturer: JLF PRO

- * Material: non-woven textile backing 35% viscose, 65% polyester, active carbon latex foam under layer
- * Anti-mycosis, anti-bacterial, anti-odour
- * Long-lasting abrasion resistance
- * Effective life: 3 months
- * Colour: green
- * Sizes: 35 to 50
- * Packaging: pair



137146

JLF anti-odour insole

Manufacturer's ref.: 090VS
Manufacturer: JLF PRO

- * Green polyester fibre contact surface with Sanitized® treatment
- * Base: black perforated latex foam and green perforated latex with side grip and raised ventilation
- * Anti-bacterial, anti-odour treatment
- * Sizes: 35 to 49
- * Packaging: pair



163418

LEMAITRE VPL ONSTEAM Insoles of cleanliness

Manufacturer's ref.: VPL ONSTEAM
Manufacturer: LEMAITRE

- * Composition: elastic foam
- * Insole cut to size along pre-printed lines
- * Excellent shock absorption due to heel cushion
- * Sizes: 35-39/40-43/44-48
- * Packaging: pair



163419

LEMAITRE Anti-fatigue Insoles

- * Optimum shock absorption due to ventilated structure of the foam. (Unique Arnetech technology)
- * Anti-bacterial, anti-odour insole
- * Increased shock absorption due to gel insert: anti fatigue system.
- * Sizes: 39 to 47
- * Packaging: pair



foot protection

Accessories

153731

JLF Cold Protection Insole
Manufacturer's ref.: 0134VS
Manufacturer: JLF PRO

- * Standards: NF 12746/NF 13520
- * Excellent protection against cold and damp
- * Material: 100% natural wool, closed cell structure polyethylene foam intermediate layer, reinforced aluminised film, non-slip metallised polyester
- * Aluminised film acts as a thermal barrier
- * Foam intermediate layer for increased comfort when walking
- * Colour: natural
- * Sizes: 35 to 50
- * Packaging: pair



163417

LEMAITRE anti-static insole
Manufacturer's ref.: VPL06/VPL07
Manufacturer: LEMAITRE

- * Composition: 100% polyester
- * High level of comfort
- * Anti-static
- * Sizes: 35 to 48
- * Packaging: pair



159376

JLF Round Laces 1.20 M
Manufacturer's ref.: 0416VR
Manufacturer: JLF PRO

- * Standards: NF G07 002, NF G 22.774
- * Material: sheath: 100% polyester
- * Length: 120 cm
- * Colour: black
- * Packaging: pair



136914

JLF 0.90 m Black Laces
Manufacturer's ref.: 0411VR
Manufacturer: JLF PRO

- * Standards: NF G07 002, NF G 22.774
- * Abrasion and breakage resistant
- * Material: Base: 100% polyester, filling and ground yarn: 100% polyester, cellulose acetate aglets
- * Flat laces
- * Colour: black
- * Packaging: pair



136931

Blue Visitor's Shoe Cover
Manufacturer's ref.: 10.100
Manufacturer: Hopen

- * Material: CPE
- * Weight: 3.2 g
- * Assembly: welded elastic
- * Dimensions: 150 x 360 mm
- * Colour: blue
- * One size
- * Cost-effective and waterproof, widely used in catering and/or for visitors
- * One size
- * Packaging: bag of 50 pairs



136920

DUPONT TYVEK Boot Cover
Manufacturer's ref.: TYVPOS0SWH00
Supplier: Dupont de Nemours

- * Tyvek® 1431 N, 41 g/m2
- * Anti-static treatment
- * Colour: white
- * Elastic around the ankle
- * Length: 40 cm
- * One size
- * Packaging: box of 20





7

Body protection



body protection

Protective clothing

Standard	Picto.	Protection	Ratings
EN 340:1993		General protective clothing	General requirements
EN 343:2003 +A1:2007	 EN 343	Rain protection clothing	X: resistance to water penetration Y: resistance to evaporation
EN 342:1998	 EN 342	Clothing protecting against cold Temperature of -5°C	A: basic resulting thermal insulation B: resulting thermal insulation C: permeability to air (3 levels) D: resistance to water penetration (2 levels)
EN 14058:2004	 EN 14058	Clothing protecting against cool climates Temperature above -5°C	A: thermal resistance class (3 levels) B: permeability to air (3 levels) (optional) C: resistance to water penetration (2 levels) (optional) D: basic resulting thermal insulation (optional) E: resulting thermal insulation (optional)
EN 471:2007	 EN 471	High visibility warning clothing for occupational use	X: area of fluorescent and retro-reflective materials (3 levels) Y: quality of retro-reflective materials (2 levels)
EN ISO 20471 : 2013	 EN ISO 20471	Protective clothing - High visibility	X: clothing class Y: maximum number of wash cycles
EN 1149	 EN 1149	Protective clothing Electrostatic properties	EN 1149-1:2006: Protective clothing - Electrostatic properties Part 1: Test method for measurement of surface resistivity EN 1149-2:1997: Protective clothing - Electrostatic properties Part 2: Test method for measurement of the electrical resistance through a material (vertical resistance) EN 1149-3:2004: Protective clothing - Electrostatic properties Part 3: Test methods for measurement of charge decay EN 1149-5:2008: Protective clothing - Electrostatic properties Part 5: Material performance and design requirements
EN 14605:2009	 EN 14605	Clothing protecting against type 4: resistant to penetration by sprayed liquids liquid chemicals type 3: jet proof joints	
EN 13034:2009	 EN 13034	Clothing protecting against type 6: limited protection, the lowest chemical protection liquid chemicals	
EN ISO 14116:2008	 EN ISO 14116	Clothing protecting against heat and flame, contact	rating 1: no flame propagation but a hole is formed on limited with a flame rating 2: no flame propagation, no hole is formed on contact with a flame rating 3: no flame propagation, no hole is formed on contact with a flame (persistent limited flame)
EN ISO 11612:2008	 EN ISO 11612	Clothing protecting against heat and flames	A: propagation of the flame B: convective heat C: radiant heat D: molten aluminium splashes E: molten cast iron splashes F: contact heat insulation
EN ISO 11611:2007	 EN ISO 11611	Protective clothing used during welding	The standard covers protection against molten metal splashes, against short duration contact with a flame, against radiant heat from the arc and the possibility of an electric shock in the case of short duration accidental contact with an electric conductor
IEC 61482:2007	 IEC 61482	Clothing that protects against the thermal effects of an electric arc	class 1: short circuit test with 4kA test current class 2: short circuit test with 7kA test current

Category 3 Protective clothing

Standard	Type	Picto.	Types of risk
EN 943-1:2013 EN 943-2:2012	Type 1		Gas tight protection. Equipment providing complete protection of the user against gases.
EN 943-1:2013	Type 2		Protection limited to gases. Equipment providing complete or partial protection of the user against gases.
EN 14605:2009	Type 3		Protection against liquid chemicals. Equipment providing complete or partial protection of the user against liquid chemicals in jet form (violent splashing of liquid chemical)
EN 14605:2009	Type 4		Protection against liquid chemicals. Equipment providing complete or partial protection of the user against chemicals in spray form.
EN ISO 13982-1:2013	Type 5		Protection against solid chemicals in the form of an aerosol of solid particles. Equipment providing complete protection of the user against solid chemicals in low concentration aerosol form.
EN 13034:2009	Type 6		Limited protection against liquid chemicals. Equipment providing complete or partial protection of the user against low hazard liquid chemicals in light spray (liquid aerosols, sprays) or jet (low pressure) form.
EN 1073-2:2002		 EN 1073-2	Protection against radioactive contamination
EN 14126:2004		 EN 14126	Protection (fabrics) against infectious agents (identified by a "B", e.g. Type 3-B) and subject to several protection tests

High visibility waistcoats

155593-203

SIOEN Hellisan Yellow HV Waistcoat
Manufacturer's ref.: 307AA2PX8
Manufacturer: Sioen

- * Standards: EN 340, EN ISO 14116, EN 1149-5, EN 471 (2-2)
- * High visibility anti-static, fire-resistant waistcoat
- * Material: 100% polyester fabric with 100% PU coating
- * Exterior: V neck. Self-grip strip closure
- * Colour: fluorescent yellow
- * Sizes: S to 3XL
- * Packaging: unit



168989-203

T2S Yellow HV Fire resistant Waistcoat
Manufacturer's ref.: SILEX
Manufacturer: T2S

- * Standards: EN ISO 20471(2), EN 1149, EN ISO 14116
- * Material: Fire resistant/antistatic mesh 98% FR polyester, 2% Anti-static fibre 120 g/m²
- * Waistcoat fully tone-on-tone bias piped
- * Front centre closure by two horizontal FR self-grip tapes
- * Fire-resistant mesh badge holder, 11.5x8.5cm without PVC window, on left chest as worn
- * Waistcoat highlighted by two retro-reflective bands and two shoulder stripes
- * Colour: fluorescent yellow
- * Sizes: M to 5XL
- * Packaging: unit



169966-203

PORTWEST HV ATEX Fluorescent Waistcoat
Manufacturer's ref.: FR71
Manufacturer: Portwest

- * Standards: EN ISO 20471 Class 2, EN ISO 14116, EN 1149-5
- * Material: Bizflame™ Work
- * Flame-resistant reflective strips
- * 5cm wide retro-reflective strips, two around the body and one on each shoulder. Light and comfortable, this waistcoat is ideal for work in warm temperatures.
- * Sizes: S/M, L/XL, 2/3L, 4/5L
- * Packaging: unit



140383-203

T2S NeonYellow Standard HV Waistcoat
Manufacturer's ref.: NEON
Manufacturer: T2S

- * Standard: EN ISO 20471 (2)
- * Material: 100% polyester
- * High visibility warning waistcoat
- * Multi-size, self-grip strip closure
- * 2 horizontal reflective strips
- * One size
- * Colour: fluorescent yellow
- * Packaging: unit



132754-203

Portwest HV Waistcoat
Manufacturer's ref.: S476
Manufacturer: Portwest

- * Standards: EN 340, EN 471 (2-2)
- * Material: 100% polyester mesh 135g
- * 2 bottom bellows pockets with velcro flap and handrest. Chest badge holder. 1 chest pocket with pen and phone compartments and velcro flap. 5 cm HiVisTex retro-reflective strips
- * Colour: fluorescent yellow
- * Sizes: S to 3XL
- * Packaging: unit



body protection

Multirisk rainwear

169896-306

AS FR ELKA waterproof rain jacket

Manufacturer's ref.: 26350

Manufacturer: Elka

- * Standards: EN 343 (3.1), EN ISO 14116, EN 1149-5
- * Material: PU/polyester
- * Retro-reflective strips
- * Adjustable hood
- * 2 pockets with flap
- * Zip closure under press stud flap
- * Velcro closure on sleeves
- * Colour: navy blue
- * Sizes: XS to 5XL
- * Packaging: unit



169897-306

Pantalon pluie étanche AS FR ELKA

Réf. fabricant : 22450

Fabricant : Elka

- * Normes : EN 343 (3,1), EN ISO 14116, EN 1149-5
- * Matériau : PU/polyester
- * 4 poches
- * Fermeture en bas des jambes
- * Coloris : marine
- * Tailles : ES à 5EL
- * Conditionnement : unité



Multirisk clothing

166509-306

SIOEN Durant Multirisk Parka

Manufacturer's ref.: 7237A2ET1

Manufacturer: Sioen

- * Standards: EN ISO 11612, EN ISO 14116, EN ISO 11611, EN 1149-5, EN 13034, EN 343 (3.3)
- * Material: SIOPOR Excell 3 layer polyester fabric Dobby Ripstop + breathable FR PU + inherent knit FR +/- 270 gm2
- * Standup collar, hood available separately, zip closure under self-grip strip flap, 1 patch chest pocket, 2 patch pockets
- * 1 Napoleon pocket - 2 badge attachment loops
- * Back length 85 cm
- * Colour: navy blue
- * Sizes: S to 3XL
- * Packaging: unit



168946-306

SIOEN Cardinia mid-season jacket

Softshell (lining for Durant parka)

Manufacturer's ref.: 9634N2TV4

Manufacturer: Sioen

- * Standards: IEC 61482-2, EN ISO 11612, EN ISO 14116, EN 1149-5, EN 14058, EN 13034, EN ISO 11611
- * Material: 3 layer softshell: polyester fabric + breathable FR PU + inherent FR fleece +/- 400 gm2
- * Standup collar, zip closure with self-grip flap
- * 1 inset chest pocket with zip closure, 2 inset pockets
- * 1 badge attachment loop
- * Set-in sleeves - 1 inside pocket
- * Colour: navy blue
- * Sizes: S to 3XL
- * Packaging: unit



167487-306

SIOEN Barrington hood (fits Durant parka)

Manufacturer's ref.: 7238A2ET1

Manufacturer: Sioen

- * Standards: EN ISO 11612, EN ISO 14116, EN ISO 11611, EN 1149-5, EN 13034, EN 343 (3.3)
- * Material: SIOPOR Excell 3 layer polyester fabric Dobby Ripstop + breathable FR PU + FR inherent knit +/- 270gm2
- * Hood with chin protection and hem drawstring
- * Self-grip strip adjustment - Unlined
- * Colour: navy blue
- * Sizes: S to 3XL
- * Packaging: unit



Multirisk clothing

170434

SIOEN Ridley FR AST Parka
Manufacturer's ref.: 7218
Manufacturer: Sioen

- * Standards: EN 531:1995/A B2 C1
 EN ISO 14116, EN 1149-5:2008
 EN 13034:005 Type PB (6) - EN 343 (3-3)
- * Material: 100% polyester fabric with 100%
 FR + AST PU coating; ± 250 gm²
- * Hood available separately
- * Zip closure under flap with self-grip strip
- * 2 patch pockets with flap - 2 loops for gas detectors
- * Fire-resistant retro-reflective strips (25 mm)
- * Back length 85 cm (L)
- * Colour: navy blue
- * Sizes: S to 3XL
- * Packaging: unit



163353

SIOEN Watson Lining
Manufacturer's ref.: 7221A2TF1B753
Manufacturer: Sioen

- * Standards: EN ISO 14116, EN 14058
- * Double-sided fleece: 100% polyester,
 fire-resistant; ± 275 g/m²
- * Zip closure
- * Hand opening for access to inside
 pocket in jacket
- * Set-in sleeves
- * Knitted ribbed cuffs * Lapped seams
- * Sizes: S to 3XL
- * Packaging: unit



**Lining and hood
 adaptable to the
 parka**

171006-306

SIOEN Hood
Manufacturer's ref.: 7225
Manufacturer: Sioen

- * Standards: EN 531:1995/A B2 C1
 EN ISO 14116, EN 1149-5:2008
 EN 13034:2005 Type PB (6) EN 343 (3-3)
- * Material: 100% polyester fabric with
 100% FR + AST PU coating; 250 g/m²
- * Hood with chin protection and hem draws-
 tring
- * Colour: navy blue
- * Sizes: XS to 3XL
- * Packaging: unit



170018

PORTWEST Fleece
(without logo)
Manufacturer's ref.: FR30
Manufacturer: Portwest

- * Standards: EN ISO 11612 A1 B1 C2,
 EN 1149-5
- * Material: 60% modacrylic,
 39% cotton, 1% carbon fibre 280 g
- * Front centre zip closure
- * Elasticated cuffs - Pockets with zip closure
- * Colour: navy blue
- * Sizes: S to 3XL
- * Packaging: unit



body protection

High visibility multirisk clothing

181961-905

Hood for Shannon parka van Heurck
Manufacturer's ref.: 6687
Manufacturer: van Heurck

- * Material: Outer fabric PES 100%
- Lining: Aramid/Viscose FR 50%/50%
- Membrane: Goretex® 100% PTFE 220g/m²
- * Attaches to the parka by zip
- * Cord with stops
- * Seams stitched with non-flammable thread
- * Sizes: XS to 4EL
- * Packaging: unit



181963-905

Shannon multirisks parka van Heurck
Manufacturer's ref.: 11389
Manufacturer: van Heurck

- * Standards: Standards: EN 343-3-3:2003+A1:2007, EN ISO 20471: 2013 CLASS 2, EN ISO 11611: 2015 A1 CLASS 1, EN ISO 11612: 2015 A1 B2 C1 D3 E1 F1, EN ISO 14116: 2015 INDEX 3, EN 1149-5: 2008 ATPV = 14.7 CAL/CM² ONLY TESTED ON FABRIC, EN 13034: 2005 + A1: 2009 TYP
- * Material: Outer fabric: PES 100% + GORE PYRAD®. Technological lining: ARAMID/VISCOSE FR 50%/50%. Membrane: 100% PTFE Weight: 220g/m²
- * Colour: fluorescent orange/navy blue
- * Sizes: S to 4XL
- * Packaging: unit



181962-905

van Heurck Shannon multirisks parka with Total logo
Manufacturer's ref.: 10254
Manufacturer: van Heurck

- * Packaging: unit

181965-905

HV multirisks waistcoat van Heurck
Manufacturer's ref.: 11390
Manufacturer: van Heurck

- * Standards: EN ISO 20471: 2013 CLASS 1, EN ISO 11611: 2015 A1+A2 CLASS 1, EN ISO 11612: 2015 A1 A2 B1 C1 F1, EN ISO 14116: 2015 INDEX 3, EN 1149-5: 2008, EN 13034: 2005 + A1: 2009 TYPE PB[6], EN 14058: 2004
- * Materials: Outer fabric: PES/CO/Negastat 50%/49%1% Lining: Aramid/Viscose FR 50%/50%
- Membrane: PES 100% Wattine
- * Colour: fluorescent orange/navy blue
- * Sizes: S to 4XL
- * Packaging: unit



181983-905

Shannon parka and HV multirisks waistcoat van Heurck with Total logo
Manufacturer's ref.: 11265
Manufacturer: van Heurck

- * Standards: EN 343-3-3:2003+A1:2007, EN ISO 20471: 2013 CLASS 2, EN ISO 11611: 2015 A1 CLASS 1, EN ISO 11612: 2015 A1 B2 C1 D3 E1 F1, EN ISO 14116: 2015 INDEX 3, EN 1149-5: 2008 ATPV = 14.7 CAL/CM² ONLY TESTED ON FABRIC, EN 13034: 2005 + A1: 2009 TYP
- * Parka material: Outer fabric: PES 100% + GORE PYRAD®. Technological lining: ARAMID/VISCOSE FR 50%/50%. Membrane: 100% PTFE Weight: 220g/m²
- * Waistcoat material: Outer fabric: PES/CO/Negastat 50%/49%1% Lining: Aramid/Viscose FR 50%/50% Membrane: PES 100% Wattine
- * Colour: fluorescent orange/navy blue
- * Sizes: S to 4XL
- * Packaging: unit



181964-905

HV multirisks waistcoat with Total logo van Heurck
Manufacturer's ref.: 10255
Manufacturer: van Heurck

- * Packaging: unit

High visibility multirisk clothing

167294-905

SIOEN Falcon Multirisk Parka
Manufacturer's ref.: 7229A2ET1
Manufacturer: Sioen

- * Standards: EN ISO 11612, EN ISO 14116, EN ISO 11611, EN 1149-5, EN 13034, EN 471 (3.2), EN 343 (3.3)
- * Material: SIOPOR Excell 3 layer polyester fabric Dobby Ripstop + breathable FR PU + FR inherent knit +/- 270 gm2
- * Standup collar, hood available separately, zip closure under self-grip strip flap, 1 chest patch pocket, 2 patch pockets
- * 1 Napoleon pocket
- * 2 badge attachment loops Unlined, 2 inside pockets
- * Colour: fluorescent orange/navy blue
- * Sizes: S to 3XL
- * Packaging: unit



168526-905

PLAYFORD 9633 Softshell mid-season jacket (lining for Falcon Parka) High visibility, fire-resistant and anti-static
Manufacturer's ref.: 9633N2TV4
Manufacturer: Sioen

- * Standards: EN ISO 11612, EN ISO 14116, EN 1149-5, EN 14058, EN 13034, EN ISO 11611, IEC 61482-2, EN ISO 20471 (3)
- * Material: 3 layer polyester fabric softshell + breathable FR PU + inherent FR fleece +/- 400 gm2
- * Standup collar, zip closure with self-grip strip flap, 1 inset chest pocket with zip closure, 2 inset pockets
- * Colour: fluorescent orange/navy blue
- * Sizes: S to 3XL
- * Packaging: unit



167487-306

SIOEN Barrington Hood (fits Falcon parka)
Manufacturer's ref.: 7238A2ET1
Manufacturer: Sioen

- * Standards: EN ISO 11612, EN ISO 14116, EN ISO 11611, EN 1149-5, EN 13034, EN 343 (3.3)
- * Material: SIOPOR Excell 3-layer polyester fabric Dobby Ripstop + breathable FR PU + FR inherent knit +/- 270 gm2
- * Hood with chin protection and hem drawstring
- * Self-grip strip adjustment - Unlined
- * Colour: navy blue
- * Sizes: S to 3XL
- * Packaging: unit



168953-905

SEYNTEX Hera
Manufacturer's ref.: 350025
Manufacturer: Seyntex

- * Standards: EN ISO 20471(1), EN 343(3-3), EN 13034, EN ISO 11611, EN 1149-5, EN ISO 11612, EN ISO 14116
- * Material: FR-AS Actipur
- * Trousers protecting against heat and flames
- * 2 pockets, waist drawstring, zip closure under flap, leg with side opening closed by zip and flap
- * Fixed fire-resistant cotton lining
- * Colour: fluorescent orange/navy blue
- * Sizes: S to 3XL
- * Packaging: unit



171102-905

ELKA HV Multirisk Parka
Manufacturer's ref.: 086150R
Manufacturer: Elka

- * Standards: EN 343 (3.3), EN 1149-5, EN ISO 20471 (3), EN ISO 14116, GO/RT 3279, EN 13034
- * 300D x 300D polyester oxford
- * 100% FR cotton w/80g/m² polyester
- * Retro-reflective strips
- * Detachable hood
- * 3 pockets with Velcro
- * Colour: fluorescent orange/navy blue
- * Sizes: XS to 5XL
- * Packaging: unit



body protection

Multi-risks work clothing with «retro-reflective strips»

169908-306

ATEX DMD zones multirisks working blouse
Manufacturer's ref.: 630020PET
Manufacturer: DMD

- * Standards: EN 11612, EN 13034, EN 1149-5, EN 11611, IEC 61482
- * Material: 74% cotton 25% polyester 1% carbon - 290 g/m2
- * High visibility reflective non-flammable strips round arms and in the form of a front and back harness, injected sliding closure with plastic cursor under adjoining tab closed by hidden plastic press-studs, 1 breast pocket with flap, closed by hidden plastic press-studs on the left side, 1 right side inside pocket, 2 side pockets with flaps closed by hidden plastic press-studs, cuffs applied and closed by hidden plastic press-studs, elasticated waist closed by hidden press-studs, funnel neck
- * Colour: navy blue
- * Sizes: 01 to 06
- * Packaging: unit



169164-306

DMD Multirisk Marine Trousers
Manufacturer's ref.: 601020PET
Manufacturer: DMD

- * Standards: EN 11612, EN 13034, EN 1149, EN 11611, IEC 61482
- * Material: 74% cotton - 25% polyester - 1% carbon - 300 g/m2
- * 2 pockets in side seams (pocket lining in same fabric) with flaps and concealed plastic press studs
- * 1 right-hand back pocket with flap and concealed plastic press studs
- * 1 pocket on left leg with flap and concealed plastic press studs
- * 1 ruler pocket on right leg with flap and concealed plastic press stud
- * Elasticated belt with button closure
- * Fly with plastic press studs 5 loops, 1 transfer on left leg pocket
- * 5 cm grey fire-resistant retro-reflective strip
- * Colour: navy blue
- * Sizes: 00 to 05
- * Packaging: unit



169165-306

DMD Marine Coveralls
ATEX Multirisk
Manufacturer's ref.: 650020PET
Manufacturer: DMD

- * Standards: EN 11612, EN 13034, EN 1149, EN 11611, IEC 61482
- * Material: 74% cotton - 25% polyester - 1% carbon - 300 g/m2
- * Front centre injected closure plastic slider under flap
- * Flap closed by 2 concealed plastic press studs
- * 2 chest pockets with flaps with concealed plastic press studs
- * 2 bottom pockets in side seams under flaps with concealed plastic press studs
- * 2 bottom-opening knee pockets for foam knee pads
- * Elasticated back
- * High collar closed with 2 concealed plastic press studs
- * 5 cm grey fire-resistant retro-reflective strip
- * Colour: navy blue
- * Sizes: 00 to 06
- * Packaging: unit



Multirisk workwear

159860-306

Atex DMD multirisks blouse
Manufacturer's ref.: 630020ATX
Manufacturer: DMD

- * Standards: EN 340, EN ISO 11612, EN 13034, EN 1149-5, EN ISO 11611, IEC 61482-2
- * Material: 74% cotton, 25% polyester and 1% carbon
- * Grammage: 300 g/m2
- * Injected zip closure, plastic cursor closed by hidden plastic press studs
- * 1 breast pocket on left
- * 1 inside breast pocket
- * 1 sleeve pocket on left
- * 2 side pockets
- * Cuffs closed by plastic press studs
- * Elasticated waist
- * Funnel neck
- * 1 loop for detector on each shoulder
- * Colour: navy blue
- * Sizes: 01 to 06
- * Packaging: unit



155766-306

DMD Marine ATEX Driver's Trousers
Manufacturer's ref.: 601.ATEX
Manufacturer: DMD

- * Standards: EN ISO 11612, EN 1149, IEC 61482, EN ISO 13034, EN ISO 11611
- * Material: 74% Cotton - 25% Polyester - 1% Carbon - 300 g/m2
- * Side-elasticated belt with button closure, 3-button fly, 5 loops
- * 2 pockets in side seams with flaps closed with concealed plastic press studs
- * 2 leg pockets with flaps and concealed plastic press studs, 2 knee pad pockets on the inside
- * Colour: navy blue
- * Sizes: 00 to 05
- * Packaging: unit



159771-306

DMD Marine ATEX Driver's Coveralls
Manufacturer's ref.: 650.ATEX
Manufacturer: DMD

- * Standards: EN ISO 11612, EN 13034, EN 1149, EN ISO 11611, IEC 61482
- * Material: 74% Cotton - 25% Polyester - 1% Carbon - 300 g/m2
- * Front centre injected zip closure with plastic slider under stitched flap closed with concealed plastic press studs
- * 2 chest pockets with flaps with concealed plastic press studs
- * 2 pockets in side seams under flaps with concealed plastic press studs
- * 2 leg pockets with flaps with concealed plastic press studs
- * 2 knee pad pockets on the inside
- * 1 pocket with flap closed by concealed plastic press stud on left sleeve
- * Sizes: 01 to 07
- * Colour: navy blue
- * Packaging: unit



body protection

High visibility multirisk work clothing

159861-902

Yellow/Navy HV ATEX Driver's Jacket DMD
Manufacturer's ref.: 630960ATX
Manufacturer: DMD

- * Standards: EN 340, EN ISO 11612, EN 13034, EN 1149-5, EN ISO 11611, EN 471 (2-2), IEC 61482-2
- * Material: 74% cotton, 25% polyester and 1% carbon
- * Grammage: 300 g/m²
- * Two 5 cm grey fire-resistant retro-reflective strips on back, front and around arms
- * Single 5cm grey fire-resistant retro-reflective strip on bottom pockets
- * Injected zip with plastic slider
- * 1 chest pocket on left
- * 1 inside pocket on right
- * 2 bottom pockets
- * Cuffs closed with plastic press studs
- * Elasticated belt
- * Spread collar
- * Colour: fluorescent yellow/navy blue
- * Sizes: 01 to 06
- * Packaging: unit



159772-902

HV zone Atex DMD multirisk trousers
Manufacturer's ref.: 601960ATX
Manufacturer: DMD

- * Standards: EN 340, EN ISO 11612, EN 13034, EN 1149-5, EN ISO 11611, EN 471 (2-2), IEC 61482-2
- * Material: 74% cotton, 25% polyester and 1% carbon
- * Grammage: 330 g/m²
- * 2 retro-reflective, fire-resistant 5 cm strips, fitted double around calf
- * Button fly
- * 2 leg pockets
- * 2 knee pockets
- * Elasticated waist
- * Sizes: 00 to 05
- * Colour: fluorescent yellow/navy blue
- * Packaging: unit



159773-902

DMD Yellow/Navy HV Driver's Coveralls
Manufacturer's ref.: 650960ATX
Manufacturer: DMD

- * Standards: EN 340, EN ISO 11612, EN 13034, EN 1149-5, EN ISO 11611, EN 471 (2-2), IEC 61482-2
- * Materials: 74% cotton, 25% polyester and 1% carbon
- * Grammage: 300 g/m²
- * Double 5cm grey fire-resistant retro-reflective strip on back + front + around arms + around legs
- * 5cm grey fire-resistant retro-reflective strips
- * Injected zip closure with plastic slider under flap
- * 2 chest pockets, 2 bottom pockets, 2 leg pockets, 2 knee pockets, 1 left-hand sleeve pocket
- * Elasticated back
- * Spread collar
- * 1 protection standard transfer at top of right sleeve
- * Sizes: 01 to 07
- * Colour: fluorescent yellow/navy blue
- * Packaging: unit



High visibility non-multirisk parkas

160804-703

Campbell HV blouse with detachable sleeves
Manufacturer's ref.: 364AN3EX1
Manufacturer: Sioen

* Standards: EN ISO 20471: Class 3 with sleeves, EN 343: 2003 + A1: Class 3-3, EN ISO 13688

* Material: SIOPOR® Ultra: 100% polyester fabric with 100% PU coating; ± 195 g/m²

* Standup collar

* Hood rolled into the collar

* Zip closure under flap with self-grip strip

* 2 plated breast pockets with zip closure

* 2 pockets side by side - 1 pocket on the sleeve + ballpoint pocket

* 1 telephone pocket - 1 loop for badge

* Detachable sleeves

* Detachable fleece lining

* Colour: fluorescent orange/navy blue

* Sizes: S to 3XL

* Packaging: unit



Non-multirisk working overalls

137558-500

DMD Work Coveralls
Manufacturer's ref.: 182070CP4
Manufacturer: DMD

* Material: 65% cotton - 35% polyester
300g/m²

* Coveralls with double injected zip closure

* Elasticated back waist

* 2 chest pockets with injected zip closure

* 2 bottom patch pockets

* 1 ruler pocket on right leg

* Straight cuffs with grippers

* Leg cuffs with grippers

* Mandarin collar

* Colour: grey

* Sizes: 00 to 08

* Packaging: unit



body protection except «PPE»

Rainwear

169518-306

SINGER Rainwear set
Manufacturer's ref.: VPLARMOR
Manufacturer: Singer

- * Minor risks
- * Material: PVC on polyester backing
- * Jacket with fixed hood rolled into the collar, zip closure under press stud flap, 2 side pockets with flap, ventilated back
- * Trousers with fly and press studs, elastic waist band, press stud calf adjustment
- * Colour: navy blue
- * Sizes: M to 3XL
- * Packaging: unit



137579-200

DELTA PLUS Jacket and Trousers
Manufacturer's ref.: EN 304 JA
Manufacturer: Delta Plus

- * Standards: EN 340, EN 343 (3-1)
- * Material: PVC - polyester - PVC
- * Jacket and trouser set with welded stitched seams
- * Jacket has fixed hood with drawstring
- * Inner wind flap
- * Raglan sleeves with wind flaps in cuffs
- * Zip closure under press stud flap
- * 2 patch pockets with flap
- * Trousers have waist drawstring and press stud fly closure
- * 2 through-pockets - Adjustable lower leg with press studs
- * Colour: yellow
- * Sizes: M to XXL
- * Packaging: unit



Waistcoats

152255-306

PORTWEST Navy Blue Sleeveless Waistcoat with Retro-Reflective Strips
Manufacturer's ref.: F414
Manufacturer: Portwest

- * Material: 65% Polyester, 35% Cotton
- * Lining: 100% polyester
- * Badge holder can be visible or concealed
- * Pen pocket - Phone pocket
- * Reflective strip - Radio loop
- * Colour: navy blue
- * Sizes: S to XXL
- * Packaging: unit



137584-306

DELTA PLUS Waistcoat for people not exposed to hazards (handlers for example)
Manufacturer's ref.: SIERRBM
Manufacturer: Delta Plus

- * Standard: EN 340
- * Material: 65% polyester - 35% cotton
- * Padded polyamide lining
- * Press stud closed mandarin collar
- * Elasticated internal protective armholes
- * Zip front closure with self-grip strip flap closure
- * Elasticated sides at back. Kidney pad
- * 1 wallet pocket with self-grip strip closure
- * 2 bottom patch bellows pockets with flaps and 2 side pockets
- * 2 zip closure bottom pockets - 2 patch bellows telephone chest pockets
- * Colour: navy blue
- * Sizes: S to 3XL
- * Packaging: unit



T-shirts/Polo shirts

170889-400

B&C White T-Shirt
Manufacturer's ref.: Exact TS 190 MSH22
Manufacturer: B&C

- * Material: 100 % pre-shrunk ringspun cotton. 185 g/m²
- * Generous tube cut
- * Cotton/elastane two-pleat collar
- * Colour: white
- * Sizes: XS to 4XL
- * Packaging: unit



170971-306

FRUIT OF THE LOOM Navy Blue Short-Sleeved T-Shirt
Manufacturer's ref.: SC221C
Manufacturer: Fruit of the Loom

- * Material: 100% Belcoro® yarn cotton 160 g/m²
- * Tube cut
- * Double-stitched cotton/Lycra® round neck
- * Neck tape
- * Double-stitched sleeves and hem
- * Colour: navy blue
- * Sizes: S to 3XL
- * Packaging: unit



body protection except «PPE»

T-shirts/Polo shirts

137698-306

B&C Navy Blue Long-Sleeved T-Shirt

Manufacturer's ref.: BC195

Manufacturer: B&C

- * Material: 100% semi-combed cotton jersey
- * Grammage: 185 g/m²
- * Tube cut
- * Cotton/elastane neck
- * Colour: navy blue
- * Sizes: S to 3XL
- * Packaging: unit



137665

GILDAN Navy Blue Short-Sleeved Polo Shirt

Manufacturer's ref.: GN 380

Manufacturer: Gildan

- * Material: 100% ringspun cotton. 220 g/m²
- * Placket with 3 horn buttons
- * Tube cut
- * Colour: navy blue
- * Sizes: XS to XXL
- * Packaging: unit



138452-306

B&C Long-Sleeved Polo Shirt Navy Blue

Manufacturer's ref.: BC425

Manufacturer: B&C

- * Material: 100% semi-combed cotton
- * Grammage: 180 g/m²
- * Piqué mesh
- * 1x1 rib knit cuffs with elastane
- * 3 tone-on-tone buttons
- * Colour: navy blue
- * Sizes: S to 3XL
- * Packaging: unit



170969-100

B&C Red Polo Shirt

Manufacturer's ref.: BC185/CGPUC10

Manufacturer: B&C

- * Material: 100% pre-shrunk combed cotton ringspun piqué mesh. 230 g/m²
- * Handy invisible chest pocket * 3 tone-on-tone buttons * 1x1 rib knit collar and cuffs
- * Side seams. Easycare, washable at 60°, tumble dry.
- * Colour: red
- * Sizes: S to 2XL
- * Packaging: unit



137502-100

B&C Red Short-Sleeved T-Shirt

Manufacturer's ref.: Exact TS190MSH22

Manufacturer: B&C

- * Material: 100% semi-combed cotton jersey. 185 g/m²
- * Tube cut
- * Cotton/elastane neck
- * Colour: red
- * Sizes: S to XXL



170965-306

B&C BC410 Navy Blue Short-Sleeved Polo Shirt

Manufacturer's ref.: BC410

Manufacturer: B&C

- * Material: 180 cotton polo
- * Piqué mesh
- * Neck tape
- * Placket with 3 tone-on-tone buttons
- * Colour: navy blue
- * Sizes: S to 3XL
- * Packaging: unit



137697-100

B&C Red Polo Shirt

Manufacturer's ref.: HEAVYMILL

PQHEAMSH22

Manufacturer: B&C

- * Material: 100% ringspun combed cotton. 230 g/m²
- * Piqué mesh
- * Placket with 3 tone-on-tone buttons
- * Neck tape - Side slits
- * Colour: red
- * Sizes: S to 3XL
- * Packaging: unit



body protection except «PPE»

Sweatshirts

170970-306

RUSSELL Navy Blue Sweatshirt
Manufacturer's ref.: RU013M
Manufacturer: Russell

- * Material: 80% ringspun cotton, 20% polyester 300 g/m2
- * Spotshield stain-resistant coating
- * Reinforced shoulder panels
- * Back panel for improved comfort
- * Elasticated pen holder on left sleeve
- * Washable at 60°C
- * Colour: navy blue
- * Sizes: S to 4XL
- * Packaging: unit



170966

GILDAN GI8000 Grey Sweatshirt
Manufacturer's ref.: GI18000
Manufacturer: GILDAN

- * Material: 50% cotton/50% polyester
- * Pre-shrunk brushed fleecy interior. "Air-Jet" yarn for softer, non-pilling surface. Double-stitched finish. 1x1 ribbed cuff with elastane. Generous cut
- * Colour: grey
- * Sizes: S to 4XL
- * Packaging: unit



142829-306

B&C BC500 Navy Blue Sweatshirt
Manufacturer's ref.: BC500
Manufacturer: B&C

- * Material: polyester cotton, 100% combed cotton outer shell for improved durability
- * Straight sleeves
- * 1x1 rib with elastane
- * Colour: navy blue
- * Sizes: S to 3XL
- * Packaging: unit



138436-306

Zippered Collar SC276 Sweatshirt without logo
Manufacturer's ref.: SC276
Manufacturer: Imbretex

- * Sweat raglan sleeves zippered collar
- * 70% combed cotton / 30% polyester 280 g/m2
- * Outer side 100% combed cotton
- * Raglan sleeves
- * High collar with metal zip
- * Colour: navy blue
- * Sizes: S to XXL
- * Packaging: unit



Underwears

152500-511

TALUX long sleeves 100% Cotton T-shirt
Manufacturer's ref.: 5264251
Manufacturer: Talux

- * 60% Polyester - 40% Cotton
- * 210 g/m2
- * Colour: mottled medium grey
- * Sizes: M- L- XL- XXL
- * Packaging: unit



152499-511

LEMAHIEU Long open thermal pants
Manufacturer's ref.: 5263251
Manufacturer: Talux

- * 60% Polyester - 40% Cotton
- * 210 g/m2
- * Colour: mottled medium grey
- * Sizes: M- L- XL- XXL
- * Packaging: unit

Multirisk accessories

168959

Neck size FAKSE Ref 79871
Manufacturer's ref.: 79871
Manufacturer: HELLY HANSEN

* Standards: EN ISO 11612 A1B1C1
 EN CEI 61482 cl 1 (4 kA)
 EN 1149

* Material: * 48.5% wool, 48.5% viscose, 3% stainless steel - 170 g/m²

* Fire resistant - Antistatic

* Certified against electric arcs

* Contrasting seams - Double layer of fabric

* Colour: black

* One size

* Packaging: unit



Hats

170021

CONCEPT Hat
Manufacturer's ref.: HALINF 7PLE8
Manufacturer: CONCEPT

* Standards: EN ISO 14116, EN 1149-5

* Composition: 68% worsted/30% aramid/2% anti-static - HERCOSETT SUPERWASH treated wool to prevent shrinking on washing.

* Colour: Navy Blue

* Packaging: unit



Overcoats

138682

DUPONT DE NEMOURS Tyvek Overcoat
Manufacturer's ref.: TYVPL30S WH 00
Manufacturer: DUPONT DE NEMOURS

* Tyvek® overcoat with collar and 3 pockets, front closure with 5 plastic press studs

* Sizes: 02 to 05

* Packaging: unit



114767-304

HAVEP Blue Laboratory Coat
Manufacturer's ref.: 4043.M2170H
Manufacturer: Havep

* Material: M2 - 65%/35% cotton/polyester, 2/1 plain weave, 290 gr/m²

* Press stud closure under flap, 2 front pockets, chest pocket, inside pocket, mobile phone pocket, pen pocket on sleeve, back belt, back gussets, back vent

* Colour: Cornflower blue

* Sizes: 44 to 64

* Packaging: unit



114423-400

HAVEP White Laboratory Coat
Manufacturer's ref.: 4024.L1550H
Manufacturer: Havep

* Material: L1 - 65%/35% polyester/cotton, 2/1 plain weave, 245 gr/m²

* Adjustable belt with press studs, 2 front pockets, chest pocket, inside pocket, back gussets

* Colour: white

* Sizes: 44 to 64

* Packaging: unit



139803

HOPEN White Overcoat
Manufacturer's ref.: 40.301
Manufacturer: Hopen

* Category 1

* Material: polypropylene. 40 g/m²

* Stitched, elasticated cuffs, press stud closure

* With collar

* Colour: white

* Sizes: 02, 03, 04, 05

* Packaging: unit



body protection

Aprons

155659

MANULATEX Vinyl Apron
Manufacturer's ref.: OTS.050.14.090X120
Manufacturer: Manulutex

- * Standards: EN 340, EN 14605
- * Material: vinyl on polyester liner
- * Grammage: 750 g/m²
- * Thickness: 500μ (±50)
- * Protection against caustic soda and sulphuric acid splashes
- * Operating temperature 60°C
- * Standard assembly: adjustable neck strap, rear hook and elastic fastening
- * Rear hook and elastic fastening
- * Colour: brown
- * Dimensions: 90x120 cm (L x H)
- * One size
- * Packaging: unit



141332-500

SINGER Welder's Apron
Manufacturer's ref.: SOUDAT9070
Manufacturer: Singer

- * Standards: EN 340, EN ISO 11611
- * Material: natural cow split leather
- * Welder's protective apron, one-piece with bib
- * Fastened around neck with tape and under arms with adjustable belt and buckle
- * Dimensions: 90x70 cm. * One size
- * Colour: natural
- * Packaging: unit



136671

HOPEN 50.301 PE 25 Blue 120*70 Apron
Manufacturer's ref.: 50.301
Manufacturer: HOPEN

- * Material: polyethylene
- * Colour: blue
- * Thickness: 25 μ
- * Dimensions: 120 x 70 cm
- * Very strong extendable PE ties
- * "One-at-a-time" dispensing system to avoid contaminating the whole batch when removing an apron from the dispenser
- * One size
- * Packaging: box of 100



Visitor's kit

136736

HOPEN Visitor's Kit
Manufacturer's ref.: 50-701
Manufacturer: HOPEN

- * Visitor's kit consisting of:
- * 1 white polyethylene visitor's overcoat with hood and press studs
- * 1 round bouffant cap
- * 1 single-pleat paper mask
- * 1 pair of blue shoe covers
- * One size
- * Packaging: one kit



Hood

110985

Tyvek® DuPont™ Hood
Manufacturer: Dupont de Nemours

- * Material: Tyvek®
- * Tyvek® hood made of a hood and a collar assembled with overlocking
- * Elastic around the neck and face
- * One size fits all
- * Colour: white
- * Packaging: per 25 units

NEW



Coveralls

151347-500

Protection
COVID-19

DUPONT Tychem® Grey Coveralls
Manufacturer's ref.: TYF CHA5 T GY 00
Manufacturer: DUPONT DE NEMOURS

- * Standards: Category III EN 14605 Types 3B/4, EN 13982-1 type 5, EN 13034 type 6, EN 1073-2, EN 1149-5, EN 14126
- * Material: Tyvek® substrate with laminated film
- * 100% particle-proof, recommended for organic acids, bases and biological protection
- * Closure and chin flaps
- * Thumb holes - Elasticated back, ankles and wrists
- * Welded strip seam covers
- * Colour: grey
- * Sizes: S to 3XL
- * Packaging: unit



159897

Protection
COVID-19

DUPONT Tyvek® Coveralls
Manufacturer's ref.: TYV CHF5S WH00
Manufacturer: DUPONT DE NEMOURS

- * Standards: Category III EN ISO 13982-1 Type 5B, EN 13034 Type 6B, EN 1073-2, EN 1149-5, EN 14126
- * Material: Tyvek® 1431 N, 41 g/m²
- * Patented seam technology
- * External stitched seams, 3 piece hood
- * Automatic locking zip closure with flap, in Tyvek®
- * Elasticated hood, waist, wrists and ankles
- * Ergonomic design offering better adjustment
- * Colour: white
- * Sizes: S to 3XL
- * Packaging: unit



170845-400

Protection
COVID-19

MICROGARD 2000 Model 102 overalls
Manufacturer's ref.: WH20-B-00-102
Manufacturer: Microgard

- * Standards: Category CE III Type 5-B, Type 6-B, EN 14126, DIN 32781, EN 1073-2, EN 1149-5

Detector holder

- * Material: microporous polyethylene film
- * Hooded overalls with loops on the chest and hip, taped seams, front zip closure with double cursor and repositionable adhesive flap
- * Elasticated hood, size, cuffs, ankles and thumb-holes
- * Colour: white
- * Sizes: S to 3XL
- * Packaging: unit



161849-200

Protection
COVID-19

Microgard® 2300 PLUS Model 132 Yellow Coveralls
Manufacturer's ref.: YY23-T-00-132
Manufacturer: MICROGARD

- * Standards: EN 14605: Types 3 and 4 – EN ISO 13982-1: Type 5 – EN 14126: Types 3-B, 4-B and 5-B – EN 1073-2 – EN 14126 – EN 1149-5
- * Entry level chemical protection sealed coverall
- * Comfortable, anti-static alternative for sub-contractors mainly using water with limited additives in industrial cleaning, environment and sanitation
- * Anti-static
- * Sizes: S to 5XL
- * Packaging: unit



167782

Protection
COVID-19

CHEMFLEX Coveralls
Manufacturer's ref.: 6203
Manufacturer: Chemflex

- * Standards: EN ISO 14116, EN 1149-5, EN 14605 Type 3, EN 14605 Type 4, EN 343 (3.1)
- * Material: Chemflex: 100% polyester knit with PVC PU coating; ± 390 g/m²
- * Fixed hood
- * Zip closure under double flap with self-grip strip
- * Sleeve and leg tightening with self-grip strip
- * Reinforced knees - Elasticated waist
- * Sizes: S to 3XL
- * Packaging: unit



body protection

Intervention jacket

169169-306

VIDAL Intervention Jacket

Manufacturer's ref.: 1VLJADPVC

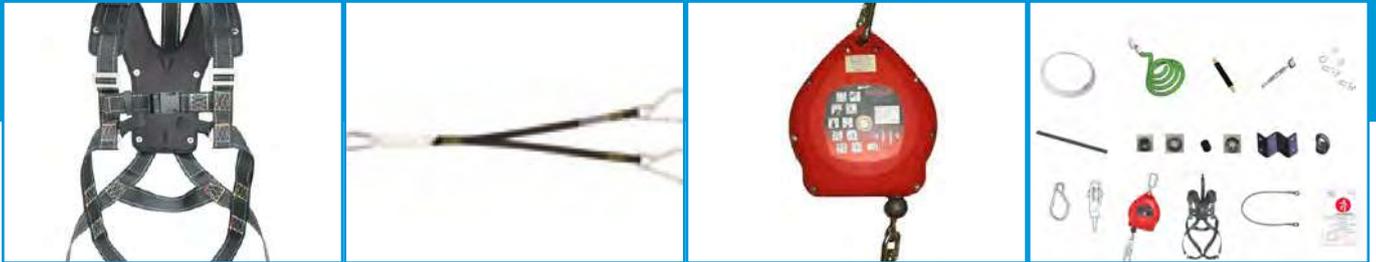
Manufacturer: Vidal

- * Anti-panic zip closure under self-grip flap
- * Reinforced shoulders - Retro-reflective strips
- * Ergonomic sleeves
- * Fixed thermal lining
- * 2 outer pockets
- * 1 inside pocket - Adjustable sleeves
- * Detachable bottom retro-reflective strip
- * Sizes: S to 3XL
- * Packaging: unit



8

Fall protection



fall protection

Putting your harness on



1 Hold it by the back ring, check that all the straps are correctly in place and that the leg straps are open.

Put on the shoulder straps first.

2



3 Buckle and adjust the leg straps.

A correctly adjusted leg strap must leave enough space to put your hand through. Feed the excess strap into the loops provided for this.

4



5 Buckle and adjust the chest strap.

To finish, make final adjustments so that the harness is comfortably adjusted, without being too tight.

6



BASIC STANDARDS

EN 341: Descenders

EN 353-1: Guided type fall arresters including a rigid anchor line

EN 353-2: Guided type fall arresters including a flexible anchor line

EN 354: Lanyards (fixed or adjustable, maximum length: 2 m)

EN 355: Lanyards with energy absorbers

EN 358: Work positioning system (belt and tether)

EN 360: Retractable type fall arresters

EN 361: Full body harnesses

EN 362: Connectors

EN 363: Personal fall protection systems

EN 795(b): Anchor devices - Class B

EN 813: Sit harnesses for retention in working position

Source Antec

ATEX Harness

143767

**HONEYWELL ATEX 2
HARNESS** Manufacturer's ref.:
1015074:1015075
Manufacturer: Honeywell

- * Standards: EN 361, directive ATEX 94/9/EC, EN 13463-1, EN 13463-5
- * 2 point harness: dorsal and sternal anchorage points with extension and removable PAD
- * Sternal loops
- * Adjustment buckle: 45 mm aluminium alloy
- * Automatic buckle: stainless steel and aluminium
- * 45 mm anti-static polyester material shoulder and leg straps
- * Colour: black
- * Weight: 1.40 kg
- * Colour: black
- * Sizes: S/M, L/XL
- * Packaging: unit



For Category 3 PPE, an annual inspection is mandatory by a certified body or by the authorized TOTAL staff

2-point Harness

168847

HONEYWELL Harness
Manufacturer's ref.: **1032844**
Manufacturer: Honeywell

- * Standards: EN 361
- * Miller H-Design 2-point harness with 2 metal D-rings (sternal and dorsal) and **MANUAL BUCKLES** on chest strap and thigh straps
- * Easily accessible quick adjustment buckles: intuitive top-to-bottom movement
- * Highly accessible anchorage points: arched dorsal D-ring
- * Adjustable chest strap for perfect height and width adjustment.
- * Adjustable leg straps
- * Metal sternal D-ring for easy connection
- * Built-in accessory holder system
- * Weight: 1.13 kg (size 02)
- * Sizes: 01, 02, 03
- * Packaging: unit



168848

HONEYWELL Harness
Manufacturer's ref.: **1032853**
Manufacturer: Honeywell

- * Standards: EN 361
- * Miller H-Design 2-point harness with 2 metal D-rings (sternal and dorsal) and **AUTOMATIC BUCKLES** on chest strap and thigh straps
- * Easily accessible quick adjustment buckles: intuitive top-to-bottom movement
- * Highly accessible anchorage points: arched dorsal D-ring
- * Adjustable chest strap for perfect height and width adjustment.
- * Adjustable leg straps
- * Metal sternal D-ring for easy connection
- * Built-in accessory holder system
- * Weight: 1.17 kg (size 02)
- * Sizes: 01, 02, 03
- * Packaging: unit



fall protection

2-point Jacket Harness

144036

PETZL H Newton Fast Jak Harness
Manufacturer's ref.: C73JF0 1
Manufacturer: Petzl

- * Standard: EN 361
- * Harness with 2 anchorage points
- * For use with the Omni TL carabiner
- * Sternal anchorage point and dorsal anchorage point to connect a fall protection system
- * JAK jacket ensures harness shaping
- * FAST automatic buckles on thighs make harness easy to put on with the feet on the floor
- * Shoulder straps fitted with DoubleBack self-locking buckles
- * Two equipment holders with protective sheath
- * Retention in work position, on side anchorage points, possible with PAD FAST belt
- * Descent in standing position possible due to LIFT spreader
- * Size 00 weight: 0.96 kg
- * Size 01 weight: 1.02 kg
- * Size 02 weight: 1.070 kg
- * Packaging: unit



Restraint Harness

170407

HONEYWELL H-Design Body Fit Harness
Manufacturer's ref.: 1033537
Manufacturer: Honeywell

- * Standard: EN 361, EN 358
- * Easily accessible adjustment buckles
- * Highly accessible anchorage points: Arched dorsal D-ring
- * Adjustable chest strap for perfect height and width adjustment
- * Adjustable leg straps
- * Dorsal D-ring: steel with zinc-plated finish
- * 44.5 mm PTFE-coated polyester green stretch straps with black edging
- * Breaking strength: > 2700 daN
- * Automatic aluminium buckles
- * Sizes: 01, 02, 03
- * Packaging: unit



Dorsal extender

169532

HONEYWELL 0.3m Lanyard MD50 carabiner
Manufacturer's ref.: 1002889
Manufacturer: Honeywell

- * Standard: EN 354
- * Dorsal extender with carabiner. Used to facilitate positioning of fall arrest lanyard.
- * Yellow polyester strap width: 23 mm *
Manual locking steel carabiner
- * Length: 0.30 m
- * Packaging: unit



Rope grabs

136967

PETZL Asap'sorber 40 cm + carabiner
Manufacturer's ref.: L71AA40
Manufacturer: Petzl

- * Standard: EN 355
- * Connects the ASAP mobile fall arrester to the harness
- * Ends equipped with STRING
- * With integral 40 cm lanyard
- * Packaging: unit



137439

PETZL B71 ASAP Fall arrester
Manufacturer's ref.: B71AAA
Manufacturer: Petzl

- * Standards: EN 353-2, EN 12841 type A
- * Arrests falls, slides or uncontrolled descents
- * Used on safety rope
- * Locks even if grabbed during the fall
- * Works on vertical or angled rope
- * Moves along the rope without manual manipulation
- * May be combined with an ASAP'SORBBER energy absorbing lanyard
- * Comes with an OK TRIACT-LOCK automatic locking carabiner
- * Weight: 425 g
- * Packaging: unit



171001

TRACTEL Stopfor K work positioning lanyard adjuster
Manufacturer's ref.: 98469
Manufacturer: Tractel

- * Standard: EN 353-2, EN 358
- * New generation automatic fall prevention device
- * Can also be used to adjust a work positioning lanyard
- * Use on 10.5-12.5 mm diameter braided rope
- * New automatic blocking system without jaws
- * M10 connector
- * Suitable for use on flat roofs
- * Packaging: unit



Rope (for use with a rope grab)

155118

PETZL 11 mm yellow/black Axis Rope 30 m
Manufacturer's ref.: R74YT030
Manufacturer: Petzl

- * Standard: EN 1891 type A
- * For use with ASAP mobile fall arrester
- * Stitched end with protective sheath
- * Can be used in conjunction with throw bag 170987
- * Colour: yellow/black
- * Length: 30 m
- * Diameter: 11 mm
- * Packaging: unit



fall protection

Fall arrest lanyard with absorber

143737

HONEYWELL Fork Lanyard
Manufacturer's ref.: 1015859
Manufacturer: Honeywell

- * Standards: EN 355, EN 13463-1 5 (2001) and EN 13463-5 (2003) **ATEX**
- * 25 mm black polyester strap
- * Equipped with:
 - 1 energy absorber
 - 1 Zicral quarter turn light aluminium carabiner, 16 mm opening
 - 2 GO60 aluminium carabiners, 60 mm opening
- * Packaging: unit



Non-adjustable dynamic rope lanyard

166969

PETZL 1 m Long Lanyard
Manufacturer's ref.: L50 100
Manufacturer: Petzl

- * Standard: EN 354
- * Sewn ends protected by plastic sheath to hold the connector in place and protect the ends from abrasion
- * Length: 1 m
- * Weight: 130 g
- * Packaging: unit



Cable reels

143768

HONEYWELL Falcon – Self-retracting cable reel **ATEX** 10 m
Manufacturer's ref.: 1017921
Manufacturer: Honeywell

- * Standards: EN 360, conforms to standard ATEX EN 13463-1
- * High strength nylon housing
- * Stainless steel cable Ø 4.5 mm
- * Length: 10 m
- * Equipped with 1 zinc plated steel screw carabiner, opening 17 mm, and 1 galvanised steel snap hook, opening 20 mm
- * Fall indicator
- * Quick activating braking system
- * Weight: 5 kg
- * Packaging: unit



169424

TRACTEL automatic fall arrester - stainless steel cable (M10 M46)
Manufacturer's ref.: 58622
Manufacturer: Tractel

- * Standard: EN 360
- * Automatic fall arrester, equipped with new Tractel® patented AES system
- * The AES system ensures the user an impact of less than 600 daN even with a fall when the cable has been completely unwound
- * The AES system reduces the strength of the impact on the user's body in the event of a fall
- * Steel cable Ø 4.7 mm
- * Length: 10 m
- * Weight: 4.86 kg
- * Packaging: unit



Webbing reel

151920

HONEYWELL Turbolite + 2 connectors

Manufacturer's ref.: 1018015

Manufacturer: Honeywell

- * Standard: EN 360
- * Lightweight, high-strength, compact nylon housing
- * Suitable for all low height working situations
- * 2 m working capacity
- * With 2 standard carabiners
- * **Can be used in fall factor 2 and in both directions**
- * No annual recertification required
- * Built-in fall indicator
- * Fast blocking system
- * Vectran and polyester webbing
- * Swivel prevents webbing from twisting
- * Packaging: unit



Work positioning lanyards

137051

HONEYWELL Work Positioning Lanyard

Manufacturer's ref.: 1008285

Manufacturer: Honeywell

- * Standard: EN 358
- * Adjustable lanyard
- * 100% polyamide rope
- * Aluminium alloy
- * No connector
- * Diameter: 12 mm
- * Length: 1.80 m
- * **Order with screw carabiner (in 2s) reference 136259**
- * Packaging: unit



137008

HONEYWELL 4 m adjustable lanyard

Manufacturer's ref.: 1003112

Manufacturer: Honeywell

- * Standard: EN 358
- * For use around a structure, connected to the side D-rings on the harness belt, enables user to work with hands free
- * 14 mm polyamide lanyard, 3-strand rope, 1 polyester fibre textile protective sheath, inner rubber coating and outer latex coating
- * 1 stainless steel lanyard tensioner
- * 1 aluminium carabiner
- * Gradual adjustment without jolts, can be used with one hand
- * Weight: 1.140 kg
- * Length: 4 m
- * Packaging: unit



fall protection

Manual carabiners

136253

HONEYWELL Carabiner
Manufacturer's ref.: 1018960
Manufacturer: Honeywell

- * Standard: EN 362
- * Steel carabiner
- * Manual screw locking
- * 17 mm opening
- * Packaging: unit



136259

HONEYWELL M10 screw carabiner connected to work positioning lanyard
Manufacturer's ref.: 1009276
Manufacturer: Honeywell

- * Standards: EN 362
- * Aluminium oval carabiner
- * Manual screw locking.
- * 18 mm opening.
- * 22 kN strength.
- * Packaging: unit



Automatic carabiners

136970

PETZL Carabiner connected to ASAP (OKTL)
Manufacturer's ref.: M33TL
Manufacturer: Petzl

- * Standards: EN 362 (B), EN 12275 (B)
- * Symmetrical oval aluminium carabiner
- * Keylock system
- * Triact-Lock automatic locking
- * Weight: 75 g
- * Opening: 19 mm
- * Packaging: unit



136989

HONEYWELL Carabiner 1 (M15)
Manufacturer's ref.: 1018968
Manufacturer: Honeywell

- * Standard: EN 362
- * Material: Aluminium alloy
- * Length: 108 mm
- * Width: 61 mm
- * Diameter: 11.5 mm
- * Opening: 16 mm
- * Packaging: unit



Temporary anchorage

HONEYWELL Positioning Sling
Manufacturer's ref.: 1008362
Manufacturer: Honeywell

- * Standard: EN 795, EN 566
- * Orange webbing with black stripes
- * Material: \varnothing 25 mm polyamide
- * Breaking strength > 2200 daN
- * Packaging: unit

Manufacturer's ref.: 1008362

168993

Length: 1 m

Manufacturer's ref.: 1008364

159836

Length: 1.5 m



128174

HONEYWELL 1.5 m Webbing Anchorage Sling
Manufacturer's ref.: 1002919
Manufacturer: Honeywell

- * Standard: EN 795
- * Material: polyester
- * 27 mm yellow polyester webbing
- * Sling with carabiner loop and tubular protective webbing
- * Length: 1.5 m
- * Packaging: unit



Permanent anchorage

137039

HONEYWELL Anchor Plate
Manufacturer's ref.: 1002996
Manufacturer: Honeywell

- * Standard: EN 795 class A1
- * Stainless steel anchor plate with built-in fall indicator
- * Packaging: unit



170705

HONEYWELL Anchor Plate Kit for manholes
Manufacturer's ref.: 1030512
Manufacturer: Honeywell

- * Consists of 4 fall indicator anchor plates with M12*60 screws
- * Packaging: unit



Fall arrester kits

168938

HONEYWELL Tanker Lifeline kit
Manufacturer's ref.: 1015700
Manufacturer: Honeywell

- * ATEX EN 13463-1 and 13463-5 compliant lifeline kit
- * Kit for use in loading bays, made up of 3 ATEX harnesses and 2 ATEX reels
- * Packaging: unit



168939

HONEYWELL Tank Wagon Backpack Kit
Manufacturer's ref.: 1028546
Manufacturer: Honeywell

- Wagon fall protection system kit, comprising
- * 3 ATEX harnesses
- * 2 ATEX fork lanyards
- * 4 fall indicator anchor plates, delivered in a backpack
- * ATEX anti-static harness with dorsal extender and removable PAD: Material: 45 mm polyester anti-static webbing Standard: EN 361 EN ATEX 13463-1
- * ATEX fork webbing lanyard equipped with an energy absorber, 2 GO60 and a ¼ turn carabiner: Material: 25 mm polyester anti-static webbing Standard EN ATEX 13463-1
- * Fall indicator anchor plate
 Material: Stainless steel
 Standard: EN 795 class A1
- * Packaging: unit



168940

HONEYWELL Wooden Box Kit
Manufacturer's ref.: 1014880
Manufacturer: Honeywell

- Standard: EN ATEX 13463-1
- Kit comprising
- * 1 earth braid
- * 2 Energy absorbers, including 1 replacement
- * 1 Tensioner
- * Fixing kit comprising: set of cable thimbles, cable clips
- * Stainless steel cable Ø 8 mm, 15 m long, 2 thimble eyes
- * 2 GO60 carabiners for making the reel ready
- * 2 fixed pulleys
- * 2 ATEX 10 m cable reels
- * Set of bolts
- * 3 ATEX 2-point anti-static harnesses
- * 1 Maritime fumigated SEI4C Wooden Box
- * Packaging: unit



170707

HONEYWELL Tanker Kit
Manufacturer's ref.: 1017700
Manufacturer: Honeywell

- ATEX EN 13463-1 and 13463-5 compliant lifeline kit
- * Kit for use in loading bays consists of 3 ATEX harnesses, 2 ATEX reels and 1 rescue kit
- * Packaging: unit



fall protection

Fall arrester kits

170706

HONEYWELL Tank Top Work Kit

Manufacturer's ref.: 1030513

Manufacturer: Honeywell

* Consists of 2 ATEX harnesses, 2 ATEX fork lanyards, 1 10.5 mm diameter 40 m anchor line, 2 STICK RUN 10/12 mm diameter rope grabs, and one 1.5 m anchor sling in a backpack.

* Packaging: unit



Evacuation

HONEYWELL Tank Top Rescue Kit with Safescape

Manufacturer's ref.: 1030511

Manufacturer: Honeywell

* Consists of one Safescape Elite rescue descender with 10.5 mm diameter 20 m - 100 m rope, 1 rescue rope grab, one 1.5 m anchor sling, 1 stick run rope grab + 0.3 m lanyard supplied in a backpack with "rescue" logo.

* Packaging: unit



169568

HONEYWELL Tanker Rescue Kit

Manufacturer's ref.: 1017500

Manufacturer: Honeywell

* Standard EN 795

* Consists of:

- anchor device (1002897)
- connector (1018968)
- pulley (1007038)
- sling (1003178)

* Packaging: unit



170708-20 Length 20 m

170708-30 Length 30 m

170708-40 Length 40 m

170708-50 Length 50 m

170708-60 Length 60 m

170708-70 Length 70 m

170708-80 Length 80 m

170708-90 Length 90 m

170708-100 Length 100 m

135044

HONEYWELL Pulley Kit

Manufacturer's ref.: 1007042

Manufacturer: Honeywell

* Standards: EN 564, EN 567, EN 12275

* Lightweight Pulley system which enables the rescuer to clip the casualty to his own line and lift them to transfer either onto his system or onto a stretcher

* Kit consists of pulley, ascender and carabiners that fit into a strong carrying bag

* Cam-Clean ascender: aluminium alloy, dimensions 115x80x30 mm

* Quick link: zinc-plated steel

* Rope: polyamide, 6 mm diameter

* Carabiner: aluminium, 19 mm opening

* Weight: 1.2 kg

* Packaging: unit



Accessories

170987

HONEYWELL Throw Bag with 50 m twisted rope

Manufacturer's ref.: 1009432

Manufacturer: Honeywell

- * PVC throw bag weighted with steel balls
- * To be used in conjunction with AXIS rope reference 155118
- * Good resistance to climatic variations
- * Weight: 250 g
- * Packaging: unit



137469

HONEYWELL Bag

Manufacturer's ref.: 1004444

Manufacturer: Honeywell

- * PVC canvas
- * Adjustable reinforced bag
- * Capacity: 60 L = 200 m of Ø 10 mm line
- * 680 x 550 x 200 mm, 1,230 kg
- * Packaging: unit





9

Rescue, first aid, lighting,
lock out, tool bags, hygiene



Rescue

168961

PLASTIMO Typhon 150N Life jacket

Manufacturer's ref.: 6108

Manufacturer: Plastimo

- * Standard: EN ISO 12402-3
- * Material: 100% polyester
- * Zip closure
- * Adjustment belt with plastic loop and waist tie cord
- * 3-piece ergonomic collar
- * Adjustable double thigh strap
- * Colour: orange
- * Packaging: unit



168962

PLASTIMO Ø 75 cm Ring Life Buoy – Orange polyethylene

Manufacturer's ref.: 61970

Manufacturer: Plastimo

- * Standard: SOLAS 74.96 standard
- * Material: polyethylene structure filled with polyurethane foam
- * With 30 m retrieval line
- * Floating polypropylene diameter 8 mm
- * Colour: red
- * Packaging: unit



First aid kits

159419

ESCULAPE ASEP First Aid Kit

Manufacturer's ref.: 7170112

Manufacturer: Esculape

- * For vehicle fleets
- * Nylon pouch with belt loop
- * Contents: Two disposable breathers, one survival blanket, ten 5x5 cm sterile wipes, one 5 m x 2 cm roll of adhesive tape, four 3 m x 7 cm elastic bandages, ten assorted plasters, five disinfecting wipes, one pair of scissors, one pair of metal tweezers, two pairs of vinyl gloves, four bandage fastening clips, one first aid guide in six languages
- * Dimensions: 18x12x5 cm
- * Weight: 330 g
- * Colour: red
- * Packaging: unit



170895

ESCULAPE ASEP P MDT First Aid Kit

Manufacturer's ref.: 7220606

Manufacturer: Esculape

- * Red polypropylene box and wall mounting
- * Dimensions: 35 x 30 x 9 cm
- * Weight: 41.4 kg
- Composition:
 - One pressure dressing, one 50 ml Chlorhexidine spray
 - One survival blanket, one 5 m x 2 cm roll of adhesive tape
 - One face shield for mouth-to-mouth, one pair of Lister scissors
 - One triangular bandage, five single-dose eye baths
 - 20 7.5 cm x 7.5 cm sterile wipes, two plastic bags with zip
 - 30 assorted plasters, 12 safety pins
 - Three 3 m x 7 cm elastic bandages, five pairs of vinyl gloves
 - Three 3 m x 10 cm elastic bandages, one pair of tweezers
 - One 4 m x 10 cm crepe bandage, one first aid guide
- * Packaging: unit



170892

ESCULAPE First aid kit refill: ASEP KIT PMDT

Manufacturer's ref.: 805 09 09

Manufacturer: Esculape

- * Refill for ASEP P MDT first aid kit
- * Packaging: unit

first aid, lighting

First aid kits

170894

ESCALAPE ASEP S 450 First Aid Kit

Manufacturer's ref.: 7210105

Manufacturer: Esculape

* Weight: 1 kg

* Dimensions: 27 x 23 x 8 cm

* Ideal for a team of around eight people

* Composition recommended by the French Red Cross

Composition:

One pressure dressing, one survival blanket

Four alcohol wipes, one face shield for mouth-to-mouth, four Chlorhexidine wipes, one large sterile pressure pad, four bruise wipes, one triangular bandage

Four burn gel sachets, one cooling pouch, one pair of tweezers

Five 5 cm x 5 cm sterile gauze pads, one pair of vinyl gloves

10 assorted plasters, one pair of Lister scissors

Two 3 m x 7 cm elastic bandages, three bandage fastening clips

One 5 m x 2 cm roll of adhesive tape, one first aid guide in six languages

* Packaging: unit



137097

ESCALAPE Fire Blanket

Manufacturer's ref.: 8020104

Manufacturer: Esculape

* Complies with BS EN 1869

* For industry and public sector use

* 100% glass fibre

* Weight of non-inflammable fabric 520 g/m²

* Asbestos-free

* Wall mounted

* Temperature: -20° to +100°C

* Dimensions: 180x120 cm

* Very strong 23 x 17 x 5 cm ABS box - Weight: 800 g

* Colour: red

* Packaging: unit



9

Portable lighting

168933

ENERGIZER PRO ATEX LED Headlight

Manufacturer's ref.: 632026

Manufacturer: Energizer

* Standard: EN 60529

* Class 1, Division 1

* Swivelling head

* One white LED, two red LEDs, one green LED, two light intensities

* Spot or diffuse lighting

* Sealed to IPX 4

* Non-slip helmet compatible straps

* Uses 3 AAA alkaline batteries, supplied

* Packaging: unit



154000

PETZL PIXA 1 Head Lamp

Manufacturer's ref.: E78AHB 2

Manufacturer: Petzl

* Headlamp with wide, uniform beam, suited to work within reach

* Can be worn on the head with the strap, fixed onto a helmet or placed on the ground

* Lighting at 15 metres for 12 hours

* Certification:

ATEX: CE0080, Ex II 3 GD, Ex nAnI IIB T4

HAZLOC: class I Groups C & D div II, Class II Group G div II, Operating Temperature code T4

* Uses 2 AA/LR6 batteries

* Weight with batteries: 160 g

* Packaging: unit



158975

JSP LED Mini Helmet Lamp

Manufacturer's ref.:

AHV-310-000-000

Manufacturer: JSP

* Packaging: unit



Portable lighting

170561

PELI MityLite Flashlight
Manufacturer's ref.: 1900-019-241E
Manufacturer: Peli



- * The Peli MityLite 2AAA classic flashlight is certified to Zone 1 standards; this new flashlight is compact, powerful and reliable. ATEX Zone 1 certification means that it can be used in the most hazardous zones (Zone 1), often found in industries with a high risk of explosion.
- * Can be fastened to several types of work helmet with mounts (available from Peli)
- * Submersible to 150 metres.
- * Colour: yellow
- * Packaging: unit

170891

PELI 2610 ATEX ZONE 0 Flashlight
Manufacturer's ref.: 2610Z0
Manufacturer: Peli



- * The new 2610 head lamp enables the user to work, ride a bicycle or motorbike or play, hands free. It comes with a rubber band for wearing on a helmet (to prevent it from slipping), and a fabric band for wearing on the head or hat.
- * ABS resin body, water-resistant head swivels to different angles
- * Two different lighting levels depending on whether 1 or 3 LEDs are used, for precise work or to light short distances. 80 hours
- * Packaging: unit

163619

Peli Headsup Lite 2690 Head Lamp
Manufacturer's ref.: 4477
Manufacturer: Peli



- * Standard: Certification: Ex II 1 D/G Ex ia IIC T4, Ex iaD 20IP65 T65°C
- * Length: 7.1 cm
- * Light source: LED
- * Light output in lumens: 60
- * Lux at 1 metre: 1
- * Battery life: 10 hours
- * Voltage: 4.5
- * Protection rating: IP 65
- * Weight with batteries: 0.12 kg
- * Weight without batteries:- 0.08 kg
- * Uses 3 AAA batteries (included)
- * Packaging: unit

167292

PELI 3315Z0 lamp
Manufacturer's ref.: 3315Z0
Manufacturer: Peli



- * This compact, lightweight model incorporates three AA batteries which power a single LED supplying 138 lumens for ultra-powerful LED lighting
- * Approved from a safety angle for the most volatile ATEX Cat. 1 (Zone 0) working environments
- * Body: Anti-static Impact Modified PC/PBT
- * Length: 15.6 cm
- * Packaging: unit

Ergonomics

136747

DMD Thermo comprim Knee Pads
Manufacturer's ref.: M3 MOUSSE
Manufacturer: DMD

- * Combats knee hygroma (water on the knee)
- * One size
- * Packaging: pair



143785

ERGODYNE ProFlex® 380 KNEELING PAD
Manufacturer's ref.: PROFLEX 380
Manufacturer: Ergodyne

- * Material: high density closed cell rubber foam.
- * Non-conducting silicone-free foam, not corrosive to aluminium
- * Edge markings
- * Extremely resistant to petroleum products
- * Dimensions : 53 x 36 x 2.5 cm
- * Packaging: unit



113937

ERGODYNE ProFlex® Back Support
Manufacturer's ref.: PROFLEX 2000SF
Manufacturer: ERGODYNE

- * This patented back support holds the body and provides reliable, comfortable support for the lower back and abdomen
- * V-shaped design fits to the back and is easy to put on around the waist
- * Two-step Velcro® closure enables quick adjustment
- * Adjustable double Velcro® closure to adjust tension
- * Non-slip rubberised stays hold it in position
- * Suitable for use in seated position (forklift operator) due to V-shaped design
- * Sizes: S, M, L, XL, XXL, XXXL
- * Packaging: unit



Tool bags

Tool bag with flap
Manufacturer's ref.: C010
Manufacturer: Outils Océans

- * For minor jobs
- * Dimensions: 45 x 15 x 15 cm
- * Packaging: unit

186819-100 Colour: red

186819-306 Colour: navy blue



Tool bag with flap
Manufacturer's ref.: C06
Manufacturer: Outils Océans

- * For mobile maintenance
- * Dimensions: 40 x 28 x 17 cm
- * Packaging: unit

186820-100 Colour: red

186820-306 Colour: navy blue



Tool bag
Manufacturer's ref.: C08
Manufacturer: Outils Océans

- * For working at height
- * Dimensions: 37 x 21 x 10 cm
- * Packaging: unit

186821-100 Colour: red

186821-306 Colour: navy blue



Tool back-pack
Manufacturer's ref.:SD324516
Manufacturer: Outils Océans

- * Accepted in ATEX zone, according to the standard EN13463-1
- * Dimensions: 32 x 45 x 16 cm
- * Packaging: unit

186824-306 Colour: navy blue

186825-306 Colour: navy blue with integrated trolley



Lockout kits

170973

BRADY Lockout Kit

Manufacturer's ref.: 806186

Manufacturer: Brady

Contains:

- * Large Universal Valve Lockout base clamping unit
- * Large blocking arm
- * Cable attachment
- * Adjustable gate valve device
- * APLCO with sheathed metal cable
- * Large plug lockout device
- * 227 V No-hole circuit breaker
- * 480-600 V No-hole circuit breaker
- * 480-600V Breaker blocker kit
- * Miniature circuit breaker demo kit (1 of each type)
- * Nylon lockout hasp
- * 1 pack of red safety padlocks
- * 1 pack of red safety lockouts (25 mm)
- * Duffel bag
- * Pen
- * 75 x 160 mm "Do not touch" tag
- * Packaging: unit



170975

BRADY Lockout Kit

Manufacturer's ref.: 806187

Manufacturer: Brady

Contains:

- * Large Universal Valve Lockout base clamping unit
- * Large blocking arm
- * Cable attachment
- * Adjustable gate valve device
- * APLCO with sheathed metal cable
- * 1 pack of red safety padlocks
- * 1 pack of red safety lockouts (25 mm)
- * 75 x 160 mm "Do not touch" tag
- * Red gusset side bag
- * Packaging: unit



170974

BRADY Lockout Kit

Manufacturer's ref.: 806188

Manufacturer: Brady

Contains:

- * Universal multi-pole breaker lockout system
- * 227 V No-hole circuit breaker
- * 480-600 V No-hole circuit breaker
- * Miniature circuit breaker kit (1 of each type)
- * 2 x Red Brady safety padlocks
- * Nylon non-conductive hasp
- * Red nylon non-conductive hasp
- * Large red LOTO pouch
- * 76 x 160 mm "Do not operate" tag
- * Pen
- * Packaging: unit



172392

Masterlock lockout kit

Manufacturer's ref.: MAINTKIT-FR

Manufacturer: Masterlock

Contains:

- * Lot of 2 keyed-alike Zenex™ padlocks
- * 2 miniature circuit breaker units
- * Universal circuit breaker unit
- * 2 x «Do not use» labels
- * Nylon lockout hook with flexible loop
- * Adjustable lockout cable 1.80 m x Ø 4 mm
- * FREE compact lockout pouch
- * Packaging: unit



Hygiene

182691

Stokoderm Grip Pure Deb Stoko
Manufacturer's ref.: SGP1L
Manufacturer: DEB STOKO

* Universal barrier cream containing Eucoriol®, unique skin reinforcement agent which helps to prevent softening of the skin under the gloves and IPE and improves grip in damp environments

* Contents: 1 litre

* Packaging: unit



159753

Deb Stoko Deb Protect 1000 appliance
Manufacturer's ref.: PRO1LDSSTH
Manufacturer: DEB STOKO

* Distribution system compatible with 1l retractable cartridges. New generation of distributors in an innovative design associated with a leading edge technology. Simple to use and support, economic and robust. Sensitizing and training tool which simplifies hand hygiene protocols with its use of pictograms and a colour code

* Contents: 1 litre

* Packaging: unit



160235

Deb Stoko 2l Estesol washing lotion

Manufacturer's ref.: LTW2LT
Manufacturer: DEB STOKO

* Lightly perfumed - suitable for both men and women and without a persistent odour
* a mixture of soft and effective surfactants – hypoallergenic formula suitable for frequent use to remove minor dirt and impurities.

* Contains glycerine - helps to improve hydration of the skin and prevent drying out, leaving the skin smooth and firm after use

* Certified Ecolabel

* Contents: 2l retractable cartridge

* Packaging: unit



176836

Deb Stoko Light Cleanse Appliance
Manufacturer's ref.: LGT2LDPSTH
Manufacturer: DEB STOKO

* New generation of distributors with an innovative design associated with a leading edge technology. Simple to use and support, economic and robust. Sensitizing and training tool which simplifies hand hygiene protocols with its use of pictograms and a colour code

* Contents: 2 litres

* Packaging: unit



112939

Deb Stoko Light Solopol®
Manufacturer's ref.: 33449
Manufacturer: DEB STOKO

Solvent-free cleaning cream and cutaneous cleaning pastes for heavy to very heavy soiling

* Perfumed paste, pH neutral for skin

* Very good cleaning power, contains Eucornol®, a skin-protecting substance, procures a pleasant sensation on the skin, contains Astopon®, a fine natural agent filler (refined nutshell flour), contains aloe vera

* Moderate to severe soiling due, for example, to oils, greases, soot, graphite, metallic dust, lubricants

* Contents: 2 litres

* Packaging: unit



170606

Deb Stoko Heavy Cleanse Appliance
Manufacturer's ref.: HVY2LDPSTH
Manufacturer: DEB STOKO

* A unique range of 2l and 4l devices, for sealed product cartridges, meeting the different needs of all professional environments and public places

* Contents: 2 litres

* Packaging: unit



Hygiene

170613

Deb Stoko Kresto Special Ultra cleaning paste

Manufacturer's ref.: KSP2LT

Manufacturer: DEB STOKO

- * Formulated with a solvent based on a soft ester - specific solvent having an exceptional cleaning performance, soft for the skin
- * Extremely concentrated formula – Only a small quantity of product is necessary for complete and economic cleaning. Contains natural and patented vegetable fillers: Astopon® - helps to provide cleaning in depth, without damaging the skin or harming the environment
- * Lightly perfumed - Pleasant to use & high skin tolerance for the user
- * Contents: 2l retractable cartridge
- * Packaging: unit



170615

Deb Stoko Ultra Cleanse Appliance

Manufacturer's ref.: ULT2LDPSTH

Manufacturer: DEB STOKO

- * New generation of distributors with an innovative design associated with a leading edge technology. Simple to use and support, economic and robust. Sensitizing and training tool which simplifies hand hygiene protocols with its use of pictograms and a colour code
- * Contents: 2 litres
- * Packaging: unit



159824

Deb InstantFOAM® Complete

Manufacturer's ref.: ULT2LDPSTH

Manufacturer: DEB STOKO

- * Disinfectant hydroalcoholic foam for the hands without rinsing
- * Broad spectrum biocide-bactericidal action (EN1500), virucide (EN14476), levuricide (EN1650) and mycobactericide (EN14348). Eliminates 99.999% of the most common germs
- * Instantaneous foam action - gives the user complete control of the product and avoids streams and splashes
- * Clinically proven cutaneous tolerance - independent tests, prevents cutaneous drying out, even after frequent use
- * No perfume, no colouring
- * Contents: 1 litre
- * Packaging: by 6



176843

Deb Sanitise 1000 appliance

Manufacturer's ref.: SAN1LDSSTH

Manufacturer: DEB STOKO

- * Distribution system compatible with 1l retractable cartridges. New generation of distributors in an innovative design associated with a leading edge technology. Simple to use and support, economic and robust. Sensitizing and training tool which simplifies hand hygiene protocols with its use of pictograms and a colour code
- * Contents: 1 litre
- * Packaging: unit



Hygiene

170610

Deb Stoko Classic Stokolan®
Manufacturer's ref.: SCL1L
Manufacturer: DEB STOKO

- * Enriched regenerating cream - specially formulated to nourish, hydrate and soothe stressed skins
- * Restores the cutaneous barrier - helps with production of the skin's lipid barrier and promotes cellular renewal
- * Contains lanolin - a natural lipid recognized for its excellent hydrating and nourishing properties for the skin
- * Contents: 1 litre
- * Packaging: unit



183137

Deb Stoko Stokolan® Light Gel
Manufacturer's ref.: SGE1L
Manufacturer: DEB STOKO

- * Unique hydrating gel formula - designed to be absorbed rapidly by the skin and provides a refreshing effect - regular use
- * Light texture - leaves a non-greasy sensation after use
- * Contains glycerine and urea – improves the water retention capacity of the top layers of the skin and sustains the skin hydration system correctly
- * Contents: 1 litre
- * Packaging: unit



183138

Deb Stoko Intense Stokolan®
Manufacturer's ref.: SIN1L
Manufacturer: DEB STOKO

- * Very dry skins | Very stressed skins
- * Immediate and intense hydration – immediately after use, improves skin hydration by 40% and helps to repair very dry and stressed skins (clinically proven)
- * Long term hydrating effect – hydrates for more than 4 hours after a single application
- * Contents: 1 litre
- * Packaging: unit



170611

Deb Stoko Restore 1000 appliance
Manufacturer's ref.: RES1LDSSTH
Manufacturer: DEB STOKO

- * Distribution system compatible with 1l retractable cartridges. New generation of distributors in an innovative design associated with a leading edge technology. Simple to use and support, economic and robust. Sensitizing and training tool which simplifies hand hygiene protocols with its use of pictograms and a colour code
- * Contents: 1 litre
- * Packaging: unit



136902

JLF Disinfectant Spray
Manufacturer's ref.: 601VS
Manufacturer: JLF

- * Deodorising, sanitising cosmetic foot lotion in a 150 ml aerosol
- * Ingredients: ethyl alcohol, isohexane
- * Mixture of natural and synthetic ingredients
- * Packaging: unit



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Appendix 01: HSE Plan

STS/HSE/MS

Revision: 01

Effective date: March 2019

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HSE PLAN TEMPLATE NO.:

IDENTIFICATION OF THE OPERATION

Describe the operation to be performed:
.....
.....
.....

DATE OF WORK

Start date: Scheduled end date:

OPERATION LOCATION

.....
.....
.....



RECAP

All the documents provided to compile the HSE plan must be specific to the context and nature of the operation

The HSE plan must be updated as the operation progresses, taking into account changes and the incorporation of new elements (new activity, new company, unforeseen events, etc.)

This document must be archived for a period of 10 years. The associated documents (general WORK permit, specific permits, etc.) ARE archived for the current and previous years.



Appendix 01: HSE Plan

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I - CONTENTS OF THE HSE PLAN

1. DEFINITION OF THE OPERATION AND OBLIGATIONS OF THE EC AND UC

Today, (date), Mr, on behalf of the company
....., site of, User Company (UC)

And, the representatives of the External Companies (EC) designated below, (see next page §2 Identification of signatories)

Have compiled this **HSE Plan** following a **joint preliminary visit** of the site, concerning the operation of, which will take place from..... (date) until (date).

If the operation continues beyond this date, a new HSE Plan must be compiled.

The aim of this agreement is to **establish**, before work starts, the appropriate **preventive measures** for the identified health, safety and environmental risks in all the **phases of hazardous activities selected**. *This analysis is as comprehensive as possible for the different work phases and the ensuing risk situations.*

The **User Company Manager** is required to involve the representatives and worksite managers of all External Companies and request the involvement of any person concerned with compiling the HSE Plan, provide all relevant information and be responsible for the overall coordination of the work.

Each **External Company Manager** undertakes to provide all relevant information and pass on all the information in this HSE Plan to his/her subcontractors and to each of his/her own employees called upon to take part in the work, and **remains responsible for** applying the preventive measures necessary for the protection of his/her staff.

This HSE Plan must be updated or completed based on:

- Developments in the work and the risks
- The intervention of new External Companies.

Any External Company that was unable to participate in the joint preliminary visit and the HSE Plan coordination meeting may be included in the HSE Plan provided the HSE Plan is updated with:

- A preliminary meeting between the User Company and the External Company
- An analysis of the risks and possible interference generated by the External Company
- Distribution of the updated HSE Plan to all External Companies present on the worksite (with acknowledgement of receipt for all External Companies that have signed the previous version of the HSE Plan).

This HSE Plan supplements the **general safety instructions** and all the legal obligations arising from the **texts in force in the entity's country**, of which each External Company must inform its employees.

The worksite manager of each External Company must be present.



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2. IDENTIFICATION OF SIGNATORIES

2.1 USER COMPANY (ENTITY)

User Company		
Name and address of the site:		
Contact		details:
Period of work on the site: From:/...../..... To:/...../.....		
Operator or delegated representative	Instructing party	Worksite supervisor
Name:	Name:	Name:
Position:	Position:	Position:

2.2 EXTERNAL COMPANIES

External Company No. 1:			
Address:			
Contact			details:
First name and last name of the worksite manager:			
Work	Workforce	Work location	Period of work
.....		From:/...../..... To:/...../.....

External Company No. 2:			
Address:			
Contact			details:
First name and last name of the worksite manager:			
Work	Workforce	Work location	Period of work



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.....	From:/...../..... To:/...../.....
-------	-------	-------	---

External Company No. 3:			
Address:			
Contact			details:
.....			
First name and last name of the worksite manager:			
<u>Work</u>	<u>Workforce</u>	<u>Work location</u>	<u>Period of work</u>
.....		.....	From:/...../..... To:/...../.....

External Company No. 4:			
Address:			
Contact			details:
.....			
First name and last name of the worksite manager:			
<u>Work</u>	<u>Workforce</u>	<u>Work location</u>	<u>Period of work</u>
.....		.....	From:/...../..... To:/...../.....

The above templates can be replicated according to the number of External Companies involved and as needed



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2.3 SUBCONTRACTORS FOR EXTERNAL COMPANIES (SECOND TIER)

Subcontractor No. 1:			
Address:			
Contact			details:
.....			
First name and last name of the worksite manager:			
<u>Work</u>	<u>Workforce</u>	<u>Work location</u>	<u>Period of work</u>
.....		..... .....	From:/...../..... To:/...../.....

Subcontractor No. 2:			
Address:			
Contact			details:
.....			
First name and last name of the worksite manager:			
<u>Work</u>	<u>Workforce</u>	<u>Work location</u>	<u>Period of work</u>
.....		..... .....	From:/...../..... To:/...../.....

The above templates can be replicated according to the number of subcontractors involved and as needed

- The External Company is responsible for informing the operator or the instructing party as quickly as possible of any new subcontractor employed, that was not foreseen in this HSE Plan.
- An organisation chart including the name, position and reporting relationship between all those involved must be attached to this HSE plan for each main company and subcontractor**

3. GOLDEN RULES



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The Golden Rules must be strictly obeyed. All employees of the entity concerned and of partner companies, including subcontractors, are personally and collectively committed to ensuring safety on a daily basis during operations and on the sites with a common goal: "Zero fatal accidents".

All workers must take ownership of these Golden Rules and take great care in implementing them. Their strict application must become automatic for everyone.

The 12 Golden Rules are:

	High-risk situations		Powered systems
	Traffic		Confined spaces
	Movements, postures and tools		Excavation work
	Personal protective equipment (PPE)		Work at height
	Work permit		Hot work
	Lifting operations		Danger line

- The 12 Golden Rules booklet should be provided to all workers, explained to them and attached to this HSE plan

4. GENERAL AND SPECIFIC SAFETY INSTRUCTIONS

4.1 GENERAL SAFETY INSTRUCTIONS



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The site on which you are going to work, apart from enclosed sites, is an establishment posing risks due to the dangerous nature of the petroleum products stored and handled there. In this respect, we have strict preventive measures which are described in this HSE plan and its associated documents, to which you are a party particularly by

- Knowing and managing the risks associated with work on our facilities
- Complying with jointly defined safety measures
- Controlling interference between work
- Sharing the basic rules that everyone must know and apply
- Reinforcing prevention by encouraging everyone to intervene as soon as a deviation is observed
- Stopping the work if the risk is not managed
- Reporting anomalies.

In this regard, the general and specific safety instructions to be applied must contain the following requirements:

- The overriding hazards and risks
- The obligation to translate instructions to anyone who does not know the country's language
- That only the people needed for the work are present on site
- Adherence to working hours
- Work must not be carried out without a permit (general or specific) and/or certificates

In any case, for the entire duration of the work, a qualified EC representative (e.g. worksite manager), who is familiar with the instructions and has the necessary experience, must be present at all times and must undertake to inform his/her staff, display the safety instructions and ensure that they are followed.

4.2 PROTECTIVE EQUIPMENT

- The obligation to provide its staff with the appropriate collective and personal protection.
- The obligation to wear 100% cotton clothing and underwear that is suitable and compliant
- The obligation to immediately change out of any clothing impregnated with chemical and petroleum products

4.3 GENERAL HEALTH AND SAFETY RULES

- The washing and toilet facilities provided must be kept perfectly clean.
- The External Company must provide 3 litres of fresh drinking water per person per day.
- Access and traffic routes must be kept clear.
- Bringing fire or flame in any form is prohibited, except for the performance of work covered by a Hot Work Permit.
- The use of mobile phones, headphones or similar devices is prohibited
- Bringing an outside person onto the worksite or an animal or a child onto the site is prohibited
- Being in an unauthorised location or route is prohibited
- Meals are not permitted in the worksite area
- Taking photographs without permission is prohibited
- Running on the site is prohibited
- Participating in dangerous games, fights or bullying is prohibited
- Operating the appliances or valves is prohibited (except for the entity's staff)
- Bringing in or taking out equipment or products without permission is prohibited
- Borrowing the entity's equipment or tools without permission is prohibited
- Using fire hydrants without permission is prohibited
- Driving a forklift truck without a driving licence is prohibited

Level 1 confidentiality. For internal use by TotalEnergies



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4.4 INSTALLING AND CLEANING THE WORKSITE

The person in charge of the worksite must ensure that the worksite is kept clean and in order:

- Ensure that staff do not leave any objects, tools or equipment in piping, tanks and in high places
- Approved fire extinguishers (minimum of 2) appropriate to the risks are provided by the EC near the workstations
- Using drums either as supports or as makeshift workbenches is prohibited
- Refuelling any appliance while it is in operation is prohibited
- Obligation to leave the premises clean and free of all unnecessary materials or waste of any kind
- Obligation to adhere to the waste management system in place on the site
- Using flammable products for cleaning without permission is prohibited
- Leaving papers, greasy rags and other rubbish lying around is prohibited; these must be collected in metal bins with lids
- Leaving any dangerous objects or tools lying around (boards with nails in them, sharp metal sheets, etc.) is prohibited

4.5 SITE RISK

- Pay attention when moving around:
 - In order not to trip over (obstacles / damage) or slip (slippery floors: presence of lubricants)
 - To trolley, lorry and pedestrian traffic: obey the signs
 - To the risk of falling objects in storage and lifting areas
- Presence of hazardous chemicals: wear your PPE.

4.6 CONDUCT IN THE EVENT OF AN ACCIDENT

Any accident, whether to persons or equipment, must systematically and immediately be reported to the operator or the instructing party

In the event of an accident involving a person:

- Protect the victim without putting yourself at risk
- Alert the emergency services in accordance with the emergency plan and inform the operator or the instructing party
- Rescue, provide assistance (do not move the victim except if there is serious and imminent danger)
- Never give the victim anything to drink.
- For splashes, use the safety showers and eyewash stations available.

In the event of an accident involving equipment:

- Take appropriate action without exposing yourself to undue risk.

If the alarm sounds or a gas detector is triggered:

- Stop work
- Extinguish open fires on the worksite
- Stop motorised equipment, machinery and vehicles
- Shut down equipment that may present a fire hazard and remove it if possible (e.g. gas cylinders)
- Leave all passageways clear to allow the safety teams to respond
- Evacuate using the nearest emergency exit and never go back
- Gather around the worksite manager at the assembly point (see attached plans)
- Wait for instructions

Do not start work again under any circumstances until the end of the alert is confirmed by the operator or the instructing party

- Place for sounding the alert / Alarm button (Identify and locate):
- Alarm signal (Describe when and how staff became aware of the alarm signal):
- Assembly Point (Identify and locate):

4.7 EXAMPLE OF A PICTOGRAM DISPLAY FOR SAFETY INSTRUCTIONS

These safety instructions must be displayed with appropriate signage. Below are some pictograms that can be used as appropriate

PPE	 Avec jugulaire    
General health and safety rules	             
Installing and cleaning the worksite	   
Site risk	            
Conduct in the event of an accident	      

4.8 INTERNAL RULES OF THE SITE AND/OR ENTITY

The internal rules of the site or entity were presented and explained to all workers



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On:/...../..... (date) at (time)

by Last name: First name: Position:

The site's internal rules must be attached to this HSE plan

4.9 SPECIAL SAFETY INSTRUCTIONS

-
-
-
-
-
-
-
-
-

5. MANAGEMENT COMMITMENT AND LEADERSHIP

The External Company must provide:

- The appropriate Health, Safety, Environment, Social and Quality Charter for the company's purpose and context, defining HSE objectives and including the commitment to the continuous improvement of its HSE management system.
- A written commitment to comply with all applicable local regulations and the entity's or subsidiary's HSE rules, which are included in the contract.
- The Management Review Schedule
- These three documents are attached to this HSE plan

6. STAFF TRAINING AND ACCREDITATION

To carry out certain specific operations (e.g. electricity, welding, work in confined spaces, etc.), the worker must be trained and qualified and have been declared fit by the works doctor. Accreditation is the employer's recognition of the ability of the person placed under its authority to perform the tasks entrusted to him/her in complete safety with regard to the risks identified. Before being qualified,



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Tasks (Describe the task)	Company	Persons qualified to carry out these tasks	Type of certificate and accreditation
.....	Last name(s): First name: Position: .....	.....
.....	Last name(s): First name: Position: .....	.....
.....	Last name(s): First name: Position: .....	.....
.....	Last name(s): First name: Position: .....	.....
.....	Last name(s): First name: Position: .....	.....

Training certificates and accreditations are attached to this HSE plan

7. HYGIENE AND HEALTH

7.1 MEDICAL FITNESS FORMS

These forms (to be provided by the EC) must be produced by their works doctor. Fitness for the defined position must take into consideration the constraints associated with the intervention on our facilities.

The required medical fitness forms are attached to this HSE plan

7.2 ENHANCED MEDICAL SURVEILLANCE

Does the work covered by this HSE Plan include positions requiring enhanced medical monitoring?

- NO
- YES → The list of these positions/tasks must be completed by the E.C. in the table below

Company	Tasks / Positions requiring enhanced medical monitoring
---------	---



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<p>.....</p>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>

7.3 WASHING AND TOILET FACILITIES

During the entire period of work, the External Company is obliged, in conjunction with the User Company, to provide the following necessary washing and toilet facilities for the workers:

- 1 changing room with two compartments for men and women
- 1 washbasin for 10 people in the men's and women's changing room
- Showers for men and women
- 1 cubicle and 1 urinal for 20 men
- 2 cubicles for 20 women
- Catering facilities
- First aid kits
- Other:

Describe the facilities and state their number	Location	Set up by (State U.C. or E.C.)	Maintained by (State U.C. or E.C.)
.....
.....
.....



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8. EQUIPMENT AND PRODUCTS

8.1 PROVISION OF EQUIPMENT

- The External Company must provide a list of the equipment to be used for the operation according to the nature of the work, the associated risks, the phasing of the work, etc.
- This equipment must be suitable and compliant and proof of its compliance checks is provided
- The list of equipment and the proof of its compliance are attached to this HSE plan**

8.2 PROVISION OF PRODUCTS

- The External Company must provide a list of the products that will be used during the operation according to the nature of the work, the associated risks, the phasing of the work etc.
- The safety data sheets related to these products must be provided by the External Company before using them.
- The list of products and their SDS are attached to this HSE plan**



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9. JOINT PRELIMINARY VISIT

During **the joint preliminary visit**,

Scheduled for:/...../..... (date)

Completed on:/...../..... (date) in the presence of the representatives of the External Companies mentioned on the first page, the following actions were carried out:

Identification and demarcation:

- Risks associated with the entity's activity or its environment (in particular overhead power lines, various networks, groundwater, the neighbourhood, etc.)
- Areas which may present interference hazards with the activity of the External Companies
- The External Companies' intervention sector, marking the zones in this area which may be hazardous for the staff and indicating one-off risks within this zone

Location

- Parking areas (private vehicles, HGVs, machinery, etc.)
- workshops and equipment storage areas
- emergency exits
- assembly point in the event of an alert
- changing rooms, washing and toilet facilities, catering facilities and first aid equipment, etc. ...

Indication of access roads and routes to be followed by staff, vehicles and machinery to reach:

- the worksite
- equipment storage workshops
- changing rooms, washing and toilet facilities, catering facilities
- the **assembly point** in the event of an emergency
- the location of first aid equipment, etc.

Safety instructions

- Preparation and communication of safety instructions applicable to the operation which will concern the employees of these companies when they work or move around.

All items identified during this joint preliminary visit will be indicated on the plans attached to this HSE plan, and will be included in the preparation of the detailed risk analysis, the operating procedures, the general work permit and any specific permits and certificates.

- All these points will be included in a report. This is attached to this HSE plan**

10. RISK ANALYSIS

All the risk analyses carried out from the project phase to the joint preliminary visit must be included in this HSE plan.

- Preliminary analysis carried out on:/...../..... (date)
- Detailed risk analysis carried out on:/...../..... (date)
- Pre-commencement risk analysis to be carried out on the scheduled work date:/...../..... (date)



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The detailed risk analysis and associated preventive measures are attached to this HSE plan

As a reminder, the preliminary risk analysis is carried out during the preparation of the call for tenders. This analysis is usually carried out by the subsidiary's engineering teams or by a commissioned engineering consulting firm.

The detailed risk analysis is carried out following the joint preliminary site visit by the appropriate staff from the subsidiary and all the External Companies involved in the operation. This analysis includes the elements of the preliminary analysis and in particular makes it possible to incorporate the risks inherent in each company's activity and those associated with interference and co-activities.

Tick the hazardous activity phases corresponding to the operation work:

- | | |
|--|---|
| <input type="checkbox"/> 1. Hot spots | <input type="checkbox"/> 15. Very low / very high temperature facilities |
| <input type="checkbox"/> 2. Confined spaces | <input type="checkbox"/> 16. Radiography / gamma radiography |
| <input type="checkbox"/> 3. Height | <input type="checkbox"/> 17. Switching off parts of a facility containing flammable gas or compressed air |
| <input type="checkbox"/> 4. Lifting | <input type="checkbox"/> 18. Line emptying and flushing |
| <input type="checkbox"/> 5. Digging / Excavation | <input type="checkbox"/> 19. Demolition |
| <input type="checkbox"/> 6. Electric | <input type="checkbox"/> 20. Signage |
| <input type="checkbox"/> 7. ATEX zone | <input type="checkbox"/> 21. Buildings and furniture |
| <input type="checkbox"/> 8. In water and at the water's edge | <input type="checkbox"/> 22. Heating and air conditioning |
| <input type="checkbox"/> 9. Containers & Piping Tanks & Piping (including LPG) | <input type="checkbox"/> 23. Washing and cleaning and treatment system |
| <input type="checkbox"/> 10. High pressure cleaning | <input type="checkbox"/> 24. Civil engineering, roads and prefabrication |
| <input type="checkbox"/> 11. Hazardous machinery and equipment | <input type="checkbox"/> 25. Maintenance bay |
| <input type="checkbox"/> 12. Sandblasting and painting | <input type="checkbox"/> 26. General amenities & Green areas |
| <input type="checkbox"/> 13. Dispensing equipment including LPG / GPLC | <input type="checkbox"/> 27. Measurement, Monitoring and Inspection |
| <input type="checkbox"/> 14. Canopies | |

The main risks identified during these analyses should be reported in the table below and the analysis reports attached to this HSE Plan

Risks identified	Preventive and protective measures to be implemented
.....
.....
.....
.....
.....
.....



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.....
.....
.....
.....

It is important that these risk analyses are completed on the day of the intervention and before the permits are signed by checking the following elements in the field:

- The intervention location
- The specific risks of the operation / work
- The workers and the equipment/materials
- The processes (Operating procedure)
- The definition of the isolations
- The definition of the collective protection to be put in place, the personal protective equipment (PPE) and other necessary means of prevention.
- The weather conditions
- Co-activity, operation and any interference from outside the site

11. WORK PERMIT AND ASSOCIATED DOCUMENTS RELATED TO THE OPERATION

11.1 IDENTIFICATION OF PERMITS AND ASSOCIATED DOCUMENTS REQUIRED FOR THE OPERATION

The work permit (general and/or specific) must be validated and signed on site before the work in question begins. Starting work at any location without a **work permit** is prohibited - except for regular services that can be carried out without a work permit (based on risk analyses) and approved by the appropriate line authority at least once a year and for which an operating procedure has been drawn up and validated.

Tick the permits and associated documents required for the operation in the table below

Appendix No.	Documents governing the different types of work posing risks	Tick if required
8	General work permit or DPP	<input type="checkbox"/>
9	Simplified work permit	<input type="checkbox"/>
10	Hot work permit	<input type="checkbox"/>
11	Work at height permit	<input type="checkbox"/>
12	Cleaning / Degassing permit	<input type="checkbox"/>
13	Excavation permit	<input type="checkbox"/>
14	Lifting permit	<input type="checkbox"/>
15	Radiographic testing permit	<input type="checkbox"/>
16	Lockout / Tagout certificate	<input type="checkbox"/>
17	Cleaning / Degassing certificate	<input type="checkbox"/>



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18	Confined Space Entry Certificate	<input type="checkbox"/>
19	Excavation certificate	<input type="checkbox"/>
20	Certificate for work at the water's edge	<input type="checkbox"/>
21	Lifting plan or file	<input type="checkbox"/>
22	Checklist - Scaffolding	<input type="checkbox"/>
23	Checklist - MEWPs	<input type="checkbox"/>
24	Checklist - Roof work	<input type="checkbox"/>
25	Checklist - Rope access work	<input type="checkbox"/>
26	Checklist - Mobile ladder as a means of access	<input type="checkbox"/>
27	Checklist - Harnesses	<input type="checkbox"/>
28	Atmospheric measurement form	<input type="checkbox"/>
29	Lifting operations categorisation form	<input type="checkbox"/>
30	Work acceptance form	<input type="checkbox"/>

11.2 LIST OF PERSONS QUALIFIED TO ISSUE PERMITS, AND TO CARRY OUT CERTAIN TASKS

Put "Not Applicable" in the boxes of the documents and tasks that will not be needed for the operation.

State the tasks, permits and associated documents required	Name(s) and position(s) of the person(s) qualified to issue and/or sign the documents (Approving authority)	Name(s) and position(s) of the person(s) qualified (Executing authority)	
		To issue and/or sign the documents	To perform the task
.....	Last name(s): First name: Position: Company: Signature:	Last name(s): First name: Position: Company:	Last name(s): First name: Position: Company:
.....	Last name(s): First name: Position: Company: Signature:	Last name(s): First name: Position: Company:	Last name(s): First name: Position: Company:



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.....	Last name(s): First name: Position: Company: Signature:	Last name(s): First name: Position: Company:	Last name(s): First name: Position: Company:
.....	Last name(s): First name: Position: Company: Signature:	Last name(s): First name: Position: Company:	Last name(s): First name: Position: Company:

- The permits and associated documents are included in this HSE plan
- The list of persons qualified to issue a permit is attached to this HSE plan

12. OPERATING PROCEDURES

The operating procedure is a chronological and detailed description of the intervention to be carried out. It must take into account the workers' actual working conditions (e.g. the environment in which the activity is carried out) and specify the equipment, materials and resources used. The External Company must produce precise and relevant operating procedures covering its main operations, including:

- The activities posing risks to be carried out and the associated risks
 - The implementation stages and methods
 - The cases of emergency interventions and degraded situations
 - The adaptations to the types of intervention (e.g. co-activity situation)
 - The lists of equipment and protective measures (personal and collective) to be adapted according to the interventions and worksites.
- The prepared operating procedures should be attached to this HSE plan

13. SUPERVISION OF WORK

Work which poses risks requires permanent or alternating supervision depending on the phase of the work. State below the supervision systems put in place and for which phase of the work



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13.1 SUPERVISION BY THE USER COMPANY

<u>Position and organisation (if mandated by the entity)</u>	<u>Phase of the work concerned</u>
Last name(s): First name: Position: Mandated Entity or Company:	<input type="checkbox"/> Continuously <input type="checkbox"/> According to the phase of the work (to be defined):
Last name(s): First name: Position: Mandated Entity or Company:	<input type="checkbox"/> Continuously <input type="checkbox"/> According to the phase of the work (to be defined):

13.2 SUPERVISION BY THE EXTERNAL COMPANY CONCERNED

<u>Position and organisation</u>	<u>Phase of the work concerned</u>
Last name(s): First name: Position: Mandated Entity or Company:	<input type="checkbox"/> Continuously <input type="checkbox"/> According to the phase of the work (to be defined):
Last name(s): First name: Position: Mandated Entity or Company:	<input type="checkbox"/> Continuously <input type="checkbox"/> According to the phase of the work (to be defined):
Last name(s): First name:	<input type="checkbox"/> Continuously <input type="checkbox"/> According to the phase of the work (to be defined):



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Position:
Mandated Entity or Company:
.....
Last name(s):	<input type="checkbox"/> Continuously
First name:	<input type="checkbox"/> According to the phase of the work (to be defined):
Position: .....	.....
Mandated Entity or Company: .....	.....
.....

13.3 WORKSITE VISITS

The following worksite visits are compulsory in the case of work and operations posing risks:

- JST (Joint Safety Tours)
- MSV (Managerial Safety Visit)
- RSV (Regular Safety Visit)
- USV (Unannounced Safety Visit)

These worksite visits are also compulsory for External Companies. The findings of these visits are recorded in the site logbook.

Attach the following schedules to this HSE plan:

- JST schedule
- MSV schedule
- RSV schedule

13.4 PHASES REQUIRING CAMERA SURVEILLANCE

.....

.....

.....

.....

.....

.....

14. SITE AND TRAFFIC PLAN

The site and traffic plan must contain as a minimum:

- | | |
|---|--|
| <input type="checkbox"/> Intervention areas, work areas | <input type="checkbox"/> Washing and toilet facilities |
| <input type="checkbox"/> Hazardous areas | <input type="checkbox"/> Living areas |
| <input type="checkbox"/> Green areas | <input type="checkbox"/> Parking areas |
| <input type="checkbox"/> Pedestrian and vehicle access routes | <input type="checkbox"/> Equipment storage area |
| <input type="checkbox"/> Traffic routes used by workers, vehicles and machinery | <input type="checkbox"/> Waste separation area |
| | <input type="checkbox"/> Waste storage area |



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- The area and traffic plan is attached to this HSE plan

15. WORK SCHEDULE

The work schedule (e.g.: Gantt) should include the following:

- The tasks
 - Scheduling
 - Deadline / time limit
 - Co-activity phases
 - Interference phases.
- The work schedule is attached to this HSE plan

16. HANDOVER PROCEDURES

Handover / shift changeover:

- List of permits and their contents (the description of the work to be performed, as a minimum)
- This list is signed by the permit issuer taking over.

17. DECLARATION OF NIGHT AND WEEKEND WORK

- Fill in the declaration of night and weekend work for work outside standard working hours (night work, weekends / public holidays, holidays)
- The declaration of night and weekend work is attached to this HSE plan if required

18. EVACUATION AND EMERGENCIES

18.1 CONTENTS OF THE EVACUATION AND EMERGENCY PLAN

The evacuation and emergency plan must contain as a minimum:

- The objective, purpose and scope of the plan
- Description and instructions for use of emergency and crisis facilities
- Information and communication protocols
- Risk analysis for emergency / crisis scenarios
- The staff list



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- The evacuation plan including:
 - The emergency exits
 - The assembly point in the event of an alert
 - The shortest evacuation route in case of an emergency to the nearest hospital
- The emergency drill

- The evacuation and emergency plan is attached to this HSE plan**
- Certain activities requiring specific permits require appropriate rescue plans to be prepared which must also be attached to this HSE plan**

18.2 LIST OF STAFF TO GIVE FIRST AID IN CASE OF EMERGENCY (MINIMUM OF 1 PERSON FOR EVERY 20 EMPLOYEES)

User Company								
First name:	name	Last	First name:	name	Last	First name:	name	Last
.....				
Position:			Position:			Position:		
Signature:			Signature:			Signature:		
External Companies including subcontractors								
Company 1:			Company 2:			Company 3:		
.....				
First name:	name	Last	First name:	name	Last	First name:	name	Last
.....				
Position:			Position:			Position:		
Signature:			Signature:			Signature:		
Company 4:			Company 5:			Company 6:		
.....				
First name:	name	Last	First name:	name	Last	First name:	name	Last
.....				
Position:			Position:			Position:		
Signature:			Signature:			Signature:		
Company 7:			Company 8:			Company 9:		
.....				
First name:	name	Last	First name:	name	Last	First name:	name	Last
.....				
Position:			Position:			Position:		



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Signature:	Signature:	Signature:
Company 10:	Company 11:	Company 12:
First name Last name:	First name Last name:	First name Last name:
Position:	Position:	Position:
Signature:	Signature:	Signature:

19. EXPOSURE TO HAZARDOUS SUBSTANCES

The Exposure to Hazardous Substances Plan must contain as a minimum:

- A list of products on site
- Associated safety data sheets

Checks for exposure to hazardous substances must be performed. If required, specify the frequency of exposure
To be completed if applicable:

.....

.....

.....

.....



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20. ENVIRONMENTAL PROTECTION:

External Companies, including subcontractors, must act responsibly by reducing and limiting the effects and impacts of their activities on the environment during the operation. The environmental management plan describes all the actions to limit such impacts and must contain as a minimum:

- Environmental regulatory monitoring
 - The roles and responsibilities of the UC and the EC
 - A waste management plan containing:
 - The inventory and tracking table for waste (source, type, quantity)
 - Waste management and storage
 - Tracking and transport of waste
 - Waste treatment and disposal (disposal channels and waste service providers)
 - Consumption management (e.g.: water and energy consumption tracking table)
 - Management of accidental pollution (preventive / protective measures related to accidental spills or discharges)
 - Management of noise, vibration, visual and olfactory pollution (measurement tracking table (sound level and vibration meters) and procedure for managing and dealing with complaints from third parties)
 - Management of carbon emissions (e.g. monitoring the worksite's carbon footprint)
 - Chemical management
 - Management and treatment of contaminated land
 - Rehabilitation of the site
-
- The environmental protection plan is attached to this HSE plan**

21. CHANGE MANAGEMENT PROCEDURE (MOC)

This HSE plan should be updated to take into account any developments and changes.

The change management procedure applies to operating procedures, organisation, staff (especially critical positions), engineering, equipment (especially safety systems) and materials and substances used in the operation.

The change management procedure should contain as a minimum:

- The justification for the change / modification request
- The implementation plan (exact scope / duration of change)
- The risk assessment and expected impacts, including for co-activity
- Upstream training of workers in change management

All of the above information should be documented and tracked.

Whenever conditions change, the risk is reassessed and new measures (prevention and/or mitigation) are identified and implemented. Plans and procedures are updated accordingly and workers are duly informed of the change. Changes are not implemented without APPROVAL.

- The change management procedure is attached to this HSE plan**



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22. PREVENTION AGENCIES AND LOCAL AUTHORITIES IF NECESSARY

The entity should check whether the HSE Plan should involve prevention bodies and/or local authorities...

Authority 1 (to be specified): Tel.:	Authority 2 (to be specified): Tel.:
Authority 3 (to be specified): Tel.:	Authority 4 (to be specified): Tel.:
Authority 5 (to be specified): Tel.:	Authority 6 (to be specified): Tel.:

23. DEMOBILISATION

The External Companies and the entity ensure that the level of risk management does not deteriorate during the demobilisation of staff and equipment.

The demobilisation plan must include:

- An analysis of the specific risks associated with demobilisation
- A specific demobilisation plan

- The demobilisation plan is attached to this HSE plan**

24. HSE PERFORMANCE AND COMMUNICATION

The HSE performance and communication plan should contain the following as a minimum:

- HSE performance with key KPIs through regular reviews
- Internal reporting (frequency, recipients, etc.)
- HSE events, anomalies and the use of STOPCARD
- The implementation of action plans and corrective measures
- Sharing of feedback and awareness-raising activities
- Recognition (Motivation, Promotion of best practice, Safety award, Worker of the month)
- HSE communication (posters, notifications, events, etc.)



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- The HSE performance and communication plan is attached to this HSE plan

25. HSE MEETINGS

25.1 START OF WORKS MEETING

The start of works meeting is:

Scheduled for:/...../..... (date)

Completed on:/...../..... (date)

The purpose of the start of works meeting is to mobilise External Companies and review the phasing of the work, the co-activity and the organisation of the worksite.

25.2 FOLLOW-UP MEETING

An HSE meeting schedule specifying the dates, frequency and purpose of meetings should be drawn up. These meetings should be an opportunity to review HSE performance (measurement of KPIs) and be the subject of a report.

- HSE meeting schedule (dates/frequency, purpose of the meeting)

- The start of works meeting schedule and the minutes of the kick-off meeting are attached to this HSE plan

26. SIGNATORIES

26.1 SIGNATORIES FOR VALIDATION

The managers of the External Companies, signatories to this HSE Plan, undertake to share it with their employees and explain to them the identified risks and the associated preventive measures.

User Company								
First name	Last name	First name	Last name	First name	Last name	First name	Last name	
name:		name:		name:		name:		
.....			
Position:		Position:		Position:		Position:		
Signature:		Signature:		Signature:		Signature:		
Main and subcontracting External Companies								



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Company 1: First name Last name: Position: Signature:	Company 2: First name Last name: Position: Signature:	Company 3: First name Last name: Position: Signature:
Company 4: First name Last name: Position: Signature:	Company 5: First name Last name: Position: Signature:	Company 6: First name Last name: Position: Signature:
Company 7: First name Last name: Position: Signature:	Company 8: First name Last name: Position: Signature:	Company 9: First name Last name: Position: Signature:
Company 10: First name Last name: Position: Signature:	Company 11: First name Last name: Position: Signature:	Company 12: First name Last name: Position: Signature:

External opinions if necessary, based on the regulations in force:

.....

.....

.....



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Any delegation of signature must be formalised. The person to whom the signature has been delegated must also be qualified.

- The formal accreditation certificate of the signatories is attached to this HSE plan
- The formal delegation of signature (if required) must be attached to this HSE Plan

27. ACKNOWLEDGEMENT OF RECEIPT OF THE HSE PLAN INSTRUCTIONS

The External Companies and their subcontractors declare that they are aware of the risks inherent to the worksite and the ensuing preventive and protective measures.

This information, contained in the HSE Plan, has been communicated to them by the manager of the External Company they work for.

They also acknowledge that they have attended a safety briefing given by the User Company.

This acknowledgement must be signed by all worksite participants and handed in upon the start of works and each time new staff arrive

COMPANY:				
HSE Plan No.:				Safety briefing
Date	Worker's name	Qualification	Signature	Signature
...../...../.....		
...../...../.....		
...../...../.....		
...../...../.....		
...../...../.....		
...../...../.....		
...../...../.....		
...../...../.....		
...../...../.....		
...../...../.....		



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...../...../.....	
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The signed acknowledgement of receipt of the HSE plan instructions is attached to this HSE plan. The signature is an undertaking by all workers that they are aware of the risks and the preventive measures and conditions and that they will report any changes.

II - LIST OF DOCUMENTS ATTACHED TO THE HSE PLAN

HSE Plan Document No.	Type of document required	Check that the documents are attached
2	Organisational chart related to the operation for the EC and the UC	<input type="checkbox"/>
3	Golden Rules Booklet	<input type="checkbox"/>
4	Internal rules provided by the site and/or entity	<input type="checkbox"/>
5	Health Safety Environment Quality Policy provided by the External Company	<input type="checkbox"/>
	Commitment of the EC management to comply with all applicable regulations	<input type="checkbox"/>
	Management Review Schedule	<input type="checkbox"/>
6	Staff accreditation and training certificate	<input type="checkbox"/>
7	Medical fitness form	<input type="checkbox"/>
8	List of equipment used for each EC	<input type="checkbox"/>
	Proof of equipment compliance	<input type="checkbox"/>
	List of products introduced	<input type="checkbox"/>
	Safety data sheet of the introduced products	<input type="checkbox"/>
9	Joint preliminary visit report (See template attached to the GM)	<input type="checkbox"/>
10	Preliminary analysis	<input type="checkbox"/>
	Detailed risk analysis. Number of pages (please specify):	<input type="checkbox"/>
	Associated preventive measures. Number of pages (please specify):	<input type="checkbox"/>
	Pre-commencement risk analysis	<input type="checkbox"/>
11	General Work Permit (See template attached to the GM)	<input type="checkbox"/>
	Specific permits (See template attached to the GM)	<input type="checkbox"/>
	Additional technical documents: Lifting plan or file (See template in GM Appendix)	<input type="checkbox"/>
	List of staff qualified to issue permits	<input type="checkbox"/>
12	Operating procedures (See template attached to this GM)	<input type="checkbox"/>
14	Area and traffic plan	<input type="checkbox"/>
15	Work schedule	<input type="checkbox"/>
17	Declaration of night and weekend work (See template attached to the GM)	<input type="checkbox"/>
18	Evacuation and emergency plan	<input type="checkbox"/>
20	Environmental protection plan	<input type="checkbox"/>
21	MOC procedure	<input type="checkbox"/>
23	Demobilisation plan (including analysis)	<input type="checkbox"/>



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24	HSE performance and communication plan	<input type="checkbox"/>
25	Start of works meeting schedule	<input type="checkbox"/>
	Kick-off meeting report	<input type="checkbox"/>
26	Formal accreditation of signatories	<input type="checkbox"/>
27	Acknowledgement of receipt of the HSE Plan instructions	<input type="checkbox"/>

You are reminded that the appended documents form an integral part of the HSE Plan.



APPENDIX 02: Joint Preliminary Visit report

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Other:

.....
.....
.....

.....
.....
.....

.....
.....
.....

Area Preparation & Marking

Demarcation and marking out of the External Companies' area of intervention:

.....
.....
.....

Marking of hazardous areas*:

.....
.....
.....

Signage for occasional risks*:

.....
.....
.....

Location*:

Parking areas (private vehicles, HGVs, machinery, etc.): ÷

.....
.....

Workshops and equipment storage areas:

.....
.....

Emergency exits

Assembly point in the event of an alert

Changing rooms:

.....

Washing and toilet facilities:

.....

Catering facilities:

First aid equipment:

Indication of access roads and routes to be followed by staff, vehicles and machinery to get to*:

The worksite

The equipment storage workshops

The changing rooms, washing and toilet facilities and catering facilities

The location of first aid equipment

The assembly point

Other:

Instructions & Organisation

Safety instructions applicable to the operation which will concern the employees of the External Companies when they work or move around:

.....

Definition of the chain of command (organisation chart(s) attached):

.....

Equipment & Materials provided:

By the External Companies:

.....



APPENDIX 02: Joint Preliminary Visit report

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By the User Company:

-
-
-

Accreditations required for External Contractor staff

-
-
-
-
-
-

Planned worksite monitoring system:

- In-person supervision:
- Camera surveillance:
- Other monitoring systems:

Coordination of works: permits and associated certificates

Depending on the nature of the work and the risks identified and the co-activity, state below all the permits and certificates required. It is important to note that the number of work permits to be issued for one area is taken into account when coordinating planned works.

- Detailed risk analysis Operating procedures
- General Work Permit or DPP Simplified Work Permit Hot Work Permit Work at Height Permit
- Cleaning and Degassing Permit Excavation Permit Lifting Permit Radiographic Testing Permit
- Lockout / Tagout Certificate Cleaning and Degassing Certificate Confined Space Entry Certificate
- Excavation Certificate Certificate for work at the water's edge Lifting plan or file
- Checklist - Scaffolding Checklist - MEWPs
- Checklist - Roof work Checklist - Rope access work
- Checklist - Mobile ladder as a means of access
- Checklist - Harnesses Lifting Operations Categorisation Form
- Atmospheric measurement form Work Acceptance form
- Other additional documents (plans):

Start of works

Start of works date decision:/...../.....

Comments:

Signatories

User Company

First name Last name:	First name Last name:	First name Last name:
Position:	Position:	Position:
Signature:	Signature:	Signature:

Main External Companies including subcontractors

Company 1: First name Last name: Position: Signature:	Company 2: First name Last name: Position: Signature:	Company 3: First name Last name: Position: Signature:
Company 4: First name Last name: Position: Signature:	Company 5: First name Last name: Position: Signature:	Company 6: First name Last name: Position: Signature:
Company 7: First name Last name: Position: Signature:	Company 8: First name Last name: Position: Signature:	Company 9: First name Last name: Position: Signature:
Company 10: First name Last name: Position: Signature:	Company 11: First name Last name: Position: Signature:	Company 12: First name Last name: Position: Signature:

* These elements must be shown on the plans attached to the HSE Plan.



APPENDIX 03: OPERATING PROCEDURE TEMPLATE

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1 Identification of the operation

Describe the operation to be performed:	HSE Plan No.:	General Work Permit No.:	Permit No.:
---	---------------------	--------------------------------	-------------------

2 Company/Companies and Worker(s)

EC - Main	EC - Subcontractor(s)	Staff involved - Number:
-----------	-----------------------	--------------------------------

3 Date of work

4 Work location

...../...../.....(time)	Identify the site precisely (It must indicate the worksite footprint which corresponds to the maximum perimeter of the work area including the worksite preparation area, storage area and the area where machinery moves around):
----------------------------------	---

The activities and tasks to be performed should follow a chronological development of the way they are done, specifying the sequence of activities and tasks. The first step should always be the arrival on site with the installation of the equipment and the last step should always be the withdrawal from the worksite.

No.	Activities and tasks to be performed	Implementation stages and methods	Duration	Number of workers	Equipment used	Risks identified	Associated means of prevention and protection

The operating procedure should specify the implementation stages and method to be followed for emergency interventions and degraded situations. It must specify the adaptations to the types of interventions: co-activity situation, weather conditions, any interference from outside the site, configuration of the site, etc.

Add as many lines/pages as necessary

Executing authority Author of the operating procedure (External Company manager, Worksite manager, Team leader, Operator(s), etc.)	Approving authority Validation by the operator or the instructing party
Date:	Date:
Name:	Name:



APPENDIX 03: OPERATING PROCEDURE TEMPLATE

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Signature:

Signature:



APPENDIX 04: DECLARATION OF NIGHT AND WEEKEND WORK

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This declaration of night and weekend work is not an authorisation to work and does not dispense with the necessary permits depending on the nature of the work to be carried out

1 Identification of the operation

Describe the operation to be performed:

.....
.....

HSE Plan No.: General Work Permit or DPP No.:

2 Companies and workers

Applicants

First name Last name:

.....

Position:

First name Last name:

.....

Position:

User Company (Name of the site)

.....
.....

EC - Main

.....
.....

EC - Subcontractor(s)

.....
.....

Number of people in charge of the work present on the worksite:

First name/Last name/Company (to be written below)

.....
.....
.....

.....
.....
.....

3 Date and duration of the work

Specific day

- FRIDAY/...../.....
- SATURDAY/...../.....
- SUNDAY/...../.....
- HOLIDAY/...../.....
- NIGHT WORK/...../.....

Slots

- Morning
- Afternoon
- Day
- Night

From(time)
To(time)

4 Work location

Identify the work area precisely:

.....

5 Type of work

.....
.....
.....

6 Signatories

Approving authority

For approval

Presence on worksite Yes No

Otherwise, can be reached by calling:

.....

Worksite supervisor

For verification

Presence compulsory

Executing authority/authorities

For execution

Issuance of the declaration

Name(s):

Date:

Time:

Signature:

Name(s):

Date:

Time:

Signature:

Name(s):

.....

Date:

Time:

Signature:

Closure of the declaration

Name(s):

Date:

Time:

Signature:

Name(s):

Date:

Time:

Signature:

Name(s):

Date:

Time:

Signature:

Copies:

- Entity manager
- Operations manager
- Line manager
- On-call staff
- HSE Manager

1 Purpose of the Work Matrix

The purpose of this activity matrix, in conjunction with the risk analysis guide, is to provide an indicative list of construction, rehabilitation and maintenance work on industrial sites (stations, depots, etc.) with the associated risk level

- High-risk activities
- Moderate-risk activities
- Low-risk activities

This document contains the essential concepts related to the work and the risk analysis.

2 Scope

This matrix is intended for all entities of the Marketing & Services Division. It applies to all sites in the network and depots, and must be applied to all work. This matrix is drawn up after specific risk analyses, and approved by the appropriate line authority at least once a year

The rules for preparing and approving work which can be carried out without a work permit are defined in the entity's work permit procedure.

The comprehensive list of the work that can be done without a work permit is drawn up based on risk analyses. It is reviewed and approved by the appropriate line authority at least once a year.

It covers all phases of activities corresponding to the work below.

- | | | |
|---|--|---|
| 1. Hot work | 10. High pressure cleaning | 19. Demolition |
| 2. Confined spaces | 11. Hazardous machinery and equipment | 20. Signage |
| 3. Height | 12. Sandblasting and painting | 21. Buildings and furniture |
| 4. Lifting | 13. Dispensing equipment including LPG / GPLC | 22. Heating and air conditioning |
| 5. Digging / Excavation | 14. Canopies | 23. Washing and cleaning and treatment system |
| 6. Electrical | 15. Very low / very high temperature facilities | 24. Civil engineering, roads and prefabrication |
| 7. ATEX zone | 16. Radiography /gamma radiography | 25. Maintenance bay |
| 8. In water and at the water's edge | 17. Switching off parts of a facility containing flammable gas or compressed air | 26. General amenities & Green areas |
| 9. Containers & Piping Tanks & Piping (including LPG) | 18. Line emptying and flushing | 27. Measurement, Monitoring and Inspection |

3 Matrix of activities and operations posing risks (construction, rehabilitation, maintenance)

Type of work	High-risk activities	Moderate-risk activities	Low-risk activities
Hot Work	<ul style="list-style-type: none"> • Work with risk of ignition • (Possible sparking/flames) within hazardous areas (See relevant definition) 	<ul style="list-style-type: none"> • Work with a fire risk outside hazardous areas 	
Confined spaces	<ul style="list-style-type: none"> • Storage tank stratification work • Opening of line/enclosed container for product posing risks • Cleaning / degassing of enclosed container • Work in shafts > 1.30 m deep • Work in separators • Work in tanks • Work in spaces defined by local regulations as confined spaces 	<ul style="list-style-type: none"> • Work in shafts ≤ 1.30 m deep 	
Height	<ul style="list-style-type: none"> • Work at heights above > 1.50 m where there are no safety devices. • Work with risk of falling when the height difference is > 1.50 	<ul style="list-style-type: none"> • Work at heights below 3 m and where there are safety devices. • Work inside buildings on false ceilings 	

	<ul style="list-style-type: none"> m (at the edge of a pit, a shaft, a separation, where there are no safety devices) Work with elevating platforms over 3 m 	<ul style="list-style-type: none"> m 	
Lifting	<ul style="list-style-type: none"> Category 3 (Critical) and Category 2 (Standard) lifting work. See categorisation form: Lifting of tanks, framework, shells for depots, totems, washing gantries, screening, canopies, twin walls, cabins, generators, The load to be lifted ≥ 2 tonnes 	<ul style="list-style-type: none"> Category 1 (simple) lifting work. See categorisation form Lifting of distribution equipment With load to be lifted < 2 tonnes Lifting by forklift, earthmover Pallet lifting 	
Digging / Excavation	<ul style="list-style-type: none"> Excavation work > 1.30 m deep or in hazardous areas 	<ul style="list-style-type: none"> Excavation work ≤ 1.30 m deep and > 0.10 m outside a hazardous area Excavation work for the separator pit Excavation work for the totem pole pit. 	<ul style="list-style-type: none"> Excavation work ≤ 0.5 m deep outside a hazardous area
Electrical	<ul style="list-style-type: none"> All live electrical work Work in the vicinity of bare lines Work on electrical installations Intervention on transformers Intervention on electrical distributors Installation and maintenance of solar equipment Installation / replacement of electrical cable Lockout/Tagout operation 	<ul style="list-style-type: none"> Maintenance work on electrical panels, including replacement of lamps and sockets in offices Measuring and correcting grounding Intervention on electric generator Installation / Repair of lighting equipment Installation of electrical cables on the premises Installation of grounding 	<ul style="list-style-type: none"> Measurement / Control / Troubleshooting Switch off live installations using the devices provided (switches, fuses, etc.) Small-scale electrical work Inverter and voltage limiter
ATEX zone	<ul style="list-style-type: none"> Any intervention in an ATEX zone 		
In water and at the water's edge	<ul style="list-style-type: none"> Work at the water's edge Diving 		
Containers and Piping Tanks & piping (including LPG)	<ul style="list-style-type: none"> Intervention on tanks / containers Storage tank stratification Opening of line/enclosed container for product posing risks Cleaning / degassing of enclosed container Leak sealing work Work on metallic and non-metallic piping Intervention on submersible pumps and cathodic protection Intervention on S1 Vapour Recovery System Intervention on gauging equipment Fixing of tank chambers Lockout/Tagout operation 	<ul style="list-style-type: none"> Intervention on delivery control system 	<ul style="list-style-type: none"> Maintenance and inspection of fire-fighting equipment
High pressure cleaning	<ul style="list-style-type: none"> High-pressure cleaning work 		
Hazardous machinery and equipment	<ul style="list-style-type: none"> Use of pressure equipment (compressors/gas cylinders, etc.) Interventions on dangerous machines (production equipment, etc.) 		

<p>Sandblasting and painting</p>	<ul style="list-style-type: none"> • Sandblasting and painting work on depots • 		
<p>Dispensing equipment including LPG / GPLC</p>	<p>Intervention on:</p> <ul style="list-style-type: none"> • Fire extinguishing systems • Pump controller • Fuel dispensing equipment (including removal/installation) • LPG / GPLC dispensing equipment • 2-stroke dispenser • S2 Vapour Recovery System 	<ul style="list-style-type: none"> • Preventive maintenance of fuel dispensers • Integrated card reader <p>Dispensing pump activity:</p> <ul style="list-style-type: none"> • Changing/ Cleaning the filter • Maintenance work inside the pump control cabinet, such as: Computer panel, Power source, Transformer, lamps and other • Changing the fuse/battery on the top of the calculator • Change the pulser • Replace the motor • Replacement/Maintenance of the pump unit and metering unit • Replacement of pump unit paddles • Calibration of the metering unit • Replacement of the worn out hose/nozzle 	
<p>Canopies</p>	<ul style="list-style-type: none"> • Cleaning at height • Work at height (replacement of corrugated sheets, PVC sheets and gutters, etc.) • Solar panel installation • Installation of canopy floodlights. • Installation of canopy cables. • Canopy painting work. 	<ul style="list-style-type: none"> • Cleaning of canopies from the ground without working at height • Ground-level canopy assembly work 	
<p>Very low / very high temperature facilities</p>	<ul style="list-style-type: none"> • Work on very low (from - 5 °C) or very high temperature (from 55 °C) facilities 		
<p>Radiography /gamma radiography</p>	<ul style="list-style-type: none"> • Radiographic testing intervention 		
<p>Switching off parts of a facility containing flammable gas or compressed air</p>	<ul style="list-style-type: none"> • Commissioning of supply systems containing flammable gases • Initial filling with gas or when servicing a tank with opening of the vessel • Controlled gas venting (combustion) • All maintenance work, dismantling or replacement of components/instruments that are not equipped with a shut-off valve to depressurise or degas the system. • Inerting and degassing of tanks or pits and shafts > 1.30 m deep containing flammable liquids or gases. • Work that may result in an accidental or uncontrolled release of a product, gas or inert gas that presents a risk of explosion, suffocation or poisoning. 	<ul style="list-style-type: none"> • All maintenance work, dismantling or replacement of components/instruments that are equipped with a shut-off valve to depressurise or degas the system. • Facilities/equipment containing non-flammable gases (e.g. compressed air): pressure > 10 bar 	<ul style="list-style-type: none"> • Facilities/equipment containing non-flammable gases (e.g. compressed air): pressure ≤ 10 bar

	<ul style="list-style-type: none"> Use of nitrogen, noble gases, dry ice (CO₂), etc. for flushing and filling parts of a facility. 		
Line emptying and flushing	<ul style="list-style-type: none"> Line emptying and flushing work 		
Demolition	<ul style="list-style-type: none"> Building demolition work Demolition and modification of load-bearing elements (load-bearing walls, props, etc.) Work with demolition using explosives 		
Signage	<ul style="list-style-type: none"> Installation of canopy signs and other signage interventions at height Totem & Mat prices 	Cleaning and maintenance of panels without working at height	
Buildings and furniture	<ul style="list-style-type: none"> Interventions on lifts / hoists including following malfunctions Video surveillance system at height 	Interventions on: <ul style="list-style-type: none"> Automatic door Metal shutters Fire extinguishing systems Chiller cabinets Cold storage rooms Restaurant furniture Restaurant equipment Grease traps Doors and windows and safe 	<ul style="list-style-type: none"> Cleaning of the premises Security guards Small-scale plumbing without hot work Recurring activities & maintenance of non-hazardous equipment in offices, photocopiers, etc. Indoor work on washing and toilet facilities, windows, doors, furniture, hinges, without working at height Shop furniture without working at height Management equipment / separate card reader Receipt of packaged products (cartons, packaging, etc.)
Heating and air conditioning		<ul style="list-style-type: none"> Air conditioning, refrigeration and ventilation malfunctions (including replacement of equipment) without working at height 	
Washing and cleaning and treatment system	Interventions on: <ul style="list-style-type: none"> Roller gantry Water recycling unit Wastewater Treatment Unit Hydrocarbon decanter - separator Interventions following a malfunction on the compressors and replacement of equipment 	<ul style="list-style-type: none"> Interventions on car wash equipment Installation and maintenance of automatic bay doors Preventive maintenance of air compressors 	<ul style="list-style-type: none"> Hoovers Air and water machines
Civil engineering, roads and prefabrication	<ul style="list-style-type: none"> Work with construction equipment, machinery and structures in any of the high risk activities Drilling and boring in hazardous areas Unusual interventions exposing staff to hazardous substances (chemicals, asbestos, etc.) 	<ul style="list-style-type: none"> Road works, traffic routes and parking areas Painting work not considered as work at height and not considered as work involving exposure to hazardous substances, Work with construction equipment, machinery and structures in any of the moderate risk activities Compaction and backfill work 	<ul style="list-style-type: none"> Minor civil engineering works Simple work with construction equipment, machines and structures requiring no training / qualification certificate for appliances/machinery/structures Masonry work on the ground Manual work and/or handling



APPENDIX 05: Activity matrix

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		<ul style="list-style-type: none"> • Drilling and boring outside a hazardous area • Work on the public highway • Reinforcement work, formwork and concreting including tank camber 	<ul style="list-style-type: none"> • Cold work in workshops. • Kerb laying
Maintenance bay		<p>Interventions on:</p> <ul style="list-style-type: none"> • Hydrocarbon separators • Metal shutters • Waste oil tank • Installation and maintenance of automatic bay doors • Lubricating equipment 	
General amenities & Green areas	<ul style="list-style-type: none"> • Maintenance of green areas with tree pruning 	<ul style="list-style-type: none"> • Rainwater harvesting system 	<ul style="list-style-type: none"> • Fences • Maintenance of green areas without special machinery or tree pruning
Measurement, Monitoring and Inspection			<ul style="list-style-type: none"> • Control operation Visual inspections • Monitoring of piezometers • Gauging, sampling • Recurring activities in the laboratories. • Performance of atmospheric tests • Calibration of equipment.



APPENDIX 06: Worksite Safety Visit (Profile: Technical / HSE / Operations)

<p>Date of visit:</p> <p>Operation No.: Name of Site or Worksite:</p>	<p>Name of Visitor:</p> <p>Contact details of the visited company's management</p> <p>Last name First name Email address</p>
<p>Company / Companies visited</p> <p>Name: Type of work:</p>	<p>Contact details of the visited company's management</p> <p>Last name First name Email address</p>
<p>Description of work</p> 	

Evaluation Grid

	Satisfactory	Unsatisfactory	Not applicable	Comments
No. 1 - Avoiding situations posing risks				
<p>RULE 1</p> <p>Situation posing risks</p>				
1.1 Are safety instructions displayed on the worksite and known to the workers?				
1.2 Are the staff involved aware of the procedure for securing degraded situations?				
1.3 Is there an attendance register and is it used?				
1.4 Do visitors and newcomers automatically receive a safety briefing?				
1.5 Is there a qualified HSE supervisor on site?				
1.6 No staff smoke or vape outside authorised areas?				
1.7 No staff are under the influence of alcohol, drugs or psychotropic substances?				
1.8 No deliberate intervention can start without a risk analysis and associated preventive measures?				
1.9 Are the risks known before an infrequent or complex operation is performed?				
1.10 Workers adhere to the operating procedures for stopping and starting equipment and facilities				
1.11 Do all workers have their own signed "Safety Passport"?				
1.12 Have the Safety Green Light meetings taken place?				
No. 2 - Compliance with safety rules when driving / moving around.				
<p>RULE 2</p> <p>Traffic</p>				
2.1 Is the worksite properly demarcated with appropriate markings around the work areas?				
2.2 Has the condition of the vehicles been checked before use?				
2.3 Compliance with parking and traffic rules (vehicles parked in the direction of departure, routes and parking areas marked out)?				
2.4 Compliance with driving rules (speeding, seatbelts fastened, road conditions, no communication systems used including hands-free kit, etc.)				
2.5 Compliance with authorised driving times and the travel management plan?				
2.6 Compliance with pedestrian traffic rules (footpaths laid out and demarcated on the worksite, and staff and visitors are required to use them, handrails are used on the stairways, etc.)				
2.7 Is all machine driving accompanied by a driving permit from the company manager?				
No. 3 - Handle tools safely				
<p>RULE 3</p> <p>Movements, postures and tools</p>				
3.1 No lending of equipment between companies / No use of site equipment (including fire extinguisher)?				
3.2 All necessary equipment / tools are present, checked and appropriate. Are they in line with the permit, the task and the environment (ATEX zone)?				
3.3 Are the tools, test accessories or tests used within the limits set by the manufacturer?				

	3.4 Is the safety equipment provided for in the HSE plan and permit and in the Total rules (e.g. explosimeter and fire extinguisher in the area, etc.) present?				
	3.5 Are the work movements and postures adapted to minimise overexertion?				
No. 4 - Wear the required PPE.					
RULE 4	4.1 Is standard PPE (hard hat with chin strap, shoes, cotton clothing, gloves, jackets) correctly worn by staff in the work area?				
	4.2 Is the specific PPE required (harness, mask, goggles, specific gloves, life jacket, etc.) compliant and correctly worn?				
	4.3 Is the PPE (standard and specific) compliant, visually in good condition and appropriate for the task and work area?				
No. 5 - Work with a valid permit.					
RULE 5	5.1 Have any specific accreditations required (e.g. electrical accreditation, welding certificate, CACES, driving permit, etc.) been presented?				
Work Permit	5.2 Compliance with procedures: Have the HSE plan and associated permits, operating procedures, risk analysis, etc. been checked?				
	5.3 Have certificates and other required documents (cleaning and degassing certificates, various networks for excavation, verification of scaffolding / MEWP, etc.) been checked?				
	5.4 Has the content of the permit been explained and understood by the workers?				
	5.5 Has the work location been identified by all the workers?				
	5.6 Have the permits and operating procedures been signed by qualified staff who have received the required training (e.g. worksite safety)?				
	5.7 Has the Safety Green Light Meeting taken place and the safety conditions fulfilled so that work can start?				
	5.8 Does the work being carried out comply with the work permit?				
	5.9 Do the workers know that if there is a change, they must stop the work, refer to the supervisor and reassess the risks?				
No. 6 - Preparation and planning of the lifting operation and compliance with the lifting plan or file					
RULE 6	6.1 Inspection (condition and compliance) of lifting equipment and accessories, rehearsal of the manoeuvre, absence / existence of external risks (electrical cables, road traffic, ground stability, etc.)?				
Lifting	6.2 Are the accreditations of the workers (supervisor, driver, sling operator, etc.) suitable for the equipment used?				
	6.3 The perimeter is secure: Area marked / barricaded and no movement under the load being lifted?				
	6.4 Is there a lifting permit and is it being complied with?				
	6.5 Is the lifting plan or file available on site, checked and adapted to the operation (e.g.: Erecting canopies, burying tanks, lifting shells, etc.)?				
	6.6 Is the load supervised and monitored (the slinging, packing and control of the moving load is checked)?				
No. 7 - Check for isolation and absence of energy and fluids before any intervention.					
RULE 7	7.1 Have the work permit and the lockout / tagout certificate for powered systems been issued and are they available?				
Powered Systems	7.2 Have electrical and hydraulic networks etc. been locked out / tagged out, if required?				
	7.3 Compliance with the lockout / tagout stages and the isolation diagram (risk analysis, lockout / tagout file, separation, locking and labelling, discharge of stored energy, test for absence of energy/fluid, etc.)				
	7.4 Check that all energy and fluid sources have been identified, isolated, locked and labelled?				
	7.5 Has the lockout / tagout procedure been carried out by qualified staff? Are the accreditations of these members of staff on the site?				
	7.6 At the end of the work, check that isolation has been removed before restarting?				

No. 8 - Required authorisation before entering a confined space and monitoring of operations.					
<p>RULE 8</p> <p>Confined spaces</p> 	8.1 No entry into a confined space without formal authorisation, permit and certificate to enter. Are the permits and certificate valid and available on site?				
	8.2 Is there personal and/or collective protection equipment (fire extinguisher, explosimeter, tripod, pulley, locking, barricaded access, etc.)?				
	8.3 If required, is the appropriate and compliant breathing apparatus used?				
	8.4 No intervention in a confined space, including a manifold or manhole chimney, is carried out by just one person (rule: 2 people minimum)?				
	8.5 Check that the atmosphere is checked before the operation and continuously during the operation?				
	8.6 Are all energy and fluid sources isolated?				
	8.7 Is there continuous monitoring of the operation, entries / exits in order to raise the alarm?				
	8.8 Is the rescue plan / evacuation plan prepared, known and mastered?				
	No. 9 - The ground is prepared for the excavation work. The permit is available with the underground plan before the excavation. I secure the excavation areas.				
<p>RULE 9</p> <p>Excavation Work</p> 	9.1 No excavation without an excavation permit and certificate. Are the required permits and certificate valid and available on site?				
	9.2 Is there marking and collective protection (impassable guardrails) around the excavation area during excavation?				
	9.3 Are the means of excavation appropriate and compliant and are they placed at the required safety distance (1 m)?				
	9.4 During the operation, is there constant vigilance regarding the location of underground networks and structures?				
	9.5 The extracted materials are positioned more than one metre away from the excavation. Are polluted materials disposed of by a specialist company with follow-up and traceability?				
	9.6 Staff do not descend into an unprotected excavation > 1.3 metres and without secure access (reinforced, ladder etc.)?				
No. 10 - Protect yourself from the risk of falling when working at heights ≥ 1.5 m.					
<p>RULE 10</p> <p>Work at Height</p> 	10.1 No intervention at height without a permit. Are the required permits valid and available on site?				
	10.2 Are tools and materials systematically secured to prevent falling objects?				
	10.3 Are there any power lines in the vicinity of the intervention area? Are the safety distances in relation to these lines respected?				
	10.4 For interventions at height (roofs, buildings, tanks, canopies, etc.). Has their solidity and the solidity of the anchor points been checked with proof? Has the access route been defined and have fragile areas been protected?				
	10.5 The equipment used (scaffolding, MEWPs, harnesses, lanyards, lifelines) is adapted as necessary and approved				
	10.6 Is the collective protection equipment (scaffolding, MEWPs, lifelines, safety nets, guardrails, etc.) defined in the work permit and the operating procedure compliant and correctly installed?				
	10.7 Has the personal protective equipment used (hard hat with chin strap, harness, lanyard, etc.) been systematically checked for compliance before use?				
	10.8 If required, is the harness worn by the workers and attached to validated anchor points?				
	10.9 Is appropriate marking in place and has the stability of the scaffolding been checked?				
	10.10 The minimum safety distance is observed when working near power lines				
	10.11 Ensure that stepladder / ladder work is prohibited and that the MEWP is only moved in the down position?				
	10.12 Is the emergency evacuation plan prepared, known and mastered?				
No. 11 - Avoid hot work whenever possible.					

RULE 11 	11.1 No hot work without formal authorisation and permit. Is the permit available on site and valid?					
	11.2 Have flammable substances and ignition sources been identified, located and isolated?					
	11.3 In an ATEX zone, check that the atmosphere is checked before the operation and continuously during the operation?					
No. 12 - Stay out of the danger line						
RULE 12 Danger line 	12.1 Have the workers been informed and made aware of how to avoid moving objects, machinery and vehicles, pressure discharges and falling objects?					
	12.2 The safety perimeter is demarcated and the safety barriers have been installed					
	12.3 Check that safety perimeters and barriers are respected?					
	12.4 Check that loose objects are secured?					
No. 13 - Change management						
 Additional checks	13.1 Consideration of the changing worksite. Does the work being carried out comply with the work permit?					
	13.2 Consideration of changing conditions (e.g. weather for lifting, change of operator for a fire permit, etc.)?					
	13.3 No technical or organisational changes to the work without prior authorisation from the instructing party?					
	No. 14 - Simultaneous operations and Co-activity					
	14.1 No work operations without a Joint Inspection Visit (JIV) or preliminary visit (before starting the work)?					
	14.2 Are there coordination meetings to discuss and organise simultaneous work?					
	14.3 Are there any safety measures if Co-activity on the site (prohibition of unloading, customer management, etc.)?					
	14.4 Has the HSE plan been signed by all companies involved in the work?					
	No. 15 - Storage and waste management					
	15.1 Tidy and well-maintained worksite?					
	15.2 Are there Product Information Notices on site, SDS (Safety Data Sheets)?					
	15.3 Compliance in the management of non-hazardous waste (on-site sorting, disposal and recovery management)?					
15.4 Compliance in the management of hazardous waste (Check the existence of a management system for the disposal of hazardous waste, existence of the Uniform Hazardous Waste Manifest, etc.)?						
No. 16 - Qualification and subcontracting						
16.1 Subcontracting compliance (e.g. declared subcontracting, validated subcontracting level, etc.)?						
16.2 Are all the companies and subcontractors involved in an operation posing risks qualified, as appropriate (ICC, MASE, VCA, SCC, ISO 45001, etc.) or are they accompanied by the Company mandated by TotalEnergies?						
Signatures				Non-compliance	%	
General Comments						

Level 1 confidentiality. For internal use by TotalEnergies

1 Identification of the operation

 Describe the operation to be performed:

.....

.....

HSE Plan No.: General Work Permit No.:

2 Company/Companies and Worker(s)

User Company (Name of site)	EC - Main	EC - Subcontractor(s)
.....
.....

Works staff Number:

First name / Last name / Company (to be written below)

.....
.....

3 Date of work and validity period

Date of work: General permit valid from:/...../..... (time) To:/...../..... (time)

The general permit is valid for a maximum of 1 week and must be signed every day

The general permit is issued for an intervention defined according to the following 5 criteria:

- Location
 Nature of the work
 Workers
 Process (Operating procedure)
- Environment (weather conditions (storm / wind) are within the limits defined for the intervention, co-activity, facilities, any interference from outside the site)

The 5 criteria must be checked at the beginning of the intervention (D1) and at least every day; as soon as one criterion changes, the general permit is cancelled and a new permit must be issued.

4 Work location

Identify the site precisely (It must indicate the worksite footprint which corresponds to the maximum perimeter of the work area including the worksite preparation area, storage area and the area where machinery moves around):

- The work is taking place in an ATEX risk zone (see station / depot plan, ATEX risk zoning)
- The work is taking place in a confined space (inspection holes, confined premises, etc.)
- The work is taking place in an area that may contain flammable vapours (gas cylinders, excavation, etc.)

If at least one box is ticked, the measurement of explosivity (continuous, intermittent or one-off depending on the risk analysis) and oxygen (if confined space) is compulsory. **The atmospheric measurement form must be attached**

5 PPE compulsory for all External Companies



Avec jugulaire



- Ensure that personal protective equipment is appropriate, complies with the conditions of use defined by the manufacturer, is checked and compliant and is worn by all workers

6 Safety measures compulsory for all External Companies



- Ensure that hazards, obligations and prohibitions are visually indicated with appropriate signs

7 Preventive measures common to all External Companies

Applicability		The implementation of preventive measures must be verified on site	On-site check	
YE	NO	C: Compliant NC: Non-compliant	C	NC
S	<input type="checkbox"/>			
X				

Preventive measures impacting on operations & co-activity

<input type="checkbox"/>	Ensure that the number of work permits in the operation area and the risks associated with simultaneous or co-active operations are taken into account when coordinating the scheduled work.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Distribution or operation of the site concerned (station, depot, etc.) is partially or totally stopped	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Another activity is stopped (specify): From (time) to (time)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The site concerned is closed from: (time) to	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Unloading is stopped from: (time) to (time)	<input type="checkbox"/>	<input type="checkbox"/>

Preparation

<input type="checkbox"/>	The intervention area is marked out (physical barriers, cones, etc.) and prepared (cleaning, evacuation, traffic routes, storage area, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
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<input type="checkbox"/>	Keep the work area tidy to facilitate access to exits and emergency access	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that no unauthorised persons have access to the worksite and that clear visual signage is in place.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The lockout / tagout procedure has been performed on networks in the vicinity of the work area (hydraulic, electrical, mechanical, etc.). The lockout / tagout certificate is issued.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	ATEX zones are determined, identified and taken into account when carrying out the work	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	If required (proximity to an ATEX zone), the atmosphere is continuously monitored (explosimeter / beacon). The measurement form is completed.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that the work is permanently monitored by a competent person	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that the risk analysis for the operation and covering each intervention has been carried out and is available on site	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The operating procedures have been prepared step by step, validated and are available on site. They have been discussed with the intervention teams	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Only use authorised passageways on the worksite (walkways, stairs)	<input type="checkbox"/>	<input type="checkbox"/>

Equipment

<input type="checkbox"/>	The tools and materials used are appropriate, comply with the conditions of use defined by their manufacturer and are checked and compliant	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	A sufficient number of fire extinguishers suitable for the task are available	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The periodic general inspection of construction vehicles has been carried out	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	If required, ensure that personal LEL / gas detectors are worn at all times	<input type="checkbox"/>	<input type="checkbox"/>

Training and accreditation

<input type="checkbox"/>	Check that the authorised staff are qualified and competent to perform the operation. They are trained and are aware of the risks according to the intervention. And that all the staff have attended the safety briefing.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that the staff involved are medically fit	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	If required, atmospheric measurements should be carried out by a competent and qualified person	<input type="checkbox"/>	<input type="checkbox"/>

Compulsory measures before closing the permit

<input type="checkbox"/>	Ensure the work is accepted and completed as agreed	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that the site is restored to full service and that the markings are removed.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure the networks are unlocked / untagged according to the procedure	<input type="checkbox"/>	<input type="checkbox"/>

8 Preventive measures according to the nature of the work and associated risks

Category 1: Work posing risks covered by specific permits and/or certificates

The nature of the work, the associated risks and the preventive measures are specified in each of the specific permits and/or certificates. The specific permit / certificate must be completed on site before work starts.

- Hot work
 Excavation work
 Work in confined spaces
 Lifting work
 Work at height
 Cleaning / degassing
 Radiographic testing
 Lockout / Tagout operations
 Work at the water's edge

Category 2: Other work posing risks covered by this general permit

Nature of work	Nature of risks	Preventive measures
<u>Movement and traffic:</u> <input type="checkbox"/> Vehicle / machinery traffic <input type="checkbox"/> Pedestrian traffic	<input type="checkbox"/> Collision of pedestrians / private vehicles / HGVs <input type="checkbox"/> Collision / crash / crushing <input type="checkbox"/> Slips and trips <input type="checkbox"/> Fuel leakage <input type="checkbox"/> Other: <input type="checkbox"/>	<input type="checkbox"/> Respect for traffic and parking plan <input type="checkbox"/> Appropriate vehicle / machinery, in good condition, regulatory inspections up-to-date <input type="checkbox"/> Compliance with speed limits <input type="checkbox"/> Traffic aids (lights, signals, crossing devices) <input type="checkbox"/> Other:
<u>Work in ATEX zones:</u>	<input type="checkbox"/> Start of fire <input type="checkbox"/> Explosion <input type="checkbox"/> Other:	<input type="checkbox"/> Lockout / Tagout certificate <input type="checkbox"/> ATEX tools / equipment <input type="checkbox"/> Staff trained in ATEX work <input type="checkbox"/> Atmospheric analysis (completed measurement form) <input type="checkbox"/> Other:
<u>Manual work and/or handling</u>	<input type="checkbox"/> Ejections / bursts <input type="checkbox"/> Cutting / Pinching / Trapping <input type="checkbox"/> Lumbago / muscle pain <input type="checkbox"/> Other:	<input type="checkbox"/> Appropriate equipment / tools provided by the employer <input type="checkbox"/> Appropriate movement and posture <input type="checkbox"/> Work with other people <input type="checkbox"/> Mechanical handling equipment <input type="checkbox"/> Compliance with load weight regulations <input type="checkbox"/> Other:
<u>Intervention on dangerous machines</u>	<input type="checkbox"/> Moving part / getting caught <input type="checkbox"/> Vibration / Whiplash <input type="checkbox"/> Accidental startup <input type="checkbox"/> Crushing / Cutting <input type="checkbox"/> Other:	<input type="checkbox"/> Training / accreditation: <input type="checkbox"/> Lockout / Tagout certificate <input type="checkbox"/> Other:
<u>Use of chemical products</u>	<input type="checkbox"/> Chemical burns <input type="checkbox"/> Ingestion / Poisoning <input type="checkbox"/> Inhalation <input type="checkbox"/> Other:	<input type="checkbox"/> SDS for chemical products <input type="checkbox"/> Identification of products <input type="checkbox"/> Other:



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<u>Work on very low / very high temperature facilities</u>	<input type="checkbox"/> Thermal burns <input type="checkbox"/> Other: <input type="checkbox"/>	<input type="checkbox"/> Cooling of equipment <input type="checkbox"/> Other:
<u>Use of pressure equipment (compressors / gas cylinders, etc.)</u>	<input type="checkbox"/> Burns <input type="checkbox"/> Cutting <input type="checkbox"/> Explosion <input type="checkbox"/> Excessive noise <input type="checkbox"/> Other:	<input type="checkbox"/> Cylinders always fixed in an upright position. <input type="checkbox"/> Cylinders supported by a transport trolley <input type="checkbox"/> Turn off cylinders and shut down engines every time work stops <input type="checkbox"/> Protect cylinders from excessive exposure to sunlight or bad weather <input type="checkbox"/> Tools in good condition and compliant (hose, trigger, emergency stop system, etc.) <input type="checkbox"/> Safety devices (compressed air pressure control, self-locking, etc.) <input type="checkbox"/> Other:
<u>Electrical work</u>	<input type="checkbox"/> Electric shock / Electrocutation <input type="checkbox"/> Electric arc <input type="checkbox"/> Waste generation <input type="checkbox"/> Other:	<input type="checkbox"/> Lockout / Tagout certificate <input type="checkbox"/> Grounding of equipment <input type="checkbox"/> Staff accreditation <input type="checkbox"/> Use of standard extension cables <input type="checkbox"/> Use of insulating material (carpet or board, etc.) <input type="checkbox"/> Watches, rings, chains and other jewellery are not allowed for any electrical work <input type="checkbox"/> Tools appropriate and in good condition <input type="checkbox"/> Switch off temporary electrical connections at the end of the work (every evening) <input type="checkbox"/> Other:
<u>Line emptying and flushing work:</u>	<input type="checkbox"/> Chemical / thermal burns <input type="checkbox"/> Poisoning <input type="checkbox"/> Fire / Explosion <input type="checkbox"/> Pressurised fluids <input type="checkbox"/> Corrosive / toxic / irritant products <input type="checkbox"/> Widespread knock-on effects depending on works <input type="checkbox"/> Other:	<input type="checkbox"/> Lockout / Tagout certificate <input type="checkbox"/> Compatibility of products entering the site <input type="checkbox"/> Checking hydraulic circuits <input type="checkbox"/> Drain using a scraping device <input type="checkbox"/> Flush pipes with water <input type="checkbox"/> Hydrocarbon collection equipment (aluminium container, rags, etc.) <input type="checkbox"/> Pumping equipment <input type="checkbox"/> Other:
<u>Demolition work:</u>	<input type="checkbox"/> Burial / Crushing <input type="checkbox"/> Falling object <input type="checkbox"/> Dust inhalation <input type="checkbox"/> Soil, air and water pollution <input type="checkbox"/> Excessive noise <input type="checkbox"/> Other:	<input type="checkbox"/> Limit dust emissions (capture at source, wet demolition, ventilation, cover skips with tarpaulins, etc.) <input type="checkbox"/> A single dumping point for the disposal of rubble <input type="checkbox"/> Non-dispersion of water or laitance products <input type="checkbox"/> Stop work if unexpected materials are found <input type="checkbox"/> Items dismantled without demolition <input type="checkbox"/> Other:
<u>Sand-blasting and painting work</u>	<input type="checkbox"/> Inhalation / Poisoning <input type="checkbox"/> Ejections / Irritation / Injury <input type="checkbox"/> Excessive noise <input type="checkbox"/> Fire / Explosion <input type="checkbox"/> Corrosive / toxic / irritant products <input type="checkbox"/> Damage to equipment or containers <input type="checkbox"/> Product spillage <input type="checkbox"/> Falling from a height <input type="checkbox"/> Pollution of soil and water	<input type="checkbox"/> Move or protect sensitive / fragile equipment <input type="checkbox"/> Schedule absorbent and/or recovery materials in case of an accidental spillage <input type="checkbox"/> Waste collection (gloves, rags, paper, etc.) <input type="checkbox"/> Tools in good condition and compliant (hose, trigger, emergency stop system, etc.) <input type="checkbox"/> Safety devices (anti-whip, anti-discharge, screens, etc.) <input type="checkbox"/> Second worker in visual contact with the operator compulsory for any work with the lance <input type="checkbox"/> Quick access to the emergency stop <input type="checkbox"/> Check that there are no power lines above the work area that can be affected by the spray <input type="checkbox"/> Perform wet blasting in an ATEX zone <input type="checkbox"/> Compressors and compressed air tanks positioned outside the containment tank <input type="checkbox"/> Consideration of the risk of recoil force in the case of work at height. <input type="checkbox"/> Other:
<u>Interventions on lifts</u>	<input type="checkbox"/> Crushing / Injuries <input type="checkbox"/> Fall <input type="checkbox"/> Locking of doors <input type="checkbox"/> Other:	<input type="checkbox"/> Ensure that the preventive measures defined with the professional are implemented <input type="checkbox"/> Lockout / Tagout certificate if required <input type="checkbox"/> Specific PPE worn if required (harness) <input type="checkbox"/> Other:
<u>Opening of hazardous product line or enclosed container</u>	<input type="checkbox"/> Chemical / thermal burns <input type="checkbox"/> Poisoning <input type="checkbox"/> Fire / Explosion <input type="checkbox"/> Pressurised fluids <input type="checkbox"/> Corrosive / toxic / irritant products <input type="checkbox"/> Widespread knock-on effects depending	<input type="checkbox"/> Lockout / Tagout certificate <input type="checkbox"/> Cleaning / Degassing certificate <input type="checkbox"/> Evacuation of residual hazardous products to a purge network and a pumping vehicle <input type="checkbox"/> Set up protective covers <input type="checkbox"/> Schedule necessary absorbent and/or recovery



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	<ul style="list-style-type: none"> <input type="checkbox"/> on works <input type="checkbox"/> Waste generation <input type="checkbox"/> Other: 	<ul style="list-style-type: none"> <input type="checkbox"/> materials in case of an accidental spillage <input type="checkbox"/> Other:
<u>Leak sealing work</u>	<ul style="list-style-type: none"> <input type="checkbox"/> Chemical / thermal burns <input type="checkbox"/> Fire / Explosion <input type="checkbox"/> Pressurised fluids <input type="checkbox"/> Corrosive / toxic / irritant products <input type="checkbox"/> Widespread knock-on effects depending on works <input type="checkbox"/> Waste generation <input type="checkbox"/> Other: 	<ul style="list-style-type: none"> <input type="checkbox"/> Schedule necessary absorbent and/or recovery materials in case of an accidental spillage <input type="checkbox"/> Waste collection (gloves, rags, paper, etc.) <input type="checkbox"/> Set up protective covers <input type="checkbox"/> Other:
<u>High-pressure cleaning work</u>	<ul style="list-style-type: none"> <input type="checkbox"/> Ejections / Irritation / Injury / Cutting <input type="checkbox"/> Whiplash <input type="checkbox"/> Excessive noise <input type="checkbox"/> Fire / Explosion <input type="checkbox"/> Corrosive / toxic / irritant products <input type="checkbox"/> Damage to equipment or containers <input type="checkbox"/> Product spillage <input type="checkbox"/> Falling from a height <input type="checkbox"/> Pollution of soil and water <input type="checkbox"/> Other: 	<ul style="list-style-type: none"> <input type="checkbox"/> Move or protect sensitive / fragile equipment <input type="checkbox"/> Schedule absorbent and/or recovery materials in case of an accidental spillage <input type="checkbox"/> Waste collection (gloves, rags, paper, etc.) <input type="checkbox"/> Tools in good condition and compliant (hose, trigger, emergency stop system, etc.) <input type="checkbox"/> Safety devices (anti-whip, anti-discharge, screens, etc.) <input type="checkbox"/> Second worker in visual contact with the operator compulsory for any work with the lance <input type="checkbox"/> Quick access to the emergency stop <input type="checkbox"/> Check that there are no power lines above the work area that can be affected by the spray <input type="checkbox"/> Compressors and compressed air tanks positioned outside the containment tank <input type="checkbox"/> Consideration of the risk of recoil force in the case of work at height. <input type="checkbox"/> Other:
<u>Work in the prefabrication workshop</u>	<ul style="list-style-type: none"> <input type="checkbox"/> Ejections / Irritation / Injury / Cutting <input type="checkbox"/> Burns <input type="checkbox"/> Presence of hazardous products <input type="checkbox"/> Fire / Explosion 	<ul style="list-style-type: none"> <input type="checkbox"/> Protect sharp parts <input type="checkbox"/> Waste collection (gloves, rags, paper, etc.) <input type="checkbox"/> Schedule absorbent and/or recovery materials in case of an accidental spillage <input type="checkbox"/> Provision of tools in good condition <input type="checkbox"/> Other:
<u>Maintenance work on green areas</u>	<ul style="list-style-type: none"> <input type="checkbox"/> Chemical / toxic / irritant products <input type="checkbox"/> Musculoskeletal disorders <input type="checkbox"/> Fire <input type="checkbox"/> Falls / Cuts / Serious injuries <input type="checkbox"/> Excessive noise <input type="checkbox"/> Accidental product spillage <input type="checkbox"/> Soil, air and water pollution 	<ul style="list-style-type: none"> <input type="checkbox"/> Work at Height permit (for tree pruning) <input type="checkbox"/> Schedule necessary absorbent and/or recovery materials in case of an accidental spillage <input type="checkbox"/> Collect waste <input type="checkbox"/> Wet ground when using manual equipment <input type="checkbox"/> Appropriate equipment / tools provided by the employer <input type="checkbox"/> Appropriate movement and posture <input type="checkbox"/> Other:
<u>Refuelling</u>	<ul style="list-style-type: none"> <input type="checkbox"/> Physical accident <input type="checkbox"/> Excessive noise <input type="checkbox"/> Fire / Explosion <input type="checkbox"/> Accidental fuel spillage <input type="checkbox"/> Other: 	<ul style="list-style-type: none"> <input type="checkbox"/> Use only diesel-powered equipment <input type="checkbox"/> Provide a suitable tank and sufficient stock <input type="checkbox"/> Adequate means of containment under the tank <input type="checkbox"/> Provide for filling with the help of a pumping device <input type="checkbox"/> Preferably use a hand pump <input type="checkbox"/> Delay filling to cool the engine <input type="checkbox"/> Hot work prohibited during refuelling <input type="checkbox"/> Switch off the engines within a 5 metre radius of the equipment to be refuelled and allow to cool <input type="checkbox"/> Aluminium container for collecting drips <input type="checkbox"/> Clean and collect waste (gloves, rags, paper, etc.) <input type="checkbox"/> Other:
<u>Maintenance work</u>	<ul style="list-style-type: none"> <input type="checkbox"/> Start of fire <input type="checkbox"/> Explosion <input type="checkbox"/> Ejections / bursts <input type="checkbox"/> Cutting / Pinching / Trapping <input type="checkbox"/> Lumbago / muscle pain <input type="checkbox"/> Other: 	<ul style="list-style-type: none"> <input type="checkbox"/> Lockout / Tagout certificate <input type="checkbox"/> ATEX tools / equipment <input type="checkbox"/> Personnel trained in ATEX work <input type="checkbox"/> Atmospheric analysis (completed measurement form) <input type="checkbox"/> Appropriate equipment / tools provided by the employer <input type="checkbox"/> Appropriate movement and posture <input type="checkbox"/> Compliance with regulatory load weights <input type="checkbox"/> Other:
<u>Road and civil engineering work</u>	<ul style="list-style-type: none"> <input type="checkbox"/> Collision of pedestrians / private vehicles / HGVs <input type="checkbox"/> Collision / crash / crushing <input type="checkbox"/> Cutting / Pinching / Trapping <input type="checkbox"/> Ejections / bursts <input type="checkbox"/> Slips and trips <input type="checkbox"/> Lumbago / muscle pain <input type="checkbox"/> Fuel leakage <input type="checkbox"/> Excessive noise 	<ul style="list-style-type: none"> <input type="checkbox"/> Appropriate movement and posture <input type="checkbox"/> Appropriate equipment / tools provided by the employer <input type="checkbox"/> Respect for traffic and parking plan <input type="checkbox"/> Appropriate vehicle / machinery, in good condition, regulatory inspections up-to-date <input type="checkbox"/> Compliance with load weight and speed regulations <input type="checkbox"/> Traffic aids (lights, signals, crossing) <input type="checkbox"/> Avoid handling bitumen with bare hands <input type="checkbox"/> Sewage networks are protected (inspection holes, etc.)



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- | | |
|--|---|
| <input type="checkbox"/> Dust emissions | <input type="checkbox"/> Limit nuisance (noise, dust) |
| <input type="checkbox"/> Burns (bitumen) | <input type="checkbox"/> Other: |
| <input type="checkbox"/> Other: | |

9 Signatories of the general permit

Date	Approving authority For approval	Executing authority For execution
...../...../.....	Name(s):	Name(s):
...../...../.....	Name(s):	Name(s):
...../...../.....	Name(s):	Name(s):
...../...../.....	Name(s):	Name(s):
...../...../.....	Name(s):	Name(s):
...../...../.....	Name(s):	Name(s):
...../...../.....	Name(s):	Name(s):

10 Closure of the general permit

- | | |
|---|--|
| <input type="checkbox"/> The work is finished | <input type="checkbox"/> The work is not finished |
| <input type="checkbox"/> The station or facility is returned to normal operation | <input type="checkbox"/> The worksite is left clean and safe |
| <input type="checkbox"/> The work will be subject to a new work permit scheduled for: | |

Approving authority	Executing authority
On/...../..... (date) at (time)	On/...../..... (date) at (time)
SIGNATURE	SIGNATURE

Conditions for permit suspension and cancellation

Any change to the planned measures will invalidate the general permit and require a new permit to be issued.

Reason for suspension or cancellation	Date	Signature
...../...../.....
.....	
.....	

The signature is an undertaking that:

- All of the workers are aware of the risks
- Preventive conditions and measures are known
- Any changes will be reported



The above preventive measures are not a comprehensive list. It is the company's responsibility to implement all the protective and safety measures according to the environment, the risks identified, the progress of the tasks and the constraints associated with operating needs. Before starting, please refer to the TotalEnergies Golden Rules and the operating and safety instructions for the site.

A "simplified" work permit can only be used for recurring, low-risk work that does not involve any co-activity or simultaneous operations.

1 Identification of the operation and worker(s)

Annual HSE Plan No.:	User Company (Name of site)	EC - Main	Works staff Number: First name/Last name (to be written below)
-------------------------------	---	--------------------	--

2 Date of work and validity period

Date of work:/...../..... Valid from:/...../..... (time) To:/...../..... (time)

The simplified permit is valid for a maximum of 1 day, and is issued for an intervention defined according to the following 5 criteria:

Location Nature of the work Workers Process (Operating procedure) Environment (weather conditions (storm/wind) are within the limits defined for the intervention, co-activity, facilities, any interference from outside the site)

The 5 criteria must be checked at the beginning of the intervention (D1) and at least every day; as soon as one criterion changes, the simplified permit is cancelled and a new permit must be issued.

3 Work location

Identify the site precisely (It must indicate the worksite footprint which corresponds to the maximum perimeter of the work area including the worksite preparation area, storage area and the area where machinery moves around):

The work is taking place in an ATEX risk zone (see station/depot plan, ATEX risk zoning)

The work is taking place in an area that may contain flammable vapours (gas cylinders, excavation, etc.)

If at least one box is ticked, the measurement of explosivity (continuous, intermittent or one-off depending on the risk analysis) and oxygen (if confined space) is compulsory. The atmospheric measurement form must be attached

4 PPE and compulsory safety measures

COMPULSORY PPE	COMPULSORY SAFETY MEASURES
 Avec jugulaire	      
<input type="checkbox"/> Ensure that PPE is compliant and appropriate and worn by all workers	<input type="checkbox"/> Ensure that hazards, obligations and prohibitions are visually indicated with appropriate signs

6 Description of the work to be carried out

The work covered by the simplified work permit must be defined in a list drawn up after an analysis of the specific risks, and approved by the appropriate hierarchical authority at least once a year.

.....

.....

.....

7 Identification of the work-related risks

The risk analysis must have been carried out by competent staff before this permit is granted and completed on site by checking the 5 criteria in Point 3 above at the start of the work and at least every day.

.....

.....

.....

8 Preventive measures related to the intervention

Applicability		The implementation of preventive measures must be verified on site	On-site check	
YES X	NO □	C: Compliant NC: Non-compliant	C	N C
<input type="checkbox"/>	<input type="checkbox"/>	Co-activity is not permitted when carrying out work covered by a simplified permit	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Distribution or operation of the site concerned (station, depot, etc.) is partially or totally stopped	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	The site concerned is closed from: .....(time) to (time)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Unloading is stopped from: .....(time) to (time)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that the worksite has been prepared and marked out beforehand	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	If required, the networks near the intervention area are locked out/tagged out. The lockout/tagout certificate is issued.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	The operating procedures have been prepared, validated and are available on site	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	The tools and equipment/materials used are compliant and appropriate and have been checked	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	A sufficient number of fire extinguishers suitable for the task are available	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that staff are qualified and competent to perform the operation. They are aware of the risks associated with the intervention.	<input type="checkbox"/>	<input type="checkbox"/>
Other measures:			o	<input type="checkbox"/>
.....			o	<input type="checkbox"/>
.....			o	<input type="checkbox"/>



APPENDIX 08: SIMPLIFIED WORK PERMIT

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.....	<input type="radio"/>	<input type="checkbox"/>
.....	<input type="radio"/>	<input type="checkbox"/>
.....	<input type="radio"/>	<input type="checkbox"/>

10 Signatories

Approving authority certifies that:

- They have been shown the compulsory valid ID card.
- They have taken note of the specified preventive measures
- The External Company is informed immediately of any change

Executing authority certifies that:

- The above safety measures are observed.
- The operator is informed of any changes (changes in risks, suspension of work, accidents, etc.)

Issuance of the permit

Name(s):	Signature:	Name(s):	Signature:
Date:/...../.....		Date:/...../.....	
Time:		Time:	

Closure of the permit

- Ensure the work is accepted and completed as agreed
- Ensure that networks are unlocked/untagged according to the procedure, that markings are removed and that the site is restored to full service

Name(s):	Signature:	Name(s):	Signature:
Date:/...../.....		Date:/...../.....	
Time:		Time:	

Conditions for permit cancellation

Any change to the planned measures will invalidate this permit and require a new permit to be issued.

Reason for cancellation	Date	Signature
...../...../.....	
.....		

The above preventive measures are not a comprehensive list. It is the company's responsibility to implement all the protective and safety measures according to the environment, the risks identified, the progress of the tasks and the constraints associated with operating needs. Before starting, please refer to the TotalEnergies Golden Rules and the operating and safety instructions for the site.



Hot work is prohibited ⁽¹⁾

In all instances, choose an alternative technique

If it is absolutely necessary, this permit must be completed, validated and signed before the work starts. Under no circumstances can hot work be carried out after a container has been cleaned. Only degassing with a result of 0% LEL allows this work to be carried out without risk of explosion.

(1) Hot work: work that generates sparks, heat or flames.

1 Identification of the operation

Describe the operation to be performed:

.....

.....

.....

HSE Plan No.:

.....

No. Cleaning/degassing Certificate No.:

Other specific associated permits:

Lockout/Tagout Certificate No.:

.....

Excavation permit

General Work Permit or DPP No.:

.....

Atmospheric Measurement Form No.:

.....

Confined space work permit

Work at height permit

2 Company/Companies and Worker(s)

User Company (Name of site)

.....

.....

.....

EC - Main

.....

.....

.....

EC - Subcontractor(s)

.....

.....

.....

Works staff Number:

First name/Last name/Company (to be written below)

.....

.....

.....

3 Date of work and validity period

Date of work: / /

From: / / (time)

To: / / (time)

The Hot Work Permit is valid for a maximum of 1 day

This permit is issued for an intervention defined according to the following 5 criteria:

Location Nature of the work Workers Process (Operating procedure)

Environment (weather conditions (storm/wind) are within the limits defined for the intervention, co-activity, facilities, any interference from outside the site)

The 5 criteria must be checked at the beginning of the intervention (D1) and at least every day; as soon as one criterion changes, the Hot Work Permit is cancelled and a new permit must be issued.

4 Work location

Identify the site precisely (It must indicate the worksite footprint which corresponds to the maximum perimeter of the work area including the worksite preparation area, storage area and the area where machinery moves around):

.....

The work is taking place in an ATEX risk zone (see station/depot plan, ATEX risk zoning)

The work is taking place in a confined space (inspection holes, confined premises, etc.)

The work is taking place in an area that may contain flammable vapours (gas cylinders, excavation, etc.)

If at least one box is ticked, the measurement of explosivity (continuous, intermittent or one-off depending on the risk analysis) and oxygen (if confined space) is compulsory. The atmospheric measurement form must be attached

5 Type of work

Open flame

Arc welding

Oxyacetylene welding

Impact work

Stripping

Cutting (arc, torch, saw)

Drilling/Coring (sparks)

Grinding (sparks)

Sandblasting

Cutting up

Heating

Demolition (describe the work):

Other work to be specified:

.....

6 PPE and compulsory safety measures

SPECIFIC PPE ACCORDING TO SITUATION



7 Identification and nature of the risks

It is essential that the risk analysis for the hot work has been carried out by competent staff before this permit is granted. It is completed on site by checking the 5 criteria in Point 3 above at the start of the intervention and at least every day.

Health:



Safety:



Environment:





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<input type="checkbox"/> Electric shock <input type="checkbox"/> Electrocution <input type="checkbox"/> Burns <input type="checkbox"/> Injuries: eyes, skin, limbs, respiratory and digestive systems	<input type="checkbox"/> Product leak <input type="checkbox"/> Fire <input type="checkbox"/> Explosion <input type="checkbox"/> Falling cylinders	<input type="checkbox"/> Accidental product spillage <input type="checkbox"/> Waste generation
--	--	---

8 Equipment & Tools used

<input type="checkbox"/> Jackhammer, concrete breaker <input type="checkbox"/> Soldering lamps <input type="checkbox"/> ATEX tools	<input type="checkbox"/> Thermal appliances <input type="checkbox"/> Torch <input type="checkbox"/> Other equipment (please specify):	<input type="checkbox"/> Electrical appliances <input type="checkbox"/> Saw
--	---	--

9 Compulsory preventive measures

Applicability	The implementation of preventive measures must be verified on site	On-site check			
	C: Compliant NC: Non-compliant				
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;"> YES <input checked="" type="checkbox"/> </td> <td style="width: 50%; text-align: center;"> NO <input type="checkbox"/> </td> </tr> </table>	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">C</td> <td style="width: 50%; text-align: center;">NC</td> </tr> </table>	C	NC
YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>				
C	NC				

Preparation

<input type="checkbox"/>	Ensure that the risk analysis for the hot work has been carried out and is available on site	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Checks on the non-combustible nature of the materials present in the intervention area (on the other side of the hot spot, buildings, insulation)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Combustible elements that cannot be moved must be protected by using tarpaulins or sheets attached to each other. Additional sprinkling can be provided if necessary.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Gaps, openings, gutters, drains, etc. are blocked up with non-combustible materials (sand, metal sheets, tarpaulins, etc.).	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that hazards associated with high temperatures and incipient fires are visually identified by affixing appropriate signs	<input type="checkbox"/>	<input type="checkbox"/>

Equipment

<input type="checkbox"/>	Protective screens (fireproof, spark-proof, etc.) are installed	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	A sufficient number of fire extinguishers suitable for the task are available	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that tools and equipment designed to operate in ATEX zones are used	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that personal LEL / gas detectors are worn at all times	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that the use of water as a compensatory measure (wetting of concrete, working under a stream of water, spraying on a chainsaw, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that venting in the open air is prohibited in the vicinity of the work area	<input type="checkbox"/>	<input type="checkbox"/>

Atmospheric measurements

<input type="checkbox"/>	Check that gas detection and explosimeter beacon(s) are installed at the required locations (bottom of the tank, low point, near the work area, etc.) to measure the atmosphere continuously. The completed measurement form must be attached to this permit.	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	---	--------------------------	--------------------------

Monitoring

<input type="checkbox"/>	At least two people must be present to perform the intervention continuously	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	If a suspicious odour is identified or the alarm sounds on one of the multi-gas detectors, work must be stopped immediately	<input type="checkbox"/>	<input type="checkbox"/>

Compulsory post-intervention and pre-permit closure measurements

<input type="checkbox"/>	Stop hot work at 4 pm, unless exempted	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that the area is checked 30 minutes and 2 hours after the end of the work, stating the checker's name and the time of the check 30 minutes afterwards (name): at (time) and 2 hours afterwards by (name): at .....(time)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure the work is accepted and completed as agreed	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that the site is restored to full service and that the markings are removed.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure the networks are unlocked/untagged according to the procedure	<input type="checkbox"/>	<input type="checkbox"/>

10 Signatories

Approving authority For approval	Worksite supervisor For verification	Executing authority For execution
--	--	---

Issuance of the permit

Name(s): Date: Time: Signature:	Name(s): Date: Time: Signature:	Name(s): Date: Time: Signature:
---	---	---

Closure of the permit



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Name(s): Date: Time: Signature:	Name(s): Date: Time: Signature:	Name(s): Date: Time: Signature:
---	---	--

Conditions for permit suspension and cancellation

Any change to the planned measures will invalidate the Hot Work permit and require a new permit to be issued.

Reason for suspension or cancellation	Date	Signature
...../...../.....

The signature is an undertaking that:

- All of the workers are aware of the risks
- Preventive conditions and measures are known
- Any changes will be reported



The above preventive measures are not a comprehensive list. It is the company's responsibility to implement all the protective and safety measures according to the environment, the identified risks, the progress of the tasks and the constraints associated with operating needs. Before starting, please refer to the TotalEnergies Golden Rules and the operating and safety instructions for the site.

Working at height is high-risk work. In order to reduce the risks at their source, choose an alternative solution. Work at height is considered to be any intervention whose height ≥ 1.5 m from the reference ground or a body of water

1 Identification of the operation

Describe the operation to be performed:

.....

HSE Plan No.: General Work Permit or DPP No.:	Preliminary checklists must be completed according to the equipment used: <input type="checkbox"/> Scaffolding No.: <input type="checkbox"/> MEWP No.: <input type="checkbox"/> Roofs No.: <input type="checkbox"/> Ropes No.:	Specific permits / associated certificates: <input type="checkbox"/> Hot Work permit <input type="checkbox"/> Excavation permit <input type="checkbox"/> Degassing permit <input type="checkbox"/> Lifting permit <input type="checkbox"/> Confined Space Entry Certificate
--	--	--

2 Company/Companies and Worker(s)

User Company (Name of site)	EC - Main	EC - Subcontractor(s)
.....

Work staff Number of workers:

First name/Last name/Company (to be written below)

.....
.....

3 Date of work and validity period

Scheduled date of work:

From: / / (time) To: / /

The Work at Height Permit is valid for a maximum of 1 day

This permit is issued for an intervention defined according to the following 5 criteria:

- Location
 Nature of the work
 Workers
 Process (Operating procedure)
- Environment (weather conditions (storm/wind) are within the limits defined for the intervention, co-activity, facilities, any interference from outside the site)

The 5 criteria must be checked at the beginning of the intervention (D1) and at least every day; as soon as one criterion changes, the Work at Height Permit is cancelled and a new permit must be issued.

4 Work location

Identify the site precisely (It must indicate the worksite footprint which corresponds to the maximum perimeter of the work area including the worksite preparation area, storage area and the area where machinery moves around):

5 Type of work

- | | | |
|--|---|---|
| <input type="checkbox"/> Roofing work. | <input type="checkbox"/> Canopy work | <input type="checkbox"/> Totem pole work. |
| <input type="checkbox"/> Work on car wash gantries | <input type="checkbox"/> Signage work | <input type="checkbox"/> Tree pruning. |
| <input type="checkbox"/> Work near an excavation | <input type="checkbox"/> Work on lifting stations | <input type="checkbox"/> Work near ridges and slopes. |
- Work to be carried out at height (if not indicated in the above list, to be defined according to the activity to be carried out: painting, welding, inspections, etc.):
-

6 Specific PPE



7 Identification and nature of the risks

It is essential that the risk analysis for the work at height has been carried out by competent staff before this permit is granted. It is completed on site by checking the 5 criteria in Point 3 above at the start of the intervention and at least every day. It should cover the following risks as a minimum (depending on relevance):

Health:  	Safety:   	Environment: 
<input type="checkbox"/> Dizziness <input type="checkbox"/> Tetany <input type="checkbox"/> Anxiety <input type="checkbox"/> Exposure to frost/extreme heat	<input type="checkbox"/> Falling persons <input type="checkbox"/> Falling objects <input type="checkbox"/> Electric arc <input type="checkbox"/> Electric shock/Electrocution <input type="checkbox"/> Injury (cuts, bumps and knocks) <input type="checkbox"/> Crushing <input type="checkbox"/> Collapse <input type="checkbox"/> Overturning	<input type="checkbox"/> Accidental spillage <input type="checkbox"/> Widespread knock-on effects depending on work <input type="checkbox"/> Waste generation

8 Equipment used

Any work at height must be carried out with appropriate means of elevation, taking into account the environment, the height, the condition of the ground and the nature and area of the work. Ladders and access ramps are not used as workstations. They are only allowed as a means of access. The use of scaffolding and MEWPs and work on roofs and rope access work are subject to a preliminary checklist that must be completed before the permit is issued.



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Height of fall	<input type="checkbox"/> 1.5 m < height ≤ 3 m	<input type="checkbox"/> 3 m < height ≤ 8 m	<input type="checkbox"/> 8 m < height ≤ 40 m
Means of elevation	<input type="checkbox"/> Stepladder and platform with guardrails (IRPL)	<input type="checkbox"/> MEWP	<input type="checkbox"/> MEWP
	<input type="checkbox"/> Fixed scaffolding <input type="checkbox"/> Rolling scaffolding	<input type="checkbox"/> Fixed scaffolding	<input type="checkbox"/> Fixed scaffolding
	<input type="checkbox"/> Mobile elevating work platform (MEWP)	<input type="checkbox"/> Rolling scaffolding	
<input type="checkbox"/> Height > 40 m: In addition to a work permit, these works require a formal authorisation. The risk analysis will determine the means of elevation to be used.			

9 Compulsory preventive measures

Applicability	The implementation of preventive measures must be verified on site	On-site check	
YES X	NO <input type="checkbox"/>	C: Compliant NC: Non-compliant	
		C	NC

Preparation

<input type="checkbox"/>	Ensure that the risk analysis for the work at height operation has been carried out and is available on site	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Specific ground markings must be put in place to limit the risks associated with falling objects and to protect equipment and workers from traffic.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	A sufficient number of fire extinguishers suitable for the task are available	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	When working and moving, a minimum distance between workers/equipment and obstacles, overhead power lines is respected (3 m if voltage ≤ 50 Kv; 5 m if voltage ≥ 50 Kv)	<input type="checkbox"/>	<input type="checkbox"/>

Equipment

<input type="checkbox"/>	Ensure on site that the requirements of the preliminary checklist(s) are in place	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Mobile guardrails are recorded and their purpose is justified. They are secured and marked.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that anyone moving around or working at height is wearing a hard hat with an attached chinstrap	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The temporary removal of permanent or temporary collective protection elements requires compensatory measures to restrict access to the area	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Permanent or temporary anchoring devices / lifelines are identified or put in place. They are checked and compliant and the supporting documents are provided.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The weight of the equipment/material to be loaded/unloaded, including staff, is taken into account in the choice of lifting equipment and is in keeping with the maximum capacity of the equipment.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Periodic, regulatory inspections are carried out, documented and available	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Fall arrest devices such as the landing net are used when conditions so require	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Restraint systems prevent workers from reaching places from which it is possible to fall	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Tools and equipment/materials are secured while they are transported and handled	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	All workers working at height must wear a suitable and compliant safety harness, which is attached at all times	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Workers must not work suspended by their harness, in permanent traction on the lanyard	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Moving mobile scaffolding with people on it and deployed MEWP (with/without people) is prohibited	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	No equipment/materials are stored on the equipment used unless the risk assessment has provided for this. In this case, users keep within the permissible load limits.	<input type="checkbox"/>	<input type="checkbox"/>

Training and authorisation

<input type="checkbox"/>	Check that the accreditation issued to workers by their employer for work at height stipulates that they may not go up unless the permit has been issued and signed by both parties.	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--	--------------------------	--------------------------

Monitoring

<input type="checkbox"/>	Any worker attached via a harness must not work alone and must remain visible and/or audible	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Workers must be on a solid support surface at all times	<input type="checkbox"/>	<input type="checkbox"/>

Rescue plan

<input type="checkbox"/>	Ensure that a rescue plan is drawn up, validated, communicated by the EC and tested. Emergency and evacuation procedures are known and understood	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that staff have received training with respect to the rescue plan and First Aid	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The alarm box is identified	<input type="checkbox"/>	<input type="checkbox"/>

Compulsory measures before closing the permit

<input type="checkbox"/>	At the end of the work, ensure that the removal and dismantling of equipment is carried out by trained and qualified professionals in accordance with the risk analysis and operating procedures.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure the work is accepted and completed as agreed	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that the site is restored to full service and that the markings are removed.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure the networks are unlocked/untagged according to the procedure	<input type="checkbox"/>	<input type="checkbox"/>

10 Signatories

Approving authority For approval	Worksite supervisor For verification	Executing authority For execution
--	--	---

Issuance of the permit

Name(s): Date: Time: Signature:	Name(s): Date: Time: Signature:	Name(s): Date: Time: Signature:
--	--	--

Closure of the permit



APPENDIX 10: WORK AT HEIGHT PERMIT

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Name(s): Date: Time: Signature:	Name(s): Date: Time: Signature:	Name(s): Date: Time: Signature:
---	---	--

Conditions for permit suspension and cancellation

Any change to the planned measures will invalidate the Work at Height Permit and require a new permit to be issued.

Reason for suspension or cancellation	Date	Signature
...../...../.....

The signature is an undertaking that:

- All of the workers are aware of the risks
- Preventive conditions and measures are known
- Any changes will be reported



The above preventive measures are not a comprehensive list. It is the company's responsibility to implement all the protective and safety measures according to the environment, the identified risks, the progress of the tasks and the constraints associated with operating needs. Before starting, please refer to the TotalEnergies Golden Rules and the operating and safety instructions for the site.



APPENDIX 11: PERMIT FOR INTERIOR CLEANING-DEGASSING WITHOUT HUMAN INTERVENTION (tank, vessel, container, etc.)

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The use of cleaning/degassing methods without human intervention inside the tank, vessel or container (e.g. use of so-called "robotic" equipment) and the use of a combination hydro-cleansing tanker, whose equipment is ATEX and ADR certified, are to be preferred (and are strongly recommended) when this type of equipment is available.

1 Identification of the operation

Describe the operation to be performed:

.....
.....
.....

Container(s) to be cleaned and degassed:

HSE Plan No.:	Certificate No(s) (lockout/tagout, cleaning/degassing):	Other specific associated permits: <input type="checkbox"/> Hot work permit <input type="checkbox"/> Excavation permit <input type="checkbox"/> Confined space work permit <input type="checkbox"/> Work at height permit <input type="checkbox"/> Lifting permit <input type="checkbox"/> Radiographic testing permit
General Work Permit or DPP No.:	Other certificates:	

2 Company/Companies and Worker(s)

User Company (Name of site)	EC - Main	EC - Subcontractor(s)
.....

Works staff Number:

First name/Last name/Company (to be written below)

.....
.....

3 Date of work and validity period

Date of work:/...../.....

From:/...../.....(time) To:/...../.....(time)

The Cleaning and Degassing Permit is valid for a maximum of 1 day

This permit is issued for an intervention defined according to the following 5 criteria:

- Location Nature of the work Workers Process (Operating procedure)
- Environment (weather conditions (storm/wind) are within the limits defined for the intervention, co-activity, facilities, any interference from outside the site)

The 5 criteria must be checked at the beginning of the intervention (D1) and at least every day; as soon as one criterion changes, the permit is cancelled and a new permit must be issued.

4 Work location

Identify the intervention area / VESSEL concerned precisely (It must indicate the worksite footprint which corresponds to the maximum perimeter of the work area including the worksite preparation area, storage area and the area where machinery moves around):

.....
.....

<input type="checkbox"/> The work is taking place in an ATEX risk zone (see station/depot plan, ATEX risk zoning) <input type="checkbox"/> The work is taking place in a confined space (inspection holes, confined premises, etc.) The work is taking place in an area that may contain flammable vapours (gas cylinders, excavation, etc.)	If at least one box is ticked, the measurement of explosivity (continuous, intermittent or one-off depending on the risk analysis) and oxygen (if confined space) is compulsory. The atmospheric measurement form must be attached
--	---

5 Methods and equipment used

Case 1: Without human intervention inside the tank, vessel, container, etc. <input type="checkbox"/> ADR ATEX hydro-cleansing tanker (ideally) <input type="checkbox"/> Transfer pump <input type="checkbox"/> Vacuum pump (depending on the flash point some pumps cannot be used): <input type="checkbox"/> Vane pumps <input type="checkbox"/> Liquid ring pump <input type="checkbox"/> Rotary piston pumps <input type="checkbox"/> Semi-automatic high pressure cleaning <input type="checkbox"/> with on-board camera <input type="checkbox"/> with atmospheric measurement <input type="checkbox"/> Automatic high pressure cleaning (robot) <input type="checkbox"/> with on-board camera <input type="checkbox"/> with atmospheric measurement Stratified tanks should not be cleaned with high pressure if they are to be reused <input type="checkbox"/> Use of surface-active and degreasing product, <input type="checkbox"/> Solution for ventilation / vapour extraction: <input type="checkbox"/> Ventilator / extractor <input type="checkbox"/> Ducting system for transporting gases	Case 2: With human intervention inside the tank, vessel, container, etc. Comply with the Confined Space Permit and Certificate
--	--

Other equipment and tools

- Equipotential cables with ATEX clamps
- Anti-static / anti-sparking rod pump
- Fire blanket

- | | | |
|--|---|--|
| <input type="checkbox"/> Flag/ windsock | <input type="checkbox"/> Two 9 kg ABC dry powder fire extinguishers | <input type="checkbox"/> Gantry/Tripod/Winch |
| <input type="checkbox"/> Aluminium / stainless steel ladder | <input type="checkbox"/> ATEX / anti-sparking tools | <input type="checkbox"/> 24 V ATEX lighting |
| <input type="checkbox"/> Sprayer with an antistatic hose and a remote tank | <input type="checkbox"/> Non-steel scraper | <input type="checkbox"/> Cotton cloths |
| <input type="checkbox"/> Special water-detecting paste | <input type="checkbox"/> Special hydrocarbon-detecting paste | |
| <input type="checkbox"/> Compliant hoses | | |

6 Atmospheric measurements

Measurements of the concentration of hydrocarbons or other flammable gases/vapours are compulsory for any cleaning/degassing operation.

These checks and measurements must be carried out from the outside (if necessary, special equipment, such as an extender, a rod, a specific arm, etc., must be used) continuously at all the points required according to the configuration of the intervention area (top, middle and bottom. Possibly centre and corners where possible), measuring for at least one minute per point and ensuring that the whole intervention area is covered. If entry is required, the Confined Space Entry Permit and Certificate are required.

The percentage (%) LEL must be less than 10% at all these points.

The completed measurement form must be attached to this permit.

⚠ Hot work is prohibited after cleaning a tank, vessel, container... Only degassing with a result of 0% LEL allows this work to be carried out without risk of explosion

7 PPE and compulsory safety measures

SPECIFIC PPE ACCORDING TO SITUATION



8 Identification and nature of the risks

The risk analysis for cleaning/degassing work must have been carried out by competent staff before this permit is granted and completed on site by checking the 5 criteria in Point 3 above at the start of the work and at least every day.

Health: 	Safety: 	Environment: 
<input type="checkbox"/> Asphyxiation/Anoxia <input type="checkbox"/> Poisoning <input type="checkbox"/> Behavioural problems <input type="checkbox"/> Chemical and/or thermal burns <input type="checkbox"/> Loss of consciousness <input type="checkbox"/> Falls (on the same level, from height, object) <input type="checkbox"/> Noise <input type="checkbox"/> Ergonomic	<input type="checkbox"/> Toxic gases and vapours in the confined space <input type="checkbox"/> Fire <input type="checkbox"/> Explosion <input type="checkbox"/> Fall of person <input type="checkbox"/> Corrosive products <input type="checkbox"/> Toxic products <input type="checkbox"/> Irritating products <input type="checkbox"/> CMR products (Carcinogenic, Mutagenic and Reprotoxic)	<input type="checkbox"/> Widespread knock-on effects depending on work <input type="checkbox"/> Waste generation <input type="checkbox"/> Air pollution <input type="checkbox"/> Soil pollution <input type="checkbox"/> Water pollution

9 Preventive measures

Applicability	The implementation of preventive measures must be verified on site	On-site check	
	C: Compliant NC: Non-compliant	C	NC
YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>		

Preparation

	Description	C	NC
<input type="checkbox"/>	The work area is marked out (physical barriers, cones, etc.) and prepared (cleaning, evacuation, traffic, zones: storage, ATEX, discharge from pumped vents and hydro-cleansing tanker).	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Network plans are available	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The lockout/tagout procedure has been performed on networks in the vicinity of the work area (hydraulic, electrical, mechanical, etc.). The lockout/tagout certificate is issued.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Nearby sewage networks are protected (inspection holes, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	A dedicated person is appointed to monitor the work only.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	At least two people must be present to perform the intervention continuously	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The wind direction is being monitored with a flag or windsock.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	No work that generates ignition points should be undertaken during the entire intervention	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Appropriate and compliant ventilation/extraction (type, power, flow rate) is installed	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that the risk analysis for the cleaning/degassing operation has been carried out and is available on site	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The operating procedures must indicate precisely all the phases (opening of the manhole, pumping, cleaning and degassing and re-installation of the manhole cover, etc.).	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The manhole is barricaded to prevent accidental falls.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Schedule all necessary absorbent and/or recovery materials in case an accidental spillage occurs	<input type="checkbox"/>	<input type="checkbox"/>



APPENDIX 11: PERMIT FOR INTERIOR CLEANING-DEGASSING WITHOUT HUMAN INTERVENTION (tank, vessel, container, etc.)

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	(pumping equipment, absorbent materials, etc.).		
<input type="checkbox"/>	The cathodic protection must be switched off 24 hours before the Cleaning/Degassing operation	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The specific procedure for vessels that have contained lead is followed	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that arrangements are made and known for immediate shutdown in the event of a suspicious odour	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Stratified tanks should not be cleaned with high pressure if they are to be reused.	<input type="checkbox"/>	<input type="checkbox"/>

Equipment

<input type="checkbox"/>	Ensure that personal LEL / gas detectors are worn at all times	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Atmospheric monitoring tools and equipment must be calibrated and maintained according to the manufacturer's instructions.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	A sufficient number of fire extinguishers suitable for the task are available	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Rescue equipment and other means of access (tripods, hoists, pulleys, lifelines, etc.) are provided and ready to use.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	If required, suitable lighting (SELV) with double insulated transformer is available	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The condition of the leak detector and the electrode isolation is checked.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Checking of extension cords and connections of hand-held electrical equipment including earthing before each use.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The pumping hoses are compliant and in good condition (certificates of compliance provided)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The grounding of the tanker, the container to be cleaned, the manhole covers and the valves is carried out and remains in place for the duration of the operations	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Equipotentiality between the container, the tanker / transfer pump and extractor is established	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The support stands are in the inspection position.	<input type="checkbox"/>	<input type="checkbox"/>

Training and accreditation

<input type="checkbox"/>	Check that the staff are competent and qualified. They are trained and aware of the risks and signs and symptoms of exposure to a hazardous environment	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that atmospheric measurements are carried out by a competent and qualified person	<input type="checkbox"/>	<input type="checkbox"/>

Atmospheric measurements

<input type="checkbox"/>	In the ATEX zone, continuous monitoring of the atmosphere is carried out (oxygen measurements and LEL values). The completed measurement form must be attached to this permit.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that gas detection and explosimeter beacon(s) are installed in the pumping tanker and near the work area. The completed measurement form is attached to this permit.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The locations of the tanker parking area, the vent and possibly extractor discharge area have been defined taking into account: the prior testing of the atmosphere, the pumping point and method, the nature of the product, the wind direction, the traffic and the activities in the vicinity.	<input type="checkbox"/>	<input type="checkbox"/>

Rescue plan

<input type="checkbox"/>	Ensure that a rescue plan is drawn up, validated, communicated by the EC and tested. Emergency and evacuation procedures are known and understood	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that staff have received training with respect to the rescue plan and First Aid	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The alarm box is identified	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	If the size of the openings is incompatible with a rescue operation, additional safety measures are put in place	<input type="checkbox"/>	<input type="checkbox"/>

Compulsory measures before closing the permit

<input type="checkbox"/>	Ensure the work is accepted and completed as agreed	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that the site is restored to full service and that the markings are removed.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure the networks are unlocked/untagged according to the procedure	<input type="checkbox"/>	<input type="checkbox"/>

⑩ Signatories

Approving authority For approval	Worksite supervisor For verification	Executing authority For execution
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Issuance of the permit

Name(s): Date: Time: Signature:	Name(s): Date: Time: Signature:	Name(s): Date: Time: Signature:
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Closure of the permit

Name(s): Date: Time: Signature:	Name(s): Date: Time: Signature:	Name(s): Date: Time: Signature:
---	--	--

Conditions for permit suspension and cancellation

Any change to the planned measures will invalidate the Cleaning/Degassing Permit and require a new permit to be issued.		
Reason for suspension or cancellation	Date	Signature
...../...../.....



APPENDIX 11: PERMIT FOR INTERIOR CLEANING-DEGASSING WITHOUT HUMAN INTERVENTION (tank, vessel, container, etc.)

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.....
The signature is an undertaking that:

- All of the workers are aware of the risks
- Preventive conditions and measures are known
- Any changes will be reported



The above preventive measures are not a comprehensive list. It is the company's responsibility to implement all the protective and safety measures according to the environment, the identified risks, the progress of the tasks and the constraints associated with operating needs. Before starting, please refer to the TotalEnergies Golden Rules and the operating and safety instructions for the site.

IF THE MAXIMUM DEPTH OF THE EXCAVATION IS < 10 CM, AN EXCAVATION PERMIT IS NOT REQUIRED.

1 Identification of the operation

 Describe the operation to be performed:

.....

.....

HSE Plan No.:	Excavation Certificate No.: Other certificates:	Other specific associated permits: <input type="checkbox"/> Hot work permit <input type="checkbox"/> Cleaning/degassing permit <input type="checkbox"/> Confined space permit <input type="checkbox"/> Work at height permit <input type="checkbox"/> Lifting permit <input type="checkbox"/> Radiographic testing permit
General Work Permit or DPP No.:		

2 Company/Companies and Worker(s)

User Company (Name of site)	EC - Main	EC - Subcontractor(s)
.....
Works staff Number:		
First name/Last name/Company (to be written below)		
.....

3 Date of work and validity period

Date of work:

From: / / (time) To: / / (time)

The Excavation Permit is valid for a maximum of 1 day

This permit is issued for an intervention defined according to the following 5 criteria:

Location Nature of the work Workers Process (Operating procedure)
 Environment (weather conditions (storm/wind) are within the limits defined for the intervention, co-activity, facilities, any interference from outside the site)

The 5 criteria must be checked at the beginning of the intervention (D1) and at least every day; as soon as one criterion changes, the Excavation Permit is cancelled and a new permit must be issued.

4 Work location

Identify the site precisely (It must indicate the worksite footprint which corresponds to the maximum perimeter of the work area including the worksite preparation area, storage area and the area where machinery moves around):

<input type="checkbox"/> The work is taking place in an ATEX risk zone (see station/depot plan, ATEX risk zoning) <input type="checkbox"/> The work is taking place in a confined space (inspection holes, confined premises, etc.) <input type="checkbox"/> The work is taking place in an area that may contain flammable vapours (gas cylinders, excavation, etc.)	If at least one box is ticked, the measurement of explosivity (continuous, intermittent or one-off depending on the risk analysis) and oxygen (if confined space) is compulsory. The atmospheric measurement form must be attached
---	---

5 Type of work

Manual excavation Mechanical excavation Pipe / pile driving
 Sinking of pilings Drilling / Core drilling Stripping / Profiling of roadway
 Marking / Staking Shoring / Shoring removal Earthworks (Cutting / Backfilling)
 Other:

6 Identification and nature of the risks

It is essential that the risk analysis for the excavation works has been carried out by competent staff before this permit is granted. It is completed on site by checking the 5 criteria in Point 3 above at the start of the intervention and at least every day.

Health:   	Safety:    	Other: 
<input type="checkbox"/> Electric shock <input type="checkbox"/> Burns Anoxia <input type="checkbox"/> Injury (cuts, bumps and knocks) <input type="checkbox"/> Noise and/or vibration <input type="checkbox"/> Products (chemical/toxic/harmful, carcinogenic, hydrocarbons, gas, asbestos etc.) <input type="checkbox"/> Ergonomic (postural stress, handling of loads)	<input type="checkbox"/> Electrocutation / Drowning <input type="checkbox"/> Falls (on the same level, from a height, object, equipment) <input type="checkbox"/> Landslide, crushing, burial, siltation (asphyxiation) <input type="checkbox"/> Machine-pedestrian collision <input type="checkbox"/> Explosion related to the nature of the underground pipes <input type="checkbox"/> Fire <input type="checkbox"/> Risk of interference (Co-activity and operation)	<input type="checkbox"/> Damage to buried structures: pipes (product, gas, water, waste) <input type="checkbox"/> Presence of buried piezometers (ground level) <input type="checkbox"/> Air pollution <input type="checkbox"/> Water pollution <input type="checkbox"/> Soil pollution

7 Equipment & Tools used

Hand Excavator / Vacuum excavator Pickaxe Jackhammer Mechanical excavator / Mini excavator
 Hydraulic rock breaker Planer / Trencher Penetrometer (soil resistance) ATEX tools
 Other (specify):

8 Compulsory preventive measures

The implementation of preventive measures must be verified on site

C: Compliant NC: Non-compliant

On-site check

YES X	NO <input type="checkbox"/>
-----------------	---------------------------------------

C	NC
----------	-----------

Preparation

<input type="checkbox"/>	The excavation certificate is drawn up and accompanied by a plan detailing any underground structures, the general safety instructions and those relating to the means of excavation.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Existing plans (including records, reports, etc.) have been validated after analysis and verification. Failing that, new plans have been created following this identification.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The identified underground networks are marked out by staking or painting on the ground (using the colour code corresponding to the networks present) (electric cables, hydrocarbons, utilities, telephone, fibre, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The identification of underground structures or networks formalised in the excavation certificate is followed by a risk analysis	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that the risk analysis for the excavation operation has been carried out and is available on site	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Are there any plans for manual reconnaissance excavations?	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The Safety Data Sheets (SDS) of the products transported in the identified networks are available on site	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The ATD (Asbestos Technical Document) is available on site	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The Works Notice (Déclaration des travaux- DT) and the Notice of Commencement (Déclaration de l'intention de commencer les travaux - DICT) are available on site.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	If required, appropriate and compliant ventilation/extraction (type, power, flow rate) is installed depending on the intervention	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	At least two people must be present to perform the intervention continuously	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	A stand-off distance of at least 1 metre from the edge of the excavation is reserved for placing machinery, extracted materials or various equipment.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Each time work is resumed, check the status of the excavation (Accessible / Not accessible)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that the machine operator is provided with continuous guidance outside the excavation	<input type="checkbox"/>	<input type="checkbox"/>

Equipment

<input type="checkbox"/>	A sufficient number of fire extinguishers suitable for the task are available	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Installation of means of access and crossing for staff (steps, ramps, ladders, temporary crossings, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Installation of means of crossing for construction/emergency vehicles	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	If excavation > 1.30 m or there is a risk of a landslide: Installation of shoring, props, slope trimming, banks and/or other protection systems.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that a dedicated sealed storage area for polluted soil is provided	<input type="checkbox"/>	<input type="checkbox"/>

Compulsory measures before closing the permit

<input type="checkbox"/>	The plans have been updated at the end of the operation	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure the work is accepted and completed as agreed	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that the site is restored to full service and that the markings are removed.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure the networks are unlocked/untagged according to the procedure	<input type="checkbox"/>	<input type="checkbox"/>

9 Signatories

Approving authority For approval	Worksite supervisor For verification	Executing authority For execution
--	--	---

Issuance of the permit

Name(s): Date: Time: Signature:	Name(s): Date: Time: Signature:	Name(s): Date: Time: Signature:
---	---	--

Closure of the permit

Name(s): Date: Time: Signature:	Name(s):..... Date: Time: Signature:	Name(s): Date: Time: Signature:
---	---	--

Conditions for permit suspension and cancellation

Any change to the planned measures will invalidate the Excavation Permit and require a new permit to be issued.

Reason for suspension or cancellation	Date	Signature
...../...../.....
.....	
.....	

The signature is an undertaking that:

- All of the workers are aware of the risks
- Preventive conditions and measures are known
- Any changes will be reported

The above preventive measures are not a comprehensive list. It is the company's responsibility to implement all the protective and safety measures





APPENDIX 12: EXCAVATION WORK PERMIT

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according to the environment, the identified risks, the progress of the tasks and the constraints associated with operating needs. Before starting, please refer to the TotalEnergies Golden Rules and the operating and safety instructions for the site.

1 Identification of the operation

 Describe the operation to be performed:

.....

.....

 HSE Plan No.:

.....

Certificate No. if required:

 Degassing Certificate No.:

 Confined Space Certificate No.:

 Lockout/Tagout Certificate No.:

 Lifting plan or file:

 General Work Permit or DPP No.:

.....

2 Company/Companies and Worker(s)

User Company (Name of site)

EC - Main

EC - Subcontractor(s)

Works staff Number:

 First name/Last name/Company (to be written below)

.....

.....

3 Date of work and validity period

Date of work

From: / / (time)

To: / / (time)

The Lifting Permit is valid for a maximum of 1 day

 This permit is issued for an intervention defined according to the following 5 criteria:

- | | | | |
|--|---|----------------------------------|--|
| <input type="checkbox"/> Location | <input type="checkbox"/> Nature of the work | <input type="checkbox"/> Workers | <input type="checkbox"/> Process (Operating procedure) |
| <input type="checkbox"/> Environment (weather conditions (storm/wind) are within the limits defined for the intervention, co-activity, facilities, any interference from outside the site) | | | |

The 5 criteria must be checked at the beginning of the intervention (D1) and at least every day; as soon as one criterion changes, the Lifting Permit is cancelled and a new permit must be issued.

4 Work location

Identify the site precisely

 (It must indicate the worksite footprint which corresponds to the maximum perimeter of the work area including the worksite preparation area, storage area and the area where machinery moves around):

5 Categorisation and management of lifting operations

Lifting category according to criticality level

- | | | |
|--|---|---|
| <input type="checkbox"/> Simple lifting | <input type="checkbox"/> Standard lifting | <input type="checkbox"/> Critical lifting |
| <input type="checkbox"/> Attach the lifting operation categorisation sheet | | |

6 Identification and nature of the risks

The risk analysis for lifting work must be carried out before this permit is granted and completed on site by checking the 5 criteria in Point 3 above at the start of the work and at least every day.

Health:	Safety:	Environment:
 <input type="checkbox"/> Physical accident <input type="checkbox"/> Falling from a height	 <input type="checkbox"/> Falling object/load <input type="checkbox"/> Crushing <input type="checkbox"/> Equipment tipping over <input type="checkbox"/> Damage to facilities	 <input type="checkbox"/> Waste generation

7 Compulsory preventive measures related to the lifting operation

Applicability		The implementation of preventive measures must be verified on site	On-site check	
YES	NO	C: Compliant NC: Non-compliant		
X	□			
Preparation				
<input type="checkbox"/>	The final unloading area is clear	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Access to the lifting area and lifting equipment is appropriately restricted and controlled	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The machine/load suitability review has been carried out and the centre of gravity of the load and the load-bearing capacity of the ground are known	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that the lifting equipment is visually inspected by the user, and functionally tested (if necessary), before use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Specific ground markings must be put in place to limit the risks associated with falling objects and to protect equipment and workers from traffic.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	A sufficient number of fire extinguishers suitable for the task are available	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that the risk analysis for the lifting operation has been completed and is available on site. If it is a Category 3 operation and above active facilities, it must be validated by the entity's operations manager or his/her delegate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<input type="checkbox"/>	Visibility is satisfactory throughout the operation. At night, appropriate lighting is provided	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	When working and moving, a minimum distance between workers/equipment and obstacles, overhead power lines is respected (3 m /voltage ≤ 50 Kv; 5 m /voltage ≥ 50 Kv)	<input type="checkbox"/>	<input type="checkbox"/>

Equipment

<input type="checkbox"/>	The lifting appliance's safety systems have been checked and are fully functional	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The lifting equipment has been designed, manufactured and certified by a recognised certification body to meet international or local standards	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The lifting equipment's certificate of compliance must be available on site. Ensure that the entity or subsidiary has validated the certification body	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that a pre-use check of the suitability and compliance of the lifting appliance and accessories has been carried out and the supporting documents provided.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The means of communication are available and have been checked	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The lifting equipment register is available and kept up-to-date and contains the required information (manufacturer, type, model, serial number, commissioning, load tests, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that a lifting appliance maintenance programme is implemented and recorded in an inspection and maintenance log.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that the latest valid periodic general inspection report is available for each item of lifting equipment	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Each lifting appliance has a logbook recording information regarding inspections, tests, maintenance and repairs of the appliance.	<input type="checkbox"/>	<input type="checkbox"/>

Training and accreditation

<input type="checkbox"/>	The lifting operators, sling operators, riggers and supervisors are trained and have theoretical and practical knowledge of the tasks, the associated risks and the entrusted equipment.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that each worker is in possession of a training certificate and a driving licence for the lifting operator	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that the supervisor is present and identified by the operator of the lifting appliance	<input type="checkbox"/>	<input type="checkbox"/>

Lifting plan or file

<input type="checkbox"/>	A lifting plan or file is prepared for any Category 2 or 3 lifting operation. It is reviewed and technically validated by a competent person	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The plan or file for a Category 3 lifting operation over active facilities must be formally validated by the entity or subsidiary operations manager or his/her delegate.	<input type="checkbox"/>	<input type="checkbox"/>

Rescue plan

<input type="checkbox"/>	Ensure that a rescue plan is drawn up, validated, communicated by the EC and regularly tested	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that staff have received training with respect to the rescue plan and First Aid	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The alarm box is identified	<input type="checkbox"/>	<input type="checkbox"/>

Compulsory measures before closing the permit

<input type="checkbox"/>	Ensure the work is accepted and completed as agreed	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that the site is restored to full service and that the markings are removed.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure the networks are unlocked/untagged according to the procedure	<input type="checkbox"/>	<input type="checkbox"/>

③ Signatories

Approving authority For approval	Worksite supervisor For verification	Executing authority For execution		
		Supervisor	Lifting operator	Sling operator

Issuance of the permit

Name(s): Date: Time: Signature:	Name(s): Date: Time: Signature:			
---	--	--	--	--

Closure of the permit

<input type="checkbox"/> Ensure that a debriefing is carried out with those involved at the end of the Category 2 and 3 lifting operation				
Name(s): Date: Time: Signature:	Name(s): Date: Time: Signature:	Name(s): Date: Time: Signature:	Name(s): Date: Time: Signature:	Name(s): Date: Time: Signature:

Conditions for permit suspension and cancellation

Any change to the planned measures will invalidate the Lifting Permit and require a new permit to be issued. If the risk control measures defined in the work permit are still adequate, the resumption of work is authorised by the work permit issuer

Reason for suspension or cancellation	Date	Signature
...../...../.....

The signature is an undertaking that:

- All of the workers are aware of the risks
- Preventive conditions and measures are known
- Any changes will be reported



The above preventive measures are not a comprehensive list. It is the company's responsibility to implement all the protective and safety measures according to the environment, the identified risks, the progress of the tasks and the constraints associated with operating needs. Before starting, please refer



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to the TotalEnergies Golden Rules and the operating and safety instructions for the site.



APPENDIX 14: Radiographic Testing Permit

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1 Identification and purpose of the radiographic testing

Describe the operation to be performed:

Purpose of the radiographic testing

HSE Plan No.:

Lockout/Tagout Certificate No.:

Other specific associated specific permits (if required):

General Work Permit or DPP No.:

Atmospheric Measurement Form No.:

- Excavation Permit
- Confined Space Entry Permit or Certificate

2 Company/Companies and Worker(s)

User Company (Name of the site)

EC - Main

EC - Subcontractor(s)

Works staff Number:

First name/Last name/Company (to be written below)

3 Date of work and validity period

Date of work:/...../.....

From:/...../.....(time)

To:/...../.....(time)

The Radiographic Testing Permit is valid for a maximum of 1 day

This permit is issued for an intervention defined according to the following 5 criteria:

- Location
- Nature of the work
- Workers

Process (Operating procedure)

- Environment (weather conditions (storm/wind) are within the limits defined for the intervention, co-activity, facilities, any interference from outside the site)

The 5 criteria must be checked at the beginning of the intervention (D1) and at least every day; as soon as one criterion changes, this permit is cancelled and a new permit must be issued.

4 Work location

Identify the site precisely (It must indicate the worksite footprint which corresponds to the maximum perimeter of the work area including the worksite preparation area, storage area and the area where machinery moves around):

5 Identification and nature of the risks

It is essential that the risk analysis for radiographic testing has been carried out by competent staff before this permit is granted. It is completed on site by checking the 5 criteria in Point 3 above at the start of the intervention and at least every day.



Health & Safety:

Environment:



- Irradiation (ionising radiation)

- Radioactive contamination

- Radioactive contamination

6 Calculation of the safety radius

- With collimator
- Without collimator

The design note below is to be written by the company responsible for the radiographic testing

Type of source:

Residual activity:

Specific constant of the radio element:

Maximum dose rate at the edge of the area:

R = metres

Area identification

LEVEL OF EXPOSURE

Area demarcation

Red controlled area

> 100 mSv/1 s

Access prohibited

Orange controlled area

100 mSv/1 s

Restricted access

Yellow controlled area

2 mSv/1 h

Restricted access

Green controlled area

4 mSv/1 month

Restricted access

Monitored area

1.25 mSv/1 month

Monitored access

Unrestricted area

0.08 mSv/1 month

Public access

7 Compulsory preventive measures

The implementation of preventive measures must be verified on site

Applicability

YES

NO

X

C: Compliant NC: Non-compliant

On-site check

C

NC

Preparation

- Ensure that sources and workplaces are identified where worker exposure is likely to exceed tolerated levels

- Ensure that the radiographic testing risk analysis has been completed and is available on site



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<input type="checkbox"/>	Ensure that the zoning plan is drawn up. The plan must be attached to this permit.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that the access area prohibited for unauthorised persons is indicated and marked out on site according to the safety radius calculated above	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that other areas (restricted, monitored and public) are indicated and marked out	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that access markings are appropriate for the area (sufficient, flexible or hard markings)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Operatives authorised to access a controlled area, an extremity area or an operating area must be provided with personal dosimeters and are subject to dosimetric monitoring	<input type="checkbox"/>	<input type="checkbox"/>

Equipment

<input type="checkbox"/>	Ensure that the work equipment and technical means used are appropriate for the intervention and reduce the emission of ionising radiation	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	A sufficient number of fire extinguishers suitable for the task are available	<input type="checkbox"/>	<input type="checkbox"/>

Training and accreditation

<input type="checkbox"/>	Ensure that access to a demarcated area is restricted to workers who have been authorised by the employer. Access to the orange or red controlled area must be subject to an individual authorisation issued by the employer.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that access to the red controlled area is exceptional and must be recorded with the person's name upon each entry.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that all authorised persons are subject to medical monitoring for exposure	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that the accreditation issued to workers by their employer for work at height stipulates that they may not go up unless the Work at Height certificate and permit have been issued and signed by both parties.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure the work is organised so as to reduce the duration and intensity of exposure, in particular by controlling access to demarcated areas	<input type="checkbox"/>	<input type="checkbox"/>

Compulsory measures before closing the permit

<input type="checkbox"/>	Ensure the work is accepted and completed as agreed	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that the site is restored to full service and that the markings are removed.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure the networks are unlocked/untagged according to the procedure	<input type="checkbox"/>	<input type="checkbox"/>

③ Signatories

Approving authority For approval	Worksite supervisor For verification	Executing authority For execution
--	--	---

Issuance of the permit

Name(s):..... Date: Time: Signature:	Name(s):..... Date: Time: Signature:	Name(s):..... Date: Time: Signature:
---	---	---

Closure of the permit

Name(s):..... Date: Time: Signature:	Name(s):..... Date: Time: Signature:	Name(s):..... Date: Time: Signature:
---	---	---

Conditions for permit suspension and cancellation

Any change to the planned measures will invalidate this permit and require a new permit to be issued.

Reason for suspension or cancellation	Date	Signature
...../...../.....

The signature is an undertaking that:

- All of the workers are aware of the risks
- Preventive conditions and measures are known
- Any changes will be reported



The above preventive measures are not a comprehensive list. It is the company's responsibility to implement all the protective and safety measures according to the environment, the identified risks, the progress of the tasks and the constraints associated with operating needs. Before starting, please refer to the TotalEnergies Golden Rules and the operating and safety instructions for the site.



APPENDIX 15: LOCKOUT/TAGOUT CERTIFICATE

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1 Identification of the operation

Describe the lockout/tagout operation to be performed and the work to be done in relation to this certificate:

.....
.....
.....

HSE Plan No.:	Associated Specific Permit No.:	List of documents associated with this certificate: <input type="checkbox"/> Hot work permit <input type="checkbox"/> Cleaning / Degassing permit <input type="checkbox"/> Excavation permit <input type="checkbox"/> Confined Space Entry Certificate
General Work Permit No.:	This certificate is drawn up to be attached to Cleaning/Degassing Permit No.:	

2 Company/Companies and Worker(s)

User Company (Name of site)	EC - Main	EC - Subcontractor(s)
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Works staff Number:

First name/Last name/Company (to be written below)
.....

3 Date of work

Scheduled date of work:/...../.....

3 Date of issue and validity

Date of issue of the certificate:/...../.....

Validity: From:/...../.....(time)
To:/...../.....(time)

This validity period is set by the professional in charge of the operation

4 Location and nature of the intervention

Exact description of the operation to be carried out:
.....

Identify the work area precisely:
.....

4 Location and purpose of the lockout/tagout

Exact description of the purpose of the lockout/tagout removal:
.....

Identify the lockout/tagout area precisely:

5 Selection of the type of lockout/tagout

<input type="checkbox"/> Electric	<input type="checkbox"/> Processes (Fluids/Gases)	<input type="checkbox"/> Mechanical	<input type="checkbox"/> Self-lockout/tagout (Personal)
-----------------------------------	---	-------------------------------------	---

6 Equipment involved in the lockout/tagout

Description of the equipment:	Reference:	Exact location of the equipment:
-------------------------------------	------------------	--

7 Types of energy and associated risks

<input type="checkbox"/>	Electrical Energy		Electric shock, Electrocution, Burns, Blinding by an electric flash, Ignition source
<input type="checkbox"/>	Mechanical Energy		Entrapment, Crushing, Impact, Cuts
<input type="checkbox"/>	Thermal Energy		Burns
<input type="checkbox"/>	Hydraulic Energy		Combination of risks related to mechanical, thermal and chemical energy and excessive noise
<input type="checkbox"/>	Hazardous Fluids		Toxic, biological or related to specific properties of the substance

Applicability		On-site check
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YES	NO	C: Completed NC: Not Completed	C	NC
X	<input type="checkbox"/>			

8 Common Measures and Compulsory Lockout/Tagout Steps

Preparation phase				
<input type="checkbox"/>		Validation from the approving authority is required to start the lockout/tagout procedure.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		Conduct the risk analysis before any intervention on powered systems	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		Prepare the detailed isolation diagram and the lockout/tagout file (isolation plan, processes, operating procedures)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		Ensure that the isolation devices for the type of energy to be locked and tagged are available	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		The personal protective equipment, tools and materials used comply with the conditions of use defined by their manufacturer and are checked and compliant	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		Check that the authorised staff are qualified and competent to perform the operation. They are trained and aware of the risks	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		The work area(s) has/have been marked out (physical and rigid barrier around the area concerned) and indicated (traffic cones, reflective tape)	<input type="checkbox"/>	<input type="checkbox"/>
Implementation phase: Compulsory lockout/tagout steps				
<input type="checkbox"/>		Separation: Put in place the devices needed to separate the equipment from its energy sources (de-energising, physical disconnection, double or single valve and blinding, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		Locking: Isolation devices are locked by appropriate means (padlock / clamp, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		Signage: Each of the isolation points is clearly identified with labels	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		Power Discharge: This operation consists of creating the required safety conditions by implementing the necessary actions according to the type of lockout/tagout (earthing and short-circuiting, draining, purging, decompressing, degassing, stopping the mechanisms including flywheels, setting up a stable mechanical equilibrium, mechanical blocking). For electrical lockout/tagout, the check must be performed before the power discharge step	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		No-power check: Check the effectiveness of the isolation measures (no voltage, no fluids, etc.) before carrying out the work, before each interruption of the work and for the final removal. For electrical lockout/tagout, the check must be performed before the power discharge step	<input type="checkbox"/>	<input type="checkbox"/>
Lockout/tagout removal phase				
<input type="checkbox"/>		Unlocking and removal of signage	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		Removal of means of isolation	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		Bring circuits back into compliance after unlocking and removing the means of isolation	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		Update the list of means of isolation	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		The lockout/tagout officer declares that all the work detailed in this certificate has been completed and that all persons involved in the work have been removed from the site and advised that it is no longer safe to work on the equipment.	<input type="checkbox"/>	<input type="checkbox"/>

Specific case 1: Long-term lockout/tagout

<input type="checkbox"/>		Ensure that a long-term lockout/tagout is implemented following a suspension of work or permit closure, in the case of equipment or facilities taken out of service temporarily or permanently or for other operational reasons:	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--	--	--------------------------	--------------------------

Specific case 2: Self-lockout/tagout (Personal lockout/tagout)

In addition to carrying out the lockout/tagout steps above, the following measures must be checked. Personal lockout/tagout is implemented if, and only if, the work concerned is included in the list of work and/or equipment which may be subject to a personal lockout/tagout established after a specific risk analysis.

<input type="checkbox"/>		Ensure that the work or equipment subject to the personal lockout/tagout is included in the comprehensive list of work and/or categories of equipment validated by the entity or subsidiary and included in their internal procedure.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		Ensure compliance with the prohibition of carrying out a personal lockout/tagout on several pieces of equipment at the same time	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		The personal lockout/tagout is not transferable to any other lockout/tagout officer	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		For any work not completed, the equipment or facility is returned to its normal operating status (reconnection), or a lockout/tagout is implemented.	<input type="checkbox"/>	<input type="checkbox"/>

9 Signature by the executing and approving authority

Applicant	Signature of Lockout/Tagout Officer	Signature of Executing Authority	Signature of Approving Authority



APPENDIX 15: LOCKOUT/TAGOUT CERTIFICATE

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Date:
..... /...../.....

Date: /...../.....

Date: /...../.....

Date: /...../.....

Signature(s):

Signature(s):

Signature(s):

Signature(s):



Starting an intervention without the authorisation of the executing and approving authority is strictly prohibited. The signature of the lockout/tagout officer alone does not authorise the work except in the case of a personal lockout/tagout.



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LIST OF LOCKOUT/TAGOUTS AND LOCKOUT/TAGOUT REMOVAL

Identification of the operation	Company/Companies and Worker(s)	Date	Location and nature of the intervention	Location and purpose of the lockout/tagout
Site name:	EC - Main:/...../.....	Exact description of the operation to be carried out: Identify the work area precisely:	Exact description of the purpose of the lockout/tagout removal: Identify the lockout/tagout area precisely:
HSE Plan No.: .....	.....		
Specific Permit No.:	EC - Subcontractor(s):			
Certificate No.: .....	.....		

No. of Equipment concerned	Inhibition	Drainage/Decompression	LOCKOUT/TAGOUT						LOCKOUT/TAGOUT REMOVAL (State if lockout/tagout removal is temporary)				Restoring of the facility to full service				
			Mechanical	Electric	Fluids	Other	Date & Time	Signature Lockout operative	Mechanical	Electric	Fluids	Others	Circuit test	Brought onstream	Elec. Tests	Date & Time	Signature Lockout operative
Signature of Executing Authority									Acceptance of the facility by the operator or the instructing party								
Signature of Lockout/Tagout Officer																	



APPENDIX 15: LOCKOUT/TAGOUT CERTIFICATE

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Signature of Worksite Supervisor



APPENDIX 16: CLEANING / DEGASSING CERTIFICATE

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Any cleaning and degassing operation is subject to a work permit, called a **cleaning and degassing permit**, prior to start-up. It consists of removing the hydrocarbon residues inside. These residues are toxic, flammable and potentially explosive, and pose a hazard. Therefore, they need to be removed to avoid all risks and to guarantee the workers' safety. This operation is carried out by a professional who is qualified and approved for this type of activity, as it requires know-how and specific equipment.

1 Identification of the operation

Describe the operation to be performed and the work to be done in relation to this certificate:

HSE Plan No.:

Cleaning / Degassing Permit No.:

List of documents associated with this certificate:

This certificate is drawn up to be attached to Cleaning / Degassing Permit No.:

Atmospheric measurement form

General Work Permit No.:

Valid to be attached to Permit No.:

Please note: a work permit is required to carry out work in a confined space, notwithstanding other specific permits depending on the nature of the work to be carried out.

2 Company / Companies and Worker(s)

User Company (Name of site)

EC - Main

EC - Subcontractor(s)

Works staff Number:

First name / Last name / Company (to be written below)

3 Date of work

Scheduled date of work:/...../.....

3 Date of issue and validity

Date of issue of the certificate:/...../.....

Validity: From:/...../..... (time)

To:/...../..... (time)

This validity period is set by the professional in charge of the operation

Validity of certificate

..... from at to at

The duration of the certificate must be very limited. This validity period is set by the professional who is carrying out this cleaning and degassing operation

4 Work location

Identify the site precisely (It must indicate the worksite footprint which corresponds to the maximum perimeter of the work area including the worksite preparation area, storage area and the area where machinery moves around):

5 Nature and quantity of products identified

Cleaning

Product contained

Volume

Compartmentalised

Degassing

Serial no. of the device used

Calibration date

Result obtained

.....% LEL

(Lower Explosive Limit)

SP 95

.....m3

SP 98

.....m3

Diesel

.....m3

MTBE

.....m3

ETBE

.....m3

Ethanol

.....m3

Kerosene

.....m3

Jet

.....m3

Domestic fuel

.....m3

Heavy fuel

.....m3

Bitumen

.....m3

Lubricants

.....m3

Other:

.....m3

6 Special conditions

- The duration of this certificate is limited to hours. (To be specified by the company in charge of the operation at the end of the intervention)
- Please note: hot work cannot be carried out after cleaning a container; only degassing with a result of 0% LEL allows this work to be carried out without risk of explosion

7 Certification by the executing and approving authority

- This certificate certifies that the enclosed container (tank, vessel, etc.) that is the subject of the request is cleaned and degassed. It specifies the nature and quantity of products found and disposed of.



APPENDIX 16: CLEANING / DEGASSING CERTIFICATE

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Executing authority

I, the undersigned, executing authority, have carried out the operation and checks at the work location(s) using all appropriate means and confirm that this certificate may be used under the conditions indicated above.

Date:/...../.....

Signature(s):

Approving authority

I, the undersigned, the approving authority, have carried out checks at the work location(s) using all appropriate means and confirm that this certificate may be used under the conditions indicated above.

Date:/...../.....

Signature(s):

Cleaning / Degassing Company:

Tank(s) / Vessel(s) to be cleaned and degassed:

I, the undersigned from (company)

Certify that I have carried out the operation specified above. I confirm that this certificate can be used to issue a work permit.

Signed in

On/...../.....

Signature



This certificate shall become null and void if there are changes in the operation's operating procedure or following the activation of an emergency plan. This certificate does not authorise the start of work. A work permit is required.



APPENDIX 17: CONFINED SPACE ENTRY CERTIFICATE

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Any operation involving entering a confined space requires a certificate to be prepared. Entry only takes place if no other alternatives have been identified. The certificate does not authorise physical entry or the start of work. The certificate must be associated with the general work permit and/or specific permits depending on the nature of the work to be carried out inside the confined space.

1 Identification of the operation

Describe the operation to be performed and the work to be done in relation to this certificate:

HSE Plan No.:

Cleaning / Degassing Certificate No(s):

Lockout / Tagout Certificate No(s):

Atmospheric Measurement Form No.:

General Work Permit or DPP No.:

List of associated specific permits:

- Hot work permit
- Excavation permit
- Cleaning / degassing permit
- Work at height permit
- Lifting permit
- Radiographic testing permit

2 Company / Companies and Worker(s)

User Company (Name of site)

EC - Main

EC - Subcontractor(s)

Works staff Number:

First name / Last name / Company (to be written below)

3 Date of work and validity period

Scheduled date of work:/...../.....

Date and validity of the certificate

From:/...../..... (time) To:/...../..... (time)

The confined space entry certificate is valid for a maximum of 1 day

This certificate is issued for an intervention defined according to the following 5 criteria:

- Location
- Nature of the work
- Workers
- Process (Operating procedure)
- Environment (weather conditions (storm / wind) are within the limits defined for the intervention, co-activity, facilities, any interference from outside the site)

The 5 criteria must be checked at the beginning of the intervention (D1) and at least every day; as soon as one criterion changes, the certificate is cancelled and a new certificate must be issued.

4 Work location

Identify the site precisely (It must indicate the worksite footprint which corresponds to the maximum perimeter of the work area including the worksite preparation area, storage area and the area where machinery moves around):

5 Nature of the work to be carried out in the confined space

Identify the nature of the work to be carried out in the confined space in relation to the general work permit and/or specific permits Describe the work to be performed in the confined space:

- Manhole chimney intervention
- Hydrocarbon separator intervention
- Tank emptying work
- Moving or removing a container
- Container cutting
- Container interior inspection
- Repair work (in case of leakage)
- Container conversion
- Stratification work
- Other work inside the container (Specify the nature of the work):
- Manifold intervention
- Washing track separator intervention
- Crawl space operation
- Hot work
- Work at height
- Cleaning / degassing work
- Sandblasting work, high pressure cleaning
- Electrical work
- Draining, line flushing and pumping work
- Wastewater treatment plant (WWTP) intervention
- Inspection hole intervention
- Drain intervention
- Excavation work
- Lifting work
- Maintenance work
- Painting work

Hot work is prohibited after cleaning a tank, vessel, container... Only degassing with a result of 0% LEL allows this work to be carried out without risk of explosion

6 Specific PPE



7 Risk identification and assessment

It is essential that the risk analysis for work in confined spaces has been carried out by competent staff prior to this certificate. It should verify whether or not it is necessary to enter the confined space to carry out this work. It should cover all stages of the operation: Opening, cleaning, degassing (if required), initial entry, internal activities, closing and rescue. A risk management plan is established. It defines the entry procedures and specifies the implementation of preventive measures. This risk analysis is completed on site by checking the 5 criteria in Point 3 above at the start of the intervention and at least every day.

Health:	Safety:	Environment:
 <ul style="list-style-type: none"> <input type="checkbox"/> Asphyxiation / Anoxia <input type="checkbox"/> Poisoning <input type="checkbox"/> Behavioural problems <input type="checkbox"/> Burial / Crushing <input type="checkbox"/> Drowning <input type="checkbox"/> Chemical and/or thermal burns <input type="checkbox"/> Loss of consciousness <input type="checkbox"/> Falls (on the same level, from height, object) <input type="checkbox"/> Noise <input type="checkbox"/> Ergonomic 	 <ul style="list-style-type: none"> <input type="checkbox"/> Toxic gases and vapours <input type="checkbox"/> Fire <input type="checkbox"/> Explosion <input type="checkbox"/> Fall of person <input type="checkbox"/> Corrosive products <input type="checkbox"/> Toxic products <input type="checkbox"/> Irritating products <input type="checkbox"/> CMR products (Carcinogenic, Mutagenic and Reprotoxic) 	 <ul style="list-style-type: none"> <input type="checkbox"/> Widespread knock-on effects <input type="checkbox"/> Waste generation <input type="checkbox"/> Air pollution <input type="checkbox"/> Soil pollution <input type="checkbox"/> Water pollution

8 Equipment Used

<input type="checkbox"/> On-board camera <input type="checkbox"/> Flag / windsock <input type="checkbox"/> Aluminium / stainless steel ladder V power tools (wet environment) (Lamp) <input type="checkbox"/> Sprayer with an antistatic hose and a remote tank <input type="checkbox"/> Non-steel scraper <input type="checkbox"/> Special hydrocarbon-detecting paste <input type="checkbox"/> Vapour extractors <input type="checkbox"/> Means of communication:	<input type="checkbox"/> On-board ATEX measuring equipment <input type="checkbox"/> Safety tools <input type="checkbox"/> ATEX / anti-sparking tools <input type="checkbox"/> Isolating transformer <input type="checkbox"/> Portable transceiver <input type="checkbox"/> Cotton cloths <input type="checkbox"/> Pumps <input type="checkbox"/> Air supply cylinders <input type="checkbox"/> Other:	<input type="checkbox"/> Ventilator / extractor <input type="checkbox"/> Gantry / Tripod <input type="checkbox"/> 48 V power tools <input type="checkbox"/> 30 Ma circuit breaker <input type="checkbox"/> Degreaser <input type="checkbox"/> Special water-detecting paste <input type="checkbox"/> Hoses <input type="checkbox"/> Winch <input type="checkbox"/> 24 <input type="checkbox"/> ATEX lighting
---	---	---

Other equipment and tools

<input type="checkbox"/> Equipotential cables with ATEX clamps <input type="checkbox"/> Flag / windsock <input type="checkbox"/> Aluminium / stainless steel ladder <input type="checkbox"/> Sprayer with an antistatic hose and a remote tank <input type="checkbox"/> Special water-detecting paste <input type="checkbox"/> Compliant hoses	<input type="checkbox"/> Anti-static / anti-sparking rod pump <input type="checkbox"/> Two 9 kg ABC dry powder fire extinguishers <input type="checkbox"/> ATEX / anti-sparking tools <input type="checkbox"/> Non-steel scraper <input type="checkbox"/> Special hydrocarbon-detecting paste	<input type="checkbox"/> Fire blanket <input type="checkbox"/> Gantry / Tripod / Winch <input type="checkbox"/> 24 V ATEX lighting <input type="checkbox"/> Cotton cloths
---	---	--

9 Requirements before entering the confined space

Applicability		The implementation of preventive measures must be verified on site	On-site check		
YES	NO	C: Compliant NC: Non-compliant		C	NC
X	<input type="checkbox"/>				

Preparation

<input type="checkbox"/>	The work area is marked out (physical barriers, cones, etc.) and prepared (cleaning, evacuation, traffic, zones: storage, ATEX, discharge from pumped vents)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The lockout / tagout procedure has been performed on networks in the vicinity of the work area (hydraulic, electrical, mechanical, etc.). The lockout / tagout certificate is issued.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	At least two people must be present to perform the operation continuously	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Nearby sewage networks are protected (inspection holes, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The manhole is barricaded to prevent accidental falls.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that the requirements for tanks that have contained tetraethyl lead are met	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that there is no trapped sludge or product in the confined space before entering	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that the confined space risk analysis has been completed and is available on site	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that the degassing certificate has been drawn up and is known to the workers.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The transformer or the circuit breaker must be located outside the enclosed container.	<input type="checkbox"/>	<input type="checkbox"/>

Equipment

<input type="checkbox"/>	Rescue equipment and other means of access (tripods, hoists, pulleys, lifelines, ladders, etc.) are provided and ready to use.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	A sufficient number of fire extinguishers suitable for the task are available	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that pressurised containers / compressed gas cylinders are not introduced into the confined space	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Checking of extension cords and connections of hand-held electrical equipment including earthing before each use.	<input type="checkbox"/>	<input type="checkbox"/>

Training, accreditation



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<input type="checkbox"/>	Check that the staff authorised to enter the confined space are competent and qualified. They are trained and aware of the risks and signs and symptoms of exposure to a hazardous environment in a confined space	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that atmospheric measurements are carried out by a competent and qualified person	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that the accreditation issued to workers by their employer for work in a confined space stipulates that they may not enter the confined space unless the entry certificate and the confined space permit have been issued and signed.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that staff have received training with respect to the rescue plan and First Aid.	<input type="checkbox"/>	<input type="checkbox"/>
Atmospheric measurements and ventilation before entering			
<input type="checkbox"/>	In order for a person to be allowed to enter the confined space, the atmosphere inside it must be made breathable and harmless in accordance with the tolerated thresholds.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that atmospheric monitoring tools and equipment are calibrated and maintained according to the supplier's instructions.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Atmospheric monitoring and measurement (oxygen, flammability and toxicity) should be carried out at all the necessary points (top, middle and bottom), measuring for at least one minute per point and making sure the entire intervention area is covered. Before entering, measurements will be taken from the outside. The completed measurement form must be attached to this certificate.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that gas detection and explosimeter beacon(s) are installed at the required locations (bottom of the tank, low point, near the work area, etc.) to measure the atmosphere continuously. The completed measurement form must be attached to this certificate.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that personal LEL / gas detectors are worn at all times	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that arrangements have been made to provide continuous ventilation throughout the intervention	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that inert gas accessories are not used as a fresh air supply.	<input type="checkbox"/>	<input type="checkbox"/>
	Ensure that signage at the main access point to show compliance of atmospheric levels (green, amber, red) has been put in place.		
Monitoring			
<input type="checkbox"/>	Ensure that another trained person, equipped like the worker, is positioned outside with appropriate means of communication and is in constant contact with the person inside.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that workers are not wearing anything (watches, jewellery, clothing, gravel under boots, etc.) that could generate a spark or electrostatic charge.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that the safety supervisor is aware that he/she should never enter the confined space on his/her own initiative, even to rescue someone	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that all intervention resources, PPE, conditions and measures in place are consistent with the risk management plan.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that in the event of signs or symptoms of danger or the triggering of an alarm by one of the multi-gas detectors, an order is given to suspend the intervention and evacuate immediately.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that handovers are arranged and scheduled for shift changeovers	<input type="checkbox"/>	<input type="checkbox"/>
Rescue plan			
<input type="checkbox"/>	Ensure that an evacuation plan is drawn up, tested and validated, covering self-rescue. The procedure is explained and tested before any entry (warning signals, routes, specific action).	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that a rescue plan is established, tested and validated. It covers the rescue procedure from the outside and the rescue procedure in the confined space by competent rescue workers.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The alarm box is identified	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	If the size of the openings is incompatible with a rescue operation, additional safety measures are put in place	<input type="checkbox"/>	<input type="checkbox"/>
Signage and Entry control			
<input type="checkbox"/>	Ensure that hazards, obligations and prohibitions are clearly visually indicated with appropriate signs	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Access points must be physically blocked. Simply taping them off is not enough	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that access is prohibited until the conditions are met.	<input type="checkbox"/>	<input type="checkbox"/>
Cases where breathing apparatus is worn at all times			
<input type="checkbox"/>	A detailed risk assessment taking into account the use of breathing apparatus has been carried out	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Work shall only be carried out by trained, qualified and medically fit staff using this type of personal protective equipment.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that breathing apparatus is appropriate for the nature of the inert / toxic gas atmosphere	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that the breathing apparatus is suitable for the ambient conditions (temperature, dust, humidity)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that the breathing apparatus is appropriate for the length of time the person is in the confined space	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Breathing apparatus should be checked for compliance by accredited professionals.	<input type="checkbox"/>	<input type="checkbox"/>
Compulsory measures before closing the permit			
<input type="checkbox"/>	Ensure the work is accepted and completed as agreed	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that the site is restored to full service and that the markings are removed.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure the networks are unlocked / untagged according to the procedure	<input type="checkbox"/>	<input type="checkbox"/>
⑩ Final validation of the certificate			
This certificate has been drawn up in order to:			
<input type="checkbox"/> Allow a maximum number of authorised (qualified) workers to enter the confined space simultaneously or individually			



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- Define the maximum length of time they can stay in the confined space set at and the associated break times
- Certify that the intervention can be carried out without risk or harm to staff for a simple preparatory visit or for carrying out work under a permit
- Confirm that no problems have been identified before entering.

This certificate certifies that the following prerequisites have been checked:

- Required confined space isolations
- Permitted atmospheric conditions
- Effective implementation of the measures defined in the risk management and emergency response plans

11 Signatories

Approving authority For approval	Worksite supervisor For verification	Executing authority For execution
--	--	---

Issuance of the permit or certificate

Name(s): Date: Time: Signature:	Name(s): Date: Time: Signature:	Name(s): Date: Time: Signature:
---	---	--

Closure of the permit or certificate

Name(s): Date: Time: Signature:	Name(s): Date: Time: Signature:	Name(s): Date: Time: Signature:
---	--	--

Conditions for permit suspension and cancellation

Any change to the planned measures will invalidate the confined space entry certificate and require a new certificate to be issued.

Reason for suspension or cancellation	Date	Signature
...../...../.....

The signature is an undertaking that:

- All of the workers are aware of the risks
- Preventive conditions and measures are known
- Any changes will be reported



The above preventive measures are not a comprehensive list. It is the company's responsibility to implement all the protective and safety measures according to the environment, the identified risks, the progress of the tasks and the constraints associated with operating needs. Before starting, please refer to the TotalEnergies Golden Rules and the operating and safety instructions for the site.



APPENDIX 18: EXCAVATION CERTIFICATE

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IF THE MAXIMUM DEPTH OF THE EXCAVATION IS < 10 CM, THE CERTIFICATE IS NOT REQUIRED.

1 Identification of the operation

Describe the operation to be performed and the work to be done in relation to this certificate:

.....

HSE Plan No.:	Excavation Permit No.:	List of additional documents: <input type="checkbox"/> Site plan <input type="checkbox"/> Network plans <input type="checkbox"/> Reports and minutes
General Work Permit No.:	This certificate is drawn up to be attached to the excavation permit indicated above:	

2 Company / Companies and Worker(s)

User Company (Name of site)	EC - Main	EC - Subcontractor(s)
.....

Works staff Number:

First name / Last name / Company (to be written below)

.....
-------	-------

3 Date of work

3 Date of issue and validity

Scheduled date of work:/...../.....

Date of issue of the certificate:/...../.....

Validated: From:/...../..... (time)

To:/...../..... (time)

This validity period is set by the professional in charge of the operation

4 Work location

Identify the site precisely (It must indicate the worksite footprint which corresponds to the maximum perimeter of the work area including the worksite preparation area, storage area and the area where machinery moves around):

.....

5 Actions required for the issue of the excavation certificate

Applicability		C: Compliant NC: Non-compliant	On-site check	
YES	NO		C	NC
X	<input type="checkbox"/>			

5.1 Preparation

<input type="checkbox"/>	Visit the work area with all stakeholders including utility services to map known public networks.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Identify items that may hinder detection (safety barriers, concrete slabs, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Identify the presence of overhead power lines	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Analysis of existing documents and plans by comparing the information in the documentation provided (plans, reports, etc.) with the actual conditions on the ground (presence of markers on the ground).	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Surface clutter has been removed or dealt with	<input type="checkbox"/>	<input type="checkbox"/>

5.2 Regulatory formalities

<input type="checkbox"/>	Verification of the administrative formalities to be completed	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Works Notice (Déclaration des travaux- DT) / Notice of Commencement (Déclaration de l'intention de commencer les travaux - DICT)	<input type="checkbox"/>	<input type="checkbox"/>

5.3 Detection

<input type="checkbox"/>	Is / Are the company / companies in charge of the detection services certified by an accredited certification body?	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Detection is carried out with the appropriate means		
<input type="checkbox"/>	- Electromagnetic method for tracking conductive networks	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	- Geo-radar method for searching for unknown networks, not showing on the surface but potentially present in the work area	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	- Acoustic detection method	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Intrusive drilling (manual digging) is carried out in addition to the detection	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The various networks in the work area have been identified (electrical cables, telephone cables, remote transmission cables, piping (product, gas, water, waste)).	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Networks adjacent to the work area are identified	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Presence of groundwater	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Presence of buried piezometers	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Soil survey - Classification by soil type	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The use of excavation equipment is permitted	<input type="checkbox"/>	<input type="checkbox"/>



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5.4 Reports, plans and marking out

<input type="checkbox"/>	Reports	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Analysis reports	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Precise plans drawn up	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The identified underground networks are marked out by staking or painting on the ground (using the colour code corresponding to the networks present)	<input type="checkbox"/>	<input type="checkbox"/>

5.5 Special conditions

If any of the following conditions apply, the use of machinery / equipment for digging is strictly prohibited. Manual digging should therefore be used first.

<input type="checkbox"/>	If any part of the excavation is within 1 metre of a known cable or pipeline route	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	If the exact locations of underground networks are not identified	<input type="checkbox"/>	<input type="checkbox"/>

5.6 Proposed preventive measures and provisions. These measures must be included in the excavation permit

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6 Certification by the executing and approving authority

I, the undersigned executing authority, have checked on site using the appropriate means / studied the site and network plans and certify that the excavation as described above can be undertaken after validation of the Work Permit(s):

- No risk or damage to staff or underground utilities**
- Under additional preventive measures and conditions to be specified in the work permit**

Date

Signature(s):

I, the undersigned approving authority, have inspected the work site(s) and the means used, have seen the site and network plans and confirm that this certificate can be used for drawing up the work permit.

Date

Signature(s):



This certificate shall become null and void if there are changes in the operation's operating procedure or following the activation of an emergency plan. This certificate does not authorise the start of work. A work permit is required.



APPENDIX 19: CERTIFICATE FOR WORK AT THE WATER'S EDGE

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<input type="checkbox"/>	Install suitable and appropriate guardrails and protective rails (crossing area, operating area, area near basins)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Installation of shoring means if required	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Installation of work platforms if required	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Installation of booms and / or means of containment if required	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	At least two people must be present at all times to perform the operation	<input type="checkbox"/>	<input type="checkbox"/>

Equipment

<input type="checkbox"/>	Ensure that the right tools and equipment for working where water is present are used	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that PPE and work clothes are compliant and suitable for working where water is present (waterproof, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Set up a lifebuoy with a becketed grab line and throw line and a gaff for retrieval from the water (be careful when using the gaff)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Equip staff and visitors with a life jacket (inflatable or permanent flotation) that is compliant and suitable for the user's physique and consistent with the risk analysis and nature of the work, for work where there is a risk of falling into water that is not prevented by a guardrail	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that the choice of life jacket takes into consideration the training, knowledge and experience of staff in the aquatic environment	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The inflatable life jacket's strap system must be perfectly adjusted (to avoid the wearer suffocating or the life jacket becoming loose)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Each personal flotation device must be accompanied by the necessary accessories (protective cover, instructions for use, commissioning kit, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Each life jacket must be equipped with a visual and audible identification system (distress light, retro reflective tape, whistle, safety harness/line, gripping system, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that regular checks and visual examinations have been carried out on the life jackets beforehand (the inflatable bag is watertight, the outer cover is in good condition, the release device works properly, etc.)	<input type="checkbox"/>	<input type="checkbox"/>

Training, accreditation

<input type="checkbox"/>	Wherever possible, workers should be able to swim	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that workers are trained in how to use life jackets	<input type="checkbox"/>	<input type="checkbox"/>

Rescue plan

<input type="checkbox"/>	Ensure that a rescue plan is drawn up, validated, communicated by the EC and tested. Emergency and evacuation procedures are known and understood	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that the rescue equipment (buoys) is identified before the operation starts	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that staff have received training with respect to the rescue plan and First Aid	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The alarm box is identified	<input type="checkbox"/>	<input type="checkbox"/>

3 Signatories

Approving authority For approval	Worksite supervisor For verification	Executing authority For execution
--	--	---

Issue of certificate

Name(s):..... Date: Time: Signature:	Name(s):..... Date: Time: Signature:	Name(s): Date: Time: Signature:
---	---	--

Closure of certificate

Name(s):..... Date: Time: Signature:	Name(s):..... Date: Time: Signature:	Name(s): Date: Time: Signature:
---	---	--

Conditions for certificate suspension and cancellation

Any change to the planned measures will invalidate the certificate for work at the water's edge and require a new certificate to be issued.

Reason for suspension or cancellation	Date	Signature
...../...../.....

This certificate does not authorise the start of work. A work permit is required.



APPENDIX 20: LIFTING PLAN OR FILE

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Any lifting operation must be planned, prepared and studied.

A lifting file is prepared for any lifting operation involving a suspended load and for any Category 2 or 3 handling operation. Its content and level of detail depend on the category of the operation

1 Identification of the operation

1.1 Description

HSE Plan No.:	General Work Permit No.:	Associated Lifting Permit No.:	Risk Analysis No.:	Lifting Plan No.:
---------------------	--------------------------------	--------------------------------------	--------------------------	-------------------------

1.2 Companies and workers

Main EC	Subcontractor(s)
.....

Description of the lifting team

Number of people in charge	Position	First names Last names	Certificate of competency provided
.....	Supervisor	<input type="checkbox"/>
	Sling operator	<input type="checkbox"/>
	Equipment operator	<input type="checkbox"/>

1.3 Description of the operation

Starting point of the lifting	End point	Lifting equipment used
.....

Comments:

1.4 Date of the lifting operation

Date of the operation
-----------------------	-------

1.5 Work location

Identify the site precisely (It must indicate the worksite footprint which corresponds to the maximum perimeter of the work area including the worksite preparation area, storage area and the area where machinery moves around):

2 Lifting category

Lifting category according to criticality level

- Simple lifting Standard lifting Critical lifting

Attach the lifting operation categorisation sheet

3 Content of the lifting plan or file

The content of the lifting plan or file is chosen according to the lifting category selected above

3.1 Simple lifting

For a Category 1 simple lifting operation, drafting a formal lifting file is not mandatory, although it is recommended. Preparation consists of defining:

- The load to be moved (including: weight, dimensions and centre of gravity, number of lifting points, amplification factors, etc.)
- The appropriate equipment for this lifting and its utilisation rate
- The positioning, possibly with a freehand drawing giving the minimum information required for this phase
- The demarcation of the lifting area including the pick up and set down areas
- The slinging.
- The necessary checks are carried out using the Suitability Report which will be filled in jointly by the Crane Operator and the Supervisor.

3.2 Standard lifting

For a standard lifting operation (Category 2), the lifting file, checked and signed by the person in charge from the External Company, is compulsory and must contain the following information as a minimum:

- The load to be moved (weight, size, centre of gravity, number of lifting points, amplification factors etc.)
- The description of the lifting appliance (make, type, model, configuration, capacity at the required range, etc.)
- The positioning (plan view) with details of supports and ground pressures, and the identification of buried routes and networks
- The demarcation of the lifting area including the pick-up and set down areas
- The definition of the slinging (type of slinging, characteristics of the equipment, etc.)
- Lifting drawings (plan and elevation view) if deemed necessary
- The definition of specific parameters (physical environment and weather conditions) to be taken into account if necessary
- A simple and concise step-by-step operational procedure with a clear description of the entire lifting operation.
- Shared feedback
- Verification and signatures

3.3 Critical lifting

In the case of a critical lifting operation (Category 3), a specific lifting file, checked and signed by the person in charge from the External Company, is compulsory and must contain the following information as a minimum:

- The load to be moved (weight, size, centre of gravity, number of lifting points, amplification factors etc.)
- The description of the appliance (make, type, model, configuration, capacity at the required range, lifting radius and angle, etc.)
- The positioning of the appliance (plan view) with details of supports and ground pressures, and identification of buried routes and networks; nearby excavation

- The route of the load and the areas over which it will be moved
- The demarcation of the lifting area including the pick-up and set down areas
- The definition of the slinging (type of slinging, characteristics of the equipment, etc.), including a drawing of the slinging
- Lifting drawings (plan and elevation view), as many as necessary to cover all phases of the operation
- The definition of specific parameters (physical environment and weather conditions, equipment in use, presence of overhead power lines) that need to be taken into account
- A detailed step-by-step operational procedure giving a clear description of all phases of the lifting operation
- An emergency and rescue plan
- Methods and means of communication
- A detailed description of the lifting team with the certificates of competency of the key people.
- Shared feedback
- Verification and signatures

4 Template for a lifting plan or file

4.1 Description of the load

Type of load	Maximum load dimensions	Lifting point and centre of gravity	Maximum lifted load
<input type="checkbox"/>	Max. length:	Number of lifting points:	Factored lifting load:
<input type="checkbox"/>	Max. width:	Location of the centre of gravity in relation to the lifting point	.....
<input type="checkbox"/>	Max. height:	X: Y: Z: .....	.....
<input type="checkbox"/>			

4.2 Photo of the lifted load



Example of a photo of a load to be lifted (container, canopy, etc.)

4.2 Details of lifting equipment

Crane	Abacus model of the lifting equipment
Make: Type: Model: Length of the boom: Counterweight (T): Max. range (m): Utilisation rate: Total weight of the lifted load: ... Maximum permissible load: Lifting radius: Lifting angle:	
Slinging method	
Type of slinging: Number of lifting points: Number of lifting beams: Number of spreader beams: Lifting frame: Make a drawing of the slinging.	

4.3 Lifting accessories

Accessories	Identifier	Maximum permissible load	Mass	Utilisation rate
.....
.....
.....

4.4 Consideration of amplification factors



APPENDIX 20: LIFTING PLAN OR FILE

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- Shift in the centre of gravity Skew load factor Bending efficiency factor Tilt effect factor Yaw effect factor
 Other:

4.5 Examination of the load

- Weight not checked No dedicated and/or certified lifting points
 Special shape / large aerodynamic surface / sharp edges Lifting of hazardous liquids or products
 Centre of gravity not known / shifted / unstable Orientation of the load before set down
 Integrity / Fragility of the load The load must be on a pallet
 Load is live or pressurised Other:

4.6 Examination of the crane

- Fixed boom/boom hoist crane Crane moved with load on hook Telescopic crane
 Other:.....

4.7 Consideration of specific parameters

- Have the following been taken into account?
 Physical environment (equipment in use, presence of power lines) Weather conditions

5 Route and set down area

Describe the load route in the diagram:

Describe the areas over which the load will be moved:

Before starting the operation, the following must be checked

	YES	NO
Is the slope of the route within the operating limits of the appliance?	<input type="checkbox"/>	<input type="checkbox"/>
Has the route been selected and cleared so that there are as few obstacles as possible?	<input type="checkbox"/>	<input type="checkbox"/>
Is the set down area adequate in terms of size and load capacity?	<input type="checkbox"/>	<input type="checkbox"/>
Is the set down area within the crane's range?	<input type="checkbox"/>	<input type="checkbox"/>
Have signs and markings been put in place to prevent access by unauthorised persons?	<input type="checkbox"/>	<input type="checkbox"/>
Have the weather conditions been taken into account?	<input type="checkbox"/>	<input type="checkbox"/>
Are the production units located far enough away from the lifting area?	<input type="checkbox"/>	<input type="checkbox"/>

6 Drawing of the lifting

This section should contain the lifting drawings and should be used in combination with the other sections to improve understanding. It should include:

- The drawing of the general location of the lifting appliance with details of the approach of the lifting appliance if necessary.
- The general lifting drawing with a plan view and a side view.
- The installation of the lifting equipment (access for cranes and trucks), the load being lifted, the route of the load and identification of possible obstacles, the restricted area or safety zone boundaries, the movement above roads and the closure of these roads, if applicable (coordination).
- The general drawing of the rigging with all the required data (all accessories with their description, lifting lugs or pins, spreader bar / spreader if necessary).
- The maximum permissible weather conditions and, in particular, the maximum permissible wind speed (taking into account the mass and aerodynamic surface of the load).
- The maximum pressure exerted on the ground by the lifting appliance (maximum loads under the outriggers or the tracks and dimensions of the spreader plates).

7 Detailed step-by-step operational procedure

7.1 Before starting the operation, the following must be checked

	YES	NO
Are all lifting accessories and appliances compliant?	<input type="checkbox"/>	<input type="checkbox"/>
Has the radio communication been checked?	<input type="checkbox"/>	<input type="checkbox"/>
Have checks been made for potential abandoned objects?	<input type="checkbox"/>	<input type="checkbox"/>
Should there be a discussion (technical/ HSE) before the operation starts?	<input type="checkbox"/>	<input type="checkbox"/>

7.2 Description of the different stages of the operation

Step 1	.....
Step 2	.....
Step 3	.....
Step 4	.....
Step 5	.....
Step 6	.....
Step 7	.....
Step 8	.....

7.3 Methods of communication

- Radio - State the number of radios: Hand signals

8 Emergency and rescue plan

Describe the emergency plan to be put in place:

9 Feedback

Share feedback:

10 Verification and signatures

This lifting plan or file must be presented to all those involved at least once in the last six months

Presentation date: / /

Approving authority

For approval

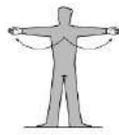
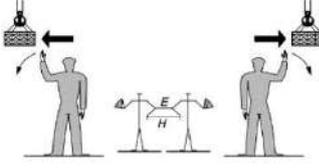
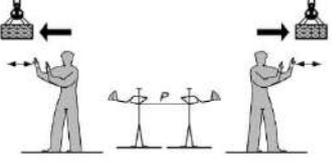
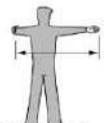
Executing authority

For execution

Technically competent person	Operations manager if required	Supervisor	Lifting operator	Slings operator
Name(s): Date: Time: Signature:	Name(s): Date: Time: Signature:	Name(s): Date: Time: Signature:	Name(s): Date: Time: Signature:	Name(s): Date: Time: Signature:

11 Example of hand signal communication protocol

In addition to the traditional means of communication (radio / walkie-talkie), hand signals can be adopted for communication. Below is an example of a hand signal protocol from the AFNOR FD E52-401 standard

1- Taking command or attention	2- Stop movement	3- End of command	4- Hoist	5- Hoist slowly
				
6- Lower	7- Lower slowly	8- Horizontal movement		9- Slow horizontal movement
				
10- Indicate a direction	11- Bring forward	12- Send backward	13- Indicate a horizontal distance	
				
14- Raise boom	15- Lower boom	16- Extend boom	17- Retract boom	
				
18- Magnetisation			19- Demagnetisation	
				

Facing the crane driver, the signaller (supervisor) places the flat of one of his/her hands (initially from the position of arm half extended vertically, palm facing the driver) onto the back of his/her other hand. He/She then rotates one hand over the other until magnetisation is in effect

From the final position reached during the magnetisation command, the signaller (supervisor) moves the hand on top back to the position of arm half extended vertically, palm facing the driver. This position is maintained by the signaller until actual demagnetisation



APPENDIX 21: CHECKLIST - SCAFFOLDING

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1 Identification of the operation

Describe the operation to be performed:

.....

.....

HSE Plan No.:	General Work Permit No.:	Certificate No.:
.....
This certificate is drawn up to be attached to Work at Height Permit No.:		
.....		

2 Company/Companies and Worker(s)

User Company (Name of site)	EC - Main	EC - Subcontractor(s)
.....
.....
.....
Assembly/disassembly staff	- Number:.....	Works staff - Number:.....
.....
.....

3 Date of work and date of check

Date of work	.....
Date of check	.....

4 Work location

Identify the site precisely (It must indicate the worksite footprint which corresponds to the maximum perimeter of the work area including the worksite preparation area, storage area and the area where machinery moves around):

.....

.....

5 Check points

Applicability		C: Compliant NC: Non-compliant	On-site check	
YES	NO		C	NC
X	☐			

5.1 Suitability

☐	Is the scaffolding appropriate for the work to be carried out (class of scaffolding, sufficient height, loads to be supported, side protection nets, fixed or mobile etc.)?	☐	☐
☐	Is the scaffolding suitable for the identified risks?	☐	☐
☐	Are the supplier's technical documents (instructions, assembly drawings and calculation notes) available on site and do they correspond to the scaffolding in place?	☐	☐
☐	Is the scaffolding suitable for the configuration and specific features of the site?	☐	☐
☐	The inclination of the installation and operating area is acceptable	☐	☐
☐	Has the strength of the ground in the operating area been checked?	☐	☐

5.2 Maintenance

☐	Are the scaffolding components in good condition (no significant oxidation, no signs of weld failure, no component deformation, etc.)?	☐	☐
☐	Check the locking systems and fixings (deterioration of locks, side rails, diagonals, ladders, screw clamps, etc.)	☐	☐
☐	Check that there is no deterioration or deformation of a component (presence of a crack, hole, deformation, etc.)	☐	☐
☐	Check the condition of decks, toe boards, defective hatches	☐	☐
☐	Check the condition of the wheels (tyres, brakes)	☐	☐
☐	Check the condition of the wedging and stabilisation components (permanent deformation, corrosion, play, etc.)	☐	☐

5.3 Structure

☐	Ensure that scaffolding assembly, disassembly or alteration operations have been carried out by trained and qualified staff.	☐	☐
☐	All of the assembled components come from the same scaffolding model	☐	☐
☐	The assembled components are from the same manufacturer or are compatible.	☐	☐
☐	The components are assembled properly (locking, anchors are reliable and in sufficient numbers, parallel or alternating diagonals, etc.)	☐	☐
☐	Access is secured (additional handrail, bracing present, staggered access, etc.)	☐	☐



APPENDIX 21: CHECKLIST - SCAFFOLDING

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<input type="checkbox"/>			
<input type="checkbox"/>	The ladders are fixed (top and/or bottom). Ladder extends one metre above surface to be accessed or there is a secure ladder grip.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	All decks are equipped with: - A rail between 1 m and 1.10 m from the floor - A mid-rail at 45 cm - 10 - 15 cm toe boards	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Stability has been checked and the stabilising components are in place	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that movement between the means of access and the scaffolding decks does not create additional risks of falling (use of self-closing floor hatches, guardrail gates, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Decks are fixed to the framework without any slipping possible	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The footings are correctly positioned, on a suitable support surface	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Scaffolding decks should be kept tidy and cleaned regularly to facilitate their use and reduce the risk of accidents (particularly same-level falls and falling objects).	<input type="checkbox"/>	<input type="checkbox"/>

5.4 Signage

<input type="checkbox"/>	The notice board is present and visible. It contains the required information in the appropriate colours so that everyone can be kept informed of the condition of the scaffolding	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The notice board specifies the permitted loads on the scaffolding	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The notice board shows the acceptance date and the name of the competent person who accepted the scaffolding	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The notice board shows the names of the users authorised to access the scaffolding	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The notice board specifies that moving the scaffolding with staff on it is prohibited	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The notice board shows the name of the user company and the person in charge on site	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The notice board specifies that access to the scaffolding prior to acceptance is reserved solely for staff in charge of erecting it and checking it before it is put into service.	<input type="checkbox"/>	<input type="checkbox"/>

⑥ End-of-check report and corrective actions

If any of the above conditions are non-compliant, they must be recorded and reported without delay to a manager and brought to the attention of the permit signatories/preparers

- The scaffolding does not have any major non-conformities. It is compliant. The scaffolding is maintained
- The scaffolding is non-compliant. It may not be put into service as it is
- The scaffold has non-conformities, but is maintained with the following corrective actions

Corrective actions carried out

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

⑦ Certification by the executing and approving authority

Executing authority	Approving authority
<p>I, the undersigned executing authority, have checked the scaffolding on site using appropriate means / in the presence of the approving authority and certify that it can be used for drawing up the Work at Height permit.</p> <p>Date</p> <p>Signature(s):</p>	<p>I, the undersigned approving authority, have inspected the scaffolding at the work location in the presence of the executing authority and confirm that this certificate can be used for drawing up the Work at Height permit.</p> <p>Date</p> <p>Signature(s):</p>



APPENDIX 22: CHECKLIST - MEWP

STS/HSE/MS

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1 Identification of the operation

Describe the operation to be performed:

.....

.....

HSE Plan No.:	General Work Permit No.:	Certificate No.:
.....
This certificate is drawn up to be attached to Work at Height Permit No.:		
.....		

2 Company/Companies and Worker(s)

User Company (Name of site)	EC - Main	EC - Subcontractor(s)
.....
.....
.....
Assembly/disassembly staff	- Number:	Work staff - Number:
.....
.....

3 Date of work and date of check

Date of work	.....
Date of check	.....

4 Work location

Identify the site precisely (It must indicate the worksite footprint which corresponds to the maximum perimeter of the work area including the worksite preparation area, storage area and the area where machinery moves around):

.....

5 Check points

Applicability		C: Compliant NC: Non-compliant	On-site check	
YES	NO		C	NC
X	<input type="checkbox"/>			

5.1 Operating area and work location

<input type="checkbox"/>	The choice of the type of MEWP and its use must be compatible with the following:		
	- The access route to the work area and the obstacles (power cables, cleared routes, bumps, nature of the ground, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
	- The work to be carried out	<input type="checkbox"/>	<input type="checkbox"/>
	- The maximum load to be lifted	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Slopes, ramps and inclines are taken into account when performing manoeuvres	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The ground is even, stable and does not present any major risks (pits, holes, even those hidden by water, mud, ice, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Obstacles and debris on the ground that were creating manoeuvres are detected and removed or taken into account when performing manoeuvres	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Electrical conductors (power lines) and high obstacles are taken into account along the entire route of the basket	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The presence of "unauthorised" persons is prohibited	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Other:	<input type="checkbox"/>	<input type="checkbox"/>

5.2 Checks before use

<input type="checkbox"/>	The technical documents and terms of use provided by the MEWP manufacturer (indoor/outdoor use, wind and authorised loads, etc.) are available on site and strictly adhered to	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The MEWP certificate of periodic general inspection by an approved body is available on site	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The elevating platform is positioned on flat, stable ground and checked for load bearing capacity	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The safety devices (battery switch, emergency stop) are tested on site	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	No potential leaks (oil, fuel, coolant, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that the cooling system, engine oil and hydraulic oil levels have been checked	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that electrical cables and connections have been checked	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that tyres, wheels and brakes have been checked	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The operator manual(s) and safety instructions are available	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that stabilisers, pads and chassis have been checked	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The condition of the guard rails and gates is checked	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Check that the MEWP is equipped with a regulatory anchor point, preferably at a low point, allowing the mandatory use of a harness	<input type="checkbox"/>	<input type="checkbox"/>

5.3 Staff

<input type="checkbox"/>	The MEWP drivers are trained in the use and risks of such equipment and accredited by their employer	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--	--------------------------	--------------------------



APPENDIX 22: CHECKLIST - MEWP

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(Check the availability of the IPAF, CACES or equivalent training certificate)

<input type="checkbox"/>	A passenger who has not been trained to drive a MEWP may be allowed to go up on it to carry out a job, provided that he or she has received induction training on the risks involved and the rules to be observed	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	There are at least two people trained and qualified to operate the MEWP. A person qualified to drive a MEWP is on the ground each time it is used in order to check that operations run smoothly, including when the MEWP is moving	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The MEWP occupants are wearing a safety harness, attached to a suitable anchor point on the basket (short lanyard at low level), regardless of the type of MEWP used and the type of task to be performed.	<input type="checkbox"/>	<input type="checkbox"/>

5.4 Checks during use

<input type="checkbox"/>	Any movement of a MEWP, apart from manoeuvres directly related to the task in hand, is carried out by the driver alone at the control panel.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The basket control panel is accessible at ground level when the appliance is in use	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure compliance with the maximum permitted load and the maximum number of people in the MEWP basket	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The on-board equipment does not create risks for the occupants and other workers.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Other:	<input type="checkbox"/>	<input type="checkbox"/>

5.5 Additional checks

<input type="checkbox"/>	Ensure that occupants do not get out of the MEWP in the deployed position, except in exceptional cases and as addressed in the risk analysis (e.g. access to a safe area, or inability to use other means to reach and evacuate a victim at height).	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that the MEWP is only moved when the platform is completely lowered into the stowed position.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	A MEWP is not intended for loading/unloading equipment at height, unless the loads carried (people and equipment) are below the capacity of the MEWP and after checking that there are no other more suitable and less risky alternatives	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that the MEWP is not used as a means of transport for transporting people.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that the MEWP is not used as a way of accessing another level.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that the basket is not obstructed and that the on-board equipment does not create risks for the occupants and other workers.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that the MEWP is not used to load/unload equipment at height, unless the loads carried (people and equipment) are below the capacity of the MEWP.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Ensure that climbing on the basket toe boards and handrails is prohibited	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Attaching a basket (cage) via a sling to the forks of a forklift truck or to a crane is strictly prohibited.	<input type="checkbox"/>	<input type="checkbox"/>

6 End-of-check report and corrective actions

If any of the above conditions are non-compliant, they must be recorded and reported without delay to a manager and brought to the attention of the permit signatories/preparers.

- The MEWP does not have any major non-conformities. It is compliant. The MEWP is maintained.
- The MEWP is non-compliant. It cannot be put into service.
- The MEWP has minor non-conformities, but is maintained with the following corrective actions

Corrective actions carried out

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

7 Signatories

Executing authority

I, the undersigned executing authority, have checked the MEWP on site using the appropriate means / in the presence of the approving authority and certify that the certificate can be used for drawing up the Work at Height permit.

Date

Signature(s):

Approving authority

I, the undersigned approving authority, have inspected the MEWP at the work location in the presence of the executing authority and confirm that this certificate can be used for drawing up the Work at Height permit.

Date

Signature(s):



APPENDIX 23: CHECKLIST - ROOF WORK

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① Identification of the operation

Describe the operation to be performed:

.....

.....

HSE Plan No.:	General Work Permit No.:	Certificate No(s):
.....	.....	This certificate is drawn up to be attached to Work at
.....	.....	Height Permit No.:

② Company / Companies and Worker(s)

User Company (Name of site)	EC - Main	EC - Subcontractor(s)
.....
.....
.....
Assembly / disassembly staff - Number:	Work staff - Number:	
.....	
.....	

③ Date of work and date of check

Date of work	.....
Date of check	.....

④ Work location

Identify the site precisely (It must indicate the worksite footprint which corresponds to the maximum perimeter of the work area including the worksite preparation area, storage area and the area where machinery moves around):

.....

⑤ Check points

Applicability		C: Compliant NC: Non-compliant	On-site check	
YES X	NO □		C	NC

5.1 Type of roof

<input type="checkbox"/>	For a flat roof: <ul style="list-style-type: none"> - Mark out the work area to avoid approaching within 2 m of the cornice - If the roof only has one parapet wall (usually at a height of 0.50 m), the requirement for additional security measures will depend on the nature of the work and its location in relation to the edge of the roof 	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	For a roof with a slope < 20°: <ul style="list-style-type: none"> - Downstream protection by guardrail, fall arrest surface or nets is necessary - Wearing a harness is mandatory 	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	For a roof with a steep slope between ≥ 20 and < 45° <ul style="list-style-type: none"> - Downstream protection by nets or mesh is necessary. - Wearing a harness is mandatory 	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	For a roof with a very steep slope ≥ 45° and < 60°: <ul style="list-style-type: none"> - Special work platforms must be installed to be able to stand upright. - Fall arrest systems must be installed downstream of the workstation - Wearing a harness is mandatory 	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	For a roof with a slope ≥ 60°, the slope is treated as a vertical surface: a rope access work checklist must be completed	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	In the case of work carried out on or near a fragile roof (translucent, wind or fibre cement elements, openings, skylights, etc.), additional safety measures must be taken to avoid falling through the roof: <ul style="list-style-type: none"> - The procedure for accessing the fragile roof is checked and approved - A roof runner / roof ladder is set up with the harness attached to this walkway or other attachment point - The fragile roof is clearly marked with signs - Stay more than 2 metres away from unsecured fragile areas 	<input type="checkbox"/>	<input type="checkbox"/>

5.2 Access and movement

<input type="checkbox"/>	Any work on roofs (containers, buildings, service station canopies, etc.) without using permanent safe walkways requires the strength of the roof to be checked first.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The assessment of the strength of roofs and canopies takes into account the extra load generated by the staff and equipment used.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Access the roofs through the safe passageways provided. If not, provide safe access if necessary: scaffolding, secured ladder.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	If there is no permanent collective protection, temporary collective protection (e.g. guardrails, nets on the underside, scaffolding at the bottom of the slope) must be put in place before the work is carried out, otherwise harnesses must be worn.	<input type="checkbox"/>	<input type="checkbox"/>



APPENDIX 23: CHECKLIST - ROOF WORK

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5.2 Tools and equipment

<input type="checkbox"/>	Equipment and materials are brought in by appropriate lifting equipment	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Comply with the maximum permitted loads and their distribution	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Put away and store equipment as the work progresses	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Secure and tether the equipment to prevent objects from falling down (use straps, belts, bags, wrist straps, cases, etc. as appropriate).	<input type="checkbox"/>	<input type="checkbox"/>

5.5 Signage

<input type="checkbox"/>	Access to roofs and floating screens during a product movement must be prohibited.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	It is prohibited to access a roof made slippery by the atmospheric conditions	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	It is prohibited to use a MEWP to access a roof	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Mark fragile areas with signs and prevent access to them	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	It is prohibited to climb on the guardrails	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	It is prohibited to obstruct passageways	<input type="checkbox"/>	<input type="checkbox"/>

6 End-of-check report and corrective actions

If any of the above conditions are non-compliant, they must be recorded and reported without delay to a manager and brought to the attention of the permit signatories / preparers

Corrective actions carried out (if required)

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

7 Certification by the executing and approving authority

Executing authority

I, the undersigned executing authority, have checked the conditions of access, movement and work on the roof on site using the appropriate means / in the presence of the approving authority and certify that this preliminary checklist form can be used for drawing up the Work at Height permit(s):

Date

Signature(s):

Approving authority

I, the undersigned approving authority, have inspected the work locations in the presence of the executing authority, and confirm that this form can be used for drawing up the Work at Height permit.

Date

Signature(s):



APPENDIX 24: CHECKLIST - ROPE ACCESS WORK

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The use of ropes for performing work at height is prohibited except for exceptional work and only if it is technically impossible to use other means and if the risk assessment shows that the use of such equipment exposes staff to a lower risk than other means that could be used. Rope access work requires prior authorisation signed by the approving authority and validated by superiors.

1 Identification of the operation

Describe the operation to be performed:
.....
.....

HSE Plan No.:	General Work Permit No.:	Checklist No.:
.....
This form is drawn up to be attached to Work at Height Permit No.:		
.....		

2 Company / Companies and Worker(s)

User Company (Name of site)	EC - Main	EC - Subcontractor(s)	Staff - Number:
.....
.....
.....

3 Date of work and date of check

Date of work	.....
Date of check	.....

4 Work location

Identify the site precisely (It must indicate the worksite footprint which corresponds to the maximum perimeter of the work area including the worksite preparation area, storage area and the area where machinery moves around):

5 Check points

Applicability		C: Compliant NC: Non-compliant	On-site check	
YES X	NO □		C	NC

Company and worker qualifications

<input type="checkbox"/>	It is a specialist company which has all the required accreditations (particularly with regard to local regulations and in accordance with international standards)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The company is affiliated with institutes such as IRATA3 or equivalent (international scope).	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The rope access work is carried out by specialist companies with certified staff.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The company is affiliated with institutes such as IRATA3 or equivalent (international scope), or employs staff with CQP4 (France) certification or equivalent.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	A work team consists of at least two people: - one of whom has supervisory skills (IRATA 3, CQP 2 or equivalent) - other rope access technicians who may be certified at a lower level (IRATA 1&2, CQP 1, CATC5 or equivalent) - with a maximum quota of 33% of IRATA Level 1 for an IRATA certified team	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Specific PPE & Equipment

<input type="checkbox"/>	The rope access workers should be equipped with a special harness that allows them to hang for long periods of time, connected to the safety rope.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The system is equipped with at least 2 separately anchored ropes: - A working rope (means of access) equipped with a safe descent and ascent mechanism with a self-locking system that prevents the user from falling should they lose control of their movements. - A safety rope (rescue device) equipped with a mobile fall arrest device that moves around with the worker	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/>	Tools and other accessories to be used are attached to the worker's harness or seat or otherwise appropriately secured. Tools are properly secured: use of belt, wrist strap, etc. where appropriate	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Check the condition of all equipment before use: In the event of a defect, the work will be cancelled	<input type="checkbox"/>	<input type="checkbox"/>

Preliminary checks

<input type="checkbox"/>	The risk assessment shows that the rope access work can be carried out safely (taking into account, in particular, the risks generated by the installations and the environment for the workers and the equipment)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Electrical conductors (power lines) and high obstacles are taken into account in the risk analysis	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Protect the components (ropes) in case of an edge considered potentially sharp	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	The permissible loads for the equipment are respected in order to avoid breakage	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	No unauthorised persons are present under the work area (falling objects)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Other:	<input type="checkbox"/>	<input type="checkbox"/>

6 End-of-check report and corrective actions



APPENDIX 24: CHECKLIST - ROPE ACCESS WORK

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If any of the above conditions are non-compliant, they must be recorded and reported without delay to a manager and brought to the attention of the permit signatories / preparers

- All the necessary measures have been put in place. The rope access work can begin
- Not all the necessary measures have been put in place. The rope access work is stopped

Corrective actions carried out

-
-
-

7 Certification by the executing and approving authority

Executing authority

Approving authority

I, the undersigned executing authority, have carried out checks on site using the appropriate means / in the presence of the approving authority and certify that this preliminary checklist form can be used for drawing up the Work at Height permit(s):

I, the undersigned approving authority, have inspected the work locations in the presence of the executing authority, and confirm that this form can be used for drawing up the Work at Height permit.

Date

Date

Signature(s):

Signature(s):



APPENDIX 25: CHECKLIST - MOBILE LADDER AS A MEANS OF ACCESS

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Ladders, standard stepladders and other unsecured mobile equipment may not be used as workstations. Ladders are only a means of access to a higher or lower level.

1 Identification of the operation

Describe the operation to be performed:
.....
.....

HSE Plan No.:	General Work Permit No.:	Work at Height Permit No.:
Identify the work at height site precisely:		Ladder inspection date/...../.....

2 Company/Companies and Worker(s)

User Company (Name of the site)	EC - Main	EC - Subcontractor(s)
.....

First name/Last name of ladder user (to be written below) Number of workers using the ladder:

.....

.....

3 Ladder inspection checklist

Applicability		C: Compliant NC: Non compliant	On-site check	
YES X	NO □		C	NC
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that the ladder / step ladder feet are in good condition and have non-slip feet	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that the rung locks and spreader bars are working	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that the side rails show no signs of deterioration, dents or rust	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that bolts and rivets are secure	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that steps and rungs are free of oil, grease and other substances	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure the integrity of the bars and uprights and that they are in good condition	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that any slides are locked	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that the use of wooden, telescopic, double, convertible and multi-purpose ladders/stepladders is strictly prohibited	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that the floor is level, stable, able to support the load and that the ladder is positioned without risk of slipping or tipping.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that the ladder is properly secured and braced at the top (ropes, straps, etc.), and at the bottom (chocks, straps, etc.) and that its maximum height when deployed is 6 metres	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that where necessary (wet ground, doubts about stability) someone is holding the bottom of the ladder firmly throughout the operation	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that the operator never climbs or descends facing outwards, always facing the ladder and always with three points of contact.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that the ladder is positioned so that it extends at least 1 metre above the landing area and secure the passage between the ladder and the landing area	<input type="checkbox"/>	<input type="checkbox"/>
		If a double extension ladder is used, ensure that there is an overlap of approximately 1 metre.		

If only one point of non-compliance is identified above, the ladder cannot be used

7 Signatories

Executing authority

I, the undersigned executing authority, have checked the ladder covered by this form on site using the appropriate means.

Date/...../.....

Signature(s):



APPENDIX 26: CHECKLIST - HARNESSES

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PPE can only be used to protect against falls from a height when it is technically impossible to use collective protection. There are three types of suitable PPE:

- **Fall arrest systems** (stops the fall and suspends the operator)
- **Restraint systems** (prevents the operator from reaching fall zones but does not stop a fall)
- **Workstation support systems** (allows the operator to work while supported or suspended, cannot slip or fall)

1 Identification of the operation

Describe the operation to be performed and the work to be done in relation to this certificate:

.....

HSE Plan No.: General Work Permit No.: Working at Height Permit No.:

Identify the work at height site precisely: Harness inspection date
...../...../.....

2 Company/Companies and Worker(s)

User Company (Name of site) EC - Main contractor(s) or subcontractor(s) concerned

.....

First name/Last name of harness user (to be written below) Harness identification number

.....

3 Checklist for checking the harness (individual check)

On-site check

C NC

The harness is considered suitable for the task

The harness is considered suitable for the body size of the harness user

Ensure the straps are in good condition and compliant (rings, fastening buckles, seams, etc.)

Ensure the various connection devices (carabiners) are in good condition and compliant

Ensure the lanyards (lugs, rope lanyards, lifting straps, energy absorbing lanyards, etc.) are in good condition and compliant

Ensure that the energy absorber is in good condition and compliant (external protective wrapping, seams, inactivated energy absorber)

Ensure that the rope grab (automatic locking device) is in good condition and compliant

Ensure that labels are present, attached and legible.

Ensure that the storage case or bag is present, in good condition and compliant

If only one point of non-compliance is identified above, the harness cannot be used

7 Signatories

Executing authority

I, the undersigned executing authority, have checked the harness on site using the appropriate means and certify that the harness can be used for the identified work at height and to draw up the corresponding permit.

Date/...../..... Signature(s):



TotalEnergies

APPENDIX 26: CHECKLIST - HARNESSSES

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APPENDIX 27: ATMOSPHERIC MEASUREMENT FORM

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ATMOSPHERIC MEASUREMENT FORM: WORK IN CONFINED SPACES

Identification of the operation	Company/Companies and Worker(s)	Instruments used and calibration
Site name:	EC carrying out the measurements:	<input type="checkbox"/> Gas detector <input type="checkbox"/> Measuring beacon <input type="checkbox"/> Other:.....
HSE Plan No.:	Names of operators carrying out the measuring	
Specific Permit No.:	-	
Certificate No(s):	-	

Describe the operation to be performed:	Identify the work area precisely:
---	--

Atmospheric monitoring and measurement should be carried out at all the necessary points (top, middle and bottom), measuring for at least one minute per point and making sure the entire work area is covered. Before entering, measurements will be taken from the outside. If the hole is too deep, too wide, etc., special equipment, such as an extender, a rod, a specific arm, etc. must be used to monitor the atmosphere. Depending on the circumstances, the measurements can be taken at different locations. The checks should be carried out in the following order: Oxygen levels, flammability of the atmosphere and finally the toxicity of the atmosphere if necessary.

Nature of gas	Oxygen concentration (O ₂)	Hydrocarbon concentration (LEL)
---------------	--	---------------------------------

Important The **date** and **time** of the measurement, as well as the **measurement** and its unit of measurement must be written in each

Measurement points	Measurement point 1	Measurement point 2	Measurement point 1	Measurement point 2
On opening the confined space	Top			
	Middle			
	Bottom			
After ventilation and before entry	Top			
	Middle			
	Bottom			
During work	Top			
	Middle			
	Bottom			
On exiting	Top			
	Middle			
	Bottom			



APPENDIX 27: ATMOSPHERIC MEASUREMENT FORM

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Worker's signature:

ATMOSPHERIC MEASUREMENT FORM: WORK IN CONFINED SPACES

Identification of the operation	Company/Companies and Worker(s)	Instruments used and calibration
Site name:	EC carrying out the measurements:	<input type="checkbox"/> Gas detector <input type="checkbox"/> Measuring beacon Other:.....
HSE Plan No.:	Names of operators carrying out the measuring	
Specific Permit No.:	- -	
Certificate No(s):	- -	

Describe the operation to be performed:	Identify the exact work area:
---	--

Atmospheric monitoring and measurement should be carried out at all the necessary points (top, middle and bottom), measuring for at least one minute per point and making sure the entire work area is covered. Before entering, measurements will be taken from the outside. If the hole is too deep, too wide, etc., special equipment, such as an extender, a rod, a specific arm, etc. must be used to monitor the atmosphere. Depending on the circumstances, the measurements can be taken at different locations. The checks should be carried out in the following order: Oxygen levels, flammability of the atmosphere and finally the toxicity of the atmosphere if necessary.

Nature of gas	Hydrogen sulphide (H2S) concentration	Carbon monoxide (CO) concentration
Important The date and time of the measurement, as well as the measurement and its unit of measurement must be written in each		

Measurement points	Measurement point 1	Measurement point 2	Measurement point 1	Measurement point 2
On opening the confined space	Top			
	Middle			
	Bottom			
After ventilation and before entry	Top			
	Middle			
	Bottom			
During work	Top			
	Middle			
	Bottom			
On exiting	Top			
	Middle			
	Bottom			



APPENDIX 27: ATMOSPHERIC MEASUREMENT FORM

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Worker's signature: _____

ATMOSPHERIC MEASUREMENT FORM: EXTERNAL WORK (ATEX ZONE)

Identification of the operation

Company/Companies and Worker(s)

Instruments used and calibration

Site name:	EC carrying out the measurements:		<input type="checkbox"/> Gas detector <input type="checkbox"/> Measuring beacon Other:.....
HSE Plan No.:	Names of operators carrying out the measuring		
Specific Permit No.:	-	-	
Certificate No(s):	-	-	

Describe the operation to be performed:	Identify the exact work area:
---	--

Atmospheric monitoring and measurement should be carried out at all the necessary points depending on the configuration (centre, corners, low points, etc.), making sure that the entire work area is covered.

Nature of gas	Hydrocarbon concentration (LEL)
---------------	---------------------------------

Important The **date** and **time** of the measurement, as well as the **measurement** and its unit of measurement must be written in each

Measurement points	Measurement point 1	Measurement point 2	Measurement point 1	Measurement point 2
Position 1				
Position 2				
Position 3				
Position 4				



APPENDIX 27: ATMOSPHERIC MEASUREMENT FORM

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Worker's signature:

Required limit values for atmospheric measurements

The limit values below are to be considered in the light of the results of the atmospheric measurements reported in the above form completed before the permit is signed and the work begins.

Oxygen level measurement

Test result	Rule for work
$O_2 > 23.5\%$	No entry regardless of respiratory protection
$19.5\% < O_2 \leq 23.5\%$	Entry permitted
$10\% < O_2 \leq 19.5\%$	Entry permitted on an exceptional basis with self-contained breathing apparatus (cylinders or air line)
$O_2 \leq 10\%$	No entry in all cases regardless of respiratory protection

(LEL measurement Concentration of hydrocarbons or other flammable gases/vapours measured)

Test result	Rule for work
HC detectable at check	Any value other than zero must be explainable. If there is no coherent explanation as to why explosivity is present, no work should be undertaken Hot work is prohibited
Origin of explosivity understood, stabilised and controlled	HC \leq 2% of the LEL Work without special restrictions Hot work prohibited if LEL > 0%.
	2% < HC \leq 10% of LEL Constant monitoring The harmfulness of vapours (particularly petrol) may warrant respiratory protection



APPENDIX 27: ATMOSPHERIC MEASUREMENT FORM

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HC > 10% of LEL

Work prohibited and evacuation of the area

Hydrogen sulphide (H₂S) measurement

Test result	Rule for work
H ₂ S > 100 ppm	No entry regardless of respiratory protection
10 ppm < H ₂ S ≤ 100 ppm	Entry permitted on an exceptional basis with self-contained breathing apparatus (cylinders or air line)
1 ppm < H ₂ S ≤ 10 ppm	Entry permitted with respiratory protection: Self-contained breathing apparatus (cylinders or air line) Cartridge masks for short term operations (< 15 min)
H ₂ S < 1 ppm	Permitted without specific respiratory protection

Carbon monoxide (CO) measurement

Test result	Rule for work
CO > 1,500 ppm	No entry regardless of respiratory protection
500 ppm < CO ≤ 1,500 ppm	Entry with self-contained breathing apparatus (cylinders or air line)
50 ppm < CO ≤ 500 ppm	Entry permitted with the following type of respiratory protection: Self-contained breathing apparatus (cylinders or air line) Cartridge masks for short term operations (< 15 min)
CO < 50 ppm	Entry permitted without specific respiratory protection

Toxic measurements

Test result	Rule for work
Toxic measurement > threshold immediately dangerous to life	No entry regardless of the type of respiratory protection
Toxic measurement > 60 x OEL	Entry permitted only with self-contained breathing apparatus (cylinders or air line)



APPENDIX 27: ATMOSPHERIC MEASUREMENT FORM

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10% of OELV < Toxic measurement \leq 60 x OELV	Entry permitted with the following type of respiratory protection: Self-contained breathing apparatus (cylinders or air line) Cartridge mask (for short term operations).
Toxic measurement \leq 10% of OELV	Entry permitted without specific respiratory protection



APPENDIX 28: LIFTING OPERATION CATEGORISATION FORM

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1 Identification of the operation

Describe the operation to be performed:

.....

HSE Plan No.:

General Work Permit No.:

Lifting Permit No.:

Lifting Plan or File No.:

3 Date of work

Date of work

.....

4 Work location

Identify the site precisely (It must indicate the worksite footprint which corresponds to the maximum perimeter of the work area including the worksite preparation area, storage area and the area where machinery moves around):

.....

5 Elements necessary for categorisation

Category 3: CRITICAL LIFTING

General

The preparation of the lifting operation requires the assistance and calculations of a **technical expert / engineering consulting firm**

The load must be transported, tilted, straightened or turned by **two or more motorised appliances**

The lifting appliance must **move with a suspended load** with a utilisation rate of more than 70%.

The load must be transferred from one lifting appliance to another

The lifting operation is **classified as non-reversible**

The operation involves lifting a load by means of hydraulic cylinders

The lifting operation is performed from one **floating vessel to another floating vessel**

The lifting operation requires the **intervention of divers**

The lifting operation requires the use of **air balloons** or **additional buoyancy tanks**

The **stability of the vessel** depends on the lifting to be carried out (simultaneous ballasting required)

Lifting team

The lifting operation is carried out by two different teams

Lifting equipment

Lifting equipment is used at **more than 90% of its capacity** (including the weight of the hook and reeving, the weight of lifting accessories, uncertainty of masses, dynamic amplification factor, etc.)

The lifting operation requires a **specialised lifting** appliance or a **particular lifting configuration**

The lifting operation requires the design, manufacture or use of **special lifting equipment** (e.g. special spreader bars or spreaders, rotation supports, guides)

Lifted load

The **distribution of the mass is uneven** or likely to change. The load's centre of gravity may vary due to the free-surface effect

The load is **difficult to sling** (particular shape, centre of gravity above the lifting points, non-symmetrical slinging method or complex slinging, unknown centre of gravity, uncertain weight, etc.)

The **load is fragile** or may be permanently deformed

The load has a **large aerodynamic surface**. It can be affected by wind.

The load to be lifted is **greater than 2 tonnes**

The load is being lifted more than 15 meters from the ground

The load to be lifted is live or pressurised

Lifting of staff

The lifting operation involves lifting staff (excluding MEWPs)

Lifting near or over active facilities

The lifted load is in service condition or in operation.

The lifted load must be moved over an active unprotected facility or over a facility in production with a machine utilisation rate of 75% or more.

The lifting operation is carried out in specific facilities classified by the site as high risk

Environment

Conditions related to the physical environment of the operation: The lifting or the lifting operation is carried out in **areas exposed to proximity risks** (trenches or excavations, underground installations, overhead electrical cables, congestion in the operating area, small clearance, limited height, etc.)

Lifting with the outriggers positioned on areas with different allowable pressures.

Lifting is "blind" (no visual contact between the crane operator and the supervisor)

If any of the above boxes are ticked, the lifting operation will be deemed to be critical



APPENDIX 28: LIFTING OPERATION CATEGORISATION FORM

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Category 2: STANDARD

General

The lifting appliance must move with a suspended load with a utilization rate strictly below 70%

The load is lifted, transported or held by more than two non-motorised lifting appliances

Lifting team

The lifting team will manage and carry out this type of lifting (mass, shape, etc.) for the first time. The operator is in training

Lifting equipment

Fixed, motorised, temporarily installed lifting equipment will be used

The lifting operation requires the use of forklifts, telescopic boom lifts or excavators to lift suspended loads

Lifted load

No certified or tested lifting points

The load mass is estimated

Lifting near or over active facilities

The lifted load must be moved **over an active**, unprotected facility or **over a facility in production** with a machine utilisation rate strictly below 75%

Environment

The lifting operation is carried out in restricted areas (e.g. public road, public space, airport, etc.)

If any of the above boxes are ticked, the lifting operation will be deemed to be standard

Category 1: SIMPLE

Case 1: The following four conditions must be met

- No category 2 or 3 statements are present

- The staff involved in the lifting operation are trained, experienced and assessed as competent. They have already carried out similar operations and are authorised to fulfil their role

- The load is pre-slung or very easy to sling, there are no external factors that complicate the operation

- The lifting equipment is easy to use.

Case 2: The handling operation with a forklift truck is carried out under normal conditions of use of this appliance.

If any Category 1 statements are not verified, the operation will be deemed to be Category 2

7 Certification by the executing and approving authority

Executing authority
For execution

Approving authority
For approval

Date/...../.....

Date/...../.....

Signature(s):

Signature(s):



APPENDIX 29: WORK ACCEPTANCE FORM

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1 Identification of the operation

Describe the operation to be performed:

HSE Plan No.:

 General Work Permit No.:

Certificate No.:
 This work acceptance form is drawn up to be attached to the specific permitNo.:

2 Company/Companies and Worker(s)

User Company (Name of site)	EC - Main	EC - Subcontractor(s)
--------------------------------------	--------------------	--------------------------------

Assembly/disassembly staff - Number.....	Work staff - Number:
.....
.....

3 Date of work

...../...../.....

3 Work acceptance date

...../...../.....

4 Work location

Identify the site precisely (It must indicate the worksite footprint which corresponds to the maximum perimeter of the work area including the worksite preparation area, storage area and the area where machinery moves around):

5 End-of-work checkpoints

Applicability		Acceptance is carried out between the technical departments and the contractor(s), with the active participation of the operator, C: Compliant NC: Non-compliant These checks ensure that the equipment installed is compatible and that the modifications made comply	On-site check	
YES	NO		C	NC
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Ensure that the work acceptance is carried out using a checklist containing the detailed description of the work (specifications)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>

8 Certification and signature

Executing authority
 I, the undersigned executing authority, have checked on site using the appropriate means and certify that:

Approving authority
 I, the undersigned approving authority, have checked on site using the appropriate means and certify that:

The work is accepted
 Without reservation
 With the following reservations:

Date/...../.....
 Signature(s):

Date
 Signature(s):



APPENDIX 29: WORK ACCEPTANCE FORM

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Applicability		Example of a checklist for acceptance, commissioning / re-commissioning of tanks	On-site check	
YES X	NO □	Manifold Piping (M) and Tank Piping (T) The check must be carried out separately on the manifold and the piping	C	NC
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that lines and valves are correctly identified	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that the pipes are properly supported	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that the pipe supports are correctly fixed with allowance for possible movement	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that all arrangements have been made for venting the pipes	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that all vents are closed	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that all arrangements have been made for draining the pipes	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that all drains are closed	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that all valves have been tested, serviced or replaced	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure the valves can be operated	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that the valves are properly oriented to allow correct and easy operation	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that the nuts and bolts used are appropriate	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that the spades have been removed and the steady rests returned	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	If necessary, ensure that the seals have been replaced	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that the line filling is satisfactory (no leaks)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that all necessary vacuum piping is in place, calibrated and labelled	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that all vacuum piping lines are connected and de-spaded	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that all caps are in place and painted red	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that the logbook and plans have been updated. Operators have been informed via a table and turn-over	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure when (re)fitting pipe and flange connections that they are tightened	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that tightness indicators are in place and that they show the name of the worker, the EC and the date of the tightness check	<input type="checkbox"/>	<input type="checkbox"/>
Specific nature of the Tank Piping - the pump unit				
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that all valves and/or flaps have been tested, serviced or replaced	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that the previous contents of the connected lines are compatible with the product stored in the tank	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that all spades and steady rests are in place to avoid product mixing upon pump suction	<input type="checkbox"/>	<input type="checkbox"/>
Tank				
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that the tank is correctly identified and numbered	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that the manholes are sealed with the correct seal	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that all nuts and bolts are sufficiently threaded	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that the drainage system is connected and operational with its bermad	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that the drain hose is connected to the drainage system	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that all necessary vacuum piping is in place, calibrated and labelled	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that waste is disposed of	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that all stair steps and gratings have been checked	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that the LSHH connection is in place, checked and tested	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that the tank is properly grounded (at least two grounding points)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that the automatic gauge is in place, correctly installed and checked	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that vents are clean, unclogged and protected by grilles	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that the sampling point is in place with its dead man's valve if applicable	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that temperature measurement is in place and checked	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that the electrical cables are correctly installed in the cable trays	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that the lighting is appropriate and sufficiently bright	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that electrical continuity is maintained	<input type="checkbox"/>	<input type="checkbox"/>
Documentary and miscellaneous				
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that the inspection body has authorised the commissioning	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that the gauge table is received and complies with customs and regulatory requirements	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that the gauge table has been entered into the supervision and stock control system	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that LOC values are defined and entered into the supervision and/or safety system	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	For alarm inhibition, ensure that the operating configuration has been set up	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that the safety system is modified and updated	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that liquid and/or gas detectors in containment tanks are checked and operational	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that the mimic diagram of tanks in service is updated	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that information is formally passed on to the depot operators	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that plans have been changed	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Ensure that all lockout/tagout cards are returned and the lockout/tagout file is updated	<input type="checkbox"/>	<input type="checkbox"/>
<p>If all of the above operations have been carried out correctly, lockout/tagout removal and re-commissioning can be carried out.</p>				
<input type="checkbox"/> Prior to re-commissioning, the handover of instructions and communication between the different teams working in shifts				

Practical description of the action (What?)

The Safety Green Light meeting is held for all work carried out under a work permit, when the work is ready to be started (work permit signed). Each worker reflects on the four open-ended questions proposed and interacts with his or her colleagues. Each worker validates the back of the work permit or equivalent before starting. This is a quick and brief activity; it is the last opportunity to speak out and have a say before starting the work.

How it is implemented (How?)

Each member of the team involved in the work, including in the case of a lone worker, asks and answers the four open-ended questions and decides whether or not to start the work. The checklist below is easy to use and makes it easy to translate the Safety Green Light Card questions

Implementing rules (duration, place, frequency) (When and Where?)

This activity takes place at the work location and only lasts a few minutes. It is carried out each time work is started or restarted, after a team change or if there is a change in the working environment

Stakeholders (Who?)

Everyone involved in the execution of the work, both the staff of the company involved and the staff of TotalEnergies, in particular when the permit requires their presence.

Output and outcome of the task (Why?)

Each worker asks themselves all the questions in the checklist below (covering the 4 open-ended questions on the Safety Green Light Card), decides whether work can start or resume and then validates the back of the permit or other work initiation document.



Safety green light

- 1 What is the job to be done?**
 - At what exact location?
 - Do I understand my role and am I able to do it? Have the procedure and work permit been explained to me?
 - Do I have the right tools/protective equipment for the work?
- 2 What should I do if change occurs?**
 - Change in conditions (environment, co-activities, etc.) during the course of work (need for a tool not initially planned, operating procedure or risk not initially identified, etc.)?
- 3 What could happen that could be serious?**
 - Is there a risk of a fatal accident?
 - Can someone hurt me or can I hurt someone?
 - What will protect me?
- 4**

I am ready to start my work safely

START

I have doubts

STOP

I report to my team leader

TotalEnergies logo and Safety logo are present at the bottom.

Reporting

Each entity or subsidiary should regularly report the number of Safety Green Light meetings held.

Prior awareness required

The Company's staff and the staff of the companies involved must be informed of this activity and have it explained to them. This activity should be included in the safety briefing / introduction to site safety and any other training related to the safety of the work.

Points for attention

This process requires commitment and recognition if it is to be used in the long term.

Here is what must be avoided when conducting Safety Green Light meetings:

- Lone workers performing the task alone and/or away from supervision
- Discussing general information instead of specific steps of the operation
- Giving a speech instead of encouraging the proactive participation of those who have to perform the tasks
- Lack of communication in the team
- Not expressing concerns or asking questions
- Talking about the steps of the operation by quoting the operating procedure rather than checking it is being applied
- Not paying attention to reactions or warnings voiced
- Not talking about potential mistakes and how to avoid them: lack of feedback
- Making the Safety Green Light meeting too long
- Mixing up the green light with existing tools



APPENDIX 30: SAFETY GREEN LIGHT MEETING

STS/HSE/MS

Revision: XX

Effective date: Month Year

Page 1/2

Checklist of Safety Green Light questions

Identification of the operation

Describe the operation to be performed:

Associated Work Permit No.:

Date and location of work

Date:/...../.....

Location:

Time:

- Start of work
 Restart of work
 Change of team
 Change of environment

Question checklist

YES

NO

Do I know exactly where the work is to take place?

Have I understood my role and am I able to do it (accreditations, training, etc.)? Have the operating procedure and the work permit been explained to me?

Do I have the right tools and protective equipment?

Do I know what to do if there is any change in my task or in the environment (weather, co-activity) during the course of the work (need for a tool not initially foreseen, operating procedure or risk not initially identified, etc.)?

Am I aware (it has been explained to me) of the risks associated with the operation which can lead to a serious or fatal accident?

Is the workers' safety in relation to each other (I can't hurt anyone and no one can hurt me) ensured?

Are there preventive measures to protect myself and others?

I can start safely. * (if just one answer is "NO", the work cannot start)

Workers' signatures

Workers' names

Signatures

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Appendix 31: LIFE SAVING CHECKS

STS/HSE/MS

Revision: XX

Effective date: Month Year

Page 1/2

What - Description					Objectives of the checks										
<p>Life saving checks are field checks specific to fatal risk activities. They are carried out using checklists associated with each type of activity:</p> <table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th style="width: 15%;">Work at height</th> <th style="width: 20%;">Work on de-energised systems</th> <th style="width: 20%;">Lifting operations</th> <th style="width: 20%;">Work in confined spaces</th> <th style="width: 25%;">Hot work</th> </tr> </thead> <tbody> <tr> <td>Excavation work</td> <td></td> <td>Manual cleaning using high-pressure water jets</td> <td></td> <td>Pumping with a hydro-cleansing tanker</td> </tr> </tbody> </table> <p>On the front: a diagram showing the fatal risk activity, the points to be checked and the number of fatal accidents recorded for this type of activity</p> <p>On the back: the checklist of points to be checked, information to be filled in (location, date, company name, work permit number, compliance rate, any comments, name of the person carrying out the check and his/her company name and signatures).</p> <p>These are compliance checks based on observable and indisputable facts. Their main purpose is not to discuss matters: this is not a safety tour or a Safety Green Light meeting.</p>					Work at height	Work on de-energised systems	Lifting operations	Work in confined spaces	Hot work	Excavation work		Manual cleaning using high-pressure water jets		Pumping with a hydro-cleansing tanker	<ul style="list-style-type: none"> ▪ Strengthen supervision in the field, notably through the intervention of Company and External Company supervisors. ▪ Provide immediate feedback to workers (good practices / anomalies) ▪ Intervene and stop work if rules are not being followed or if actions or situations with uncontrolled risks are perceived ▪ Evaluate and monitor the compliance rate and use it as a steering tool ▪ Recognise and motivate the companies and operational staff
Work at height	Work on de-energised systems	Lifting operations	Work in confined spaces	Hot work											
Excavation work		Manual cleaning using high-pressure water jets		Pumping with a hydro-cleansing tanker											
Who carries out the checks?					When?										
<p>Level 1 supervisors, middle managers, executives or any other person identified/designated by each party carry out field checks. The staff performing the work cannot carry out the check.</p>					<p>Fatal risk activities are observed while the work is being performed. The checks are brief (15 minutes) in order to increase the number carried out each day.</p>										
How are the checks carried out? - The steps to follow															
<ol style="list-style-type: none"> 1. Prepare by looking at the schedule of fatal risk activities and contacting the operational manager (or another designated person). 2. Go into the field with the agreement of the operational manager to the place where the activity is being performed on the scheduled date and at the scheduled time, with the appropriate PPE and the checklist(s) for the activity. 3. Introduce yourself: Introduce yourself and explain the purpose of the field check to the workers. 4. Observe the activity with the help of the checklist and question the workers if necessary. 5. Carry out the checks using the diagram on the front, fill in the checklist for the activity being checked, ticking "YES", "NO" or "N/A" for each point to be checked and calculate the compliance rate. 6. Intervene if necessary to stop the activity, in the event of non-compliance or any other situation likely to lead to an accident, for example by using the Stop Card, and pass on the information to the entity or subsidiary in order to identify areas for improvement and facilitate the sharing of experiences. 															

Confined spaces

September 2021

1 fatality related to confined space occurred within the Company in the last 10 years.



Confined spaces



September 2021

Location _____ Date _____
 Company observed _____ Permit No. _____

- | YES | NO | N/A | POINTS TO BE CHECKED |
|-----------------------|-----------------------|-----------------------|--|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 1 Has the "Safety green light" been carried out? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 2 Use the checklist "Work on de-energized systems" for each energy and answer: do all applicable points comply? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 3 Has the atmosphere been checked prior to entry confined space? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 4 Is atmosphere monitored (or checked regularly) during the confined space work? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 5 Is the entry watch assigned and ensured at all times? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 6 Is the number of entrants monitored (or regularly checked) at all times while working in a confined space? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 7 Is communication between entry watch and entrants established and regularly tested (e.g. oral, visual or radio)? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 8 Is the confined space ventilated (natural or mechanical ventilation)? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 9 When required by the work permit, is an adapted respiratory protection used? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 10 Is the rescue plan known and ready to be initiated? |

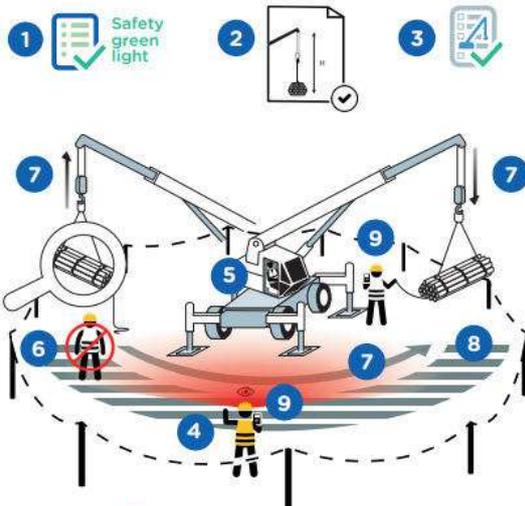
Compliance rate (Nb YES/applicable points): _____ / _____ (%)

Comments _____
 Name _____ Company _____
 Signature _____

Lifting operations

September 2021

7 fatalities related to lifting operations occurred within the Company in the last 10 years.



Lifting operations



September 2021

Location _____ Date _____
 Company observed _____ Permit No. _____

- | YES | NO | N/A | POINTS TO BE CHECKED |
|-----------------------|-----------------------|-----------------------|--|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 1 Has the "Safety green light" been carried out? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 2 Is an approved lifting plan available? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 3 Has the pre-start controls list been completed by the operations team at the beginning of the work? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 4 Is the signaler/banksman appointed and recognizable? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 5 Has the lifting appliance operator a training certificate / an authorization document to operate the appliance? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 6 Is a restricted zone physically established and no one located under or in proximity of the suspended load? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 7 Is the lifting operation executed according to the lifting drawing / step-by-step procedure? (ex: slings, departure area, arrival area, overflow area) |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 8 Is no pressurized equipment present under or in proximity of the suspended load, except in specific cases addressed in the lifting plan? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 9 Is the moving load controlled while being lifted? |

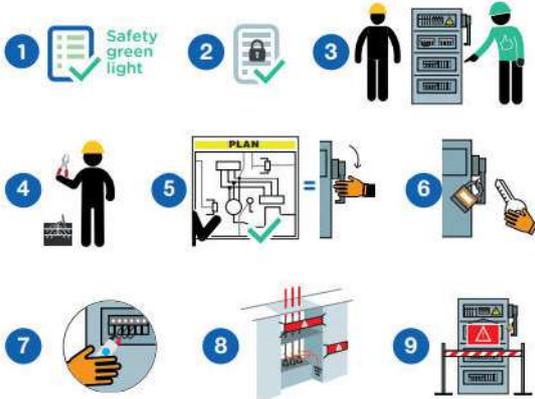
Compliance rate (Nb YES/applicable points): _____ / _____ (%)

Comments _____
 Name _____ Company _____
 Signature _____

Work on electrical de-energized systems

September 2021

14 fatalities related to work on powered systems occurred within the Company in the last 10 years.



Work on electrical de-energized systems



September 2021

Location _____ Date _____
Company observed _____ Permit No. _____

- | YES | NO | N/A | POINTS TO BE CHECKED |
|-----------------------|-----------------------|-----------------------|--|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 1 Has the "Safety green light" been carried out? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 2 Has the representative of the workers received the validated isolation certificate(s) corresponding to the equipment involved in the work to be done? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 3 Is the circuit or equipment on which the work is to be carried out identified in the field by an authorised person in the presence of a representative of the workers? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 4 Do personnel performing the activity wear specific PPE for the task? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 5 Are separation devices set in the identified position as per approved isolation diagram / plan? (master copies to be checked in the dedicated place) |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 6 Are separation devices locked and tagged? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 7 Has the zero voltage testing been carried out by an authorized person and demonstrated to the representative of the workers? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 8 Has the grounding / short circuiting been carried out on all conductors including neutral? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 9 Are hazards on adjacent live parts signalled and are protections in place? |

Compliance rate (Nb YES/applicable points): _____ / _____ (%)

Comments _____
Name _____ Company _____
Signature _____

Work on process de-energized systems (gas, liquids, solids)

September 2021

14 fatalities related to work on powered systems occurred within the Company in the last 10 years.



Work on process de-energized systems



September 2021

Location _____ Date _____
Company observed _____ Permit No. _____

- | YES | NO | N/A | POINTS TO BE CHECKED |
|-----------------------|-----------------------|-----------------------|--|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 1 Has the "Safety green light" been carried out? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 2 Has the representative of the workers received the validated isolation certificate(s) corresponding to the equipment involved in the work to be done? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 3 Is the circuit or equipment on which the work is to be carried out identified in the field by an authorised person and in the presence of a representative of the workers? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 4 Is the personnel performing the activity equipped with task-specific PPE and, in an area with a potentially explosive atmosphere, non-sparking tools? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 5 Are isolation devices set in the identified position as per approved isolation diagram / plan? (master copies to be checked in the dedicated place) |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 6 Are isolation devices locked and tagged? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 7 Has the absence of energy been demonstrated by an authorized person and in the presence of a representative of the workers? |

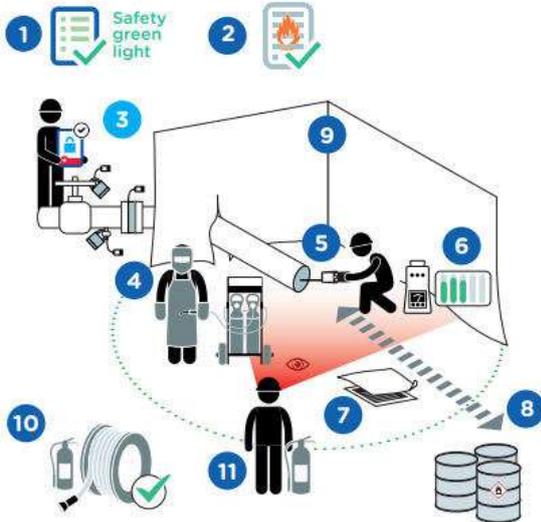
Compliance rate (Nb YES/applicable points): _____ / _____ (%)

Comments _____
Name _____ Company _____
Signature _____

Hot work

September 2021

2 fatalities related to hot work occurred within the Company in the last 10 years.



Hot work



Location _____ Date _____
 Company observed _____ Permit No. _____

- | YES | NO | N/A | POINTS TO BE CHECKED |
|----------------------------------|-----------------------|-----------------------|--|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 1 Has the "Safety green light" been carried out? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 2 Is the hot work permit validated? |
| <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | 3 Use the checklist "Work on de-energized systems" for each energy and answer, do all applicable points comply? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 4 Do personnel performing the activity wear specific PPE for the task? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 5 In an area with a potentially explosive atmosphere, has a gas test been completed prior to hot work? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 6 In an area with a potentially explosive atmosphere, is continuous monitoring of the atmosphere or is gas testing with a defined frequency carried out, and results monitored? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 7 Are drains, openings and vents shielded? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 8 Have all combustible materials been removed, covered or kept wet in the hot work area? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 9 When required by the work permit, are spark protection covers in place? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 10 Has firefighting equipment been inspected, is it available at hot work site and ready for use? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 11 When required by the work permit, is the fire watch in place? |

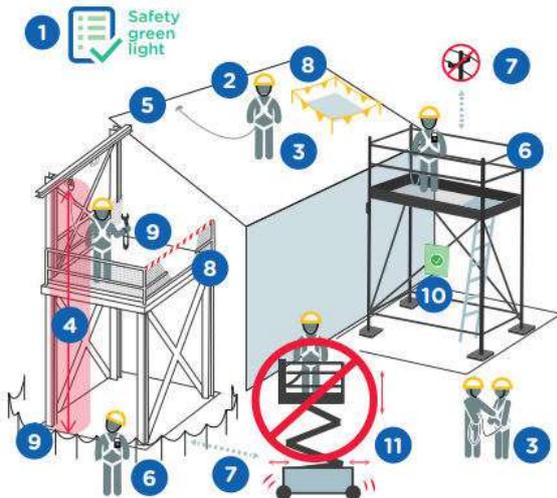
Compliance rate (Nb YES/applicable points): _____ / _____ (%)

Comments _____
 Name _____ Company _____
 Signature _____

Work at height

September 2021

12 fatalities related to work at height occurred within the Company in the last 10 years.



Work at height



Location _____ Date _____
 Company observed _____ Permit No. _____

- | YES | NO | N/A | POINTS TO BE CHECKED |
|-----------------------|-----------------------|-----------------------|--|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 1 Has the "Safety green light" been carried out? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 2 Is the safety helmet with attached chin strap worn by all personnel present at height? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 3 When the safety harness is required, is it worn and adjusted (for ex: outside fixed barriers or in a MEWP - Mobile Elevating Working Platform)? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 4 Is the potential falling path clear of obstructions when working with a safety harness? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 5 Are all personnel wearing a safety harness tied off to pre-defined anchor points? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 6 Are work crew aware that team member wearing a harness should remain visible or audible? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 7 Is safe clearance from potential hazards considered (powerlines, coactivity)? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 8 Are gaps, holes or fragile areas in floorings, guard rails and roofs, identified and / or protected? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 9 Are tools and work materials secured to avoid dropped objects or the zone below is marked off? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 10 Has the scaffold been inspected and declared safe for use? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 11 Is the work crew aware that a deployed MEWP or a mobile scaffold with personnel on it, shall not be moved? |

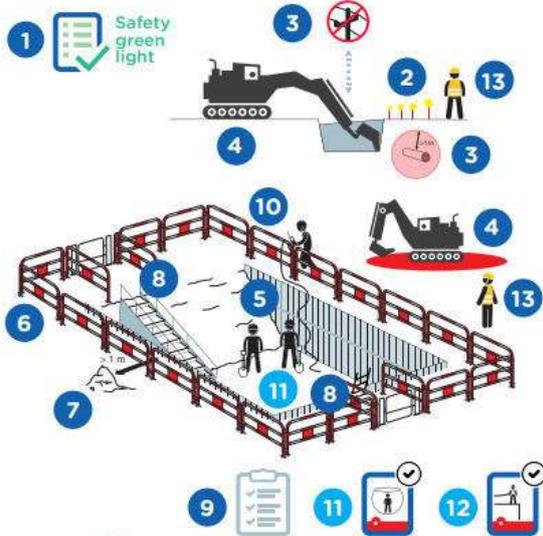
Compliance rate (Nb YES/applicable points): _____ / _____ (%)

Comments _____
 Name _____ Company _____
 Signature _____

Excavation works

September 2021

About 40 potentially serious events related to excavation work occurred within the Company in the last 10 years.



Excavation works



September 2021

Location _____ Date _____
Company observed _____ Permit No. _____

YES	NO	N/A	POINTS TO BE CHECKED
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	1 Has the "Safety green light" been carried out?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	2 Have all identified underground networks been indicated on site?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	3 Is a safe distance maintained from overhead power lines and underground networks (> 1 m - 3ft - if excavation by «aggressive» methods)?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	4 Are excavators on stable ground with nobody in the working radius of the machine?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	5 Have protections against cave-in been installed before personnel enter the excavation?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	6 Is the excavation footprint marked out (solid barriers if risk of people or vehicles falling)?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	7 Is a safe distance of at least 1 m - 3 ft - from the edge of the excavation kept free of excavation spoil, machinery or equipment?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	8 Before personnel entry, has a safe means of entering and exiting the excavation (stairs, graded slopes or ladders) been installed?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	9 Has an inspection of the excavation been carried out before personnel enter?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	10 If the atmosphere is potentially hazardous, has a gas test been performed prior to work or to entering the excavation?

For the next two cases, use the listed check-list:

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	11 If confined space, "Confined spaces" check-list
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	12 If working at height - elevation > 1.5 m (5 ft) - "Work at height" check-list
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	13 If persons are entering the excavation where the excavation is > 1.3 m (4 ft), or if the excavator operator does not have clear visibility or is working close to underground networks, is a supervisor present?

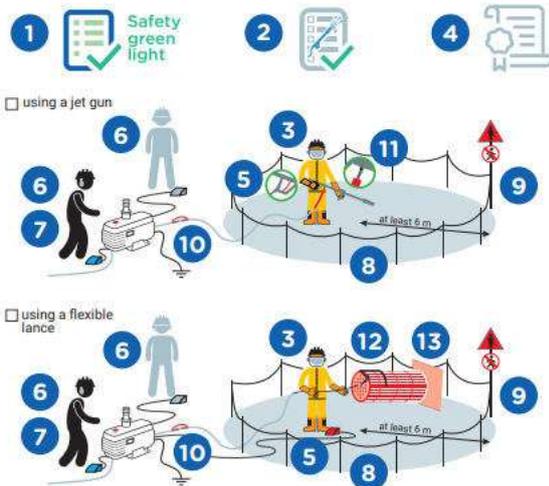
Compliance rate (Nb YES/applicable points): _____ / _____ (%)

Comments _____
Name _____ Company _____
Signature _____

Manual high pressure water jet cleaning

September 2021

1 fatal accident related to high pressure water jet cleaning occurred within the Company in the last 10 years.



Manual high pressure water jet cleaning



September 2021

Location _____ Date _____
Company observed _____ Permit No. _____

YES	NO	N/A	POINTS TO BE CHECKED
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	1 Has the "Safety green light" been carried out?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	2 Has the checklist before start-up been completed by the operations team?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	3 Are personnel in the barricaded area wearing the task-specific PPE?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	4 Do personnel have a training / competence certificate?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	5 Is the hose fitted with a tool (gun, nozzle etc) controlled by an active hold-to-run command available to the operator?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	6 Is the operator constantly observed by the machine operator equipped with an instant depressurization control device? (NB: by a dedicated observer if visibility between the machine operator and the operator is limited)
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	7 Is the machine operator close enough to the machine to activate the emergency stop ?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	8 Is the working area clear?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	9 Are suitable barriers and signs in place around the jetting area? (at least 6 m - 20 ft from the nozzle)
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	10 Are all the flexible connections fitted with an anti-whip device?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	11 HP waterjet using a jet gun: does it have a hose sleeve and, if required locally, is an anti-whip device fitted between the jet gun and the hose?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	12 HP waterjet using a flexible lance: is it fitted with an anti-withdrawal device?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	13 HP waterjet work on ducts or equipment open at both ends: is a screen installed at the open end of the equipment?

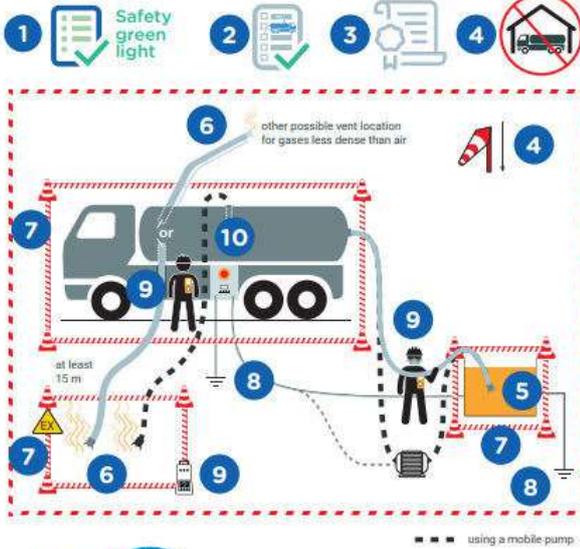
Compliance rate (Nb YES/applicable points): _____ / _____ (%)

Comments _____
Name _____ Company _____
Signature _____

Industrial cleaning using mobile pump and vacuum truck

September 2021

1 fatal accident related to pumping activity occurred within the Company in the last 10 years.



Industrial cleaning



September 2021

Location _____ Date _____
 Company observed _____ Permit No. _____

YES	NO	N/A	POINTS TO BE CHECKED
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	1 Has the "Safety green light" been carried out?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	2 Has the checklist before start-up been completed by the operations team?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	3 Do the operator and machine operator have a training/competency certificate for their function?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	4 Is the working area positioned according to the wind direction and are the truck and the vents located outside buildings?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	5 Are the team members aware of the product to be pumped (flammable, toxic, etc.) and has the compatibility with the equipments been checked?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	6 Where it is not possible to collect the vapors, are they vented to a safe area (at least 15 m - 50ft from the truck and downwind; if not and only for gases less dense than air, at least 5 m - 17 ft above the truck)?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	7 Is the area around the truck, the pumping location and the vents barricaded and the vent location clearly flagged up? (in service stations: barricades around the worksite perimeter)
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	8 Are grounding and equipotential bonding in place?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	9 Is the atmosphere at the pumping site, at the truck and at the vent location constantly monitored?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	10 Is the machine operator positioned within reach of the pump emergency stop?

Compliance rate (Nb YES/applicable points): _____ / _____ (_____ %)

Comments _____
 Name _____ Company _____
 Signature _____

The joint safety tour (What?)

Joint safety tours are **rituals** to be carried out in the **field**. They bring together the Company's **entities and subsidiaries** with its **External Companies**.

The objectives of the joint safety tour (Why?)

These tours:

- Focus on fatal risk activities (height, powered systems, lifting, confined spaces, hot work, etc.).
- Increase the field presence of the Company's staff and the External Companies' staff
- Are an opportunity to listen, see, be seen and talk to each other, and for problems to be reported

The stakeholders involved (Who?)

Each entity or subsidiary makes a list of its staff involved in these joint tours. Staff who will in turn determine the list of people involved in the External Company.

Conducting the joint safety tour (When? How?)

Best practice to ensure a joint tour is successful:

- Make **an inventory of the safety tours** already conducted and draw up a list of **high-risk** worksites and **activities**.
- Prepare a **tour schedule for the next six months or year**.
- **Coordinate properly with the External Companies** concerned and prepare logistical resources.
- **Maintain existing practices** (safety tours, safety contract owners, etc.), as well as tools and procedures for monitoring actions.
- **The involvement of middle management** is crucial.
- The **specified regular frequency**: daily for the on-site teams, weekly or monthly for management. See matrix example for calculating the number of joint safety tours that a subsidiary/entity must conduct.

The joint safety tour is divided into 4 stages:

1- Preparation

1. **Ensure that:**
 - The EC is informed
 - The visit does not interfere with the activity
 - Logistical resources are available for visitors (PPE)
 - The EC representative is present on the day of the visit
2. **Collect relevant HSE information prior to the visit**
3. **Draw up a specific visit programme:** location, themes, etc.

2- Implementation and intervention

1. **Obtain an explanation of prevention organisation and management** (risk analysis, permits, means of prevention, changes, etc.)
2. **Visit the site and talk to** all the workers you meet: listen, ask questions, value in a climate of trust.
3. **Be aware of small/early warning signals**
4. **Check staff preparedness for emergencies**
5. **Intervene immediately if dangerous situations or behaviour occur.**

3- Reporting back

1. Discuss the actual facts observed (discrepancies, areas for improvement, best practice), highlighting the positive
2. Encourage a question and answer session
3. Identify preventive / corrective measures with workers
4. Address and correct corrective/preventive measures and make joint undertakings with the EC representative
5. Together with the EC representative, prepare the report for superiors and the HSE managers.

4- Monitoring

1. Agree on a brief, organised and formalised report to be sent within a week of the visit
2. Use the action plan planning, reporting and monitoring tools to incorporate the agreed corrective/preventive measures
3. Monitor actions until their closure

Reference matrix for determining the number of joint safety tours to be conducted

Number of hours per contractor per year	For info	Number of joint safety tours per year			Daily JST
	CR 501 # Safety Contract Owner	Management Board of External Companies (5 - 10 people)	Management Board of External Companies (operational + HSE) (10-20 people)	Site manager	Supervisors and/or operator
< 500 k	3 SCO	5 JST /MB	10 JST /MB n-1	24 JST (2x/Month) for each manager	Each site operated with high-risk work in progress must set up a daily safety ritual by a TotalEnergies supervisor with a contractor
500-2,500 k	5 SCO	10 JST /MB	20 JST /MB n-1		
2,500-5,000 k	5 SCO	15 JST /MB	30 JST /MB n-1		
>5,000 k	10 SCO	20 JST /MB	40 JST /MB n-1		



Joint Safety Tours

Small MS subsidiary < 500 k: 15 JST ~ 1-2 JST per month
 Medium-sized MS subsidiary < 2,500 k: 30 JST ~ 2-3 JST per month
 Large MS subsidiary < 5,000 k: 45 JST ~ 3-4 JST per month

2 JST per month for each industrial site Combination Possible with MB/MB n-1 JST

Daily JST not necessarily documented

Joint safety tour report

Preliminary checks	Compliant	Non-compliant
All the participants scheduled for the visit are present, including the representative of the partner company.	<input type="checkbox"/>	<input type="checkbox"/>



APPENDIX 32: JOINT SAFETY TOUR

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Each participant has his or her own PPE, which is suitable for the day's environment and in good condition	<input type="checkbox"/>	<input type="checkbox"/>
--	--------------------------	--------------------------

The organisation and prevention of the greatest risks on the site have been explained to the tour participants	<input type="checkbox"/>	<input type="checkbox"/>
--	--------------------------	--------------------------

Interactions with workers

Record the various discussions, comments, questions, answers, observations with the workers:

Worker 1 Last name: First name:
--	----------------------------------

Worker 2 Last name: First name:
--	----------------------------------

Worker 3 Last name: First name:
--	----------------------------------

The previous boxes can be duplicated depending on the number of workers interviewed

Positive situations or behaviour noted during the visit (associated photos)

Positive points

Take photo if necessary	Positive findings:	Positive point:

Areas for improvement

Take photo if necessary	Findings:	Area for improvement:

Joint undertakings

List the joint undertakings made with the External Company representative:

.....

.....

.....

.....

.....

- A -

ATEX (EXPLOSION RISK ZONES)

Zone 0: location where an explosive atmosphere consisting of a mixture of flammable substances in the form of gas, vapour or mist with the air is constantly present, for long periods of time or frequently. For example, for flammable liquids, this could be the area around vents, the interior of fixed roof tanks and covered decanters.

Zone 1: location where an explosive atmosphere consisting of a mixture of flammable substances in the form of gas, vapour or mist with the air is likely to be present occasionally as part of routine operations. For flammable liquids, this may include the immediate vicinity of zone 0 and purge points, truck loading bay degassers, etc.

Zone 2: location where an explosive atmosphere consisting of a mixture of flammable substances in the form of gas, vapour or mist with the air is not likely to be present as part of routine operations, or, if it does happen to be present, it is only there for a short time. This may include locations around zones 0 and 1, pumps and compressors in particular.

The geometries and sizes of these zones are defined:

- By industry standards, which are themselves based on internationally recognised norms, standards and guidelines,
- Where applicable, by local regulations.
- These zones must be marked on site with signs that also show the safety measures to be observed.

- C -

ADDITIONAL CERTIFICATES

These are certificates issued prior to an intervention that supplement the general work permit, certifying that the safety measures relating to the equipment and/or the work location have been effectively implemented by the User Company, such as a cleaning / degassing certificate.

LOCKING

Locking is the action of preventing equipment or its product supply from functioning by acting on its control system, its energy supply or directly on the mechanical components of the equipment (isolation). Locking involves a locking operation (using a key, padlock or other system that is difficult to override) preventing unauthorised restart and appropriate signage.

LOCKOUT/TAGOUT

Lockout / Tagout includes all the measures enabling equipment (machines, circuits, facilities) to be made safe and kept safe so that:

- The equipment is safe, shut down, de-energised and/or purged (isolation and dissipation),
- An unintentional or unauthorised change of state (restored to working order, energy or product restored) is impossible (locking),
- This safe state is checked (verification).

- D -

LOCKOUT/TAGOUT REMOVAL

Lockout / tagout removal includes all the measures enabling a previously locked-out piece of equipment (machine, circuit, facility) to be returned to operating condition.

DISSIPATION / PURGING / DEGASSING

Dissipation is the removal of all potential and residual energies and/or the removal of hazardous materials (also known as purging or degassing when fluids are involved).

INSTRUCTING PARTY / PROJECT MANAGER:

Structure / function belonging to the entity commissioning the work / services: typically a maintenance / new works or operations department. This task can be transferred to an external specialist with a contract defining their roles and responsibilities.

- E -

SLINGS

Flexible lifting accessories usually with hooks, rings, etc. on the ends: made of chain, rope, wire rope or textiles (straps)

ENTITY:

Refers to the divisions or subsidiaries (Total) to which the sites are attached.

EXTERNAL COMPANY (E.C. or contractor)

A company to which the entity has entrusted the performance of work / services, and whose staff carry out operations in the User Company. This may involve regular services throughout the year or a one-off operation.

SUBCONTRACTOR

A company that performs services for another External Company (or contractor) on the site of a User Company.

USER COMPANY (entity)

Entity in which the operation takes place (Total site).

COLLECTIVE PROTECTIVE EQUIPMENT

A device, mechanism, apparatus or installation which, by virtue of its design (arrangement and constituent materials), is capable of effectively protecting staff from one or more occupational hazards and therefore limiting their consequences. This equipment is incorporated into or added to equipment or workstations. It is called "collective protection" if it indiscriminately ensures the safety of the staff working on the site (direct risk) and the safety of other people in the vicinity.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

A device or appliance intended to be worn (or possibly held, as in the case of an explosimeter, for example) by a person in order to protect him or her individually against one or more risks likely to threaten his or her health and/or safety.

CONFINED SPACE

A partially or totally enclosed space which has not been designed and constructed for permanent occupation by persons, which is not intended to be occupied by persons, but which may occasionally be occupied temporarily for the purpose of carrying out work (inspection, maintenance or repair, particular operations) and in which the atmosphere may present a health risk to the person or persons entering it.

OPERATIVE

The person who actually carries out the work / services. This may be the External Company's staff or the staff of one of its Subcontractors.

OPERATOR

Structure belonging to the operating entity of the facilities operated

within which the operations in question are carried out. For the purposes of this HSE Plan, and for the works / services it orders, the instructing party can assume the role of operator:

- In the case of sites under construction, when the operator is not yet in place
- In the case of sites that are shut down (decontamination, dismantling, site shutdown for work)
- For CODO or DODO stations or customer facilities, according to the contractual terms and conditions.

- F -

SDS

Safety data sheet

- G -

GM

Guide and Manual

LPG

Liquefied Petroleum Gas used as fuel

- H -

HAZOP (HAZard and OPerability study)

A method for identifying hazards and operability issues, enabling a risk analysis to be carried out in the project phase, particularly prior to the construction of new facilities or the modification of existing facilities. This analysis makes it possible to define the appropriate preventive and protective measures in order to eliminate or reduce the identified risks as much as possible.

HSE

Health, Safety and Environment

- I -

INHIBITION

Disabling of a mechanical, automatic system, especially a safety system.

ISOLATION

Isolation consists of interrupting the supply of energy, fluids or products to a piece of equipment (machine, circuit, facility).

- L -

LEL

Lower Explosive Limit (or flammability limit). The proportion of gas or vapour in the air above which the gas-vapour-air mixture can be ignited. This value differs depending on the nature of the gases / vapours.

FLAMMABLE LIQUIDS

The term "flammable liquids" refers to products stored at a temperature above their flash points, or liquids with a flash point below 35 °C (Class I liquids – NFPA 30). Typical products in this category include petrol, MTBE, ETBE and ethanol. Jet fuel, kerosene, diesel, domestic fuel oil, heavy fuel oil, bitumens and lubricants have a flash point of 35 °C or above and are not therefore flammable liquids unless these products are stored at a temperature above their flash point. Flammable liquids

do not include liquefied products such as LPG and LNG.

- M -

DANGEROUS MACHINE

A machine which, due to its power or operating conditions (temperature, moving or rotating speed), is capable of inflicting serious injuries (permanent incapacitation) or even fatal injuries, despite the personal protective equipment normally required to be worn. Typically, these are:

- Mechanisms capable of catching, cutting, hitting, crushing or mangling all or part of the human body,
- Machines with risks of ejecting fluids or objects,
- High-temperature or ionising radiation machines.

EQUIPMENT THAT MAY BE A SOURCE OF IGNITION

Equipment generating naked flames or sparks, with hot surfaces and no specific types of protection for operation in an explosive atmosphere. If the heat associated with the use of the tool cannot be dissipated (sawing, drilling, combustion engines, etc.), the tool should be considered a source of ignition even if there is no electric or combustion drive.

EQUIPMENT SPECIFICALLY DESIGNED TO OPERATE IN AN EXPLOSIVE ATMOSPHERE

Equipment that meets international standards defining types of protection to ensure its safe operation in explosive atmospheres. The choice of equipment depends on the nature of the hazard (gas: combustible dust, on the nature of the product and the area where the equipment is going to be used). With regard to manual tools, only tools used in a way which might generate sparks (sledgehammers, hammers, striking wrenches) must be made from non-sparking alloy.

PREVENTIVE MEASURE

A safety measure defined to reduce the probability of a risk occurring.

PROTECTIVE MEASURE

A safety measure defined to reduce the severity of a risk. There are collective and personal protective measures - collective protective measures should be prioritised over personal protective measures.

MOC

Management of change

OPERATING PROCEDURE

Description of a series of steps leading to the completion of an operation. The operating procedure includes, as a minimum, the list of tasks to be carried out, the equipment used, the human resources required, the risks generated by these different tasks and the associated preventive and protective measures.

- N -

HIGH PRESSURE CLEANING

High-pressure cleaning is a cleaning technique using water (or other fluids), highly pressurised beforehand for a wide variety of applications, such as:

- Cleaning industrial facilities (tanks, cisterns, pipes, ducts, etc.)
- Stripping corroded or dirty surfaces
- Removing residues and accumulations of solid deposits.

- O -



Appendix 33: Glossary of definitions and abbreviations Y

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OPERATION

A set of works and/or services carried out by one or more companies participating in the same objective (e.g.: refurbishment or construction of a station, installation or repair of a vessel, etc.) in a User Company, whether industrial or not.

LINE OR EQUIPMENT OPENING

Operation consisting of breaking a containment (enclosed container, pipe, other equipment) by dismantling, cutting, etc.

- P -

MEWP

Mobile Elevating Work Platform

GENERAL WORK PERMIT

The general work permit is a document that refines the risk analysis carried out in the HSE Plan (where one has been drawn up), just before the work starts, to ensure that the preventive and protective measures are sufficient to guarantee that the work is carried out safely.

SPECIFIC PERMITS

Specific permits supplement the general permit in order to deal with specific risks, such as hot work, work at height, etc.

QUALIFIED PERSON

A person authorised by his or her company or entity (via a list of names or by his or her hierarchical position) to carry out a particular task (driving machinery, signing HSE plans, work permits, ensuring safety, etc.) on the basis of his or her skills, experience and training, after which he or she has passed an assessment test.

IRP(L)

Individual Rolling Platform (Light)

HSE PLAN

An HSE Plan is:

- A set of preventive and protective measures taken by the External Companies working on the same operation and the User Company to ensure the safety of the work and to manage co-activity, which have been defined by all of these companies following a joint preliminary visit and a joint risk analysis
- A document on which all these measures are recorded.
- Produced before the start of the works, it is shared by all companies working on the same operation.

DPP

Daily Prevention Plan

- R -

RADIOGRAPHY / GAMMA RADIOGRAPHY

Industrial radiography is a non-destructive testing method using the emission of X-rays or gamma rays.

REX

Feedback

- S -

SANDBLASTING

Sandblasting or abrasive blasting is a process that consists of projecting a stream of abrasive particles at high speed using a pressurised air stream for typical blasting, surface finishing, etc. applications.

IMMEDIATELY DANGEROUS FOR LIFE OR HEALTH (IDLH) THRESHOLD

The threshold beyond which exposure of approximately 30 minutes is sufficient to cause death or irreversible toxic effects. (Abbreviated as IDLH)

SITE

Refers to different types of establishments or facilities:

- Industrial: lubricant blending plants or other speciality products, bitumen processing and production units, special fluids plants, bulk liquid or liquefied hydrocarbon depots, LPG filling centres, packaged product warehouses, other production centres, etc.
- Non-industrial: administrative (head offices, regional offices, etc.), laboratories, research centres, training centres, etc.
- Service stations and the like: roadside service stations, airport service stations (located in areas under the responsibility of aerodromes), maritime and river refuelling stations, private stations (mining), etc.
- Other miscellaneous facilities: pipelines, customer facilities.

DATA PROCESSOR

Company that receives an order from a rank 1 company

- T -

SLOPE TRIMMING

Concerns sloping land. It is part of the earthmoving work and determines how a slope must be used or made. It prevents landslides by eliminating earth pressure.

WORK

Any intervention by an External Company, whether a visual inspection, a preventive or curative maintenance operation, construction, deconstruction or environmental operation.

WORK NEAR LIVE BARE PARTS

Work not involving the risk of direct contact with potentially live bare parts, or the risk of arcing, but carried out at a relatively close distance which requires special appropriate protective measures to be taken.

ELECTRICAL WORK

Work involving handling potentially live bare parts (electrical connections, connection / disconnection work), or requiring a physical approach that could lead to the formation of an electric arc.

WORK AND OPERATIONS POSING RISKS

This refers to work or tasks carried out by the User Company's staff or an External Company's staff which pose risks for property, people and the environment.

MSD

Musculoskeletal disorders

JST

Joint security tours



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- V -

AVT

Absence of Voltage Tester

USV

Unannounced safety visit

OELV (OCCUPATIONAL EXPOSURE LIMIT VALUE)

The occupational exposure limit value for a chemical is the concentration in the air that a person can breathe for a specified time. It aims to protect against adverse health effects from exposure to the product under consideration.

For the application of this HSE Plan, refer to short-term and medium-term OELVs and not long-term OELVs which are valid for a whole working life:

Short-term exposure limit values (15 min OELVs or ELVs) are intended to protect against exposure peaks. They relate to a reference duration of 15 minutes.

The 8-hour exposure limit values (8-hour OELVs - or TWAs) are intended to protect workers from long-term effects, measured or estimated over an 8-hour work shift.

MSV

Managerial Safety Visit

RSV

Regular Safety Visit

WSV

Worksite Safety Visit

HSE Requirements for Excavation Works

Executive summary

This rule defines the HSE requirements to be implemented to manage risks associated with excavation work, which includes geotechnical drilling and piling activities. For the latter, certain requirements of this rule do not apply. This rule does not cover drilling oil or gas wells and underwater dredging activities.

The following requirements apply:

Preparation

- All underground structures or networks within and near the excavation footprint are identified, located, and spotted on site.
- Identification of the underground structures or networks is formalized by an excavation certificate, with certain exceptions when maximum depth is 10 cm. A risk analysis covering the entire work site is then carried out.

Excavation phase

- Excavation work using aggressive methods is prohibited within 1 m (3 ft) from underground networks with a high level of safety risks or when a warning device is discovered.
- If personnel are expected to access the excavation, the walls are built to prevent cave-ins for all trenches with a depth > 1.3 m (4 ft) or where such risk is identified for shallower trenches.
- The excavation footprint is entirely marked off.
- A minimum safety distance of 1 m (3 ft) from the edge of the excavation is maintained for positioning machinery, extracted material or equipment.
- Excavation works are immediately stopped and the necessary risk controls are put in place when unforeseen conditions are discovered.

Activities inside an excavation

- Daily inspections are carried out before personnel access the excavation. The inspection is performed again after any event likely to affect the integrity of the excavation. Visible signage of the excavation status is installed.
- The presence of a monitoring assistant is required when personnel are present in the excavation (depth > 1.3 m) or when the excavation machine operator lacks visibility, or when the excavation is approaching an existing network.
- Safe means of access and egress are located in the excavation, which can be used in emergency cases.

Excavation close-out

- Warning devices are systematically installed above buried structures.
- The entity or affiliate creates or updates underground plans when a new structure is buried, when an unexpected buried structure is discovered, or when an incorrect location of an existing structure is identified.

Date of publication in REFLEX: 29/07/2019

REVISION	DATE	PURPOSE	AUTHOR	CHECKED BY	APPROVED BY
01	23/07/2019	Update	PSR/HSE/HSE/FHOS F. Menci	PSR/HSE/FHOS A. Abzizi	PSR/HSE X. Bontemps

	Group Rule		
	HSE Requirements for Excavation Works		
PSR/HSE Division	HSE		CR-GR-HSE-419 Rev. N°: 01 Date: 23/07/2019

Foreword	This English version is translated from the original French reference version.
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	Group Rule		
	HSE Requirements for Excavation Works		
PSR/HSE Division	HSE		CR-GR-HSE-419 Rev. N°: 01 Date: 23/07/2019

1 PURPOSE

This rule defines the safety requirements for excavation work and covers the following:

- Risk assessment;
- Performing excavations;
- Securing the excavation (e.g. access, markup) and inspections;
- Supervision of works.

This rule does not cover:

- Drilling of oil and gas production wells (note: earthworks during the preparation phase of the drilling area are covered in this rule);
- Subsea dredging activities.

For geotechnical drilling and piling activities, requirements 3.2.2, 3.2.4, 3.3.1, 3.3.2, 3.3.3, 3.4.1 do not apply. All other requirements are applicable to these activities.

This rule is established to be in accordance with **CR-GR-HSE-001** One-MAESTRO HSE Expectations and Golden Rule 9.

2 SCOPE OF APPLICATION

This rule is applicable in all Group entities and affiliates, when relevant, in accordance with their respective decision-making rules and subject to compliance with locally applicable laws and regulations.

The requirements applicable to contractors are identified and communicated to those contractors, and those contractors are required to comply with them.

Where an entity or affiliate holds an interest in assets, activities or sites which it does not operate¹, it promotes the requirements of this rule and seeks to have similar requirements adopted by the operator.

¹ "Operate" means organise, run, conduct and manage. The operator may for example hold an operating permit or be appointed as operator by way of an operating agreement.

	Group Rule		
	HSE Requirements for Excavation Works		
PSR/HSE Division	HSE		CR-GR-HSE-419 Rev. N°: 01 Date: 23/07/2019

3 REQUIREMENTS

3.1 Preparation and Risk Assessment



Requirement 3.1.1: Identification of Underground Structures and Networks

All underground structures or networks within and near the excavation footprint are identified and located, in consultation with third-party operators of structures or networks, as appropriate.

When digging work is carried out using aggressive methods, the actual location of structures or networks is done with precision (maximum location uncertainty of 50 cm) using existing plans and is verified by additional investigations.

If existing structures or networks belonging to third parties are identified, an initial meeting between the entity or affiliate and the relevant third party is organised to define the risk controls to be put in place.

Identified underground structures or networks are spotted on site.

(Expectations 01.08; 03.01; 03.04)

Additional investigations may be cancelled if proof is provided of an equivalent level of identification and location precision of the underground structures or networks (or their absence) within and near the excavation footprint supported by a formal and documented analysis.

Requirement 3.1.2: Excavation Certificate

Prior to issuing the work permit, the identification of underground structures or networks is formalised by an excavation certificate. The certificate is accompanied by a plan detailing potential underground works, the general safety instructions to be followed and specifically those related to excavation means.

If works are < 10 cm in depth, an excavation certificate is not mandatory for road stripping and works conducted on a concrete slab, and if:

- The works are performed with techniques that allow the operator to control the equipment so as not to exceed the maximum depth and the thickness of the concrete slab or road coating;
- No networks are present within the concrete slab or the road coating.

(Expectation 01.08)

During this step, the presence or absence of underground networks and their location are documented. The intervention methods, the safety distance to maintain from concerned networks and the field operation representative present near the networks during work are specified.

The excavation certificate required above may be named differently depending on the entity (e.g. supplementary excavation permit or excavation notice).

	Group Rule		
	HSE Requirements for Excavation Works		
PSR/HSE Division	HSE		CR-GR-HSE-419 Rev. N°: 01 Date: 23/07/2019

Requirement 3.1.3: Risk Analysis

A risk analysis is carried out and helps to define an adapted operating mode containing the identified risk control.

The risk analysis covers the entire work site, taking into account the defined operating mode and the equipment considered to carry out the excavation.

Before authorising the start of excavation work, the identified risk controls are checked on site.

(Expectation 03.01)

The risk analysis takes into account, but is not limited to, the following:

- Potential pre-existing site pollution;
- Traffic and other activities taking place on the site;
- Presence of buried structures throughout the excavation area;
- Type and quality of soil, walls arrangement;
- Presence of water;
- Presence of hazardous atmosphere;
- Presence of nearby structures or buildings;
- The time the excavation is open (to be reduced during the planning phase);
- Depth (height) and risks of people or objects falling into the excavation;
- Manoeuvres or movement of excavating machine mobile parts.

If the excavation is carried out in, or generates, a confined space, the risk controls related to work in confined spaces are implemented (see **DIR-GR-SEC-004**).

3.2 Excavation Execution Safety Rules



Requirement 3.2.1: Restrictions Related to Aggressive Methods

Excavation work using aggressive methods is prohibited within a distance < 1 m (3 ft) from networks with a high level of safety risk as identified and located according to the terms of requirement 3.1.1 or from the discovery of a warning device.

If the above-mentioned distance cannot be respected, a complete de-energisation of these networks is implemented.

(Expectation 03.04)

Systematic de-energisation of all underground networks in the excavation area before the start of work is a good practice.

	Group Rule		
	HSE Requirements for Excavation Works		
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Requirement 3.2.2: Wall Arrangements for Excavations Accessible to Personnel

If personnel are expected to access the excavation, the excavation walls are arranged taking into consideration the nature and condition of the soil to prevent cave-ins, for the following cases:

- Trench excavations with a depth > 1.3 m; or
- Excavation with cave-in risks identified during a risk analysis.

(Expectation 03.04)

This requirement does not apply to geotechnical drilling and piling activities.

The choice of protection system depends on the depth of the excavation, the environmental conditions (present or anticipated), the nature of the soil, the possible presence of water tables, and the circulation of vehicles and machinery.

Requirement 3.2.3: Marking the Excavation and the Work Site

The excavation footprint is entirely marked off.

Where there is a risk of people or vehicles falling into the excavation, an adapted rigid, physical and visible day and night barrier is put in place.

(Expectations 01.08; 03.04)

During excavation, a restricted access perimeter is defined around the excavation and the work site.

Marking the excavation footprint is not mandatory in isolated areas (e.g. areas with no human occupation or traffic such as long distance pipelines in desert zones).

Requirement 3.2.4: Safety Distance from Excavation Edges

A safety distance of 1 meter (3 ft), at minimum, from the edge of the excavation is maintained free of all deposits from extracted material, machinery or equipment.

(Expectation 03.04)

This requirement does not apply to geotechnical drilling and piling activities.

For the deposit of extracted material, the minimum distance of 1 m (3 ft) may be reduced if access to the excavation is prohibited for personnel, and if the necessary, sufficient controls are implemented to ensure compliance with this instruction throughout the duration of the excavation.

A specific safety distance greater than 1 m (3 ft) may be defined during the risk analysis depending on the nature of the soil, the dimensions of the excavation, the layout of the walls and the characteristics of the machinery or equipment.

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	HSE Requirements for Excavation Works		
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Requirement 3.2.5: Excavation Works Suspension

Excavation works are immediately stopped and the necessary risk controls are put in place when unforeseen situations are discovered, such as:

- Actual or suspected soil pollution, presence of a hydrocarbons, odor;
- Buried structures not previously identified or potentially dangerous.

(Expectation 03.04)

Polluted soil is treated or disposed of in accordance with local regulations and internal requirements related to the environment according to the principles of [DIR-GR-ENV-003](#).

Work is resumed after a renewed risk analysis is conducted.

3.3 Safety Rules for Activities Inside an Excavation



Requirement 3.3.1: Excavation Inspection (Depth > 1.3 m) Prior to Access

An inspection of the excavation, surroundings, access, protection systems and its general state (e.g. presence of water, gas or pollution) is carried out daily before personnel are permitted to access the excavation and at the end of the digging phase.

(Expectations 09.01; 09.02)

This requirement does not apply to geotechnical drilling and piling activities.

This inspection is also performed after any event likely to affect the integrity of the excavation (e.g. heavy rain, frost/thaw).

Adequate and visible signage is installed to inform the personnel of the excavation status (e.g. accessible or not).

Requirement 3.3.2: Monitoring Assistant

A monitoring assistant is required for each of the following cases:

- When the excavation machine operator does not have, from his driving position, adequate visibility of the excavation tool and its path in the area of intervention, or the excavation is approaching an existing network;
- Where personnel are present in an excavation of depth > 1.3 m (4 ft).

(Expectation 03.04)

This requirement does not apply to geotechnical drilling and piling activities.

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Requirement 3.3.3: Access to Excavations (depth > 1.3 m [4 ft])

A safe means of access and egress shall be located in the excavation, which can be used in emergency cases.

(Expectation 03.04)

This requirement does not apply to geotechnical drilling and piling activities.

For trenches, the maximum distance for personnel to reach a safe exit within the excavation does not exceed 8 m (25 ft).

3.4 Excavation Close-out



Requirement 3.4.1: Closing the Excavation and Identifying Buried Structures

Prior to closing, a warning device is systematically installed above the buried structures. The characteristics and installation of this warning device comply with local regulations.

(Expectations 01.08; 03.04)

This requirement does not apply to geotechnical drilling and piling activities.

The best mitigation for risks associated with an excavation is to close it. Work is planned so as to reduce the time, to the extent possible, during which the excavation remains open.

Requirement 3.4.2: Updating Underground Plans

Underground plans are created or updated when a new structure is buried, when an unexpected buried structure is discovered, or when an incorrect location of an existing structure is identified.

(Expectation 01.03)

Updating the plan of a new buried structure or network requires that they are geo-referenced.

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	HSE Requirements for Excavation Works		
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4 TERMS AND DEFINITIONS

This rule conforms to the terms and definitions of [CR-GR-HSE-001](#). Additional terms and definitions specific to this rule are described herein.

Additional investigation

Effective search of buried structures or networks to precisely identify their location (maximum uncertainty within 50 cm). This search is preferably performed by non-intrusive detection techniques (e.g. acoustic, radar, electromagnetic, seismic). When these techniques are not sufficient, they are supplemented by intrusive techniques (non-aggressive survey) allowing the structures to be exposed.

Aggressive method

Any excavation method using mechanical machinery (e.g. jackhammer, mechanical excavator) or a pickaxe. In contrast, a non-aggressive method is an excavation method using vacuum excavator with a soft tip, hand shovel, or air pick.

Earthworks

All the excavation, transportation, earth-piling work done to modify a landform, or to create or strengthen certain structures.

Excavation

Any trench, cavity, cut, or hole in the ground involving the extraction of earth or rock, including geotechnical drilling and piling activities.

Excavation footprint

Maximum area where the excavation is planned.

Geotechnical drilling

A soil investigation operation, carried out by drilling a hole of small diameter (that does not allow people to access it), intended to identify the nature and the mechanical, physical and possibly chemical characteristics of its constituents in order to predict its behavior during infrastructure construction.

Networks

Product, utility or sewer pipelines/piping and/or conduits, electrical cables, instrumentation or communication cables/fibres.

Networks with a high level of safety risk

Underground works comprising:

- Pipelines containing liquid or liquefied hydrocarbons, dangerous liquid or gaseous chemical products;
- Pipelines containing combustible gases;
- Steam pipes;
- Powerlines;
- Any other network that, in the event of a break, may cause incidents of severity 4 or higher according to the HSE events actual or potential severity level rating scale (see [CR-GR-HSE-801](#)).

Trench

Long, narrow ground excavation, the depth of which is equal to or greater than its width (measured at the bottom of the excavation).

Spotted on site

On-site ground marking of an existing structure. The marking can be done by picketing (preferred method with the depth not exceeding 10 cm) or by painting the ground.

Warning device

An instrument (e.g. strip, net, mesh) usually made of plastic, that physically indicates the presence of buried cables or pipes during excavation operations.

Work site

Maximum extension of the work area planned by the project manager or the contractor, including site preparation, storage, and machinery circulation.

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5 REFERENCE DOCUMENTS

Reference	Title – Group Documents
CR-GR-HSE-001	One-MAESTRO HSE Expectations
CR-GR-HSE-801	Management of HSE Events and Return on Experience
DIR-GR-ENV-003	Waste Management
DIR-GR-SEC-004	Confined Space Entry

6 BIBLIOGRAPHY

Title

Observatoire National DT DICT (December 2016) Guide d'application de la réglementation relative aux travaux à proximité des réseaux. Fascicules 1, 2 et 3.

Guide HSE UK, (2014) "Avoiding Danger from Underground Services"

INRS ED 6164 (Avril 2014) « Travaux à proximité des réseaux enterrés et Investigations complémentaires sans fouille »

7 DISTRIBUTION AND EFFECTIVE DATE

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Effective date: 3 months following date of publication.

8 REVISIONS

REV.	DATE	PURPOSE	AUTHOR	CHECKED BY	APPROVED BY
00	03/06/2019	Creation	PSR/HSE/FHOS/REE F. Menci	PSR/HSE/FHOS A. Abzizi	PSR/HSE X. Bontemps
01	23/07/2019	Update	PSR/HSE/FHOS/REE F. Menci	PSR/HSE/FHOS A. Abzizi	PSR/HSE X. Bontemps

End of document

Original version signed

HSE Requirements for the Isolation of Powered Systems

Summary

This rule defines the HSE requirements for the isolation of powered systems.

Organisation of the Isolation Process

- The isolation process is described, for each type of isolation, in a documented procedure which includes the requirements of this rule as a minimum.
- The distribution of roles and assignments in the implementation of the process, as well as the possibilities for delegation, is clearly defined and communicated to the personnel concerned.
- All persons, including those from external companies, with a role in the isolation process are trained and certified. Training is refreshed at least every 5 years.

Preparing the Isolation

- An isolation is based on a risk analysis validated by a visit to the work site in order to identify the equipment and installations concerned.
- Isolation devices are determined according to criteria defined in the isolation procedures of the entity or affiliate and take into account the risk analysis. The minimum criteria are defined in Appendices 3 and 4. As a minimum, a positive isolation device, located as close as possible to the worksite, is required in the event of: 1) hot work with naked flame on equipment and installations having contained flammable or toxic products; 2) confined space entry ; 3) long-term isolation.
- Isolation diagrams are drawn up based on plans, updated documents and verified at the worksite.
- An isolation work pack is approved by the Approving Authority for the isolation and updated according to the evolution of isolation operations at the worksite.

Implementing the Isolation

- Isolation devices, defined in the isolation plan, are put in place to separate the equipment or installation from its energy sources.
- These devices are locked out and tagged out by the Isolating Authority and verified at the worksite by the Performing Authority.
- Before any intervention, the energy stored in the isolated system is discharged.
- A prior check of the absence of energy is carried out, before any intervention, at the worksite by the Isolating Authority in the presence of the intervening party.
- The Isolating Authority is present at the worksite to monitor the first opening of the line and the installation of the special isolation device.
- If an isolation device is identified in more than one Isolation Certificate, the Approving Authority that authorised its installation follows up until its removal (at the end of all work).

De-isolation

- Any de-isolation, including temporary de-isolation, is carried out by the Isolating Authority and recorded in the Isolation Certificate. For the purpose of testing, temporary isolations validated by the Approving Authority are possible.

Personal Isolation

- A personal isolation is implemented for recurrent work with a low level of risk for a maximum duration limited to one shift or one day, depending on the work regime. A personal isolation can only be made on one piece of equipment at a time. An exhaustive list of works and/or categories of equipment that may be subject to a personal isolation is established.

Long-term Isolation

- Long-term isolation devices are identified on the diagrams and P&IDs, listed in a dedicated register and checked at least quarterly. Their withdrawal requires a joint review by the Isolating Authority and the Performing Authority and the issue of a work permit.

Audit and Performance Improvement

- The application of the isolation procedures is audited. Performance indicators for the isolation process are reviewed during a process review at least once a year.

Date of Publication in REFLEX : 18/01/2021

REVISION	DATE	PURPOSE	WRITTEN BY	CHECKED BY	APPROVED BY
00	08/01/2021	Creation	PSR/HSE/FHOS/REE A. Halilou	PSR/HSE/FHOS A. Abzizi	PSR/HSE X.Bontemps

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Foreword	This is an English translation of the French original. The original French version is to be considered as the reference version.
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1 PURPOSE

This rule defines the minimum HSE requirements to be respected for preparing, implementing and organising the isolation process for powered systems.

There are three types of isolation: process, mechanical and electrical.

This rule is drawn up in keeping with **CR-GR-HSE-001** – One-MAESTRO HSE Expectations – and completes the requirements of Golden Rule no.7.

2 SCOPE

This rule is applicable in all Group entities and affiliates, when relevant, in accordance with their respective decision-making rules and subject to compliance with locally applicable laws and regulations

The requirements applicable to contractors are identified and communicated to those contractors, and those contractors are required to comply with them.

Where an entity or affiliate holds an interest in assets, activities or sites which it does not operate¹, it promotes the requirements of this rule and seeks to have similar requirements adopted by the operator.

This rule does not apply to hot tapping, as well as to operations involving the use of ionising radiation sources.

¹ "Operate" means organise, direct, steer and manage. For example, the operator can hold an operating permit or be designated as operator through an operating agreement.

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3 REQUIREMENTS

The figure below gives an overview of the isolation process.

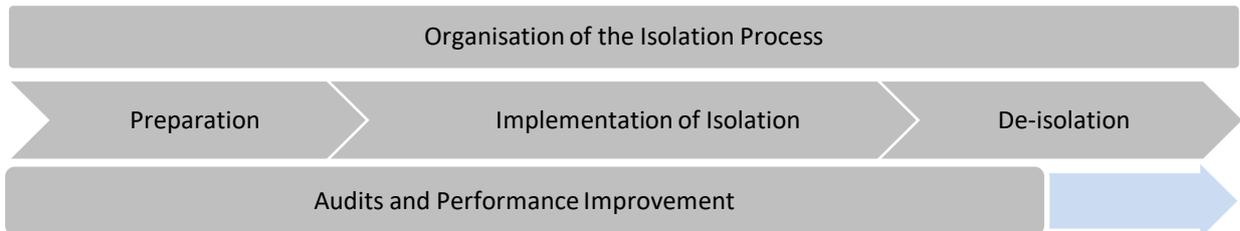
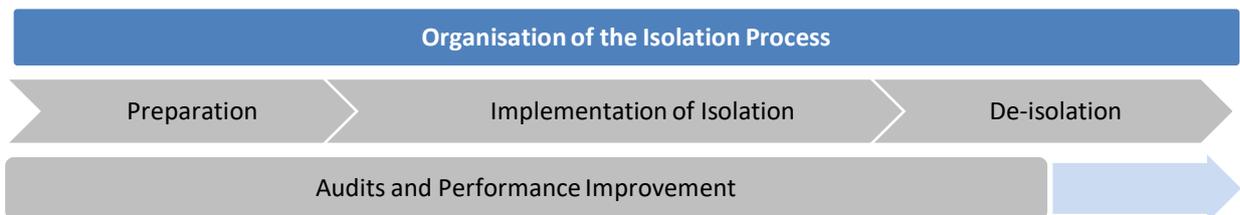


Figure 1 – Main Steps of the isolation Process

3.1 Organisation of the isolation Process



Requirement 3.1.1: isolation Procedures

The isolation process for powered systems is described, for each type of isolation, in a documented procedure which includes the requirements of this rule as a minimum.

(Expectations 04.01)

In compliance with the requirements of this rule, the procedure may, in particular, provide for isolation management arrangements specific to certain contexts, for example, major maintenance shutdowns or projects.

These arrangements may concern:

- The grouping of several pieces of equipment in the same isolation envelope, except for confined space entry;
- Work site monitoring of the implementation of process isolation devices, etc.

Requirement 3.1.2: Roles and Assignments

The distribution of roles and assignments for people involved in implementing the isolation process, as well as the possibilities for delegation, is clearly defined and communicated to the relevant personnel in the entity or affiliate and to contractors, so that they can inform their personnel.

(Expectations 01.04; 04.07)

The functions typically involved in the isolation process are described in **Appendix 1** and can be adapted according to the entity or affiliate organisation.

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Requirement 3.1.3: Training and Certification

Everyone, including contractor personnel, with a role in the isolation process is trained and certified to execute their role.

The certification is documented and issued after a competency assessment.

A list of trained and certified personnel for each type of isolation is kept up to date.

The frequency of refresher training, at least every 5 years, is determined by the isolation procedure.

(Expectations 01.04; 06.02)

Training and competence requirements are defined within the entity's or affiliate's procedure and cover in particular:

- Each person's role and assignments;
- The different types of energies and associated risks;
- Reading and understanding diagrams and P&ID (Piping and Instrumentation Diagram);
- The preparation, isolation implementation and de-isolation;
- Personal isolation;
- On-site monitoring of the implementation of isolation devices;
- The permit to work procedure;
- Asset specific site knowledge requirements.

If appropriate, the training of contractor personnel may be performed internally under the following conditions:

- Examination and approval of it by the entity or affiliate;
- Specified within the entity or affiliate procedures.

In this case, an on-site assessment of knowledge of the relevant isolation procedures is carried out by the entity or affiliate.

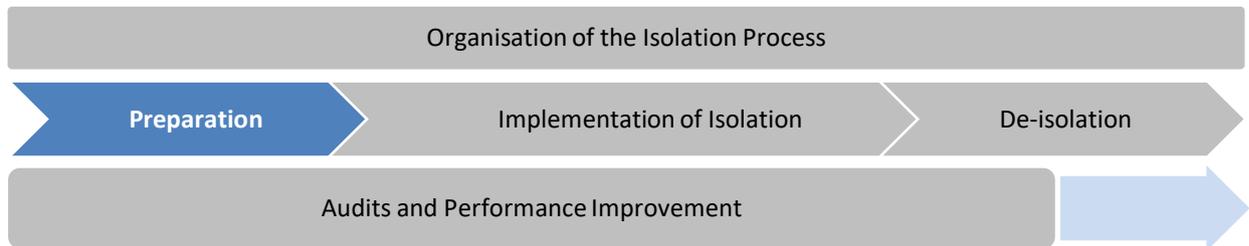
For electrical isolations, the isolating authority is certified by their employer depending on the type of electrical isolation operations to be performed

In the case where local regulations do not specify training or certification conditions, standards [NF C18-510](#) or [NFPA 70 E](#) can serve as a reference.

The authorisation issued by the hierarchical level defined by the entity or affiliate, to hold a role in the isolation process is documented in a choice of different formats (HSE passport, dedicated register, etc.).

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3.2 Preparing the Isolation



Requirement 3.2.1: Risk Analysis for Isolation

An isolation is based on a documented risk analysis.

This risk analysis is validated by a visit to the worksite to physically identify the equipment and installations concerned by the isolation.

(Expectations 03.01; 03.04)

The risks analysis aims to keep exposure of personnel, and potential other people in the vicinity, as low as reasonably practicable (ALARP).

This considers the risks related to:

- The different energy sources present (electrical, including generator sets and solar panels, fluid, pneumatic, mechanical, thermal, hydraulic, chemical, gravitational, kinetic);
- Configuration of the worksite and surrounding environment;
- Installation and removal of the isolation device;
- Isolation device failure. In this case, it defines the risk control measures to be put in place;
- The duration and work type covered by the isolation, the equipment and installations.

The risks analysis also examines the different isolation devices and the appropriate method for releasing stored energy.

Depending on the residual risk level, the isolation device selected as a result of this risk analysis is validated by the hierarchical level as defined in the entity's or affiliate's procedures.

If the required isolation device is not feasible, a new risk analysis is carried out to determine an alternative isolation device or to defer works until equipment and/or installation shutdown.

The different energy sources and the main associated risks are listed in Appendix 2.

In the case of any change(s) in the parameters taken into account in the risk analysis, in particular the points listed above, the risk analysis is updated.

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Requirement 3.2.2: Selecting Isolation Devices

Isolation devices are selected according to criteria defined in the isolation procedure of the entity or affiliate, considering the risk analysis.

The minimum criteria for process isolation devices are defined:

- In Appendix 3 for the EP branch
- By SIOPE matrix (Safe Isolation Of Plant and Equipment) in Appendix 4 for GRP, MS and RC branches.

A positive isolation device, located as close as possible to the work site, is required as a minimum standard for:

- Hot works with naked flame on equipment and installations having contained flammable, toxic or hazardous products;
- Confined space entry);
- Long-term isolation.

(Expectations 03.04; 04.02)

Examples of process isolation devices are listed in Appendix 5.

Due to certain constraints (no flanges available, impossible to space flanges, leak on upstream isolation devices, etc.), recourse to the special isolation device may be possible.

The use of special isolation devices is subject to a specific procedure and operating mode, in accordance with the manufacturer's specifications and the result of the risk analysis.

GM-GR-SEC-014 defines best practices for installation of pipeline plugs.

Requirement 3.2.3: Isolation Work Pack

In accordance with the risk analysis, isolation diagrams are drawn up. They are based on up-to-date plans and documents and verified at the worksite.

An isolation work pack approved by the Approving Authority is compiled.

This work pack is updated according to the evolution of isolation operations at the worksite and is accessible to all people concerned.

(Expectation 03.01)

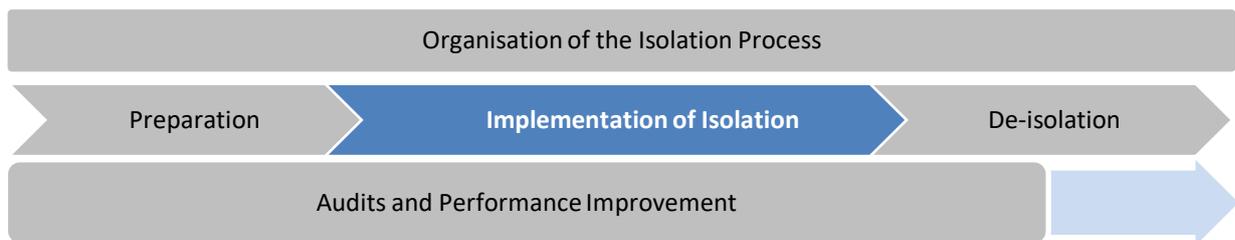
Depending the type of isolation, an isolation work pack comprises of:

- Risk analysis ;
- Detailed isolation diagram(s);
- The isolation plan (table) including:
 - The list of all the isolation devices;
 - The points for checking the absence of energy identified on the diagram;
 - Identification of the common isolation device to several isolation certificates (where applicable);
 - The characteristics of the isolation device where applicable (diameter, location, means of access, specific personal protective equipment to be worn);
 - Record of the installation or removal of the isolation device with isolating authority and performing authority or worker signature.

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- The isolation certificate, including the:
 - Identity of the requestor, the Isolating Authority, and the isolation Approving Authority
 - Identity of the equipment or installation concerned by the isolation;
 - Reason for the isolation and the required isolation device level;
 - References of the associated permits to work where applicable;
 - Status of the isolation through the different stages:
 - preparation and implementation;
 - de-isolation (including temporary de-isolation for tests);
 - long-term isolation.
- A procedure or operating mode detailing the different steps for making the equipment and installations safe (releasing stored energy, checking for the absence of energy).

3.3 Implementation of the Isolation



Implementation of isolation operations for a given energy includes the following phases: separation, lock-out, tag-out, releasing stored energy and checking for the absence of energy.

The order of these phases can be changed after the risk analysis, according to the specificities of each case.

Requirement 3.3.1: Separation

The isolation devices defined in the isolation work pack are put in place to separate the equipment or the installation from its energy sources.

(Expectation 03.04)

Specificities of Mechanical Isolation

In some cases of mechanical isolation, the separation phase involves disconnecting the equipment from the mechanical power elements (motors, cylinders) by physically separating connecting elements such as the clutch, coupling or transmission.

In other cases of mechanical isolation, the separation phase is not possible or not necessary so the process moves on to the lock-out - tag-out phase (e.g. in the case of a spring.)

Specificities of Electrical Isolation

In the case of electrical isolation, separation of the equipment from all voltage source is achieved by cutting off all the power and control circuits and the active conductors, including distributed neutral (except for the protective conductor and neutral with a TN-C network).

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Requirement 3.3.2: Lock-out - Tag-out

The isolation devices implemented in the separation phase are locked out and tagged out by the Isolating Authority.

They are verified at the worksite by the Performing Authority.

For electrical isolation, the isolation device is also locked out by the Performing Authority. If lock out by the Performing Authority is not possible, the Isolating Authority padlock key is secured in a lock-out box.

Additional risk control measures are implemented if an isolation device cannot be locked out.

(Expectation 03.04)

In the case of colour choices to differentiate between isolation devices and tag-out devices, the colours are standardised within the entity or affiliate.

Tag-out devices are marked, where applicable, with the reference(s) of the isolation certificate(s) and the permit(s) to work.

Marking of the work area is carried out and field monitoring arrangements are put in place as defined in **CR-GR-HSE-402**.

These additional risk control measures include:

- Blocking of a controlling switch;
- Removing an isolating circuit element (e.g. fuses or links, racking out/withdrawing a circuit breaker, a power bar bridge);
- Opening of an upstream disconnecting device (e.g. disconnecting switch, circuit breaker, contactors);
- Taping or securing non-lockable electrical breaker devices;
- Securing equipment shafts that could be rotated while being worked on;
- Removing of a valve handle.

Specificities of Process Isolation

In the case of isolation by valves, lock-out devices can include chains, padlocks, nylon cable ties, plastic lock-out cables, plastic valve wheel lockouts, etc.

In the case of a positive isolation device, tag-out is put in place.

Specificities of Mechanical Isolation

The lock-out devices are implemented in the position that prevents any movement and thereby any accidental restart (e.g. chocks, bars, chains, pins, rods).

Specificities of Electrical Isolation

If used, management of the lock-out box is specified in the electrical isolation procedure of the entity or affiliate.

On-site equipment is tagged-out, explicitly indicating that it cannot be operated.

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Requirement 3.3.3: Releasing Stored Energy

Before any intervention, the energy stored in the isolated system is released.

(Expectation 03.04)

Specificities of Process Isolation

This operation consists of bringing the atmosphere into compliance with the required safety conditions by implementing, where necessary, one or more of the following actions: draining and flushing, purging, decompressing, degassing (with water, steam, nitrogen), ventilating, etc.

Specificities of Mechanical Isolation

Energy reduced to the lowest possible level by:

- Shutting down mechanisms, including flywheels;
- Ensuring stable mechanical equilibrium (bottom dead centre), or failing this, mechanical calibration.

Specificities of Electrical Isolation

The release of stored energy, which means Earthing with short circuit is performed after checking for the absence of energy or zero-voltage testing (ZVT)). Except when the Earthing with short circuit is, by design of some electrical equipment, automatically applied or interlocked when the energy source is isolated.

Earthing with short circuit applies to all active conductors, including the neutral conductor when it is distributed (except for the protective conductor and neutral with a TN-C network)).

Earthing with short circuit application prevents the circuit being live from upstream, downstream, or independent sources. It also contributes to protect against the effects of magnetic induction and capacitive coupling.

Earthing with short circuit application is required for High Voltage (HVA - HVB) electrical isolation.

Earthing with short circuit application is not required:

- For Low Voltage (LV) except if there is a risk of:
 - Induced voltage;
 - Presence and voltage backup from the main source or a replacement source (inverter, storage battery, generator, etc.);
 - The presence of capacitors. In this case, the manufacturer's instructions are followed to allow the capacitor to discharge before proving dead.
- In the case of non-electrical work (ex.: mechanical work on rotating machine).

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Requirement 3.3.4: Checking for the Absence of Energy

Before any intervention, the Isolating Authority and the Performing Authority check the absence of energy at the worksite.

If it is impossible to check for the absence of energy, and if that has not been identified in a preparation step, the intervention is stopped, and a new risk analysis is performed.

(Expectation 03.04)

Checking and confirming the absence of energy is proof of the integrity and the efficiency of isolation devices.

Specificities of Process Isolation

In the case of valve isolation, checking for the absence of energy is performed:

- Prior to breaking containment (opening line/breaking flanges), by confirming via test points (drains, purge lines, vents) and also ensuring that these test points are not plugged;
- At a frequency defined in the risk analysis or in the permit to work, but as a minimum:
 - Prior to start of work execution;
 - After each time work is interrupted or suspended.

Specificities of Mechanical Isolation

The absence of energy corresponds to no constraint on equipment, no pressure and no movement.

Specificities of Electrical Isolation

The ZVT is carried out prior to releasing stored energy (Earthing with short circuit application). Except when Earthing with short circuit is, by design of some electrical equipment, automatically applied or locked when the energy source is isolated.

The ZVT is performed on each of the active conductors, including the neutral, as close as possible to the work site by ensuring the electrical continuity between the ZVT point and the work site.

For static equipment (panels, capacitors, transformers, etc.), the ZVT is confirmed by a voltage testing device (voltage detector that is suitable for the rated voltage of the circuit and checked).

For capacitors, manufacturer's instructions are followed to allow the capacitor to discharge before ZVT.

For rotating machinery, the ZVT is performed by stop-start test considering the possible presence of a control device (e.g. PLC) likely to distort the test results.

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Requirement 3.3.5: Worksite Monitoring of the Implementation of Process Isolation Devices

When a process isolation device is used, the Isolating Authority is present at the worksite to monitor the:

- Initial opening of the line;
- Installation of a special isolation device.

(Expectation 03.04)

The objectives of on-site monitoring are to:

- Make sure the stored energy (fluids, pressure, etc.) has been released;
- Check the absence of energy (fluids, pressure, etc.) when the line is opened;
- Stop work if the situation is not as expected when the line or circuit is opened.
- Raise the alarm in the event of an incident.

Requirement 3.3.6: Isolation Device Shared by Several Isolations

If an isolation device is identified in several isolation certificates, the Approving Authority that authorised its installation, monitors it until its removal (at the end of all work).

For each isolation certificate, the tag-out device is different.

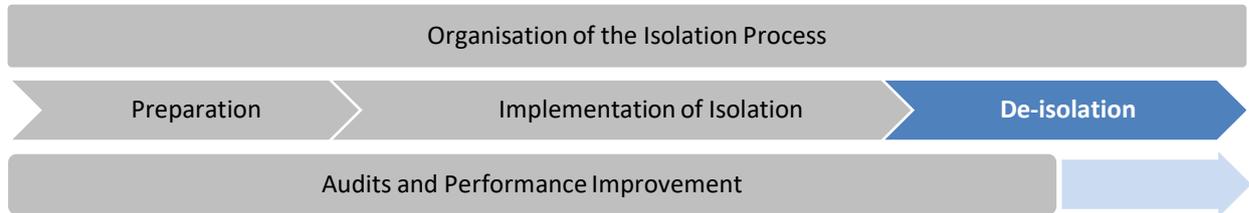
(Expectation 03.04)

When several workers are involved in lock-out of an equipment item, the key of the Isolating Authority's padlock can be placed in a lock-out box.

The isolation procedures of the entity or affiliate specify how the lock-out box is managed.

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3.4 De-isolation



Requirement 3.4.1: De-isolation

Any de-isolation, even temporary, is recorded on the isolation certificate

In order to carry out tests, temporary de-isolations are possible without closing the associated permit to work. Such temporary tests are validated by the Approving Authority.

All isolation devices, lock-out devices and tag-out devices are removed:

- When all the works covered by these isolation devices are finished and the corresponding permits to work have been closed out;
- By the Isolating Authority after the removal of any lock-out devices and tag-out devices by the Performing Authority.

(Expectation 03.04)

Tests include rotation direction checks of rotating machines, leak-tightness tests, electrical tests, control valves checks.

Specificities of Electrical Isolation

During an electrical de-isolation, the Isolating Authority considers, where applicable, magnetic induction and capacitive coupling that can appear when Earthing is removed and in a short-circuit configuration.

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3.5 Personal Isolation

Requirement 3.5.1: Personal Isolation

A personal isolation is implemented for recurrent works with a low level of risk, for a maximum duration of one shift or day according to the entity or affiliate work regime.

For any work not completed at the end of the shift or at the end of the day, the equipment or installation is returned to normal operational status (reconnection) or a full isolation is implemented.

A personal isolation is not handed to another Isolating Authority.

A personal Isolating Authority may only have a personal isolation in place on one piece of equipment at a time.

An exhaustive list of equipment that can be covered by a personal isolation is established after a specific risk analysis and included in the entity's or affiliate's procedure.

(Expectation 03.04)

Work with low level of risk includes operations with a minor potential loss of containment or on Extra Low Voltage (ELV) and Low Voltage (LV) electrical equipment.

Works performed within personal isolation are not exempt from the requirements of **CR GR HSE 402**.

A personal isolation may be exempt from the isolation certificate under conditions specified in the isolation procedures of the entity or affiliate.

A maximum of 3 energy sources can be isolated on a piece of equipment at the same time.

For process and mechanical personal isolation, a lock-out is not required if the personal Isolating Authority has a clear view of the isolation device and remains in attendance at the worksite for the duration of the work.

If a personal Isolating Authority requires assistance, this is limited to a support role only (e.g. logistics).

Examples of works and/or equipment categories that may be covered by a personal isolation are provided in Appendix 6.

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3.6 Long-term Isolation

Long-term isolation devices are those put in place:

- After work has been suspended and the permit to work has been closed out;
- As part of mothballed equipment and installations, i.e. equipment and installations being temporarily or permanently decommissioned;
- For operational reasons (e.g. isolating of permanent nitrogen connections to process equipment's while these connections are not in use).

Requirement 3.6.1: Long-term Isolation

Long-term isolation devices are identified on diagrams and P&IDs, listed in a dedicated register and inspected at least once every quarter.

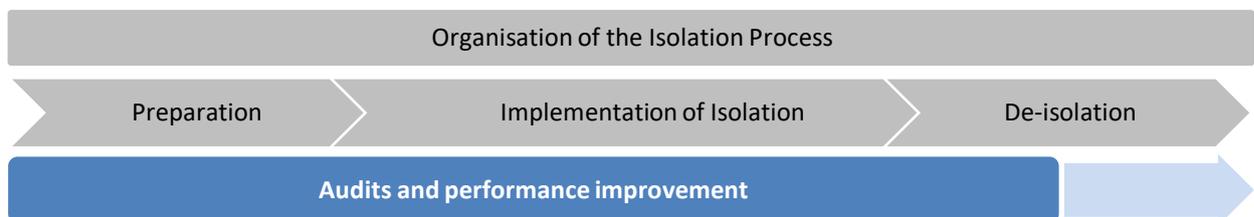
Removal of long-term isolation devices requires a:

- A site joint site visit to be carried out by the Isolating Authority and the Performing Authority to ensure that isolation devices are suitable for the proposed work to be carried out;
- A permit to work.

(Expectation 01.04)

Inspection of long-term isolation devices includes verifying their integrity and that of tag-out devices, as well as checking the need to keep them in place.

3.7 Audits and Performance Improvement



Requirement 3.7.1: Internal Audits and Performance Improvement

An audit programme is put in place in the entity or affiliate, to make sure that the isolation procedure is applied.

Isolation performance indicators, including as a minimum verification with the help of dedicated checklists, are defined and monitored.

These indicators are analysed during a process review at least once a year. The review gives rise to an action plan to improve the process.

(Expectations 01.04; 01.06; 02.01; 09.01; 09.02; 09.03)

3.8 Archiving

The conditions for archiving isolation work packs are defined by the entity or affiliate in compliance with the Group's document retention policy and the applicable regulations.

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4 TERMS AND DEFINITIONS

The terms and definitions given in **CR-GR-HSE-001** apply and are completed by the following terms and definitions for the present rule.

Control device

Device for manually or automatically, locally or remotely, modifying the functioning of a system such as: On/off push buttons, emergency shut-down functions, selector switches, PLC output relays, Safety interlocks, etc.

Certification

Formalised recognition by the employer of the employee's ability to safely perform the tasks entrusted to him in the context of isolation operations.

De-isolation

All procedures designed to bring a previously isolated equipment item or installation back into service, while ensuring the safety of personnel and equipment. This includes the removal of the lock-out devices and tag-out devices.

Extra Low Voltage (ELV)

Voltage range ≤ 50 volts alternating current (≤ 120 volts direct current).

High Voltage (HV)

Voltage range > 1000 volts alternating current (>1500 volts direct current):

HTA > 1000 volts and $\leq 50\ 000$ volts alternating current (>1500 volts and $\leq 75\ 000$ volts direct current)

HTB $> 50\ 000$ volts alternating current (> 75000 volts direct current)

Hot tapping

Operation involving welding on a live installation or equipment to install connections or accessories.

Isolation

Safety procedure designed to ensure that people and equipment are protected against the consequences of any accidental maintenance of

power or any spurious appearance or reappearance of energy or dangerous fluids on this equipment.

In this rule, the term "isolation" implies the isolation of powered systems. There are three types of isolation:

- Process isolation is applied to control the risk generated by fluids (products) and which is related to their:
 - toxicological properties (acute and chronic effects),
 - physicochemical properties, (flammable, explosive, etc.),
 - conditions of use (flowrate, pressure, temperature).
 - The terms "fluid isolation" or "hydraulic isolation" are also used in the field.
- **Mechanical isolation:** performed when there is a risk of mechanisms continuing to move after their source of drive power (electrical, hydraulic) has been shut down and isolated. The causes of movement may be:
 - An external influence (e.g. a ventilator blade set in motion by a draft).
 - Energy built up through inertia, stiffness (compressed springs), gravitation (potential energy) or pressure (hydraulic / fluid accumulator).
- **Electrical isolation:** performed to control electrical risks, it is applied to any electrically powered equipment or installation. An electrical isolation is performed for electrical work (active parts of an installation such as boards, busbars, circuit breakers or protection devices) or for non-electrical work (mechanical intervention on a rotating machine, cleaning, etc.).

Isolation device

Mechanical device that physically prevents energy transmission or release, such as:

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- circuit breakers, fuses, earth switches, manual switches, etc.
- valves, spades, blind flanges, physical disconnection, or any other similar device used to block or isolate energy.

Note: Check valves, relief valves and control devices are not devices for isolating energy sources.

Isolation envelope

Part of piping, equipment or installation, which is located between isolation devices (valve or positive isolation) forming the boundary, in which an opening can be made.

Lock-out /Locking

Operation that consists of guaranteeing that separation is maintained using an appropriate lock-out device.

Lock-out box

A lockable box designed to securely hold lock-out devices (padlocks, interlock control keys), fuses, apparatus and safety equipment used to control isolation devices.

Lock-out device

Device using material means difficult to neutralise, so that it cannot be removed without voluntary action by the Isolating Authority or an authorised person (mechanical blocking using a padlock, lock, nylon cable tie).

Low Voltage (LV)

Voltage range > 50 volts and $\leq 1\,000$ volts alternating current (>120 volts et ≤ 1500 volts direct current).

Positive isolation

Complete separation of the installation or equipment to be isolated from the powered system by physical disconnection or spading.

Physical disconnection: an operation that consists of removing a piping element and blanking of the opened ends process /

mechanical isolation), or equipment cabling disconnection, disconnecting switch, circuit breaker, contactors (electrical isolation)

Spading: an operation that consists of installing an isolation device such as a blind flange, spade or spectacle blind. (Spade: metal disc with a handle for sealing pipes, placed between two flanges that are tightened).

Powered system

An equipment, circuit or installation that presents a non-isolated energy source and/or that contains substances that are hazardous for health, safety or the environment.

Proved isolation device

Valve isolation where the effectiveness of the isolation can be confirmed via vent or bleed before breaking into system, e.g. double block and bleed valve with purging point or single block valve with purging point.

Personal isolation

Refers to cases where the Isolating Authority and the Performing Authority are one and the same person.

Special isolation device

System that uses material means such as: a mechanical plug, an inflatable plug or a cryogenic plug, etc..

Tag-out device

Visible warning device (label, sign) affixed to an isolation device to show that the locked-out equipment or installation cannot be used until the isolation is removed by the Isolating Authority or an authorised person.

Tag-out /Tagging

Operation that consists of providing physical information on the state of the locked-out equipment or installation using an appropriate tag-out device

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5 REFERENCE DOCUMENTS

Reference	Title - Company Rules
CR-GR-HSE-001	One-MAESTRO Expectations
CR-GR-HSE-402	Permit to Work Process
GM-GR-SEC-014	Good Practices for Pipe Plugs

Reference	Title – External documents
NFPA 70E	Handbook for Electrical Safety in the Workplace, evolved from the NFPA National Electrical Code
NF C 18-510	<i>Opérations sur les ouvrages et installations électriques et dans un environnement électrique - Prévention du risque électrique</i>

6 BIBLIOGRAPHY

Title
INRS ED 6109 : <i>Consignations et déconsignations</i>
HSE UK: HSG 253 Safe Isolation of Plant and Equipment
OSHA 1910.147: The control of hazardous energy (lockout/tagout).

7 LIST OF APPENDICES AND COMPLEMENTARY DOCUMENTS

Reference	Title
APPENDIX 1	Typical Functions Exercised in the Isolation Process
APPENDIX 2	Main Energy Sources and Associated Risks
APPENDIX 3	EP Branch: Minimum Criteria for the Selection of Process Isolation Devices
APPENDIX 4	GRP - MS - RC Branches: Minimum Criteria for the Selection of Process Isolation Devices Defined by SIOPE Matrix (Safe Isolation Of Plant And Equipment)
APPENDIX 5	Category of Process Isolation Devices
APPENDIX 6	Examples of Works and/or Equipment Categories That Can be Covered by a Personal Isolation

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8 DISTRIBUTION CONDITIONS AND DATE OF EFFECT

Publication in REFLEX (Group standards document referential) REFLEX is available on the intranet WAT/Le Groupe/Outils pratiques or WAT/Pratique/Les référentiels.

Effective date: in the 12 months following publication.

60 months after publication, for the requirement concerning positive isolation for confined space entry for plants, lubricant and oil depots of MS entities and affiliates. Delay required for modification of installations.

9 REVISION HISTORY

REV.	DATE	PURPOSE	WRITTEN BY	CHECKED BY	APPROVED BY
00	08/01/2021	Creation	PSR/HSE/FHOS/REE A. Halilou	PSR/HSE/FHOS A. Abzizi	PSR/HSE X. Bontemps

	Company Rule		
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APPENDIX 1: Typical Functions Exercised in the Isolation Process

One person can have several functions.

Title	Function	Equivalent Titles in the Branches	Intervention Steps
Approving Authority	Designated function of the entity/affiliate, approves, by signing the isolation certificate, the isolation preparation (risk analysis, isolation work pack, selecting of isolation devices), authorises implementation of the isolation (separation, lock-out, tag out, releasing stored energy checking for the absence of energy), and de-isolation (including temporaries de-isolations for test)	<i>Responsable de zone, Responsable opérationnel, Responsable du site, Contremaître, Chef de Quart, Chargé d'exploitation électrique</i> Operating Authority, Permit issuer, Responsible Person	Preparation Implementation of the isolation De-isolation
Performing Authority	Designated function in the entity/affiliate or contractor, in charge of the execution of work. Accepts the permit to work in the approval phase, countersigns it when the permit is issued before execution of work and closes it out when work has been completed. They can perform the work or supervise a group of people performing the work.	Performing authority, Acceptor, nominated person, Work leader, Person in charge of the work, <i>Superviseur d'intervention, Chef d'équipe intervention, chargé travaux électriques</i>	Implementation of the isolation De-isolation
Requestor	Designated function in the entity/affiliate or contractor, initiates the isolation request.	Requestor as per the definition given in CR-GR-HSE-402 , <i>Responsable du site, Contremaître, Chef de Quart,</i> Operating Authority	Preparation
Worker / Crew members	Designated function in the entity/affiliate or contractor, performs the tasks mentioned in the permit to work and states that the permit to work conditions have been understood.	Permit user, Skilled worker, <i>Executant, Affected worker</i>	Implementation of the isolation De-isolation
Isolating Authority	Designated function in the entity/affiliate or contractor, prepares and implements, according to the type of isolation (process and mechanical, electrical), the isolation phases (separation, lock-out, tag-out, releasing stored energy checking for the absence of energy), and de-isolation (including temporaries de-isolations for test). They oversee managing lock-out and tag-out devices and updates the isolation certificate according to changes on site. They monitor on work site the isolations that he does not perform himself (e.g. installation and removal of positive isolation device) and periodically monitors the security of the isolations whilst they are in place.	<i>Responsable de Zone, Chef de quart, Chef de poste, Opérateur, Electricien habilité, Chargé de manœuvre en électricité,</i> Authorised worker, Area Operator, Electrical supervisor	Preparation Implementation of the isolation De-isolation
Personal Isolating Authority	Designated function in the entity/affiliate or contractor who implements energy isolation for the work s/he performs his/herself.	<i>Intervenants (Electricien, instrumentiste, mécanicien),</i> Skilled worker,	Preparation Implementation of the isolation De-isolation

	Company Rule		
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APPENDIX 2: Main Energy Sources and Associated Risks

Type of Energy	Risks
Electrical Energy	Electric shock / electrocution / burns / blinding by electric flash / ignition source / injuries caused by reinstating or restarting a machine
Thermal Energy <ul style="list-style-type: none"> ▪ Heat (steam, flames, hot substances, hot equipment, exchangers, etc.) ▪ Cold (cooling units, liquefied gases, expansion of gas under pressure) 	Burns / Fire
Dangerous Fluids Hazardous substances / Flammables / Toxics / Chemicals and active biological substances	Burns / Flammable / Fire / Explosion / Toxic / Environment impact / etc.
Mechanical Energy <ul style="list-style-type: none"> ▪ Kinetic energy: mass in motion / rotation / transition (a ventilator blade set in motion by a draft) ▪ Potential energy: energy that can be released by an object (taut spring, actuator) 	Trapping, crushing, impact, cuts
Hydraulic Energy Pressure, velocity or flowrate of a liquid or gas	Combination of the risks regarding mechanical, thermal and chemical Energy and noise

	Company Rule		
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APPENDIX 3: EP Branch: Minimum Criteria for the Selection of Process Isolation Devices

Type of Work	Long-Term Isolation	Confined Space Entry	Hot Work (Naked Flame)	Hot Work (No Naked Flame)	Hot Work (Any)		Cold Work	
					High Pressure ⁽¹⁾	Low Pressure	High Pressure ⁽¹⁾	Low Pressure
Fluids	Any	Any	Flammable	Flammable	Non-flammable		All Fluids	
					High Pressure ⁽¹⁾	Low Pressure	High Pressure ⁽¹⁾	Low Pressure
Physical disconnection	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Spading	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
"Double block and bleed" isolation	No	No	No	Yes ⁽²⁾	Yes ⁽²⁾	Yes	Yes ⁽²⁾	Yes
Double block	No	No	No	No	Yes ⁽³⁾	Yes ⁽³⁾	Yes ⁽³⁾	Yes ⁽³⁾
Single isolation	No	No	No	No	No	Yes ⁽⁴⁾	No	Yes ⁽⁴⁾

Remark ⁽¹⁾: > 70 barg on the pressure gage, for LNG > 35 barg on the pressure gage, for H2S if partial pressure > 1 barg.

Remark ⁽²⁾: daily checks for isolation integrity.

Remark ⁽³⁾: by the same team and for the duration of one shift maximum; otherwise spading.

Remark ⁽⁴⁾: depending on the risk assessment, integrity of the isolation and in the presence of non-toxic fluids. Maximum duration: by the same team and for the duration of one shift maximum; otherwise spading

	Company Rule		
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APPENDIX 4: GRP - MS - RC Branches: Minimum Criteria for the Selection of Isolation Devices Defined by SIOPE Matrix (Safe Isolation of Plant and Equipment)

Table 1 - Toxic Liquids and Gases: HF, H2S, flare gas, etc.

Description	Duration	Maximum Operating Pressure					
		>50 barg	>20 barg	>10 barg	≤ 10 barg	≤ 2 barg	
Long Term Isolation	All						
Confined Space Entry	All						
Hot Work with a Naked Flame	All						
Hot Work without a naked flame	<12 hours	If ≥ 2,5"	If ≥ 6"	*	If ≤ 2"	If ≤ 4"	
	>12 hours	If ≥ 2,5"	If ≥ 6"		If ≤ 2"	If ≤ 4"	
Cold Work - Breaking Containment	≥ 10"	<12 hours		*	*	*	
		>12 hours					
	6" - 8"	<12 hours			*	*	*
		>12 hours					
	2,5" - 4"	<12 hours		*	*		
		>12 hours					
	1,5" - 2"	<12 hours	*	*	*		
		>12 hours					
	≤ 1"	<12 hours	*	*	*		
		>12 hours					

Legend:

Positive isolation

DBB: Double Block and Bleed

SBB: Single Block and Bleed

* Double Block and Bleed (DBB) if work is performed during the day (12h) and if the execution time for this work is less than the installation/removal time of the positive isolation device.

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Table 2 - Hydrocarbons, Flammables and Corrosives: LPG, H2, gasoline, gasoil, jet fuel, residue, hazardous utilities (corrosive/irritant), etc.

Description	Duration	Maximum Operating Pressure					
		>50 barg	>20 barg	>10 barg	≤ 10 barg	≤ 2 barg	
Long Term Isolation	All						
Confined Space Entry	All						
Hot Work with a Naked Flame	All						
Hot Work without a naked flame	<12 hours	*	*	*	If ≤ 2"	If ≤ 4"	
	>12 hours				If ≤ 2"	If ≤ 4"	
Cold Work - Breaking Containment	≥ 10"	<12 hours	*	*	*	*	*
		>12 hours					
	6" - 8"	<12 hours	*	*	*	*	*
		>12 hours					
	2,5" - 4"	<12 hours	*	*	*	*	*
		>12 hours					
	1,5" - 2"	<12 hours	*	*	*		
		>12 hours					
	≤ 1"	<12 hours	*	*	*		
		>12 hours					

Legend:

Positive isolation

DBB: Double Block and Bleed

SBB: Single Block and Bleed

* Double Block and Bleed (DBB) if work is performed during the day (12h) and if the execution time for this work is less than the installation/removal time of the positive isolation device.

	Company Rule		
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Table 3 – Non-Classified Substances and Non-hazardous Utilities: Seawater, potable water, domestic hot water, cooling water, plant and instrument air, etc.

Description	Duration	Maximum Operating Pressure				
		>50 barg	>20 barg	>10 barg	≤ 10 barg	≤ 2 barg
Long Term Isolation	All					
Confined Space Entry	All					
Hot Work with a Naked Flame	<12 hours	If ≤ 1"	If ≤ 2"	If ≤ 4"	If ≤ 8"	
	>12 hours	If ≤ 1"	If ≤ 2"	If ≤ 4"	If ≤ 8"	
Hot Work without a naked flame	<12 hours	If ≤ 1"	If ≤ 2"	If ≤ 4"	If ≤ 8"	
	>12 hours	If ≤ 1"	If ≤ 2"	If ≤ 4"	If ≤ 8"	
Cold Work Breaking Containment	≥ 10"	<12 hours				
		>12hours				
	6" - 8"	<12 hours				
		>12hours				
	2,5" - 4"	<12 hours				
		>12hours				
	1,5" - 2"	<12 hours				
		>12hours				
	≤ 1"	<12hours				
		>12 hours				

Legend:

Positive isolation

DBB: Double Block and Bleed

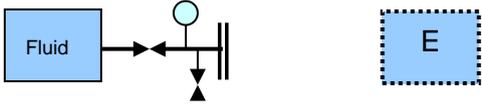
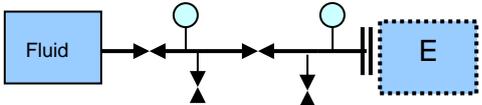
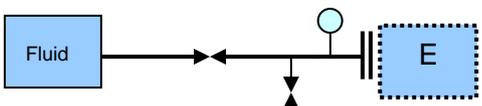
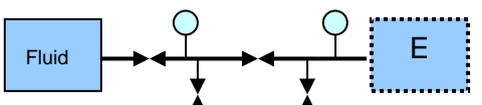
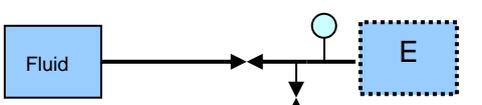
SBB: Single Block and Bleed

* Double Block and Bleed (DBB) if work is performed during the day (12h) and if the execution time for this work is less than the installation/removal time of the positive isolation device.

Information on specific fluids in each entity is provided by Safety Data Sheets and national regulatory documentation. Fluids can be added to the categories above if required, after the relevant information has been obtained from these data sheets.

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Appendix 5: Category of Process Isolation Devices

Category	Method	Example
Positive Isolation device	Physical disconnection (e.g. spool removal and blank)	
	Double block, bleed and spade	
	Single valve proven and spade	
Proved Isolation device	Double Block and Bleed	
	Single Valve and bleed	

Legend:

	Live System		Vent or bleed (Test Point)
	Equipment / process system to be isolated		Blank flange or blind / spade
	Valve (closed)		Pressure monitoring facility

	Company Rule		
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Appendix 6: Examples of Works and/or Equipment Categories That May be Covered by a Personal Isolation

- Work (checks and repairs) on domestic lighting;
- Maintenance of product meters;
- Work on analysers and samplers;
- Work on instrumentation control (manometer, pressure switch, pressure transmitter, level transmitter, flowmeter, I/P converter, automatic valve positioners, limit switches, solenoid valves);
- Work on Programmable Logic Controllers and Digital Control Systems with low voltage, 48V, 24V voltages;
- Telecom, metering and safety system (e.g.: smoke detector);
- Removal of heater pilots and / or ignitors for cleaning or exchange;
- Removal of heater burners for cleaning / replacement;
- Operator draining and flushing activities during equipment preparation for maintenance with 100% attendance.

End of document
(French original signed)



COMPANY RULE

CR-GR-HSE-420

HSE requirements for lifting operations

Summary

A compléter

	Group rule		
	HSE requirements for lifting operations		
PSR/HSE Division	HSE		CR-GR-HSE-420 Rev no. 00 Date: 03/20/2020

Foreword	This is an English translation of the French original. The original French version is to be considered as the reference version.
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1 PURPOSE

This rule defines the minimum HSE requirements for managing risks related to the preparation and execution of lifting operations on sites in onshore, inshore, offshore, marine and subsea environment, operated¹ by the Group's entities or affiliates.

It is established in keeping with **CR-GR-HSE-001** One-MAESTRO HSE expectations and Golden Rule no.6.

In this rule the term lifting includes all crane operations (lifting a suspended load), rigging operations and handling operations

2 SCOPE OF APPLICATION

This rule is applicable in all Group entities and affiliates concerned by the requirements in it, in keeping with their respective decision-making rules and provided that locally applicable legislation and rules are respected.

The entities and affiliates identify the requirements applicable to contractors, inform them and require that they comply with such requirements.

Entities or affiliates with an interest in OBO assets, activities or sites¹, will seek to promote the requirements of the present rule and ensure that the operator adopts similar requirements.

¹ To "operate" means organise, direct, steer and manage. For example, the operator can hold an operating permit or be designated as operator through an operating agreement.

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3 REQUIREMENTS

3.1 Lifting operations management procedure

Requirement 3.1.1: lifting operations management procedure

A procedure for managing lifting operations based on the requirements of this Rule shall be established and implemented. This procedure defines in particular the roles and responsibilities of the various actors involved in the preparation and execution of these operations.

(Expectation 04.01)

In line with [ISO standard 15513](#), Appendix 3 provides recommendations on the roles and responsibilities of the various actors involved in lifting operations.

Requirement 3.1.2: categories of lifting operations

Any lifting operation shall be categorised according to its level of complexity and risk using the criteria set out in Annex 1 and managed in accordance with the requirements of Annex 2 according to the applicable category:

- category 1: repetitive / simple lifting;
- category 2: standard lifting;
- category 3: critical lifting.

(Expectations 03.01, 03.04, 03.05, 04.10)

The other requirements of this Rule apply regardless of the category.

Category 2 lifting operations (standard) can be repeated but this does not change them to category 1 lifting operations (repetitive or simple), given their technical/operational characteristics and the level of risk.

3.2 Organisation

Requirement 3.2.1: competent person for lifting operations

A competent person for lifting operations (CPLO) is designated.

His/her role and responsibilities are defined in Appendix 3.

(Expectations 01.04)

The competent person for lifting operations can be a member of entity or affiliate personnel or an external personnel member (third party or from another Group entity or affiliate).

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Requirement 3.2.2: competencies and training

Only competent persons are authorised to perform lifting operations.

Anyone involved (lifting appliance operators, slingers, signallers, assessors, etc.) in preparing and executing a lifting operation:

- is trained in keeping with his/her roles and responsibilities (see Appendix 3);
- has theoretical and practical knowledge about the tasks and equipment entrusted to him/her.

The entity or affiliate records and archives capacity and training certificates, including refresher courses where applicable.

(Expectation 06.01, 06.02)

ISO standard 15513 specifies the competencies required by drivers (operators), slingers, signallers and assessors when using lifting appliance with a suspended load.

ISO standard 9926-1 specifies training course content for operators of lifting appliance with a suspended load.

3.3 Managing lifting equipment

Requirement 3.3.1: lifting equipment certification

Any use of lifting equipment requires that it has been designed, manufactured and certified to international or local standards validated by the competent person for lifting operations.

The compliance certificate or the initial load test certificate with overload of each lifting equipment is available on request at the place of carrying out the lifting operation.

(Expectation 04.03, 05.08)

The minimum safety specifications (emergency shutdown buttons, extinguisher, etc.) for lifting appliance are defined in **GS GR HSE 460**.

Requirement 3.3.2: lifting equipment register

A lifting equipment register belonging to the entity or affiliate is available on site and kept up to date. It includes:

- the manufacturer's name, the description, type and model;
- the serial number or unique identification number;
- the manufacture date and the date of entry into service;
- the dates of each load test;
- the dates of periodic general inspections and detailed examinations (with the name of the inspector or examiner);
- a list of failures and corrective actions with the date of resolution.

(Expectations 04.03, 05.08)

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Requirement 3.3.3: maintenance programme for lifting appliance belonging to the entity or affiliate

A preventive, curative and condition-based maintenance programme for the lifting appliance belonging to the entity or the affiliate is implemented.

It takes into account the manufacturers' recommendations and is suited to the conditions of use (frequency and types of lifting operations, etc.).

The inspections and maintenance operations performed on the lifting appliance belonging to the entity or affiliate are recorded in an inspection and maintenance register available on site.

(Expectation 04.03, 05.08)

The inspection and maintenance register includes:

- the inspection dates, types and observations;
- and in the event of a maintenance operation:
 - the replacements, repairs and changes of lifting appliance components;
 - the settings of the hydraulic components and configuration of safety systems.

When the lifting equipment belonging to the entity or affiliate is maintained by a contractor, the maintenance agents have the necessary training and competencies to deal with the type of lifting equipment they are responsible for.

Requirement 3.3.4: periodic general verification report

A valid periodic general verification report is available at the place of carrying out the lifting operation for any lifting equipment belonging or not to the entity or the affiliate.

(Expectation 04.03, 05.08)

Requirement 3.3.5: visual inspection before use

Prior to use, all lifting equipment is visually inspected by the operator/user, and where necessary undergoes a functional test.

(Expectation 04.03, 05.08)

The lifting appliance is visually inspected at each start of shift or after a change of operator by filling out a checklist. Any deviation/observation is communicated to the department in charge of maintenance.

The user performs a visual inspection of a lifting accessory or of portable lifting appliance before and after use.

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Requirement 3.3.6: log book for lifting appliance belonging to the entity or affiliate

The activities of each lifting appliance belonging to the entity or affiliate are recorded in a dedicated log book mentioning at least:

- the date;
- the number of lifting operations performed;
- the weight and reach.

(Expectation 04.03, 05.08)

Requirement 3.3.7: lifting of personnel

Personnel are lifted using equipment specifically designed and certified for this purpose (MEWP, construction elevator, etc.).

(Expectation 03.04)

Onshore, the lifting of personnel using a personnel basket is only authorised either in emergency situations or when no other means can be implemented or is available.

3.4 Planning and preparing the lifting operation

Requirement 3.4.1: identifying hazards and assessing risks

Hazards are identified and risks assessed before any lifting operation.

(Expectation 03.01, 03.04)

The level of detail of the risks assessment depends on the category (1, 2 and 3) of the lifting operation.

At least the following aspects are considered:

- the types and characteristics of the lifting equipment items;
- the conditions of use and the physical environment;
- the personnel involved along with their competencies and experience;
- the restrictive weather criteria;
- the means of communication available;
- the procedures and plans applicable in an emergency.

For category 1 lifting operations, a **generic** risk assessment can be used.

For categories 2 and 3 lifting operations, a **specific** risk assessment shall be carried out.

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Requirement 3.4.2: lifting plan

A lifting plan is compiled for all lifting operations.

Its content and its level of detail depend on the category of the operation, as indicated in **GS-GR-HSE-460**.

(Expectation 04.01)

In the case of category 1 lifting operations, a generic lifting plan can be used after making sure that the environment, the weather conditions and the parameters of the lifting operations have not changed.

For repetitive category 2 lifting operations (standard), an existing lifting plan can be used in the same conditions as for category 1 lifting operations.

Requirement 3.4.3: review and technical validation of the lifting plan

For all category 3 operations, the lifting plan is reviewed and technically validated by the competent person for lifting operations (CPL). For the other categories (1 and 2), the lifting plan is reviewed and technically validated by the person in charge at the site.

(Expectation 04.01, 04.10)

The procedure for managing lifting operations specifies and defines the cases for which a lifting operation does not require a work permit in compliance with the requirements of **CR-GR-HSE-402** Work permit process.

Requirement 3.4.4: authorising lifting operations over or in close proximity to live installations

The risk assessment and the lift plan of a lifting operation over or in close proximity to live installations, are subject to formal validation by the operations management of the entity or affiliate.

(Expectation 04.01, 04.10)

Under this requirement, close proximity to live installations means any configuration where there is a risk of the load and/or the lifting equipment falling on these installations.

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3.5 Performing the lifting operation

The level of supervision depends on the lifting operation category and is defined in [GS-GR-HSE-460](#).

Requirement 3.5.1: Safe to Lift checks before any lifting operation

A list of operational checks is completed before any lifting operation, as per the matrix defined in Appendix 4.

(Expectation 03.04)

The content of the Safe to Lift check points is given in [GS-GR-HSE-460](#).

Requirement 3.5.2: restricted access

Access to the lifting area and the lifting appliance is restricted and appropriately controlled and/or blocked off.

(Expectation 03.04)

Requirement 3.5.3: controlling the movements of the load

The movements of the lifted load are controlled throughout the lifting operation.

The movements of the lifted load are not controlled or guided manually. Specific devices (retaining cables, guiding ropes, push/pull poles) are implemented for this purpose.

(Expectation 03.04)

Requirement 3.5.4: debrief after the lifting operation

As part of continuous improvement during the execution of the lifting operations and in order to make them safer, an oral debrief is performed with all the players at the end of the lifting operation.

(Expectation 08.04)

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3.6 Audit of lifting operation management

Requirement 3.6.1: audit of lifting operation management

The implementation of the lifting operations management procedure, including the maintenance and inspection program of lifting equipment is audited.

The frequency of this audit cannot exceed three years.

At the end of the audit, an action plan is issued and its implementation is verified in periodic reviews until all the points of non-compliance have been closed out.

(Expectation 09.01, 09.02)

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4 TERMS AND DEFINITIONS

The terms and definitions given in **CR-GR-HSE-001** apply and are completed by the following terms and definitions for the present rule.

Certificate

A document issued by a Certification Body and conforming to applicable regulations or standards, certifying that the equipment complies with prescribed design standards, predefined technical specifications and a required manufacturing process.

Certified

A person with a valid certificate.

Competent Person for Lifting Operations (CPLO)

Person who, through his/her qualifications and owing to his/her practical and theoretical knowledge, training and experience, is recognised as technically competent, is able to propose arrangements for organizing and carrying out a lifting and can generally be a reference on the specific subject of lifting. Its role and responsibilities are set out in Appendix 3.

The CPLO knows the standards of the profession, the law and the regulations that apply to the work performed. S/he is appointed by his/her employer to take on this function, and has the authority to take the appropriate actions.

Handling

Mechanical operation involving loading, unloading or transporting something by means of a lifting device (excluding a crane) without the use of lifting accessories. It uses a wide range of manual, semi-automated and automated materials handling equipment.

Handling accessories

Integrated or non-integrated attachments installed on handling gear that are designed for handling a load without having to use lifting accessories (e.g. forks, fork extensions, clamps or grapples arms).

Handling appliance

Any mechanical device (powered or not) used or designed to load, unload and move a load within the boundaries of a site or between sites or buildings, or between a building and a transport vehicle (e.g. forklift truck, manual hydraulic pallet truck, chain or lever hoist).

Continuous mechanical handling equipment (e.g. conveyers) do not come under this definition.

Lifting

Mechanical operation, carried out by means of motorized lifting equipment or powered by human force, which involves lifting, lowering or suspending a load. In the case of a failure of the lifting device or any of its accessories the load does not remain stationary.

Lifting accessory

Any device, not part of the load, used, or designed to be used, directly or indirectly to connect a load to an item of lifting gear (e.g. chain, sling, shackle, counter pulley, pulley block, lifting ring, lifting beam, spacer).

Lifting or handling equipment

Equipment used to perform the lifting and/or handling operation. It includes the gear and accessories.

Overhead runways, lifting beams and lifting lugs are not considered as lifting appliance, but as structural elements that are to be inspected and tested in the same way as lifting appliance.

Lifting appliance

Any mechanical device (power-operated or manual) used or designed to lift, suspend and lower a load (e.g. crane, bridge crane, gantry, winch, motorised hoists, forklifts or telescopic handlers and mobile elevating work platforms).

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Machines with a guided load (i.e. elevators) do not come under this definition.

Lifting appliance operator

A person who participates in the performance of a lifting operation by operating a powered or non-motorized mechanical lifting device.

Lifting plan

This is the result of a documented process, which is normally produced by a competent person, in order to define how the lifting operation will be carried out safely. In combination with the risk assessment, it must also demonstrate that the lifting equipment will not be used beyond its MRC and how stability will be maintained throughout the lift.

Live installation

Protected or unprotected equipment items with one or more of the following characteristics: installation containing a fluid harmful for the environment or for health, powered or pressurised installation, or a strategic installation. This also includes primary energy production units and their exhaust systems.

Load

Any object lifted, lowered or suspended from a lifting appliance.

Maximum Rated Capacity (MRC)

Maximum load that an item of lifting equipment can lift, lower or keep in suspension in specific service conditions or for a given operating condition (e.g. boom configuration, type of reeving system, reach, wave height).

Nominal load

Maximum load that an item of lifting equipment can lift, lower or suspend. It does not factor in the specific service conditions that can affect its real capacity.

Person In Charge (PIC)

Person with the necessary level of competence who has the operational

responsibility of the lifting operation, whether or not s/he is directing it. Its role and responsibilities are defined in Appendix 3.

Periodic General Verification (PGV)

Detection and assessment of the defects and failures of an item of lifting appliance and verification that it is safe to be maintained in service. This includes:

- visual inspection;
- dimensional and non-destructive testing;
- functional load tests;
- overload tests if considered necessary.

This assessment is performed by a competent person sufficiently independent from the operations.

Rigger

Person who uses portable lifting equipment to lift, lower, suspend and position loads, usually where cranes cannot do so, and in areas where space and access are limited..

Rigging

Lifting operation by means of portable lifting equipment (chain hoist, winch, lever hoist, etc.) in areas where the crane cannot do so and where volumes and access are limited.

Service inspection

Search for defects on the lifting appliance and verification, without a load, that all the control commands, limiters, indicators and the lifting appliance as a whole, are functioning properly.

Slinger

Person who attaches or detaches loads or lifting accessories to/from the lifting appliance under the supervision of the signaller. Its role and responsibilities are set out in Appendix 3.

Visual inspection before use

Visual inspection and, where necessary, functional testing without a load of the lifting equipment by a competent person (e.g. operator of the gear) before each use.

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5 REFERENCE DOCUMENTS

Reference	Title - Company Rules
CR-GR-HSE-001	HSE One-MAESTRO expectations
CR-GR-HSE-100	HSE reporting
CR-GR-HSE-402	Work permit process
GS-GR-HSE-460	XXX

Reference	Title – External documents
ISO 9926-1	Cranes - Training of drivers
ISO 15513	Cranes - Competency requirements for crane drivers (operators), slingers, signallers and assessors

6 BIBLIOGRAPHY

Title
IOGP RP 376 - Lifting and hoisting recommended practice
ISO 12480-1 - Cranes - Safe use - Part 1: General

7 LIST OF APPENDICES AND COMPLEMENTARY DOCUMENTS

Reference	Title
APPENDIX 1	Criteria for categorising lifting operations
APPENDIX 2	Diagram for managing a lifting operation according to its category
APPENDIX 3	Roles and responsibilities of personnel involved in lifting operations
APPENDIX 4	Check points before starting any lifting operation

8 DISTRIBUTION CONDITIONS AND DATE OF EFFECT

Publication in REFLEX (Group standards document referential) REFLEX is available on the intranet WAT/LeGroupe/Outils pratiques or WAT/Pratique/Les référentiels.

Effective date: in the six months following publication.

9 REVISIONS

REV.	DATE	PURPOSE	WRITTEN BY	CHECKED BY	APPROVED BY
00	March 20, 2020	Creation	PSR/HSE/FHOS/REE P. Bernert	PSR/HSE/FHOS A. Abzizi	PSR/HSE X. Bontemps

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APPENDIX 1

Criteria for categorising lifting operations

The first verified statement, in order of reading, defines the category.

Category 3: CRITICAL

1. The lifting operation requires **special lifting equipment** or a **specific lifting configuration** (built or assembled on site)
2. Preparing the lifting operation requires the assistance and calculations of a **technical expert / design office**
3. The lifting operation involves **lifting of personnel** (aerial lifts excluded)
4. The lifting equipment is used at **85% or more of its capacity** (including the weight of the hook and the reeving system, the weight of the lifting accessories, mass uncertainty, the dynamic amplification factor, etc.)
5. The lifted load is to be moved **over an unprotected process area** / live installations or over / nearby production equipment
6. The lifting operation requires **three or more cranes**
7. **The load has to be tipped, straightened or turned over by more than two motorised items of lifting appliance**
8. **Mass is unevenly distributed** or is likely to change. The centre of gravity of the load might vary due to free surface effect
9. The lifting operation requires **special lifting equipment** to be designed, manufactured or used (e.g. specific lifting beam or spreader, rotation bracket, guides)
10. The **residual risk is equal to or greater than 4** on the **severity scale** as per **CR-GR-HSE-100**
11. The load is to be transferred from **one lifting appliance to another**
12. The lifting operation is **classified as irreversible**
13. The lifting operation is performed by **two different teams** (e.g. **dedicated workplace**)
14. The lifting operation corresponds to a **proof load test** of the **lifting appliance or equipment**
15. The lifting operation is performed from **one floating support vessel to another**
16. The **offshore lifting** operation is performed **without the crane operator being able to see the load**
17. The lifting operation requires **the presence of divers**
18. The lifting operation requires the use of **air bags** or **additional buoyancy tanks**
19. The **stability of the vessel** depends on the lifting operation to be performed (simultaneous ballasting required)
20. The mass of the load to be lifted during a **subsea operation exceeds 10 tonnes**
21. The load is lifted from the seabed and could be **caught or affected** by suction phenomena or by marine concretions

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Category 2: STANDARD

1. The lifting appliance has to **move with a suspended load** (excluding the monorail, overhead crane and gantry crane)
2. Conditions related to the physical environment of the operation may affect the lifting operation
3. The lifting team will be managing and performing this type of lifting operation (mass, shape, etc.) **for the first time**. The operator is undergoing **training**
4. The lifting operation is conducted **outside of the normal operating conditions of the lifting appliance**
5. The lifting operation is conducted in **restricted areas and/or areas exposed to peripheral risks** (e.g. public road, public space, airport, overhead electric cable, trench, excavation, underground installations, subsea equipment, etc.)
6. The load is lifted using **two cranes (tandem lifting)**
7. The **residual risk is equal to or greater than 3** on the severity scale, as per **CR-GR-HSE-100**
8. The load is lifted, transported or held by means of **two or more non-motorised of lifting appliances** (e.g. hoists, winches, etc.)
9. The load has a **specific shape**. Its centre of gravity is above the lifting points, high or off-centre requiring a non-symmetrical slinging system
10. **Fixed, motorised** lifting appliance **installed on a temporary basis** will be used
11. The load has a **large aerodynamic surface**. It can be affected by wind, current or the waves
12. **Absence of certified or tested lifting points**
13. The **load is fragile** or can become permanently distorted
14. The load is **difficult to sling** (e.g. complex slinging, several lifting beams or spreaders, hyperstatic slinging method, slings with an angle to the horizontal of less than 60 degrees)
15. **The mass of the load is estimated**
16. The lifting operation requires the use of **forklift trucks, telescopic handlers or excavators to lift suspended loads**
17. The onshore lifting operation is performed **without the crane operator being able to see the load**
18. **One of the four conditions of category 1 is not met**

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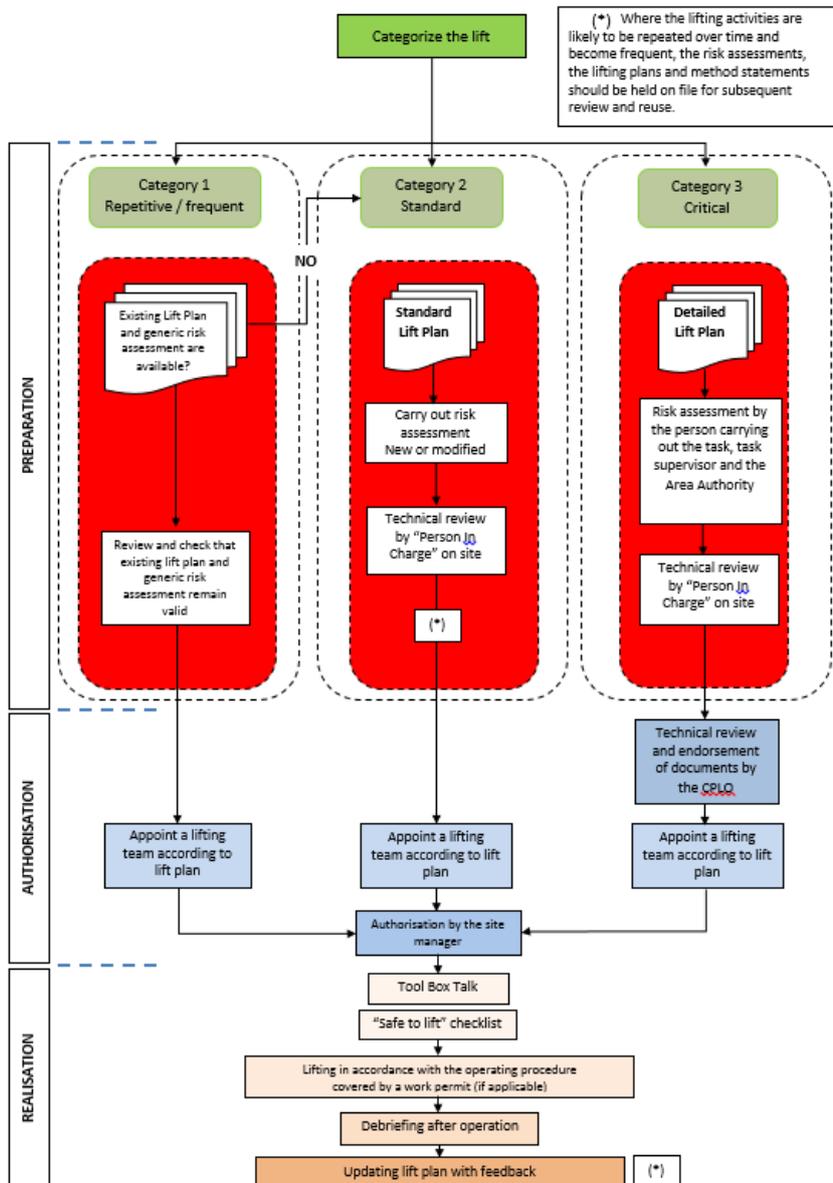
Category 1: REPETITIVE / SIMPLE

1. The following four conditions are met:
- **No affirmation belonging to categories 1 and 2 is present**
 - The personnel involved in the lifting operation is **trained, experienced, and assessed as being competent**. They **have already conducted similar operations** and are **authorised** to fulfil their role
 - The load is **pre-slung or very easy to sling**, and there is **no external factor** complicating the operation
 - The lifting equipment and the load are easy to use and to lift

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APPENDIX 2

Diagram for managing a lifting operation according to its category



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APPENDIX 3

Roles and responsibilities of personnel involved in lifting operations

Role	Responsibilities
Site manager	
Person who is responsible for the <u>lifting</u> operations performed on his/her site.	<ul style="list-style-type: none"> - Ensures that activities for planning, preparing and carrying out lifting operations are carried out under conditions that comply with the applicable requirements - S/he makes sure that all personnel are trained and have the competencies to fulfil their role. - S/he appoints the person in charge of the <u>lifting</u> operations. - Any lifting operation at the site concerned is subject to its authorisation.
Competent Person for Lifting Operations (CPLO)	
Person appointed by the Management Committee of the entity or affiliate who is technically competent and can make an independent technical judgment on the <u>lifting</u> plan.	<ul style="list-style-type: none"> - S/he provides technical advice on lifting operations to the entity/subsidiary management, project managers and more generally to all functions of the entity or subsidiary involved in lifting operations, on request - S/he knows and understands the law of the country in which the operations are performed, as well as the regulations and technical standards applicable to <u>lifting</u> operations. - S/he analyses the potential differences between local regulations and the Group's rules, and proposes on this basis the contents of the procedure for managing lifting operations - S/he proposes lifting procedures, verifies their application and promotes them. - S/he defines the training and expected skills of the <u>lifting</u> team members. - S/he assesses personnel competencies. - S/he takes part in assessing the capacities of contractors for <u>lifting</u> operations. - S/he develops or reviews and technically approves the <u>lifting</u> plans for category 3, and where necessary category 2, critical operations. - S/he can ask for assistance from head offices where necessary. - S/he takes part in analysing the HSE events related to <u>lifting</u> and shares the lessons learnt from <u>lifting</u> operations performed in the entity. - S/he performs periodic reviews and audits of lifting procedures in accordance with the lifting operations management procedure. - - S/he assists the inspection department of the entity or affiliate in the choice of third-party verification bodies.

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Role	Responsibilities
Person in charge (PIC)	
<p>Responsible for the <u>lifting</u> team.</p> <p>Person who has operational control over the <u>lifting</u> operation and has the authority to give instructions to the <u>lifting</u> team during operations.</p> <p>(This person can be a deck officer, a diving supervisor, a lifting supervisor, a deck manager, a shift supervisor or equivalent, the signaller, etc.).</p>	<ul style="list-style-type: none"> - S/he spearheads the safety talks and verifies that all the personnel involved in the operation is properly informed. - S/he categorises operations, assesses risks and plans <u>lifting</u> operations. - S/he draws up or reviews the <u>lifting</u> plan and makes sure the required verifications are in place. - S/he defines the configuration of the <u>lifting appliance</u> and ensures that the appropriate equipment is available. - S/he checks that the personnel taking part in the operation has the required level of training and competencies, and that they understand their roles and responsibilities. - S/he makes sure that the <u>lifting</u> operation is performed in compliance with the <u>lifting</u> plan and stops operations if any change is made to the approved plan. - S/he ensures that the communication methods and means to be used during the operation are available and checked before <u>lifting</u> starts. - S/he sets up an exclusion zone around the <u>lifting</u> area. - S/he directs and supervises the <u>lifting</u> operation. - S/he monitors the operation, and performs an end-of-<u>lifting</u> debrief.
Operator of the <u>lifting appliance</u>	
<p>Person who drives / operates the powered <u>lifting appliance</u> and who is authorised to do so.</p>	<ul style="list-style-type: none"> - S/he plays an active part in safety talks. - S/he holds a training certificate in accordance with the requirements of the national legislation in force and a formal authorisation signed by his employer to operate the <u>lifting appliance</u>. - S/he uses the <u>lifting appliance</u> only when s/he has received training and is authorised to do so. - S/he uses the <u>lifting appliance</u> in compliance with the manufacturer's instructions. - S/he performs the <u>visual inspections</u> before and after the operation and reports any anomalies. - S/he verifies that the weight of the load does not exceed the maximum rated capacity of the <u>lifting appliance</u>. - S/he ensures that the visual inspection and load capacity check of the required lifting accessories have been completed prior to each lifting operation - S/he does not leave a suspended load unsupervised. - S/he never leaves <u>lifting appliance</u> with the key in the ignition. - S/he makes sure communication and directives between him/herself and the signaller are clear and straightforward. - S/he only answers the orders/signals of the appointed signaller. - S/he responds to any commonly recognised emergency shutdown signal given by anyone observing a situation likely to result in a hazard, by stopping the manoeuvre. - S/he checks that the routes taken by forklift trucks/mobile devices are suitable (e.g. state of the ground, the incline, the amount of space).

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Role	Responsibilities
<p>Banksman</p> <p>Person responsible for conducting a lifting operation and in particular for giving instructions to the operator of the lifting device (by signals, possibly accompanied by other means of communication).</p> <p>It may also be referred to as a "signaller"</p>	<ul style="list-style-type: none"> - S/he plays an active part in safety talks. - S/he can be easily identified. - S/he checks the <u>lifting area</u>, making sure that all the personnel, and him/herself, are in a safe position, and makes use of physical barriers to prevent access to the exclusion zones. - S/he directs the movements and positioning of the loads. - S/he makes sure that the equipment and loads are inspected before use. - S/he checks the loading notes and the masses of the loads to be lifted. - S/he checks whether there are unsecured objects that might fall. - S/he ensures that the appropriate <u>lifting accessories</u> have been selected and are securely attached. - S/he makes sure that the loads are properly attached/detached. - S/he keeps the load in his/her line of sight at all times. - S/he maintains clear communication with the operator of the <u>lifting appliance</u>. - S/he is aware of any other operations in progress that can have an impact on <u>lifting activities</u>. - S/he ensures the load is not restrained in any way before lifting. - S/he does not perform any other activities while the operation is in progress. - If there is more than one signaller, only one of them is to have this responsibility at a given time, according to their positions in relation to the crane.
<p>Slinger / Rigger</p> <p>Person who is trained and practiced, in charge of attaching and detaching <u>lifting accessories</u> (slings, shackles, etc.) on the load and the <u>lifting appliance</u>.</p>	<ul style="list-style-type: none"> - S/he plays an active part in safety talks. - S/he selects, inspects and makes proper use of <u>lifting accessories</u> making sure that certification is in place. - S/he attaches/detaches <u>lifting accessories</u> to/from the loads and <u>lifting appliance</u> in compliance with the <u>lifting plan</u> - - S/he returns <u>lifting accessories</u> to the warehouse or the storage area after use. - S/he removes <u>lifting accessories</u> from service where necessary. - S/he secures the load properly (bundling, packing, strapping, etc.). - S/he checks whether there are unsecured objects that might fall. - S/he checks the mass of the load. - S/he stays in communication with the signaller. - S/he ensures the load is not restrained in any way. - S/he checks the <u>lifting area</u>, making sure that non-essential personnel stay away from the work area by installing physical barriers where necessary. - S/he remains in a safe position during <u>lifting operations</u>. - S/he knows how to use guiding ropes and handling tools.
<p>Rigger</p> <p>Person who is trained in rigging techniques and the use of portable lifting equipment</p>	<ul style="list-style-type: none"> - Same as for the slinger, plus: - S/he knows rigging and <u>handling techniques</u> and knows how to use and operate portable <u>lifting equipment</u> (winch, chain, lever and cable hoist). - S/he knows how to use handling tools.

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APPENDIX 4

Check points before any lifting operation

List of checks to be performed before any <u>lifting</u> operation			
General			
Date:		Time	
No. of work permits:		Unit identification:	
Main contractor:		Worksite manager:	
Start-up checklist			
		YES	NO
1	The operator is trained and in possession of his/her safe driving authorisation		
2	It has been checked that the lifting appliance and <u>lifting accessories</u> are adequate		
3	The risk analysis has been performed		
4	A <u>lifting</u> plan exists		
5	The step-by-step procedure and the risks evaluation have been discussed with the <u>lifting</u> team		
6	The final set-down area is clear		
7	The <u>lifting</u> area is marked out and evacuated		
8	The safety systems of the <u>lifting appliance</u> have been checked and are in good working order		
9	The signaller / banksman is identified by the operator of the <u>lifting appliance</u> .		
10	The communication means have been verified		
11	The weather conditions (storm/wind) are within the operating limits defined for the <u>lifting</u> operation		
12	Visibility is satisfactory throughout the operation At night, suitable lighting is installed		
The answer to points 1 to 12 of the checklist was YES The <u>lifting</u> operation can start.			
Signaller appointed:		Signature:	

End of document
(French original signed by)

Management of Change

Executive summary

This rule defines the minimum requirements to ensure that HSE risks are managed when changes are made to assets, operating conditions, procedures, or to an organisation.

It is applicable to all entities of the Group who operate major risk installations as defined by this rule.

This rule completes Golden Rule 11 and includes the following requirements:

MOC Process

- A process is implemented to manage permanent, temporary or urgent changes that have potential impacts on HSE risk;
- A function is designated to coordinate and track all change requests;
- A procedure addresses the MOC process coordination, the change approval steps, training required for implementing the process, the list of typical changes subject to the MOC process, the tasks of each party involved in the process and the performance review.

Change Assessment

- The change, including its justification, is formally recorded and documented so that its objectives remain clear during its assessment and implementation phases and are communicated to relevant parties;
- The assessment of the change includes an evaluation of the HSE risks and potential impacts of the change. The impacts and risks are treated with the definition of control measures as required.

Change Implementation

- Training for personnel (including contractors and suppliers) impacted by the change is defined, planned and organised prior to the change;
- Potentially affected personnel are notified of the change and of the associated risk management measures;
- All documents impacted by the change are updated and made available as soon as the change is conducted;
- After a significant change and before restarting the installation, a Pre-Start-up-Safety Review (PSSR) is carried out.

Performance review

- The performance of MOC process is periodically assessed.

Date of publication in REFLEX: 22/07/2019

REVISION	DATE	PURPOSE	AUTHOR	CHECKED BY	APPROVED BY
00	25/06/2019	Creation	PSR/HSE/RM/APC J.C. Caudin	PSR/HSE/RM P. Ozon	PSR/HSE X. Bontemps

	Group Rule		
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PSR/HSE Division	HSE		CR-GR-HSE-302 Rev. N°: 00 Date: 25/06/2019

Foreword	This English version is translated from the original French reference version.
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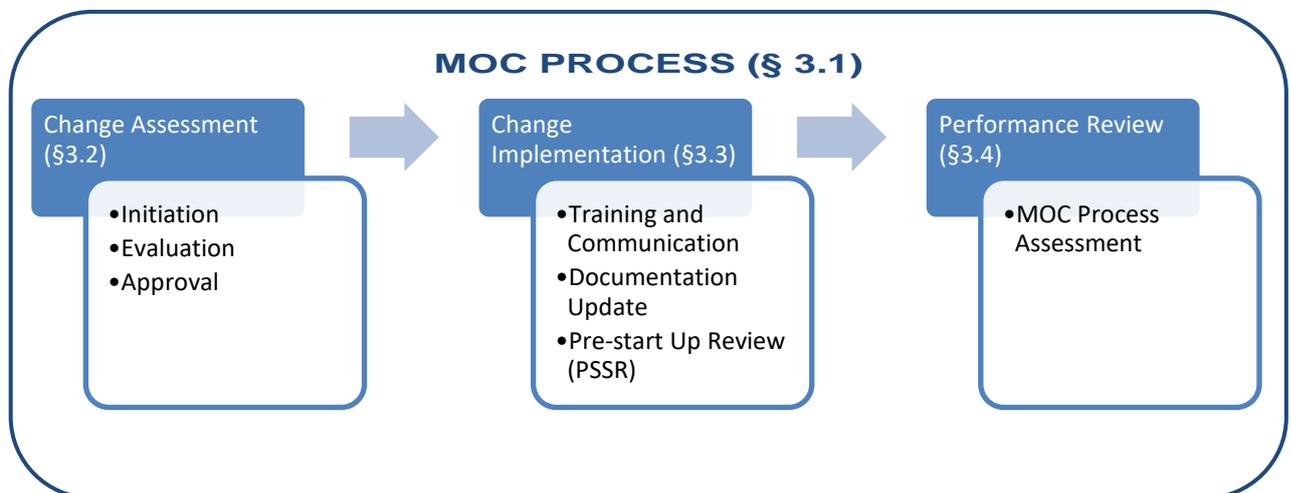
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1 PURPOSE

This rule defines the minimum requirements to ensure that Health, Safety and Environmental (HSE) risks are managed when permanent, temporary or urgent changes are made to assets, operating conditions or procedures, as well as changes in operating personnel or organisation.

Changes that might be required during the response to emergency situations are not covered by this rule, nor are replacements-in-kind.

This Company Rule is established to be in accordance with **CR-GR-HSE-001** One-Maestro HSE Expectations and complements the requirements of Golden Rule 11.



2 SCOPE OF APPLICATION

This rule is applicable, in accordance with their respective decision-making rules, by any Group entity or affiliate which operates major risk installations as follows:

- All installations that use products with so-called hazard categories of "listed" or "falling under" and at or above the low-tier quantities (taking into account addition rules) from the European directive [2012/18/EU](#) called "Seveso" regardless of whether or not the installation falls under the regulatory jurisdiction of this directive;
- All installations defined by the European Directive [2013/30/UE](#) related to the safety of offshore oil and gas operations and regardless of whether or not the installation falls under the regulatory jurisdiction of this directive;
- Wells and associated installations, as well as pipelines.

This rule applies equally to all sites that are not included in the preceding list for which the entity in charge of operations considers that their activities can lead to major accidents.

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Where an entity or affiliate holds an interest in such facilities but does not operate them¹, it promotes the requirements of this rule and seeks to have similar requirements adopted by the operator.

The requirements applicable to contractors are identified and communicated to those contractors, and those contractors are required to comply with them.

¹ “Operate” means organise, run, conduct and manage. The operator may for example hold an operating permit or be appointed as operator by way of an operating agreement.

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3 REQUIREMENTS

3.1 MOC Process

Requirement 3.1.1: MOC Process

A process is set up to manage permanent, temporary or urgent changes that present potential impacts on HSE risk level and concern:

- Assets (e.g. equipment, process, technologies, materials, safety thresholds/parameters);
- Operating conditions and operating procedures;
- Operating personnel and organisation.

A function is designated to coordinate and track all change requests of the entity or affiliate.

(Expectations 01.04; 03.02; 04.01)

In jurisdictions with specific regulations for MOC, regulatory compliance of the process in place must be verified.

Appendix 1 details examples of changes frequently encountered in Group activities requiring management through a MOC process.

Appendix 2 details examples of replacement-in-kind not subject to a MOC process.

Requirement 3.1.2: MOC Procedure Minimum Content

The entity describes the MOC process in a procedure that addresses as a minimum:

- The MOC process coordination;
- The change approval process steps (planning, coordination, control, etc.);
- The list of typical changes subject to a MOC process, as well as replacements-in-kind not covered by this process;
- The tasks and responsibilities of each party involved in the MOC process (e.g. originator, evaluation team members, approval authority, Pre-Start Up Safety Review [PSSR] leader);
- Training required for the implementation of the process;
- The MOC process assessment.

(Expectations 01.04; 03.02; 04.01)

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3.2 Change Assessment

Requirement 3.2.1: Change Initiation

The change request, including its justification, is formally recorded and documented so that the objectives of the change:

- Remain clear during its evaluation and implementation phases;
- Are communicated to relevant parties;
- Are traceable after the change has been made.

(Expectation 03.02)

The information in a change request includes, as a minimum:

- Exact scope and implementation plan;
- Duration of the change;
- Expected impacts;
- Potential interfaces or conflicts with other ongoing or planned activities or projects.

In some jurisdictions, existing regulatory obligations may require prior communication to the local authority and/or information provided to the public on changes impacting the major risks of the asset (e.g. safety distances, products, quantities, emergency plans).

Requirement 3.2.2: Change Evaluation Including Risks and Impacts Assessment

The evaluation of the change includes an assessment of the HSE risks and potential impacts of the change. This evaluation involves:

- The function in charge of HSE aspects as well as representatives of relevant disciplines depending on the nature of the change (e.g. inspection, maintenance, operations, engineering);
- Other parties impacted or influenced by the change;
- Identification of relevant regulations, standards and applicable REX.

The impacts and HSE risks are mitigated by the defined risk control measures, as necessary.

(Expectations 03.01; 03.02)

The evaluation of the change is carried out using analytical techniques adapted to the nature and level of HSE impacts and risks. This step identifies, as required, the need for additional studies, the necessary risks controls and follow up measures, the personnel to be notified and/or to be trained (including contractors and suppliers), and the documents to be updated.

When the perimeter, scope, objectives, or means described in the original change request are modified, their potential impacts are systematically assessed and the MOC process is reinitiated as necessary.

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Change approval

The hierarchical level of change approval is determined based on the nature of the change and the HSE risks.

The MOC procedure may include an approval matrix (or list) specifying the approval level of approval for the different types of changes. For example, it would be appropriate to ensure that the inspection department (if the entity has one) is listed as an approver for all changes impacting equipment monitored by this department.

3.3 Change Implementation

Requirement 3.3.1: Training and Communication

As required, training for personnel (including contractors and suppliers) impacted by the change is defined, planned and organised ahead of the change.

External stakeholders and potentially affected personnel are notified of the change and of the associated risk management measures.

(Expectations 03.02; 06.02)

Requirement 3.3.2: Documentation Update

All documents impacted by the change are updated and made available as soon as the change is conducted.

(Expectation 01.03)

For example:

- Changes in organisation are documented in updated job descriptions, roles and attributions, training plans, competency matrix, level of authorities, etc.;
- Changes to installations (including temporary modifications) are reflected in relevant external and internal technical documentation as required (e.g. regulatory and permitting documents, mark-ups on all as-built relevant piping and instrumentation diagrams (P&IDs) and other site drawings, updating operating and maintenance procedures);
- Prior to the change, the pertinence to review the following documentation shall be discussed and the decision recorded:
 - The HSE management system; and/or
 - The technological risk assessment (TRA); and/or
 - The emergency response plan of the installation.

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Requirement 3.3.3: Pre-Start Up Safety Review

Before restarting a physically modified installation after a significant change, a Pre-Start Up Safety Review (PSSR) is carried out.

All the documents required for the start-up are made available for the PSSR.

(Expectations 03.02; 03.03)

The PSSR serves as a final check of changes approved by the MOC process and confirms that:

- The change has been performed in accordance with the design specifications as well as the potential actions resulting from the MOC process;
- The risk controls are implemented;
- Appropriate procedures are available;
- Required training have been completed.

Examples of required documents for start-up after installation modification include: hazard and operability (HAZOP) review report, emergency shutdown logic diagram, emergency plan, modified operating procedures, area classification drawings, relevant safety procedure.

3.4 Performance Review

Requirement 3.4.1: MOC Process Assessment

Performance of MOC process is periodically assessed.

(Expectations 09.02; 10.01)

Appendix 3 provides examples of MOC process key performance indicators.

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4 TERMS AND DEFINITIONS

This rule conforms to the terms and definitions of **CR-GR-HSE-001**. Additional terms and definitions specific to this rule are described herein.

Major accident

Accident with consequences classified according to the Group severity levels as “catastrophic” or “disastrous” on humans, environment and/or materials.

Major risk

Risk related to a scenario with consequences classified according to the Group severity levels as “catastrophic” or “disastrous” on humans, environment and/or materials.

Operating personnel

Personnel involved in the design, installation, operation, maintenance, or testing of safety systems or risk controls on an installation.

Replacement-in-kind

Replacement of a piece of equipment in accordance with the original specifications.

Significant change

Any change implying a significant impact (potential severity of very serious or greater, at a level of 4, 5, or 6 according to the Group severity levels) and requiring an update to process safety information (e.g. modification of technologies, equipment, process parameters).

Urgent change

Change that requires urgent attention in order to avert a disruption to operations or to prevent HSE risks and generally requires change implementation within a short time period (e.g. 24 hours). These changes do not include ones required during emergency and crisis situations (the latter are not covered by this rule).

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5 REFERENCE DOCUMENTS

Reference	Title – Group Documents
CR-GR-HSE-001	One-MAESTRO HSE Expectations

Reference	Title – External Documents
2012/18/UE	Directive 2012/18/UE of the European Parliament and of the Council of 4 July 2012 on the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC.
2013/30/UE	Directive 2013/30/EU of the European Parliament and of the Council of 12 June 2013 on safety of offshore oil and gas operations and amending Directive 2004/35/EC.

6 BIBLIOGRAPHY

Title
Center for Chemical Process Safety - <i>Guidelines for Management of Change for Process Safety</i> - Aiche (2010)

7 LIST OF APPENDICES

Reference	Title
APPENDIX 1	Examples of Changes Frequently Encountered in Group Activities Requesting to be Managed Through a MOC Process
APPENDIX 2	Examples of Replacement-in-Kind not Subject to MOC Process
APPENDIX 3	Examples of MOC Key Performance Indicators

8 DISTRIBUTION AND EFFECTIVE DATE

Publication on REFLEX (Corporate repository of normative documents). REFLEX is available on the Intranet WAT/Group/Practical Tools or WAT/Practical Tools/Referentials.

Effective date: 6 months following date of publication.

9 REVISIONS

REV.	DATE	PURPOSE	AUTHOR	CHECKED BY	APPROVED BY
00	25/06/2019	Creation	PSR/HSE/RM/APC J.C. Caudin	PSR/HSE/RM P. Ozon	PSR/HSE X. Bontemps

	Group Rule		
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APPENDIX 1

Examples of Changes Frequently Encountered in Group Activities Requesting to be Managed Through a MOC Process

A MOC process applies when changes have the potential to significantly modify the HSE risk level. These changes can be related to:

- Equipment (e.g. replacing valve, vessel, lines with equipment having different dimensions, materials, design limits, Cv);
- Safety thresholds (e.g. modification of a relief valve set pressure or a threshold setting of a safety instrumented function or alarms);
- Operating conditions (e.g. treatment of a new quality of crude oil in refinery, operating parameters outside design range);
- Process (including by-passing of existing equipment or instrumentation);
- Technologies;
- Procedures;
- Materials or products used;
- Personnel and organisation (e.g. new assignment in a key HSE position, lack of a key competence, major organisation modification).

Modification of an existing installation, including compliance work

The modifications referred here are the adaptation, transformation, removal or addition – temporary or permanent – of a function that affects the installations' basic design or operation.

They concern physical changes, but also the programming of the command-control or safety systems and the parameter settings of instruments. In particular, any alteration that has an impact on an installation's safety logic diagram is treated as a change for the purposes of this rule.

Modification of an industrial project

Any change (e.g. in statement of requirement), even (or rather especially) one perceived as “minor”, can have unexpected and potentially substantial repercussions on the project.

A MOC process is therefore put in place for strictly and systematically identifying the change orders, examining them and, above all, for disseminating the information on those changes as extensively as possible throughout the project team.

Modification of an existing organisation

The organisational structures established initially to perform works or operate installations may evolve in response to a change of scope or conditions – resulting in a modified workload – or in the interests of optimisation.

This HSE Group rule applies to the organisational structures of entities managing operations from execution up to the management level forming part of the chain of command.

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Temporary modifications

Some modifications are intended to be of short duration, and are described as "temporary with an explicit final date". The present rule does not make this distinction; its requirements apply to all changes irrespective of their duration.

Downgraded situations

The compensatory measures decided after the initial risk assessment of any downgraded situation may include recommendations to make changes. Such changes are dealt with as per the requirements set out in this rule.

Equipment upgrades and changes in materials

Special attention is paid to following upgrades, generally initiated and managed by suppliers, of equipment provided on the installations or used in operations, which may undergo changes but still have the same name. If such modifications are likely to alter the level of risk involved in routine use or maintenance of the equipment, they are handled as per the requirements of this HSE Group rule.

Changes of product, material and/or substance

New feedstock in refinery, chemicals, materials and substances often change for various reasons: new technologies, stock renewal, obsolescence, reordering problems, optimisation. Such changes are dealt with as per the requirements set down in this HSE Group rule.

Changes in contractual strategy

Contractual strategy established initially to perform works or operate installations may evolve in response to an activity optimisation. Contractual change having potential impact on global HSE risk level are handled as per the requirements of this HSE Group rule.

Modification of an existing E&P operating program

Operating instructions are communicated to the performing entities as operating programs approved by the relevant levels in the entity.

Operating programs are prepared in advance, based among other things on the work accomplished in pre-job and project preparation follow-up meetings.

It may prove necessary to modify these programs once work has begun, either because operations have not gone as planned, an unforeseen danger has appeared, in response to an increase in the risk level, or otherwise in the interests of optimisation.

Examples in R&C and M&S Branch sites

When, for instance, it is planned in a depot or tank farm to change the service of a storage tank from one product to another (e.g. from diesel oil to gasoline, from butane to propane), the HSE risks identification and management of such change are typically covered by this MOC rule.

Likewise any change of the product reception mode in a depot or tank farm (e.g. from train or ship to pipeline) shall be subject to this MOC rule.

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APPENDIX 2

Examples of Replacement-in-Kind not Subject to MOC

- Replacing vessels or piping or valves with equipment having the same design specifications as the original equipment (metallurgy, wall thickness, pressure and vacuum rating, design temperature, heat treatment, valve Cv, etc.).
- Repairing a corroded vessel to restore its original wall thickness.
- Replacing rotating equipment with new equipment of the same material, capacity, flange rating, seal design, driver type, horsepower, etc.
- Tuning a controller to more tightly control the process variable.
- Replacing a Distributed Control System (DCS) component with an identical replacement.
- Replacing an instrument with an identical spare in every respect.
- Modifying process operating parameters but staying within the safe operating range established by prior safety analyses, including, but not limited to: flow, temperature, pressure, composition, time, pH, speed, production rate, inventory, weight, level, density, frequency/amplitude of vibrating equipment, voltage/current/power.
- Using alternative vendors as sources of a feed stock that meets all established technical purchase specifications.
- Rearranging warehouse stock, but within the established basis for safe operation with respect to considerations such as inventory limits, compatibility groupings, fire protection system capabilities, etc.
- Making minor editorial changes or typographical corrections to operating or maintenance procedures.
- Delegating approval responsibilities (e.g. for work order approval) to a properly qualified substitute in accordance with the pre-established delegation schedule.
- Recharging a fixed fire protection system with the same firefighting agent previously used.
- Replacing an explosion relief vent panel in accordance with the initial datasheet.
- Replacing a relief valve with a new valve that is identical to the original.
- Operating a process with an interlock (inhibition/by-pass) for maintenance but with alternative means of protection provided, as specified in the operating procedures.
- Replacing hazardous area lighting with fixtures of the same type, design and certification ATEX.
- Repaving an existing road while maintaining existing drainage, shoulder elevation, width, etc.

Note: Replacement-in-kind does not exclude the application of current standards.

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APPENDIX 3

Examples of MOC Key Performance Indicators

- Percentage of MOCs reviewed that were in full compliance with the site's MOC procedure.
- Number of MOCs performed each month.
- Number of incidents with poor MOC as a root cause.
- Percentage of work orders or requests that were misclassified as replacements-in-kind (or were not classified) and were actual changes.
- Percentage of temporary changes for which the temporary conditions were not corrected or restored to the original state at the deadline.
- Percentage of approved MOCs for which the drawings (e.g. P&ID) or procedures were not updated.
- Percentage of MOCs reviewed that were not documented properly.
- Percentage of MOCs reviewed that did not have adequate hazard or risk analysis completed.
- Percentage of MOCs for which the workers were not informed or trained.
- Average backlog of MOCs.
- Percentage of changes that were properly evaluated, but did not have all approval signatures on the change control document.
- Average amount of calendar time taken between MOC origination and approval.

End of document

Original version signed

Permit to Work Process

Executive summary

The permit to work process includes the minimum HSE requirements of this company rule. It is described in a procedure that specifies in particular:

Organisation

- The distribution of roles and assignment of personnel (internal or contractors) involved in this process is defined. A person cannot approve or issue a permit to work for himself.
- The accurate delimitation of zones and their interconnections is defined and each zone reports to a single permit to work issuing authority.
- Everyone with a role in the permit to work process is trained and authorised to conduct their role. The frequency of the refresher training is at least once every 5 years.
- The maximum validity period for a permit to work, the applicable types of permit (cold, hot, simple) and the required certificates (confined space, isolation, excavation, etc.) are defined.
- The exhaustive list of work that can be covered by a simplified permit to work or that can be done without a permit to work, is established after risk analysis and is reviewed annually.

Preparation

- A permit to work is based on a risk analysis.
- For “high risk work”, for which a non-exhaustive list is given in Appendix 5, a joint visit to the work site is conducted by the approving authority and the performing authority.

Approval and acceptance

- The permit to work is approved by the approving authority and accepted by the performing authority. Any change to the terms of the permit requires re-approval and re-acceptance.

Coordination

- The number of permits to work to be issued and the risks related to simultaneous operations or co-activities are taken into account when coordinating the planned work. A list of approved permits is then communicated to the issuing authority.

Execution

- At least once a day, the start of work execution is subject to a prior issue of the permit to work by the issuing authority and its countersignature by the performing authority. For “high risk works”, the permit is issued once the work site has been checked.
- At the start of work on the work site, the performing authority holds a safety talk to explain the risks and risk management measures identified in the permit to work to everyone involved.
- The permit to work and associated certificates are available on the work site, and monitoring is set up by the performing authority.
- If work is suspended (general alarm, change in the work site environment, etc.), the conditions for resuming work are subject to a risk assessment. A new permit to work is prepared if necessary.
- The terms for managing permits when there is a handover are specified.

End of work – Permit to work closure

- When the end of work has been confirmed, the corresponding permit to work is closed.

Audits and performance improvement

- The permit to work process is regularly audited and is reviewed annually.

Date of publication in REFLEX: 30/09/2019

REVISION	DATE	PURPOSE	AUTHOR	CHECKED BY	APPROVED BY
00	04/09/2019	Creation	PSR/HSE/FHOS/REE A. Halilou	PSR/HSE/FHOS A. Abzizi	PSR/HSE X. Bontemps

	Group Rule		
	Permit to Work Process		
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Foreword	This English version is translated from the original French reference version.
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1 PURPOSE

This rule defines the minimum HSE requirements to be respected when preparing, approving, coordinating and executing work, and in particular the organisation and monitoring of the permit to work process, as well as the competencies of the personnel involved.

This rule is established to be in accordance with **CR-GR-HSE-001** One-MAESTRO HSE Expectations and Golden Rule 5.

2 SCOPE OF APPLICATION

This rule is applicable in all Group entities and affiliates, when relevant, in accordance with their respective decision-making rules and subject to compliance with locally applicable laws and regulations.

The requirements applicable to contractors are identified and communicated to those contractors, and those contractors are required to comply with them.

Where an entity or affiliate holds an interest in assets, activities or sites which it does not operate¹, it promotes the requirements of this rule and seeks to have similar requirements adopted by the operator.

¹ "Operate" means organise, run, conduct and manage. The operator may for example hold an operating permit or be appointed as operator by way of an operating agreement.

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3 REQUIREMENTS

The figure below gives a general overview of the permit to work process.

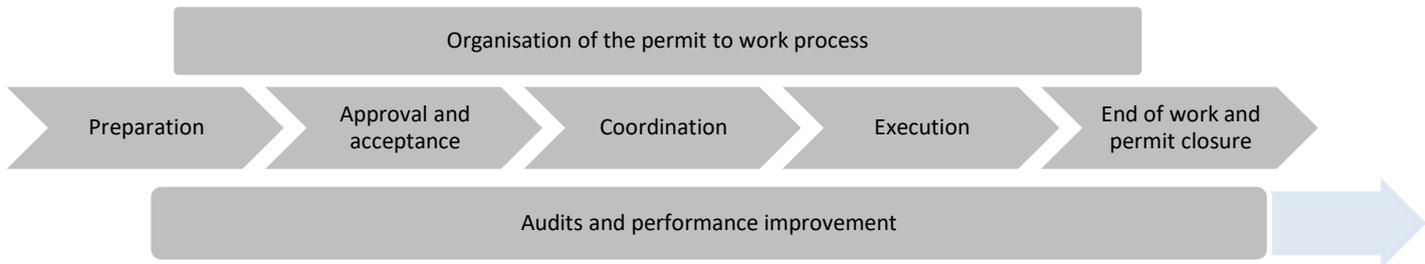
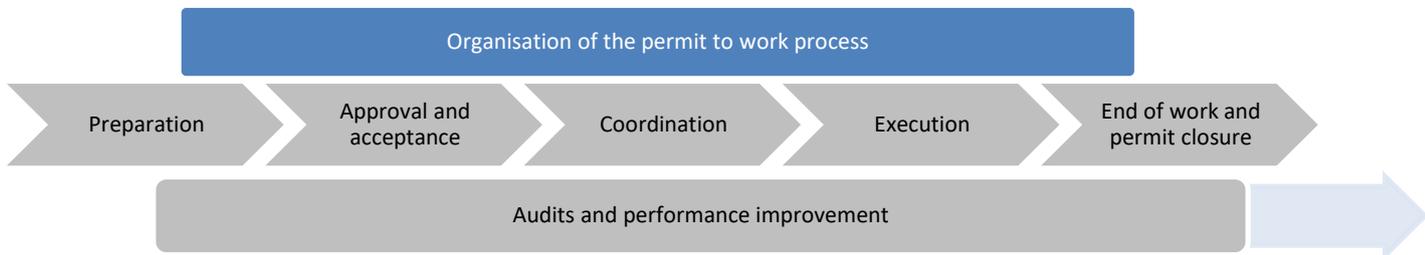


Figure 1: Main steps in the permit to work process

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3.1 Organisation of the Permit to Work Process



Requirement 3.1.1: Permit to Work Procedure

The permit to work process is described in a documented procedure to include the requirements of this rule as a minimum.

(Expectations 04.01; 04.02)

The permit to work procedure and associated forms are written at least in the locally spoken language. On sites where several languages are spoken, the entity or affiliate ensures that the permit to work procedure and associated forms are understood and have been assimilated by all personnel involved (as mentioned in Appendix 1).

In compliance with the requirements of this rule, the procedure may provide for management methods for permit to works specific to certain contexts, for example:

- Turnarounds for maintenance, enclosed work sites or semi-enclosed work sites, construction projects, dismantling or remediation projects (e.g. validity of permit to works with extended time period, different approving authorities/issuing authorities);
- Work in service stations, airports, client facilities and small general trade sites (e.g. conditions for beginning work, safety talk before starting work, “safety green light”);
- Work on sites without industrial operations (e.g. offices, living quarters).

In the case an entity’s or affiliate’s permit to work procedure co-exists with that of a contractor, a bridging document is drawn up to define the areas of application for each system and to manage the interfaces between both parties throughout the duration of the work. Such cases may include:

- A drilling rig operated by a contractor on a platform operated by an entity or affiliate;
- A construction project assigned to a contractor on an entity or affiliate site;
- Intervention on an entity or affiliate installation located on a site controlled by a third party.

Requirement 3.1.2: Roles and Assignments

The distribution of roles and assignments for personnel involved in the permit to work process, as well as the possibilities for delegation, is clearly defined and communicated to the personnel concerned in the entity or affiliate, as well as to contractors so that they can inform their personnel.

(Expectations 01.04; 04.07)

The typical functions involved in the permit to work process are described in Appendix 1 and can be adapted according to the organisation of the entity or affiliate.

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Requirement 3.1.3: Separation of Roles

A person cannot approve or issue a permit to work for work that he is to perform.

(Expectation 01.04)

Requirement 3.1.4: Delimitation of a Zone Under the Control of the Issuing Authority

The accurate delimitation of zones and their interconnections is defined and communicated to the personnel concerned in the entity or affiliate, as well as to contractors so that they can inform their personnel.

Each zone reports to a single permit to work issuing authority for a given period.

(Expectation 01.04)

Requirement 3.1.5: Training and Authorisation

Everyone with a role in the permit to work process is trained and authorised to conduct their role. The authorisation is documented.

A list of trained and authorised personnel is kept up to date.

The frequency of refresher training, at least every 5 years, is determined by the permit to work procedure.

(Expectations 01.04; 06.02)

Training is delivered based on the entity's or affiliate's permit to work procedure. In particular, it details:

- Each person's role and assignments;
- The different types of permits to work and certificates, as well as their respective validity periods;
- The preparation, approval, coordination, execution and field monitoring phases;
- The objectives and methods for risk analysis and the associated risk control measures;
- The rules to be observed before starting work.

The authorisation to conduct a role in the permit to work process can be documented in a variety of different formats (HSE passport, dedicated register, etc.).

Requirement 3.1.6: Permit to Work Validity Period

The maximum validity period for a permit to work is defined by the permit to work procedure.

When the validity period of a permit to work has expired, the work concerned cannot begin or be continued without a new permit to work.

(Expectation 04.07)

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Requirement 3.1.7: Permit to Work and Certificate Types

The permit to work procedure defines the different types of applicable permits to work and the work that requires certificates.

If required, the permit to work is accompanied by all the necessary certificates.

(Expectation 04.02)

The different types of permit to work are defined according to the nature and recurrence of work and to the risk level.

The permit to work procedure distinguishes at least the following two types:

- Cold work permit;
- Hot work permit.

The hot work permit clearly distinguishes the risks related to hot work with a naked flame from the risks related to hot work without a naked flame.

The execution of hot work with a naked flame in an area with a potentially explosive atmosphere remains an exception. An alternative solution is always sought and given preference when technically feasible.

A certificate even though sometimes called a “complementary” or “supplementary” permit, is not a permit to work and does not authorise work to begin.

Appendix 2 lists of some examples of certificates.

Requirement 3.1.8: Simplified Permit to Work

A “simplified” permit to work is used only for recurrent and low-risk work that does not generate any co-activity or simultaneous operations.

The permit to work procedure includes an exhaustive list of work covered by a simplified permit to work. The list is established after a specific risk analysis and approved by the appropriate line manager at least once a year.

(Expectation 04.02)

The simplified permit to work complies with all the requirements in this rule, with the following condition:

- Requirement 3.4.1 “Permit to Work Coordination” is not applicable, but the absence of co-activity and risk of interference is checked on the work site by the issuer of the simplified permit to work.

Appendix 3 gives an indicative and non-exhaustive list of examples of work that may be authorised by a simplified permit to work as required.

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Requirement 3.1.9: Work Authorised Without a Permit to Work

The rules for preparing and approving work that can be executed without a permit to work is defined in the permit to work procedure.

The exhaustive list of work that can be executed without a permit to work is drawn up according to the risk analysis. It is reviewed and approved by the appropriate line manager at least once a year.

(Expectations 03.04; 03.05; 04.02)

Work executed without a permit to work can only be work performed as part of routine operating activities on installation and/or equipment and infrastructures.

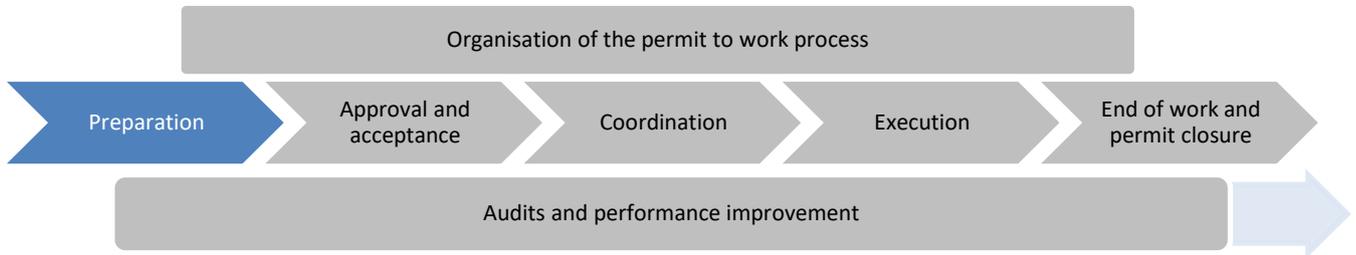
Moreover, this type of work is performed:

- By trained personnel;
- According to procedures and instructions taking into account in the risk analysis;
- Using suitable equipment, tools and, where necessary protective equipment used in compliance with manufacturer's recommendations.

Appendix 4 provides an indicative and non-exhaustive list of examples of work that may be exempt from requiring a permit to work if applicable.

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3.2 Permit to Work Preparation



Preparing the permit to work, and more specifically the risk analysis, is discussed by the approving authority, the requestor and the performing authority.

This phase serves to define, based on operating procedures, each person's expertise and return of experience (REX) from Group entities and affiliates, the supporting documentation and appropriate risk control measures.

Requirement 3.2.1: Risk Analysis for the Permit to Work

A permit to work is based on a risk analysis.

(Expectations 03.01; 03.04; 03.05)

The analysis includes risks related to the:

- Type of intervention and the work execution procedure if applicable;
- Means and tools used;
- Installations and products present, or potentially present;
- Configuration of the work execution site and surrounding environment;
- Interferences generated by identified simultaneous operations or co-activities.

It includes the:

- Identification of hazards and the risk assessment;
- Definition of the risk control measures and emergency intervention measures;
- Definition of organisations responsible for applying these measures.

The permit to work procedure defines the criteria that characterise "high risk work" according to the risk analysis.

As a minimum, the works defined in Appendix 5 are considered as "high risk work".

Requirement 3.2.2: Joint Visit for "High Risk Work"

For "high risk work" the approving authority and the performing authority visit the work site as part of the permit to work preparation process.

(Expectations 03.01; 03.04; 03.05)

The visit is used to complete the risk analysis.

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Requirement 3.2.3: Permit to Work Content

Before approval, a permit to work includes at least the following information:

- Identification of the performing authority;
- Description of the work to be performed;
- Work site;
- Identification of the equipment concerned, if applicable;
- Work execution dates;
- Validity period of the permit;
- Tools and means used;
- Risks identified in the risk analysis and the risk control measures to be applied;
- References for supporting documentation if applicable.

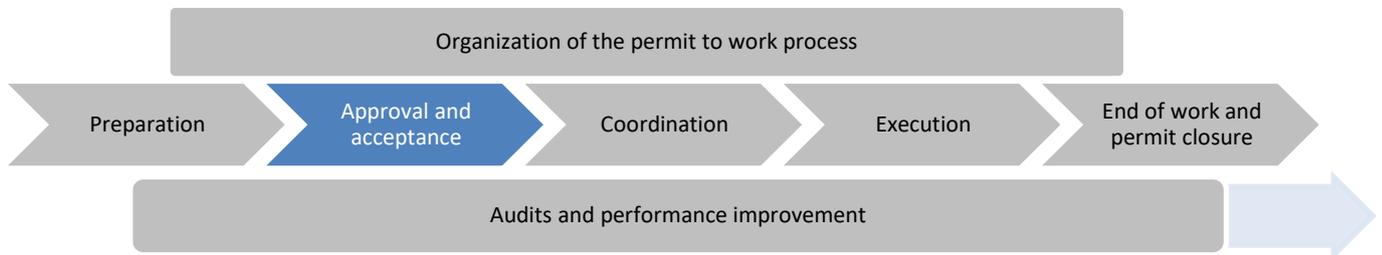
(Expectations 01.03; 01.08; 04.02)

Bringing equipment and installations to a safe state, in particular the isolation of powered systems, is clearly identified in the permit to work or in the isolation certificate associated with the permit to work.

The permit to work is prepared and submitted for approval well in advance of the planned work start date (except in an emergency).

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3.3 Approval and Acceptance of the Permit to Work



Requirement 3.3.1: Permit to Work Approval and Acceptance

The permit to work is approved by the approving authority and accepted by the performing authority. Any change to the terms of the permit requires re-approval from the approving authority and re-acceptance from the performing authority.

(Expectations 03.02; 04.07)

Different people can be designated as approving authorities, even in the same zone, depending on the level of risk.

When the permit to work is undergoing approval, the approving authority ensures:

- The production and consistency of the required supporting documentation;
- The risk analysis is relevant and the risk control measures are appropriate;
- The risks related to known interfaces are known;
- If necessary, the risk analysis and certificates have been verified by the referent.

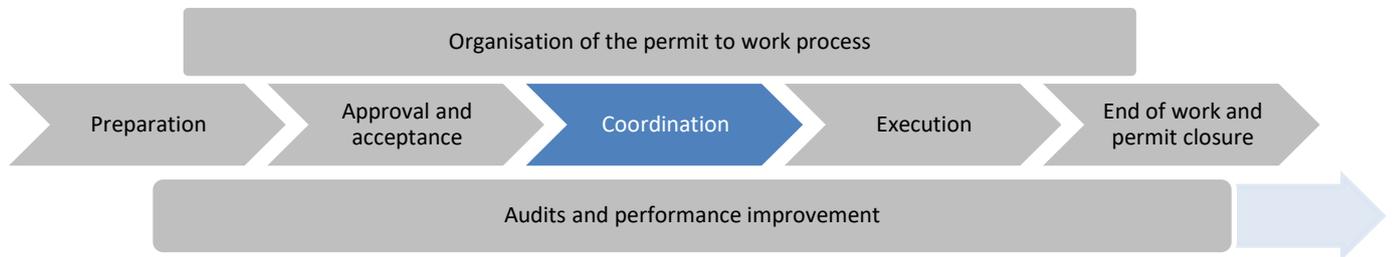
In preparation for acceptance by the performing authority, the approving authority ensures that the former has been informed of:

- The tasks to be carried out, the risk analysis and the associated risk control measures as well as the precise location of the work site;
- The constraints generated by interferences from simultaneous operations or co-activities:
 - of the work environment on the risks of the work itself;
 - of the work on surrounding activities.

The methods for implementing the “Approval and Acceptance” phase are defined in the permit to work procedure (e.g. group meetings, discussions between the approving authority and the performing authority).

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3.4 Coordination



Requirement 3.4.1: Permit to Work Coordination

The number of permits to work to be issued for a zone as well as the risks related to simultaneous operations or co-activities are taken into account when coordinating the planned work.

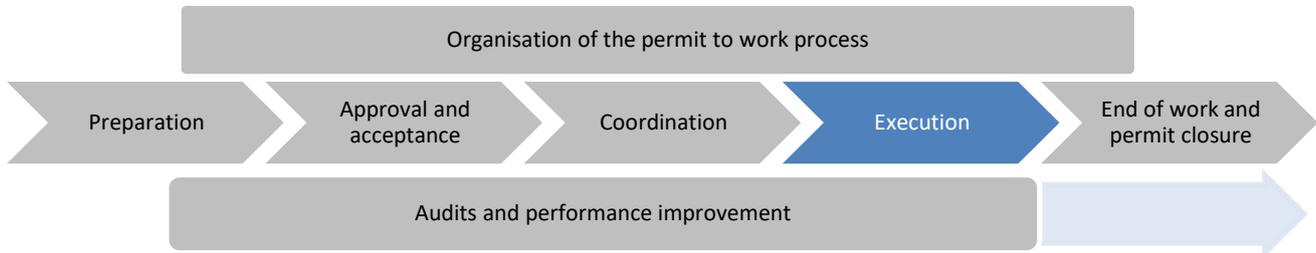
A list of approved permits to work is then established and is communicated to the issuing authority.

(Expectations 04.07; 04.08)

The conditions for implementing the “Coordination” phase are defined in the permit to work procedure (e.g. coordination meeting).

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3.5 Execution



Requirement 3.5.1: Issuing Permits to Work

At least once a day, any start of work execution is subject to a prior issue of the permit to work by the issuing authority and its countersignature by the performing authority.

For “high risk work”, the permit is issued once the execution conditions and risk control measures have been checked on the work site by the issuing authority or the checker.

(Expectations 01.04; 04.02)

Issue of the permit to work implies that the issuing authority and the performing authority have ensured the specific identification of the equipment and the work site.

The verification concerning “high risk work” ensures that:

- The safe state of the equipment and the work site location are in line with the permit to work;
- Any other activity at or near the work site is in line with the permit to work risk analysis and does not entail any additional risks.

The countersignature of the permit to work by the performing authority implies:

- That it has ensured that prior to the start of any work, the planned risk control measures are in place and the supporting documentation is valid;
- That there are no potential difficulties to implement the permit that may lead to its cancellation (e.g. operating procedures or tools initially planned that prove unsuitable, changes in the risks considered in the permit to work).

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Requirement 3.5.2: Safety Green Light / Safety Talk Before Starting Work

Before start-up or restart of the work, or before any shift change, the performing authority explains to all workers, at the location of the work site, the operating procedure, the work environment, the risks identified in the permit to work and the associated risk control measures.

This safety talk is documented and signed by the performing authority and by each worker.

(Expectations 01.08; 04.02)

The safety talk is based on 4 open-ended questions (Appendix 6) encouraging reflection and review on the possible risks of fatal accidents, and allowing, if necessary, the use of the Stop Card. It can also be accomplished by a pre-established check list.

Requirement 3.5.3: Availability of the Permit to Work on the Work Site

During the execution of the work, the permit to work and associated certificates are permanently accessible to all crew members on the work site.

(Expectation 01.03)

Requirement 3.5.4: Work Site Monitoring

During the execution of the work, monitoring of the work site is set up by the performing authority.

In addition, work site monitoring is also performed by the issuing authority each time it is required by the permit to work.

(Expectations 01.04; 03.02)

Work site monitoring can be continuous or discontinuous depending on what is defined in the permit to work.

The purpose of the work site monitoring is to ensure that:

- The measures defined in the permit to work are applied;
- The Golden Rules and procedures are applied;
- That work is suspended if necessary, as stipulated in requirement 3.5.5 (suspension of the permit to work);
- An alert is raised in case of an incident.

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Requirement 3.5.5: Suspension of the Permit to Work

The work and its associated permit are suspended in the following cases:

- General alarm;
- Specific instruction to stop works, including by a Stop Card;
- Failure to comply with one of the requirements imposed in the permit to work;
- Modification of the work execution procedure;
- Change in the work site environment;
- Expiry of the allocated timeslot to perform the work stipulated in the permit to work.
- Appearance of a risk that has not been covered in the permit to work.

(Expectations 03.02; 03.04)

Requirement 3.5.6: Resuming Activities

Following a suspension of work, the conditions for resuming work are subject to a risk assessment:

- If the risk control measures defined in the permit to work remain appropriate, resuming the work is authorised by the issuing authority;
- If the risk control measures defined in the permit to work are no longer appropriate, the permit is signed-off and cancelled, and a new permit to work is prepared.

(Expectations 03.01; 03.02; 03.04)

Requirement 3.5.7: Handover

When a handover concerning entity or affiliate personnel takes place, the permit to work information and management methods are specified in the permit to work procedure.

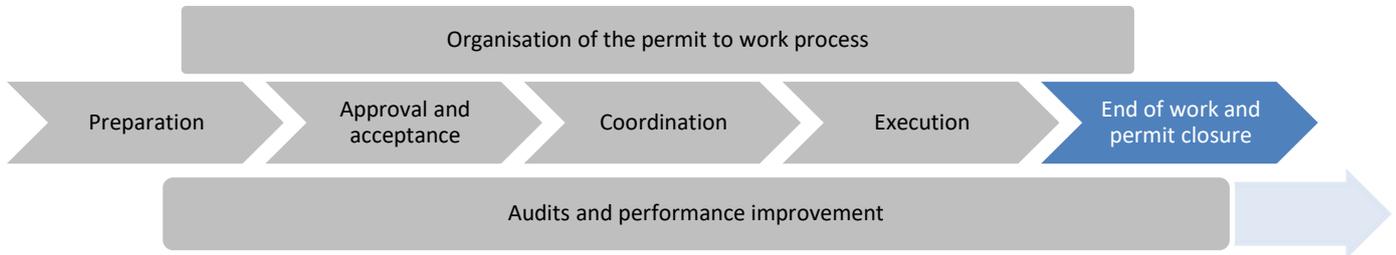
These include the transfer of the list of permits and their content (at least the description of the work to be performed) and the signature of this list by the incoming issuing authority.

(Expectations 01.08; 04.07)

This requirement aims to inform the incoming shift of the work that has been authorised but not started and the work in progress, as well as the safety instructions defined in the permit to work.

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3.6 End of Work and Permit Closure



Requirement 3.6.1: End of Work - Closure of the Permit to Work

When the end of work has been confirmed, the corresponding permit to work is closed as per the terms defined in the permit to work procedure.

The provisions for closing the permit to work by the issuing authority includes, as a minimum:

- The work site has been restored to a safe and clean condition;
- Signature of the end of work (handwritten or electronic) by the performing authority and the permit to work issuing authority;
- Withdrawal of the permit to work from the list of permits issued, as well as the associated supporting documentation;
- The triggering of the removal of the isolation devices (e.g. spades, blind flanges) and the corresponding tag out devices, provided that all the other permits requiring these isolation devices and tag out devices have also been closed;
- Management of long term isolation and inhibition devices or those that are retained beyond the permit to work validity period.

For all high-risk work, the permit is closed based on joint observation by the performing authority and the issuing authority, after the work site has been verified.

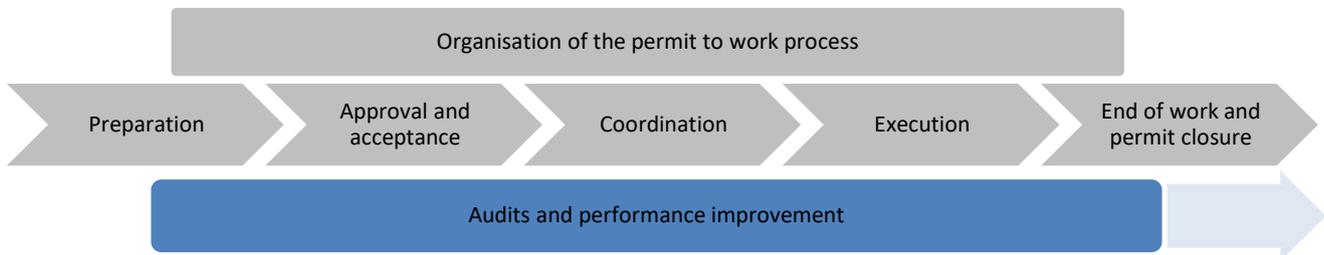
Closure of the permit to work does not authorise the start-up of equipment or installations.

(Expectations 01.03; 01.08; 04.01)

At the end of this phase, the performing authority informs the requestor or the issuing authority of the work execution conditions to be considered, if necessary (difficulties encountered, proposed improvements).

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3.7 Audits and Performance Improvement



Requirement 3.7.1: Audits and Performance Improvement

An audit program within the entity or affiliate is set up to verify that:

- The permit to work procedure is applied;
- The permit to work instructions are respected.

Performance indicators for the permit to work process are defined and monitored.

These indicators are analysed at a process review at least once a year. The review gives rise to an action plan to improve the process.

(Expectations 09.01; 09.02; 09.03)

Performance indicators are defined and monitored during reviews (e.g. number of field audits in, number of anomalies/malfunctions observed during the audits, number of permits per day).

The reviews examine in particular whether the appropriate resources are allocated to the process.

3.8 Archiving

The provisions for archiving the permits to work are defined by the entity or affiliate in compliance with the Group's document conservation policy and applicable regulations.

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4 TERMS AND DEFINITIONS

The terms and definitions given in **CR-GR-HSE-001** apply and are completed by the following terms and definitions for the present rule.

Area with a potentially explosive atmosphere

A space in which a flammable atmosphere may be expected to be present at such frequencies as to require special precautions.

Certificate

In the context of work, a document (in hardcopy or electronic format), independent from the permit to work, which after validation, certifies the safety of the installation or the equipment object of the works or work site (isolation, excavation, diving, etc.).

Cold work

Work that does not require the use of actual or potential ignition sources.

Enclosed work site

Work site that does not generate any interference with the activities performed on site by the entity or affiliate, and which does not involve any operational equipment or power source other than those necessary to the work site and has an independent access.

Hot work with a naked flame

Work requiring the use of naked flames, producing sparks or heat (cutting with a blowtorch, welding, grinding, etc.)

Hot work without a naked flame

Work without a naked flame involving other potential ignition sources (manual tools, junction box, camera, computer, mobile phone, etc.).

Issue / Issuing

Signature of the permit to work authorising work to start or be continued.

Permit to work

Documented authorization that grants permission to personnel of a Group entity or affiliate and/or a contractor, to perform specific work, at a specific location, for a specific period of time, according to specific instructions, and under defined conditions.

The terms “work authorisation”, “authorisation” or “daily validation” are also used in the field.

Safe state

Set of measures applied and provisions made as regards power sources, dangerous products, the absence of vital or other elements and which ensure the safety of workers during the work.

Semi-enclosed work site

Work site that does not generate any interference with the activities performed on site by the entity or affiliate, and which does not involve any operational equipment or power source other than those necessary to the work site, and which is located inside the entity or affiliate site and has no independent access.

Supporting documentation

Auxiliary documents specifying the safety conditions defined on a permit to work: certificate, lifting plan, diagrams, work execution procedure, procedure, instructions, calculation memo, etc.

Zone

Geographical unit containing activities, facilities and/or equipment, and which is placed under the authority of a single issuer for a given period, for the issue of permit to work.

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5 REFERENCE DOCUMENTS

Reference	Title – Group Documents
CR-GR-HSE-001	One-MAESTRO Expectations
CR-GR-HSE-419	HSE Requirements for Excavation Works
CR-GR-HSE-424	Works With High Pressure Water Jets
CR-GR-HSE-425	HSE Requirements for Working at Height
CR-GR-HSE-501	HSE Requirements for Contractors
DIR-GR-SEC-004	Operations in a Confined Space
DIR-GR-SEC-007	Isolation of Power Sources and Dangerous Products Before Work
GM-GR-SEC-019	Pumping Operations for Liquid and Paste Products
REG-GR-SEC-024	Requirements for Sealing Leaks on Line

6 BIBLIOGRAPHY

Title
HSE UK: HSG 250 Guidance on Permit to Work Systems

7 LIST OF APPENDICES AND ADDITIONAL DOCUMENTS

Reference	Title
APPENDIX 1	Typical Functions Involved in the Permit to Work Process
APPENDIX 2	Examples of Certificates
APPENDIX 3	Examples of Work That May be Authorised by a “Simplified” Permit to Work Where Applicable
APPENDIX 4	Examples of Work That May Not Require a Permit to Work Where Applicable
APPENDIX 5	Minimum List of Work Considered as “High Risk”
APPENDIX 6	Safety Green Light

8 DISTRIBUTION AND EFFECTIVE DATE

Publication in REFLEX (Corporate repository of normative documents) REFLEX is available on the Intranet WAT/Group/Practical Tools or WAT/Practical Tools/Referentials.

Effective date: 6 months following publication.

9 REVISIONS

REV.	DATE	PURPOSE	WRITTEN BY	APPROVED BY	CHECKED BY
00	04/09/2019	Creation	PSR/HSE/FHOS/REE A. Halilou	PSR/HSE/FHOS A. Abzizi	PSR/HSE X. Bontemps

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APPENDIX 1

Typical Functions Involved in the Permit to Work Process

Title	Function	Equivalent titles in the branches	Phase of the process
Approving authority	Designated function in the entity/affiliate, checks the permit in the preparation phase, approves the <u>permit to work</u> and in particular the planned risk control measures.	Offshore Installation Manager (OIM), Approver, Permit authoriser, Area Manager, Responsible for Safety & Environment on Site (RSES), Site Manager, Supervisor, Operating Authority	Preparation Approval Coordination
Performing authority	Designated function in the entity/affiliate or contractor, in charge of the execution of work. Accepts the <u>permit to work</u> in the approval phase, countersigns it when the permit is <u>issued</u> before execution of work and closes it after completion of work. He may carry out the work or supervise a group of people carrying out a work.	Acceptor, nominated person, Work leader, Person in charge of the work, Operations Supervisor/Job Site Supervisor, Operations Team Leader	Preparation Acceptance Coordination Execution End of Work - Closure
Worker / Crew members	Designated function in the entity/affiliate or contractor, performs the tasks mentioned in the <u>permit to work</u> and states that the <u>permit to work</u> conditions have been understood.	Permit user, Skilled worker, Executor	Execution End of Work - Closure
Requestor	Designated function in the entity/affiliate or contractor, creates and prepares the <u>permit to work</u> and the <u>supporting documentation</u> .	Permit originator, Initiator	Preparation
Issuing authority	Designated function in the entity/affiliate, issues the <u>permit to work</u> , authorises execution of the work and closes the <u>permit to work</u> .	Permit co-coordinator, Asset shift supervisor, Area Manager, Operating Authority, Local Authority, Shift Manager, Manager	Execution End of Work - Closure
Referent	Designated function in the entity/affiliate, checks, before permit approval, the risk analyses, permit and associated <u>certificates</u> .	Inspector, Lifting expert, Pipe expert, HSE representative, Competent Person in Radiation protection, Electrician, Driller	Preparation
Checker	Designated function in the entity/affiliate, checks the specific safety conditions before, during and after work.	Site checker, Authorised gas tester, Preventer, Operator	Execution

One person may be assigned several functions (provided that Requirement 3.1.3: Separation of Roles, is respected).

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APPENDIX 2

Examples of Certificates

Certificate	Description
Confined space entry <u>certificate</u>	Used for work involving entry into confined spaces in compliance with DIR-GR-SEC-004 and Golden Rule 8.
Powered system isolation <u>certificate</u>	Used to indicate that a specific item of equipment or circuit has been isolated, locked out, tagged out and fully de-energized (mechanical, electrical, fluid) in compliance with DIR-GR-SEC-007 and Golden Rule 7.
Excavation <u>certificate</u>	Used to make sure that any earth levelling or excavation works do not damage subsurface structures, in compliance with CR-GR-HSE-419 and Golden Rule 9.
Radiation <u>certificate</u>	Presents the control measures required to limit the risks of exposure to radioactive sources.
Diving <u>certificate</u>	Used to control diving activity and to prevent any other activity generating further risks from taking place close by.
Cleaning / degassing <u>certificate</u>	Used to indicate that a tanks have been cleaned and degassed before work can be performed.

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APPENDIX 3

Examples of Work That May be Authorised by a “Simplified” Permit to Work Where Applicable

- First level maintenance on a metering pump.
- Lubrication and greasing (excluding wellheads).
- Replacement of gauges.
- Works (checks, repairs) on lighting.
- Non-destructive testing.
- Painting work in buildings when it does not interfere with production activities (not including work in risk areas, at height or in a confined space).
- Plumbing activities not requiring welding.
- Cleaning units.
- Minor maintenance and repair activities such as:
 - Non-intrusive work on shutdown equipment.
 - Maintenance on office equipment.

	Group Rule		
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PSR/HSE Division	HSE		CR-GR-HSE-402 Rev. N° 00 Date: 04/09/2019

APPENDIX 4

Examples of Work That May Not Require a Permit to Work Where Applicable

- Gas tests.
- Cold work in workshops.
- Product sampling.
- Visual inspections in areas that do not expose operators to any danger.
- Hose connection operations for tanker loading.
- Routine activities in laboratories.
- Use of safety equipment for training.
- Routine activities in offices, hotels, living quarters, base camps, etc.
- Maintenance of non-hazardous equipment in living quarters and offices (photocopiers, automatic distributors, etc.).

	Group Rule		
	Permit to Work Process		
PSR/HSE Division	HSE		CR-GR-HSE-402 Rev. N° 00 Date: 04/09/2019

APPENDIX 5

Minimum List of Work Considered as “High Risk”

- Hot work with a naked flame.
- Excavation (see [CR-GR-HSE-419](#)).
- Lifting operations (see [CR-GR-HSE-501](#) appendix 1 for exceptions).
- Works involving a high-pressure water jet (see [CR-GR-HSE-424](#)).
- Pumping operations for products by combined hydro-curing truck (see [GM-GR-SEC-019](#)).
- Work at height (see [CR-GR-HSE-425](#)).
- Sealing leaks on equipment in service ([REG-GR-SEC-024](#)).
- Work on powered systems:
 - Opening a line or vessel containing a hazardous product(s) (inflammable, toxic, carcinogenic, mutagenic) and/or a pressurized system;
 - Work on energised installations and equipment (>48V AC et >120V DC);
 - Work on de-energised installations and equipment (>1000V AC et >1500V DC).
- Use of X-ray or gamma-ray sources, work on stationary radioactive sources (level measurement, laboratory apparatus, medical devices).
- Work near High Voltage power lines.
- Work in storage tanks and confined spaces (see [DIR-GR-SEC-004](#)).
- Work above or close to a water body.
- Diving.
- Hydraulic tests.
- Well interventions.
- Interventions on equipment/structures containing asbestos or in the presence of asbestos dust or refractory ceramic fibres.
- Work on a flare network.

	Group Rule		
	Permit to Work Process		
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APPENDIX 6

Safety Green Light

Safety Green Light

- 1 **What is the job to be done?**
 - At what exact location?
 - Do I understand my role and am I able to do it? Have the procedure and work permit been explained to me?
 - Do I have the right tools/protective equipment for the work?
- 2 **What should I do if change occurs?**
 - Change in conditions (environment, co-activities, etc.) during the course of work (need for a tool not initially planned, operating procedure or risk not initially identified, etc.)?
- 3 **What could happen that could be serious?**
 - Is there a risk of a fatality?
 - Can someone hurt me or can I hurt someone?
 - What will protect me?

4





I report to my leader

End of document

Original version signed

Personal Protective Equipment

Executive summary

This rule defines the minimum HSE requirements to be respected in terms of selecting, procuring, training in, using, storing and maintaining Personal Protective Equipment (PPE) in order to protect employees against residual risks in the workplace.

The following requirements apply:

Organisation of PPE Management

- PPE management is described in a documented procedure that includes at least the requirements of this rule.
- A PPE coordinator role is appointed assigned at the appropriate level of the entity or affiliate. The PPE coordinator ensure that the PPE management procedure is implemented.
- All personnel, including contractors, have access to appropriate PPE provided by their employer
- Any person who needs to access an area is informed about the PPE they have to wear. Specific training is delivered to users of PPE designed to provide protection against risks that could result in irreversible or fatal injuries, as defined in Appendix 1.

Risk Assessment and PPE Identification

- The required PPE is identified based on an assessment of residual risks in the workplace.
- The identified PPE complies with the standards listed in Appendix 2 (note: chin strap to be attached to all helmets). A list of the PPE required according to activities and areas is determined on each site and regularly updated.

Procuring PPE

- PPE requirements are detailed in a specification which defines the conditions for use and expected protection levels, and refers to the standards selected. The presence of the manufacturer's certificate of conformity is checked when the PPE is delivered.

Using PPE

- Written instructions concerning how to wear and use PPE are established. They specify the obligations for personnel to use PPE in compliance with the manufacturer's instructions, and to wear PPE according to the areas defined and in the conditions studied in the risk assessment. Immediate corrective actions (in particular stopping a task in progress) are defined and implemented in case of the absence of required PPE, and for any observation of degraded, defective or unsuitable PPE.
- PPE is replaced and discarded before the expiration date, in case of wear and tear, and in the event of a quality or integrity defect. In the latter case, an HSE alert is issued.

Storage, Inspection and Maintenance of PPE

- PPE is stored in accordance with the manufacturer's instructions. A system for managing PPE stocks is implemented and ensures constant availability, to meet all provision and replacement needs, and disposal, when applicable, depending on expiry dates.
- An inspection and maintenance programme is defined and implemented at least for PPE designed to provide protection against risks that could result in irreversible or fatal injuries.

Date of publication in REFLEX: 11/03/2020

REVISION	DATE	PURPOSE	WRITTEN BY	VALIDATED BY	APPROVED BY
00	07/01/2020	Creation	PSR/HSE/FHOS/CSPT N. Forest	PSR/HSE/FHOS A. Abzizi	PSR/HSE X. Bontemps

	Group rule		
	Personal Protective Equipment		
PSR/HSE Division	HSE		CR-GR-HSE-406 Rev. no.: 00 Date: 07/01/2020

Foreword	This is an English translation of the French original. The original French version is to be considered as the reference version.
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	Group rule		
	Personal Protective Equipment		
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1 PURPOSE

This rule defines the minimum HSE requirements to be respected in terms of selecting, procuring, training in, using, storing and maintaining Personal Protective Equipment (PPE) in order to protect employees against residual risks in the workplace.

This rule is established in accordance with **CR-GR-HSE-001** One-MAESTRO HSE expectations and compliments the requirements of Golden Rule no. 4.

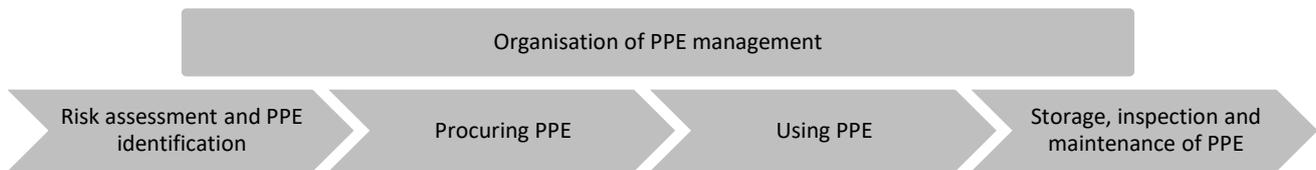


Figure 1: Key Steps of PPE Management.

2 SCOPE

This rule is applicable in all Group entities and affiliates concerned by the requirements in it, in keeping with their respective decision-making rules and provided that locally applicable legislation and rules are respected.

The entities and affiliates identify the requirements applicable to contractors, inform them and require that they comply with such requirements.

When the entities or affiliates have a stake in OBO assets, activities or sites¹, they will seek to promote the requirements of the present rule and ensure that the operator adopts similar requirements.

¹ To operate means to organize, direct, lead and manage. For example, the operator can hold an operating permit or be designated as operator through an operating agreement.

	Group rule		
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3 REQUIREMENTS

3.1 Organisation of PPE Management



Requirement 3.1.1: PPE Management Procedure

PPE management is described in a documented procedure that includes at least the requirements of this rule.

(Expectations 04.01; 04.06)

On sites where several languages are spoken, the entity or affiliate ensures that the PPE management procedure is understood and has been assimilated by all persons involved.

Requirement 3.1.2: PPE Coordinator

A PPE coordinator role is assigned at the appropriate level of the entity or affiliate.

The PPE coordinator ensure that the PPE management procedure is implemented.

(Expectations 01.04; 04.06)

It is not necessary to have a dedicated post for the role of PPE coordinator.

The PPE coordinator:

- is consulted to identify and define new PPE;
- is informed in the event of an observed PPE integrity defect;
- proposes a strategy for managing PPE stocks.

Requirement 3.1.3: Provision of PPE

All personnel, including contractors, have access to appropriate PPE provided by their employer.

(Expectations 04.06; 05.04)

The obligations to provide appropriate PPE and, where applicable, their specifications, are contractually imposed on external companies.

It is recommended that a stock of PPE is reserved for visitors who might not have been provided with the appropriate PPE.

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Requirement 3.1.4: Information and Training

Any person who needs to access an area is informed about the PPE they have to wear.

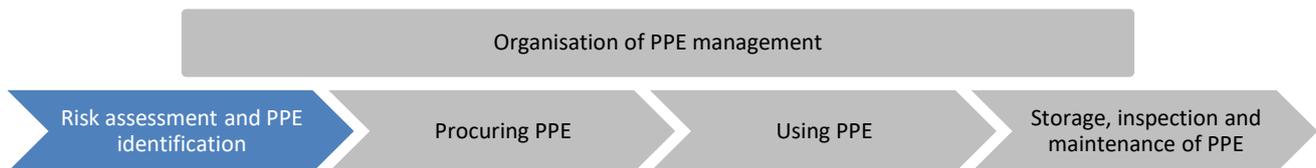
A specific training course is delivered to users of PPE designed to provide protection against risks that could result in irreversible or fatal injuries, as defined in Appendix 1.

(Expectations 04.06 ; 06.02 ; 06.03)

All personnel, including visitors, are informed about the risks their PPE protects them from, the conditions of use of the PPE and its availability.

To supplement the instructions given to personnel, it is recommended to put up signs on site reminding people of the obligation to wear PPE depending on the areas defined.

3.2 Risk Assessment and PPE Identification



Requirement 3.2.1: Assessing Risks in the Workplace and Identifying the PPE Required

The required PPE is identified based on an assessment of residual risks in the workplace.

The identified PPE complies with the standards listed in Appendix 2.

A list of the PPE required according to activities and areas is determined on each site and regularly updated.

(Expectations 02.01 ; 03.01 ; 03.04 ; 04.06)

The use of PPE can only be considered in addition to other technical and organisational measures designed to eliminate or reduce risks.

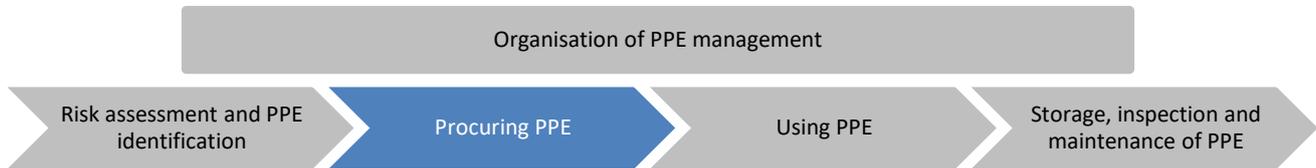
Collective protective equipments are put in place as a priority over PPE.

The risk assessment factors in the possible additional risks generated by the use of PPE (e.g. isolation, reduced dexterity or responsiveness, fatigue due to the weight of the PPE).

PPE is identified and selected by involving the users (and if necessary with the support of the HSE *métier*), based on protection effectiveness, comfort, hygiene, ergonomics, maintenance, storage and lifespan.

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3.3 Procuring PPE



Requirement 3.3.1: Procuring PPE

PPE requirements are detailed in a specification which:

- Defines the conditions for use and expected protection levels;
- Refers to the standards selected.

The presence of the manufacturer's certificate of conformity is checked when the PPE is delivered.

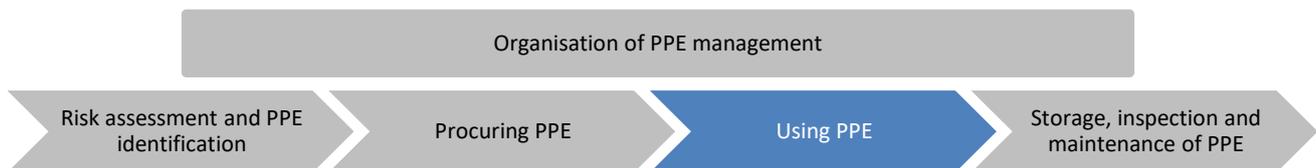
(Expectation 04.06)

It is recommended that preference be given to framework agreements with PPE suppliers, overseen by the Group's Procurement Division.

It is possible to refer to existing standard specifications.

PPE is procured in accordance with **DIR-GR-ACH-001**.

3.4 Using PPE



Requirement 3.4.1: Wearing and Using PPE

Written instructions concerning how to wear and use PPE are established.

They specify the obligations for personnel to:

- Use PPE in compliance with the manufacturer's instructions.
- Wear PPE according to the areas defined and in the conditions studied in the risk assessment.

Immediate corrective actions (in particular stopping a task in progress) are defined and implemented in case of the absence of required PPE, and for any observation of degraded, defective or unsuitable PPE.

(Expectations 01.04 ; 04.06)

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Requirement 3.4.2: Replacement of PPE

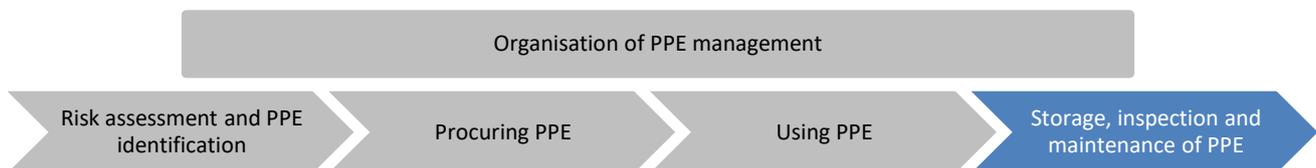
PPE is replaced and discarded:

- before the expiration date;
- in case of wear and tear;
- in the event of a quality or integrity defect. In the latter case, an HSE alert is issued.

(Expectations 04.06 ; 08.04)

The process for issuing an HSE alert is described in [CR-GR-HSE-801](#).

3.5 Storage, Inspection and Maintenance of PPE



Requirement 3.5.1: PPE storage and availability

PPE is stored in accordance with the manufacturer's instructions.

A system for managing PPE stocks is implemented and ensures:

- Constant availability, to meet all provision and replacement needs;
- Disposal, when applicable, depending on expiry dates.

(Expectation 04.06)

It is recommended that PPE is removed from stock in the order in which it arrives in the warehouse (on the principle of first-in - first-out / first delivered – first out basis).

The PPE stock management system allows the status of the PPE to be checked regularly.

Requirement 3.5.2: PPE Inspection and Maintenance Programme

An inspection and maintenance programme is defined and implemented at least for PPE designed to provide protection against risks that could result in irreversible or fatal injuries, as defined in Appendix 1.

(Expectation 04.06)

Inspection and maintenance (cleaning, repairs, storage) are performed as per the instructions given by PPE manufacturers.

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4 TERMS AND DEFINITIONS

The terms and definitions given in **CR-GR-HSE-001** apply and are completed by the following terms and definitions for the present rule.

Activity

Series of tasks performed by an individual to meet their objectives.

Area

Characteristic geographic unit in which appropriate protection is or is not to be used (e.g. production unit, storage area, traffic areas, buildings, port areas).

Collective protective equipment

Device, mechanism, apparatus or installation, which through its design (layout and composition) has the capacity to satisfactorily protect personnel against one or more professional risks and of limiting the consequences. This equipment is integrated into or added to the production means or workplace. Equipment ensures collective protection when it indiscriminately ensures the safety of personnel affected (direct risk) and that of other people nearby.

Employer

Person or company who employs one or more members of staff.

Personal protective equipment

Any equipment designed to be worn or held by personnel to protect them against one or more hazards likely to threaten their safety or

health at work, and any addition or accessory designed to meet this objective.

Protective Equipment class

PPE is classified into three categories:

- PPE designed to protect against risks that could cause superficial injuries.
- PPE designed to protect against risks that could cause serious injuries.
- PPE designed to protect against risks that could result in irreversible or fatal injuries.

Residual risks

Workplace risks remaining after the specification and design phases, the elimination or substitution of hazards in the design or renovation phases, organizational measures and implementation of collective protective equipment.

Visitor

Person who does not belong to the site's workforce and who does not perform any tasks on site (e.g. supplier, authority or any other Group partner).

Workplace

Work location, the apparatus or items of equipment used to perform the work, as well as the work environment.

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5 REFERENCE DOCUMENTS

Reference	Title - Company Rules
CR-GR-HSE-001	One-MAESTRO expectations
DIR-GR-ACH-001	Procurement Principles for Goods and Services

6 BIBLIOGRAPHY

Title

7 LIST OF APPENDICES

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APPENDIX 1	Categories of risks against which PPE is designed to protect users
APPENDIX 2	Minimum PPE Standards

8 DISTRIBUTION CONDITIONS AND DATE OF EFFECT

Publication in REFLEX (Group standards document referential) REFLEX is available on the intranet WAT/LeGroupe/Outils pratiques or WAT/Pratique/Les référentiels.

Effective date: in the six months following publication.

9 REVISIONS

REV.	DATE	PURPOSE	WRITTEN BY	VALIDATED BY	APPROVED BY
00	07/01/2020	Creation	PSR/HSE/FHOS/CSPT N. Forest	PSR/HSE/FHOS A. Abzizi	PSR/HSE X. Bontemps

	Group rule		
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APPENDIX 1

Categories of risks against which PPE is designed to protect users

This appendix defines the categories of risks against which PPE is designed to protect users.

1 Risks that can cause superficial injuries

Exclusively includes the following risks:

- Superficial mechanical aggression.
- Contact with relatively harmless cleaning products or prolonged contact with water.
- Contact with hot surfaces whose temperature does not exceed 50°C.
- Eye injury due to exposure to sunlight (other than injuries due to observation of the sun).
- Related to non-extreme atmospheric conditions.

2 Risks that can cause serious injuries

Risks other than those mentioned in the categories of risks that can cause superficial injuries or irreversible or fatal injuries.

3 Risks that can cause irreversible or fatal injuries

Includes exclusively:

- The risks generated by:
 - A substance or mixture that poses a health hazard.
 - An oxygen-poor atmosphere.
 - A harmful biological agent.
 - Ionizing radiation.
 - A hot atmosphere whose effects are comparable to those of an air temperature equal to or higher than 100°C.
 - A cold atmosphere whose effects are comparable to those of an air temperature equal to or lower than - 50°C.
 - Portable tools or machine-tools.
- Risks of falls from height.
- Risks of electric shocks and work on powered systems.
- Risks of drowning.

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APPENDIX 2

Minimum PPE Standards

Body Parts to Protect	Protection	EN Standards (or their ANSI equivalent)
Head	Industrial safety helmets, <u>with integrated chin strap</u>	EN 397 EN 13463-1 EN 166 (integrated safety glasses or visor)
	Bump caps	EN 812
	Safety helmets for use on low-voltage installations, <u>with integrated chin strap</u>	EN 397 EN 50365 EN 13463-1 EN 166 (integrated visor)
	Alpine safety helmets (work at height), <u>with integrated chin strap</u>	EN 397 EN 12492
Eyes	Personal eye protection - Specifications	EN 166
	Protective eyewear	EN 169 (welding) EN 170 (ultraviolet filters) EN 172 (reduction of sun glare in industrial use)
Hearing	Hearing protection. General requirements. Part 1: Helmets	EN 352-1
	Hearing protection. General requirements. Part 2: Earplugs	EN 352-2
	Hearing protection. General requirements. Part 3: Ear muffs	EN 352-3
Body	Fall arrest harness	EN 361 (harnesses) EN 354 (lanyard) EN 362 (connector) EN 355 (energy absorber)
	Workwear (long-sleeved coveralls or long-sleeved jacket + trousers with reflective stripes)	ISO 11612 (heat and flame) EN1149 (electrostatic properties)
	High visibility vests	EN ISO 14116 (heat and flames) EN 1149 (electrostatic properties) EN 471 (high visibility for professional use)

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		EN ISO 20471 (high visibility)
	Multi-risk protective rain garments	EN 343 (protection against rain) EN ISO 14116 (heat and limited flame spread) EN 1149 (electrostatic properties)
	Multi-risk clothing with or without high visibility	EN 343 (protection against rain) EN ISO 11612 (heat and flames) EN ISO 14116 (heat and limited flame spread) EN ISO 11611 (welding) EN 1149 (electrostatic properties) EN 13034 (liquid chemicals) EN 14058 (protection against cool environments) EN ISO 20471 (high visibility) IEC 61482 (live working)
	Chemical protective suits	EN 14605 (protective clothing against liquid chemicals - liquid-tight and spray-tight) EN 13982 (protective clothing resistant to penetration by airborne solid particles) EN 13034 (liquid chemicals) EN 1149 (electrostatic properties) EN 343 (protection against rain)
Hands	Protective Gloves - General Requirements and Test Methods	EN 420
	Protection against mechanical risks.	EN 388:2016
	Protection against chemical risks.	EN 374
	Protection against thermal risks (heat and/or fire).	EN 407
	Protection against thermal risks (cold).	EN 511
	Protective gloves against ionizing radiation and radioactive contamination.	EN 421
	Electrical insulating gloves for live working (electrical risks).	EN 60903
	Protective gloves for welders.	EN 12477

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Feet	Safety shoes	<p>EN ISO 20345 having the following characteristics (in whole or in part):</p> <ul style="list-style-type: none"> - S3 (antistatic, heel energy absorption, water penetration and absorption, perforation) - SRC (slip resistance) - CI (cold insulation) - WR (water resistance) - HRO (heat resistance) - ESD (ElectroStatic Discharge - Electrical Resistance) - AN (malleolus protection)
	Safety boots	<p>EN ISO 20345 having the following characteristics (in whole or in part):</p> <ul style="list-style-type: none"> - S3 (antistatic, heel energy absorption, water penetration and absorption, perforation) - SRC (slip resistance) - CI (cold insulation) - WR (water resistance) - HRO (heat resistance) - HI (heat insulation)
Respiratory tract	Disposable masks	EN 149
	Reusable masks	<p>EN 140 (half mask and quarter mask)</p> <p>EN 136 (full mask)</p> <p>EN 148 (thread)</p> <p>EN 143 (particle filters)</p> <p>EN 14387 (gas/vapour filters)</p> <p>EN 405 (filter half mask)</p>
	Powered filtering devices	<p>EN 12941</p> <p>EN 12942</p>
	Continuous flow compressed air line breathing devices.	EN 14594
	Self-contained open-circuit compressed air breathing apparatus with full face mask (SCBA)	EN 137

End of document

Signed original version.

Prevention of Onsite Traffic Accidents

Date of publication in REFLEX: 30/09/2020

REV.	DATE	PURPOSE	AUTHOR	CHECKED BY	APPROVED BY
00	24/09/2020	Creation	PSR/HSE/FHOS/REE F. Menci	PSR/HSE/FHOS/REE S. Roulier	PSR/HSE/FHOS A. Abzizi

	Group Guide and Manual		
	Prevention of Onsite Traffic Accidents		
PSR/HSE Division	HSE		GM-GR-HSE-452 N° Rev.: 00 Date : 24/09/2019

Foreward	This English version is translated from the original French reference version.
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Prevention of Onsite Traffic Accidents

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1 PURPOSE

This guide is a practical tool of an indicative, non-exhaustive and non-prescriptive nature, allowing better knowledge and control of the risks linked to traffic on site. It complements **CR-GR-HSE-418**.

It brings together a set of ideas and best practices for use by the Group entities or affiliates. The objective is not to repeat the list of requirements of **CR-GR-HSE-418** but to provide suggestions based on feedback and best practices, particularly with regard to the conduct of risk analysis and possible risk control measures.

2 SCOPE OF APPLICATION

The good practices in this guide may be implemented by all Group entities and affiliates concerned by **CR-GR-HSE-418**, in compliance with their respective decision-making rules and without prejudice to any legal and regulatory provisions applicable locally.

3 INTRODUCTION

This guide deals with the risks generated by traffic on the sites, in order of importance:

- traffic constraints linked to major risks and site emergency plans (trucks in ATEX zones, evacuations, intervention of emergency vehicles, protection of sensitive areas, etc.);
- vehicle/pedestrian and vehicle/vehicle collisions (cars, trucks, trolleys, site machinery, trains, etc.);
- damage caused to structures by vehicles (falling heavy shelves at work stations, collisions with sensitive structures, overturning during operations, etc.);
- accidents involving single vehicles (breakdowns, accidents on the roads, etc.).

4 PRINCIPAL HAZARD

In French industry, 18% of accidents with stoppage are caused by a traffic problem on site (source: Institut National de Recherche en Sécurité).

Trip and falls in Europe are the main cause of accidents resulting in Loss Time Incidents of more than 3 days.

Within the Group, over the period 2008-2018, there were:

- 43 HIPO out of more than 1635 workstation-related (3%);
- 3 deaths (3% of fatalities, excluding transport):
 - 2009 - France (Fertilisers - Grand Quevilly): the head of the sector crossing the loading area on foot was knocked down by a forklift.
 - 2010 - Gabon (EP): during the installation of an onshore drilling rig, a Total employee was fatally hit by a pipe laid on the ground. A truck delivering parcels rolled over the line and the line was knocked in front of the wheels of the trailer. The victim was accompanying and walking along the truck and had just stepped over the pipe.

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- 2013 - Nigeria (M&S): Death of a security guard. A security guard was trapped against a gate by a tanker truck manoeuvring to exit the parking lot.
- 19 serious accidents at service stations. Cars crashing at high speed on ilots, especially in shops. The vast majority in Europe (FR, NL, BE) but also South Africa, AME, APMO. Often with serious injuries for third parties, sometimes with fire in the station. One case with total destruction of the site.

5 RISK ANALYSIS

The identification and evaluation of the risks linked to traffic on site are carried out and take into account at least :

- the different types of transport and movement on the site;
- the technical characteristics of motorised and non-motorised vehicles and motorised machine;
- the general and specific traffic constraints imposed on the site;
- the slopes or variations in level that may cause accidental movement of vehicles;
- site entrances and exits, traffic routes and any restrictions (e.g. size, dimensions or weight of vehicles and motorised machinery);
- traffic flows for each type of transport and movement;
- accident history and relevant feedback (REX).

The risk analysis contributes to the definition or adaptation of the site's traffic plan.

5.1 Practical Method for Carrying Out Risk Analysis

Below is a method that can be used to carry out risk analysis:

1. Draw up a plan of the site/company.
2. Identify types of transport and movement (traffic flows).
3. Determine and map out routes.
4. Determine traffic periods.
5. Identify multiple-junction traffic areas.
6. Accident analysis.
7. Site visit.

This approach is valid for all types of traffic on site, including inside buildings (in this case the risks will mainly concern pedestrians and forklifts in interface with the layout of machines and workplaces).

5.1.1 The Site/Company Map

It is designed to record the routes taken on the site. It must be of a size that allows for the transcription and legibility of all the different routes.

An overall plan with up-to-date traffic routes is essential. It enables the potential risks to be studied on paper, as well as the requirements for access and exit by :

- Material transport vehicles (products, equipment, etc.): commercial vehicles, heavy goods vehicles, construction site machinery, cranes, handling equipment, trains, etc.;
- Passenger transport vehicles: bicycles, private cars, buses;
- Pedestrians: at their workstations and during their journeys, subcontractors, visitors, lorry drivers when they get out of their vehicles (loading/unloading);
- Emergency vehicles.

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It contains essential information for traffic analysis:

- the boundaries of the terrain;
- the nature of the immediate environment of the site;
- access and exit routes (including emergency routes);
- car parks and assembly points;
- traffic routes within the site;
- the location of and access to fixed installations (buildings, units, pipelines, etc.);
- the location of mobile or "movable" facilities.

5.1.2 Traffic Flows

Everything that is likely to circulate in the company is listed in a table in which the different means of traffic/transport (heavy goods vehicles, vans, bicycles, pedestrians, light vehicles, etc.) are listed and differentiated according to the type and reason for their movement (arrival of employees on site, deliveries, visits, etc.) with also the hourly periods of movement. The more precise the census is, the more relevant the analysis will be. Means of transport of the same type and with the same reason for travelling will be grouped together. Each group will be represented by a different colour.

Each group will be associated with a colour.

Moyens de déplacement	Couleurs	N°	Périodes horaires des déplacements																							
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Marchandises																										
VL / VUL																										
PL																										
Chariot automoteur																										
Chariot manuel																										
Transbordeurs																										
Personnels																										
Piéton																										
VL / VUL (entreprise)																										
VL / VUL (Ent. Ext.)																										
Vélo																										
Navette / Bus																										

Figure 1: Example of table listing all different traffic flows

5.1.3 Determine and Plot Routes on the Map

The different flows identified and listed in the table are represented on the site map using the different colours. Each route will be drawn.

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5.1.4 Determining Traffic Periods

In this step, the traffic flow table is updated, indicating for each route the relevant timetables. This will enable us to identify critical crossings more accurately.

Moyens de déplacement	Couleurs	N°	Périodes horaires des déplacements																							
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Marchandises																										
VL / VUL																										
PL																										
Chariot automoteur																										
Chariot manuel																										
Transbordeurs																										
Personnels																										
Piéton																										
VL / VUL (entreprise)																										
VL / VUL (Ent. Ext.)																										
Vélo																										
Navette / Bus																										

Figure 2 : traffic flows table by time slots

5.1.5 Identifying multiple-junction traffic zones

The routes will be overlapped on each timetable in order to identify the critical areas on the map. This will be done for each of the time slots during which there are multiple traffic flows.

In the figure below is an example of the representation of the different flows on the map, highlighting the areas where the flows intersect (in the example, 3 intersecting areas).

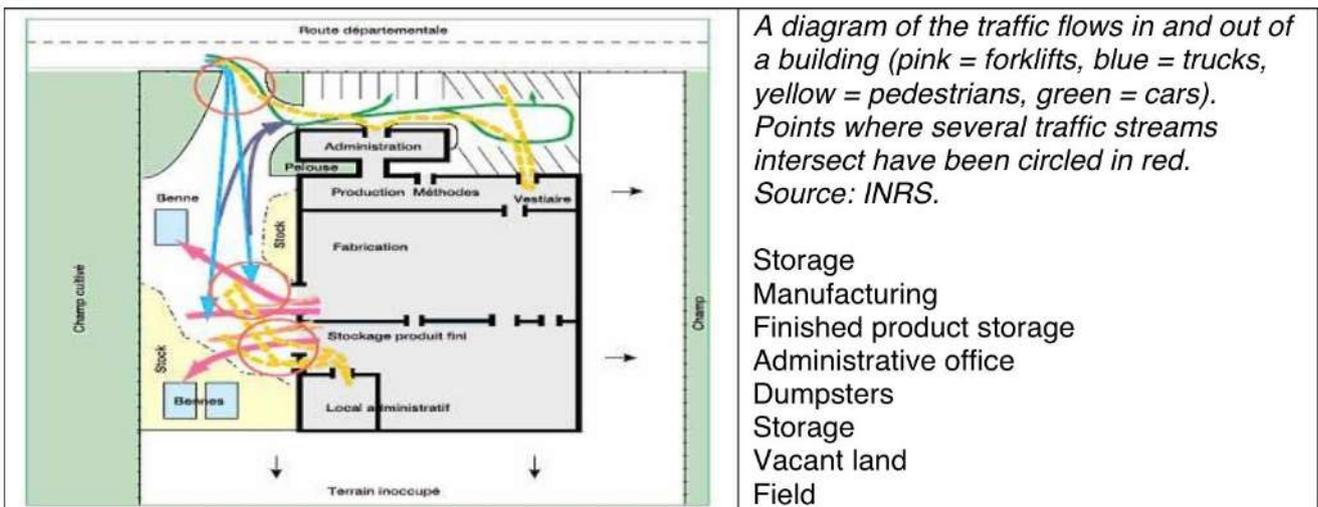


Figure 3 : Traffic flows diagram

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5.1.6 Accident Analysis

The analysis of accidents that have occurred on the site, but also from other sites with similar problematic issues, allows us to identify specific risks linked to traffic.

The Group REX database is a tool at your disposal.

5.1.7 Site Visit

The next step is to go to each of the places considered dangerous in order to determine the risks: problems with traffic organisation, road and crossing conditions, lack of signage, behaviour, etc.

Appendix 1 is a list, presented in the form of questions, of the causes frequently observed at the sites and those identified during the analysis of the various experience feedback sheets issued since 2001 within the Group's scope.

It is essential that exposed personnel be involved in the risk analysis phase, including the identification of risk control measures.

6 RISK CONTROL MEASURES

Depending on the risk analysis, risk control measures are implemented with the aim of :

- eliminate or reduce traffic flows and the number of authorised vehicles as much as possible;
- optimising or eliminating crossings of traffic flows or interference with traffic flows;
- to design routes to reduce the risks;
- limit the frequency of traffic.

Examples of measures are given below and organised around the following 5 themes:

- Organising traffic (timetables, flows, etc.) ;
- Making lanes and crossings safe;
- Securing manoeuvring areas;
- Maintaining the work environment and the passage area ;
- Choosing machines and maintaining their integrity;
- Measures for access of vehicles/engines to restricted areas;
- Acting on behavioural problems.

6.1 Organising Traffic

6.1.1 Reducing Traffic Flows

The first solution to avoid accidents involving vehicles and machinery is to remove them from circulation whenever possible.

A number of measures can be envisaged depending the nature of the site:

- Prohibit / limit traffic throughout the site (e.g. no cars allowed, shuttles that can transport employees and visitors to large sites, etc.);
- Prohibition on part of the site (e.g.: forklift in the immediate vicinity of busy pedestrian crossings, lorries on certain lanes, etc.);
- Ban on driving in certain areas at certain times (e.g. near the cafeteria at lunchtime).

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Optimised logistics also helps to reduce the flow of material handling equipment. For example, it may be appropriate to give priority to the supply of raw materials in bulk (which also reduces waste). Other measures include, for example, the adoption of automations limiting the flow of equipment or the use of shuttles instead of vehicles for transporting personnel.

Some good practices :

Picture 1 shows an example of 4 automatic palletisers. The arrival of empty packages and pallets is done with an electric pallet truck. As a result, there is no longer any trolley movement in the packaging area.

Picture 2 shows an automated forklift.



Picture 1: automatic palettiser



Picture 2 : automated forklift

6.1.2 Optimising the organisation of routes to reduce crossings

After having identified the traffic areas, the critical areas of crossings, we will try to reorganise the traffic in order to minimise these dangerous crossings and also the travel distances.

It is therefore recommended to use :

- one-way traffic;
- by-pass roads;
- buffer zones for load breaks between different vehicles;
- roundabouts.

In order to implement this reorganisation, traffic flow diagrams are used to clearly visualise the problems. Wherever possible, an attempt will be made to separate these flows in order to reduce the number of crossings. Below are some examples:



Figure 4: methodology to optimise traffic flows

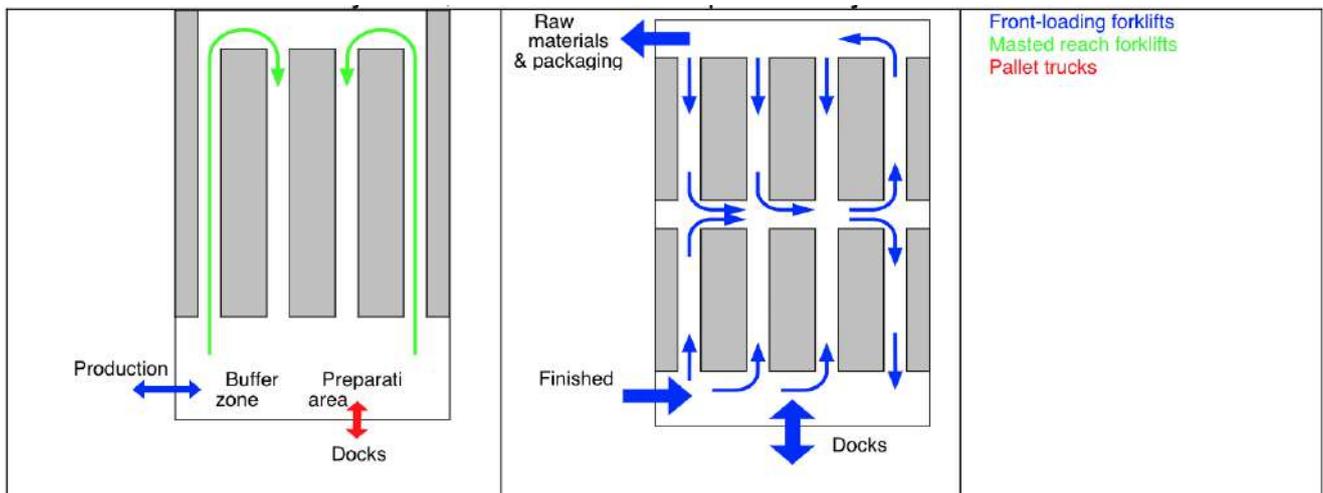


Figure 5 : example of forklift traffic optimization in order to avoid crossing

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Well-organised forklift traffic is also a factor in productivity.

The aim is to minimise the risk of collisions between vehicles/machines, between vehicles/machines and pedestrians.

6.2 Securing, Paths and Crossings

6.2.1 Optimising the Condition and Layout of Tracks and Junctions

The tracks and crossroads should be wide enough, clear, bright and with good ground conditions.

Poor ground conditions can cause forklift trucks to overturn or loads to fall. The characteristics of the ground should be studied according to the location (indoors, outdoors, etc.) and the type of activity. The floors must also allow good drainage.

The ease of movement also depends strongly on the space requirement. It is essential to define the places where storage and parking are prohibited and to enforce this regulation. Several accidents have occurred due to badly parked vehicles or improvised storage areas.



An outdoor mirror



An indoor mirror

For your information, below are recommended values for lane widths (source INRS Ed. 975).

	One-way traffic	Two-way traffic
Pedestrian	0,80 m	1,50 m
Pedestrian using handling or ride-on machine	(width of machine or load) + 1 m	(width of the 2 machines or loads) + 1,40 m
Pathway for wheelchairs	1,40 m	1,60 m
Light vehicle	3 m	5 m
Heavy load vehicle	4 m	6,50 m

Beyond these recommendations, it is clear that observation in the field makes it possible to appreciate the traffic difficulties.

Particular attention must be paid to emergency access routes (layout, indication of exits, assembly areas).

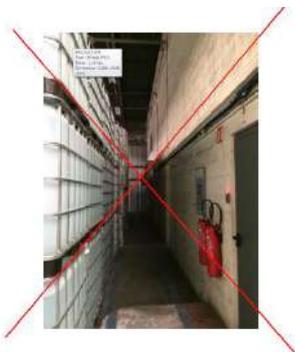
6.2.2 Physically Separating the Tracks

The physical separation between pedestrians and vehicles, both inside and outside, prevents many collisions, especially at the entrances and exits of buildings or areas. We cannot detail all cases here, however, you will find some examples below.

Examples of separation at entrances and exits of buildings and areas:



Examples of workplace protection:



The pedestrian traffic areas at the back of the storage areas (aisle, pedestrian crossing) are protected from the risk of falling stored material.

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6.2.3 Separating Visually the Tracks (Ground Markings)

Where physical separation is not possible, road markings (inside or outside) delimit the lanes and encourage pedestrians and vehicles to keep their direction. It also obliges pedestrians to use predetermined intersections with vehicle lanes (pedestrian crossings).

Here below some examples:



6.2.4 Strengthening Fragile / Critical Structures

Apart from collisions, the second most serious risk generated by a moving vehicle is the collision with structures/equipment and the potential overturning of the latter.

In the following photos examples of accidents that have occurred as a result of a vehicle colliding with some of the facilities are shown.



Figure 6 : Examples of collisions between structure / assets and vehicles

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Wherever possible, care will be taken to :

- do not place workstations near heavy shelves;
- provide sufficient distance between the structure and traffic lanes (except in the case of a forklift truck picking up or dropping off pallets). This is very important in the case of scaffolding ;
- Reinforce/protect sensitive equipment/structure.



Figure 7: examples of sensitive structure/equipment protection

6.2.5 Using Signage

Signs and signals can be particularly used as a means of prevention in noisy areas, to warn the driver or pedestrian of the proximity of a crossing.

❖ Traffic signs



The panels are classified into 4 categories:

- prohibition;
- obligation;
- warning;
- emergency.

Prohibition and obligation signs must be consistent with the traffic rules defined on the site. It is necessary to check this consistency.

Warning signs are used to warn drivers or pedestrians, for example before a crossing considered dangerous.

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A periodic check of the visibility of the signs is essential to ensure their usefulness. The knowledge of the signs by drivers and pedestrians must be regularly checked.

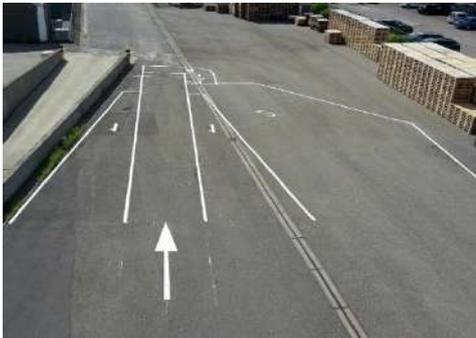
❖ **Illuminated signs**

Illuminated signal appeals even more strongly to the driver or pedestrian and has the advantage of being visible at night. It is recommended to use it for very sensitive areas (level crossings, busy or dangerous crossings, etc.).

6.2.6 Improving Visibility

Wearing high-visibility clothing helps to avoid accidents for pedestrians and cyclists, especially at night. Wearing a helmet is recommended for cyclists.

It is also important to limit the blind spots of vehicles and machinery. Here below are some examples of good practice in this respect.



Implementation by a site of a dedicated location on site allowing trucks to control the adjustment of their mirrors. The driver positions his truck at the designated location. The mirrors are correctly adjusted when the driver can see in his mirrors all the areas identified by lines on the ground.



Installation of a sign for pedestrians in areas where lorries have to operate:

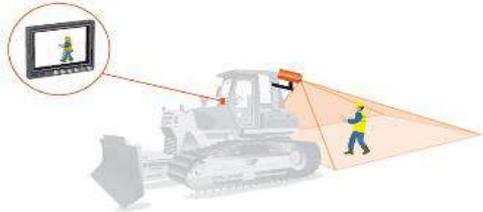
- Reduced visibility
- Dead angle

Minimum safety distance of 3 to 5 meters between pedestrian and stationary vehicle.

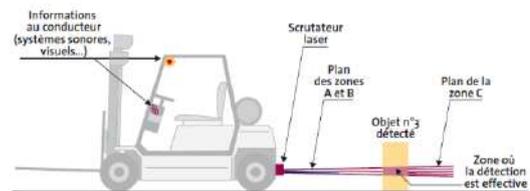
In addition to the technical and organisational measures aimed at eliminating or reducing the risk of collision between vehicles/machinery/equipment during manoeuvres with reduced visibility, there are several complementary technical solutions such as warning devices (flashing lights, reversing alarm), visual aids for the driver (rear-view mirrors, camera screen system), means of detecting people or obstacles which may affect the driver and possibly third parties, manoeuvring aids / signalling aids (necessary in particular when the driver of a lorry is carrying out a manoeuvre in poor visibility conditions); in the event of unloading a lorry body, when forward visibility is insufficient, e.g. because of the bulk of the load (e.g. in the case of a lorry body being unloaded, when the visibility in forward motion is insufficient due to the congestion of the load). (e.g. forklift truck).

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Below are some examples of additional technical devices for detection and visual aid:



Camera - screen system (INRS Ed. 6083)



Laser detection system (INRS Ed. 6083)

6.2.7 Reducing Speed

Speed is a risk factor depending on the places concerned (track geometry, type of flooring, visibility conditions, buildings, etc.), the machines and vehicles in circulation (type of vehicle, full or empty traffic, flows encountered, traffic density, etc.).

The presence of people and sensitive objects in the traffic area is an aggravating factor.

Apart from internal traffic, the risks of speeding on the entrance and exit lanes of a site deserve special attention.

Possible measures include, for example

- roundabout;
- speed bumps;
- "Berlin" cushions (uplift covering only part of the roadway);
- laying kerbs;
- warning devices;
- lane layout (e.g. chicane);
- automatic speed reduction devices (e.g. inside buildings);
- speed locking system.

Note: the installation of cushions, retarders, is not recommended on pavements likely to receive handling vehicles (self-propelled forklift trucks, PEMS, pallet trucks, etc.) unless the risks of snagging of forks or chassis, jolts and jumps, lateral overturning, etc., have been identified and managed.

For the problem of speeding in service stations, the REX-MS-SMR-2017-107 from the Group's REX database should be consulted.

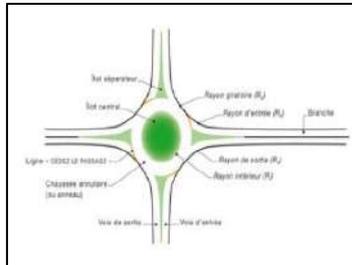
It is recalled that on connecting roads linking separate sites, even if managed by the entity or subsidiary, the speed limits indicated in **CR-GR-HSE-418** do not apply.

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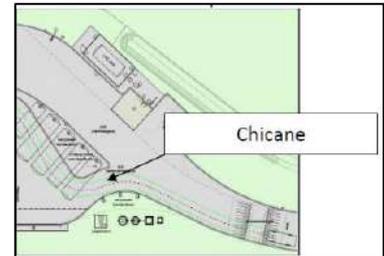
Here are some examples and good practices:



Speed indicator



Roundabout



Lane layout



Speed bumps



Radar system to automatically reduce the speed of a forklift when it enters a building.

6.3 Securing Manoeuvring Areas, Car Parks, etc.

6.3.1 Securing Loading and Unloading Areas and Worksites

It is important to limit crossings between trucks, forklifts and especially pedestrians as much as possible. Pedestrian traffic lanes are identified. In particular, care must be taken to ensure that personnel not involved in the manoeuvre do not enter the area concerned.

Visibility is essential and must be irreproachable.

Signage must be clear and visible, day and night.

Specific recommendations for loading/unloading are available in the [GM-GR-HSE-483](#).

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6.3.2 Securing Car Parks

Car parks are often accident prone. A few effective actions can reduce the risks, among them:

- separate entrances for pedestrians, lorries, cars and two-wheelers;
- very good quality lighting;
- pedestrian walkways delimited if possible materially, if not with markings on the ground;
- location of the car park outside the establishment to avoid overloading the site's lanes;
- limiting parking inside the site.

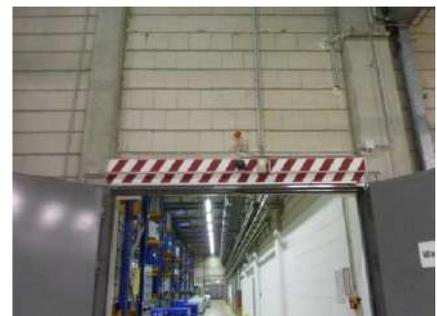
6.4 Maintain the Work Environment, Walkways and Workshop/Storage Areas

6.4.1 Securing Workshops / Shops

Workshops / warehouses are often crossroads between vehicles (especially forklift trucks) and pedestrians. It is therefore important to secure the crossings so as to limit dangerous crossings as much as possible. In addition to the measures described in § 6.2.2, the following are examples of good practice that can be applied:



Pedestrian – Machine detection system



Motion detection system with "flash lights"



«Blue spot» system installed on forklifts

6.4.2 Securing the working environment

For the safety of traffic/vehicle and pedestrian traffic, it is very important to maintain the cleanliness and condition of the working environment: slippery and/or uneven ground, cramped premises can make it difficult to move around or create unforeseen obstacles. In fact, poor floor conditions can cause forklift trucks/machinery to overturn, loads to fall or accidents on the same level.

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6.4.3 Securing Pathways / Passageways

The traffic lanes are kept clear at all times.

Traffic lanes are inspected and maintained regularly.

Particular attention is paid to gratings which bring a potential source of danger to such poorly maintained sites:

- over time, they can deteriorate (corrosion, structural fatigue, loss of tightness of clamps...);
- during the construction and maintenance phases, the risks associated with installation, modification and dismantling are particularly present and must be controlled.

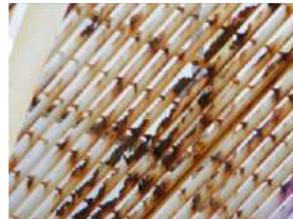
They require constant attention and must be maintained. Any deterioration, defect or removal for operation must be clearly marked and barriers must be in place. Gratings are a source of danger both during the construction and maintenance phase (installation, removal, modification, incorrect fixing) and during use. They can deteriorate (corrosion, loosening or corrosion of fasteners), so it is important to:

- make personnel aware of the risks of gratings;
- set up a campaign to check and secure the gratings: any opening in the gratings or access hatches must be marked and closed with rigid barriers to prevent the risk of falling;
- dimension the gratings correctly: long and wide enough to rest on the supports without moving, the spaces between the gratings and the elements such as structure, hopper, line, must be as narrow as possible to prevent any movement and therefore the risk of falling;
- ensure that gratings are systematically included in site inspection and maintenance plans.

The gratings must be in good condition, stable and properly secured to a suitable support. Any openings must be marked with rigid barriers. Everyone must identify and report any anomalies. The organisation of periodic detection and reporting campaigns helps to raise staff awareness and improve prevention.

It is recommended that the general visual inspection of tertiary structures (non-structural elements and including gratings and their fixings and supports) be carried out on an annual basis. See [GS-EP-EXP-311](#) and [GM-RC-HSE-046](#).

The frequency of inspections may also be increased or adapted to take account of plant shutdowns, projects and major maintenance operations.



Examples of gratings corrosion



Accidents : missing gratings

6.5 Selecting Equipment and Maintaining Its Integrity

In addition to the mandatory aspects according to local regulations, it is necessary to ensure when choosing machinery that the risks associated with the planned operations are fully covered.

In particular, account will be taken of:

- the work to be carried out, according to the conditions of use defined by the manufacturer;
- the industrial or logistics site and, in particular, the working environment and area and the traffic conditions on site;
- the results of the risk analysis of the site;
- the protection of the driver;
- the cohabitation of workers on site and in particular in high-risk areas;
- the requirements of **CR-GR-HSE-418** and, for lift trucks, the recommendations of **GM-GR-HSE-460**.

The malfunctioning or breakage of a forklift truck component is or may be the cause of serious accidents. The following are some examples:



1. 2 nos of 5 tonnes jack to support the scissor lift to prevent from falling off
2. Area barricaded to re-route the drive way of the vehicle movement



1. 1 of 5 bolt broken and dropped off
2. Other remaining 4 bolts loosen up and came off



1. Gammon maintenance team activated. Immediately all bolts replaced and bolt demarcation done.
2. All reinstated back to normal condition after replacement done.

It is therefore also necessary to ensure that the machines are in good working order through a maintenance plan that complies with the manufacturer's recommendations and regulatory obligations, and through a daily visual check of their general condition before first use by drivers and cyclists.

The **GM-GR-HSE-460** gives recommendations for the daily inspection of forklift trucks.

Checklists can be drawn up for each type of machine based on the manufacturer's recommendations and updated according to feedback.

For bicycles, check before use, at least, tyre inflation, chain lubrication, condition of brakes. It is also good practice to create a repair area so that bikes can be brought in.

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6.6 Measures for the Access of Vehicles/Engines in Restricted Areas (ATEX)

Vehicles or motorised machinery with access to a zone presenting a risk of explosion/fire are subject to a special authorisation taking into account the prevention measures defined by the entity or subsidiary.

On access roads with regulated access, it is recommended to limit access to equipped diesel vehicles/machinery:

- an emergency stop device accessible from the outside: damper on the air intake or engine exhaust and simultaneous cut-off of the fuel supply;
- a spark arrester on the exhaust pipe, or failing this, a certificate of conformity concerning the exhaust system with integrated spark arrester;
- a fire extinguisher in the vehicle or on the machine.

An explosivity check will also be provided at all times by means of a portable explosimeter.

Periodic checking of the emergency stop is recommended. In the event of damaged lighting and signal lights, access must not be allowed.

6.7 Acting on Behavioural Problems

This involves studying observed behavioural problems such as:

- excessive speed of vehicles;
- non-compliance with traffic rules (priority, wrong way, etc.);
- inappropriate parking;
- uncontrolled storage of goods;
- driving vehicles without a permit / authorisation;
- failure to fasten seat belts by occupants of vehicles or motorised machinery;
- riding a bicycle without holding the handlebars with both hands;
- pedestrians outside the authorised areas;
- not holding the handrail on the stairs.

These behaviours, if they constitute indiscipline, should be treated as such by the hierarchy, but they may also be the result of inapplicable or misunderstood procedures.

Regular dialogue helps to detect inconsistencies in procedures. Making operators aware of the need to inform their hierarchy of these difficulties is a major safety issue.

It is recommended to ensure that staff are familiar with the procedures and to carry out appropriate training.

It is also relevant to carry out awareness campaigns at regular intervals or after accidents on the site or at similar establishments (feedback).

There are also systems in place to manage and control driving authorisations for personnel and to limit access to forklift trucks to only authorised persons. It can also record how long the person has been at the wheel, how long the forklift has been in motion and how many times it has been involved in a collision. Here are some examples:



Personal electronic key



Badge system

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7 RULES AND TRAFFIC PLAN

On the basis of the risk analysis, risk control measures identified and taking into account the requirements of **CR-GR-HSE-418**, rules and a site circulation plan are defined.

These rules and the traffic plan must be communicated to all persons accessing the site.

7.1 Traffic Rules

Below are some examples of the priorities to be respected in a site.

Between road vehicles (lorries, cars) and pedestrians and bicycles, the rules of priority are generally those of the highway code in force in the country of the site.

Between a road vehicle and a construction machine / forklift truck, it is sometimes customary to give priority to the largest vehicle. This practice has been used in particular on airport aprons for several years.

Between a pedestrian and a construction vehicle/forklift, it is customary for the pedestrian to give way to the vehicle, which often has poor visibility compared to other vehicles and cannot brake safely with its load. In the following table a summary is given.

	Crossing with vehicle	Crossing with construction machinery or forklift	Croisement avec un piéton
Pedestrian	Priority	Machinery has the priority	<i>Courtesy !</i>
Forklift or machinery operator	Widest/heaviest has the priority	Widest has the priority	Machinery has the priority
Vehicle (car/lorry) driver	Priority given as per local traffic regulation	Widest has the priority	Priority given as per local traffic regulation

7.2 Traffic Plan

The traffic plan is both a technical tool that provides an overall view of traffic in the company and a communication tool. Indeed, it is important to be able to communicate, explain and disseminate the company's traffic plan to staff, external companies or even occasional visitors.

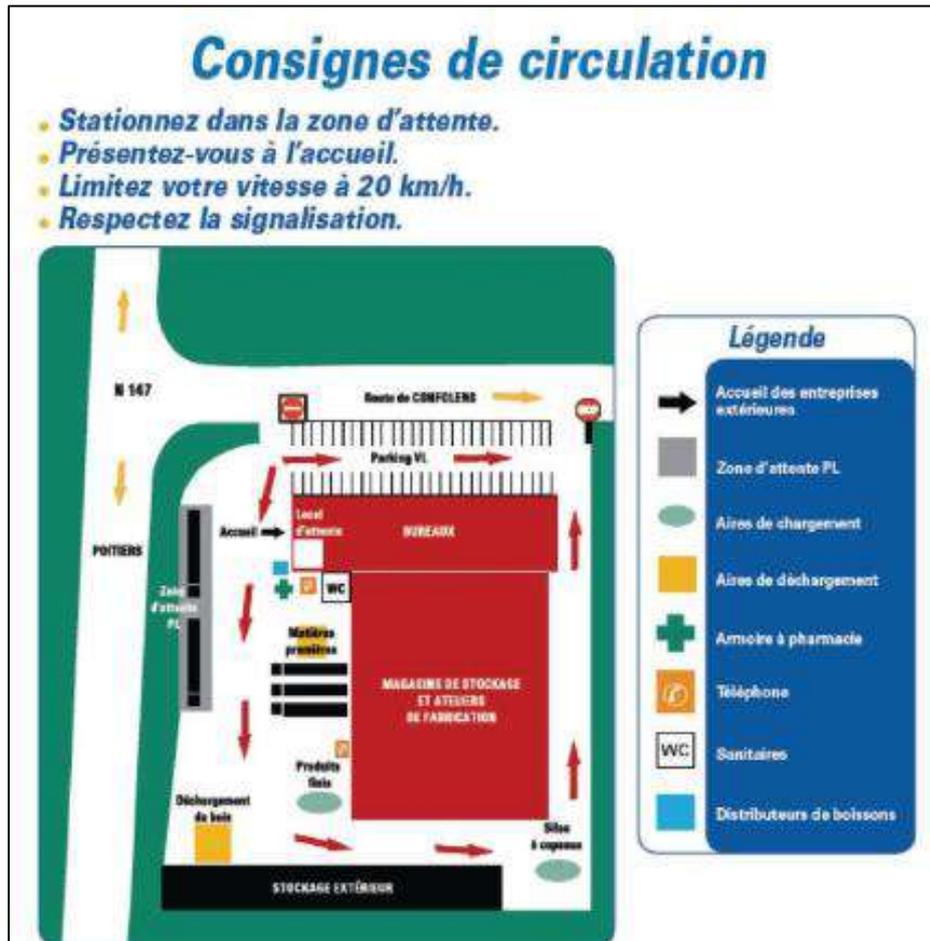
In the site traffic plan, you will find traffic information such as:

- the location of the site in its immediate environment (external traffic routes, etc.) in order to situate the site in relation to its neighbourhood;
- access to the site, including waiting areas for heavy and light vehicles;
- the location of the site buildings, units and other facilities, identifying them so that third parties can find their way around the site;
- the traffic routes within the site and the direction of traffic;
- the location of loading/unloading or parking areas;
- assembly points;

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- the position and meaning of traffic signs.

It will also include general traffic instructions and any useful information for traffic, taking care to ensure that it remains legible for all.



Example of site traffic plan

8 MAINTAINING THE PREVENTIVE EFFORT FOR THE DURATION OF THE PROJECT

It is particularly necessary when changes take place on the site (works, organisational changes, etc.) or when, as a result of habit, the situation deteriorates. It is therefore advisable to :

- to know how to manage change;
- to communicate about actions and to raise awareness;
- set up a history of events and feedback management.

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8.1 Know How to Manage Change

Any change may indirectly increase the risk of traffic on site. Appropriate preventive measures must be adopted.

8.1.1 Works and Construction Sites

Works and construction sites bring numerous traffic risks:

- **Through congestion:** the construction site and the storage of materials can block the traffic routes, so it is necessary to make appropriate detours, to regulate them, to define storage areas, to mark these new areas in order to make them highly visible. Scaffolding must be the subject of particular attention.
- **Through the traffic of new vehicles:** construction site machinery is constantly manoeuvring; the perimeter must be correctly delimited and adequate warnings put in place (especially for pedestrians). When these vehicles use the plant's traffic lanes, the regulations must be adapted to this type of machinery and known to all.
- **Through the arrival of contractors:** these people must be informed of the regulations and the dangers linked to traffic.

Depending on the importance of the work, measures such as signs, barriers, etc. must be adapted to the specific features of the project.

8.1.2 Change of Organisation / Personnel

As a result of changes, preventive actions can be decided upon. In such a case, it is important to make them well known.

When taking on a new employee, you should allow time during the induction period to explain the traffic rules.

Loss of employee vigilance can be equated with a deteriorated situation and requires appropriate prevention measures.

It is important for each change to update the risk analysis and :

- to put in place the appropriate prevention elements (material protection, warnings, etc.);
- make staff aware of the change (notes, signs, etc.);
- update the traffic plan, or even the internal rules and regulations when this change lasts over time.

8.2 Communicating and Raising Awareness

It is important to communicate regularly internally (intranet, email, billboards, meetings, etc.) for the sake of prevention or after a serious or potentially serious accident. Through this communication will seek to raise awareness among staff but also to explain the actions decided upon.

8.2.1 Raising Staff Awareness of Risks

In order to avoid a drop in staff vigilance, often as a result of routine, it is a good idea to remind staff of the risks involved. This can be done:

- at regular intervals, during pre-arranged safety meetings;
- after an accident or near-miss on the site;
- after an accident or near-miss on a similar establishment (use of feedback).

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8.2.2 Explain the Actions Implemented

Risk control measures related to traffic on site are often behaviour related. These measures will therefore only be effective if they are known to everyone. It is therefore necessary to disseminate them widely.

In order to obtain the support of the teams for the prevention campaigns, oral explanations with the operators are recommended.

8.3 Establishing a History of Accidents and Near-misses

The first objective of a history of accidents and near-misses is to guide prevention actions. The importance of an event is not only related to its observed seriousness but also to its potential seriousness. In fact, almost any accident can be analysed and as many lessons can be drawn from it as from an accident; its study is often even easier (testimonies are easier to obtain, no responsibility is sought, there is less emotion ...).

9 GENERAL CONCLUSION

The 4 important points in the prevention of traffic accidents on site are :

1. keep **a plan and traffic rules** up to date and known to all, including personnel entering the site temporarily (transporters, outside companies, etc.) ;
2. **regularly identify and evaluate risks** by analysing the site's near-accidents, external feedback and by remaining well informed of the risks perceived by the field staff;
3. Implement **risk control measures**;
4. **Communicate** following an accident or serious near-accident and after preventive actions, in order to raise awareness and get staff buy-in.

10 TERMS AND DEFINITIONS

This document does not include definition.

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11 REFERENCE DOCUMENTS

Reference	Title – Group Documents
CR-GR-HSE-418	Site Traffic
GS EP EXP 311	Minimum Requirements for Structure Inspection
GM-GR-HSE-460	Preventing Forklift Accidents
GM-GR-HSE-483	HSE Requirements for Loading and Unloading Road and Rail Vehicles
GM-RC-HSE-046	Inspection and Maintenance of Gratings

Reference	Title – External Documents
INRS Ed 800	Le guide de la circulation en entreprise
INRS Ed 975	La circulation en entreprise

12 BIBLIOGRAPHY

12.1 Guides

Title
INRS Ed 6002 - Conception de la circulation des circulations et des flux dans l'entreprise
INRS Ed 6083 - Prévenir les collision engins-piétons – la place des dispositifs de détection et d'aide visuelle

13 LIST OF APPENDICES

Reference	Title
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14 DISTRIBUTION

Publication in REFLEX (Group standards document referential). REFLEX is available on the Intranet WAT/Group/Practical Tools or WAT/Practical Tools/Referentials.

15 REVISIONS

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00	24/09/2020	Creation	PSR/HSE/FHOS/REE F. Menci	PSR/HSE/FHOS/REE S. Roulier	PSR/HSE/FHOS A. Abzizi

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ANNEX 1 - List of Accidents Causes Frequently Observed on Sites

This list is presented in the form of questions that are also inspired by the causes identified in the examination of the various feedback from the Group.

A) Major risks

VEHICLES AND HAZARDOUS AREAS

- ✓ Are hazardous areas (ATEX, toxicity, safety...) clearly identified, indicated and prohibited for certain vehicles? Is this prohibition respected?
- ✓ If the above rules are not respected, why? Is there enough space to bypass these zones? Is this simply negligence?

RESCUE AND EVACUATION INTERVENTION

- ✓ Is the site ready to take charge and direct the rescue vehicles as soon as they arrive?
- ✓ Are there any obstacles or vehicles that would impede the passage of the emergency services at the entrance or within the site?
- ✓ Are the emergency accesses suitable (e.g. fireman's access 4m wide, minimum height 3.5m) and in good condition (lighting, road conditions, etc.)?
- ✓ In the event of an alert, is absolute priority given to the emergency services and is all traffic stopped?
- ✓ Are rapid evacuations from the establishment well defined and well known?
- ✓ Are there frequent evacuation drills by these exits?
- ✓ Are vehicles parked far enough away from the hydrants (about 4m) to allow the fire brigade to reach them without hindrance?
- ✓ Do vehicles park in the car park in reverse for faster evacuation?

B) General organisation

ORGANISATION OF ROUTES

- ✓ Are the routes defined for each operator/driver and each task?
- ✓ Are the defined routes the least dangerous (proximity to danger zones)? The shortest?
- ✓ Are the routes to be followed indicated to new entrants to the site?
- ✓ Are the traffic plans up to date?

TRAFFIC RULES

- ✓ Are priority rules defined?
- ✓ Are entrants to the site informed about traffic rules?
- ✓ Are the rules applicable? What do users say?
- ✓ Are the legal traffic rules on public roads applied?

CHANGE MANAGEMENT

- ✓ Are one-off interventions (works) taken into account in traffic plans for entrants to the site?
- ✓ Are traffic flows regulated so as to avoid excessive density at certain times?

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C) Traffic on roads and crossroads

CONDITION AND LAYOUT

- ✓ Are the tracks wide enough?
- ✓ Is there enough light?
- ✓ Are the tracks subject to regular maintenance?
- ✓ Are the bends wide enough and do they offer sufficient visibility?
- ✓ Are the floors sufficiently resistant to vehicles with maximum load?
- ✓ Are the tracks free of obstacles?
- ✓ Are the floors generally slippery? in case of rain? What is to be done in the event of an oil leak?
- ✓ Are the slopes not too steep for a loaded forklift truck?

PHYSICAL SEPARATION OF THE TRACKS

- ✓ Are the pedestrian walkways physically separated?
- ✓ Does a barrier protect pedestrian exits from buildings?

SIGNPOSTING (SIGNS AND MARKINGS)

- ✓ Are the speed limits clearly indicated?
- ✓ Are the signs sufficiently clear and visible?
- ✓ Are the road markings conspicuous enough?
- ✓ Are pedestrian crossings well defined and signposted?
- ✓ Are signs and road markings checked regularly?

D) Risks on manoeuvring areas

LOADING/UNLOADING AND OTHER MANOEUVRES

- ✓ Is the signalling of the manoeuvring area clear?
- ✓ Is the perimeter of the manoeuvring area clearly defined?
- ✓ Are there pedestrian crossings in the manoeuvring area?
- ✓ Are bicycles prohibited in the zone?
- ✓ Is there a second man to guide the vehicle (in the case of heavy, bulky, blind vehicles, etc.)? Does the vehicle have visible clothing (reflective strips)?
- ✓ Are there mirrors to help the driver carry out his manoeuvre?
- ✓ Is the vehicle equipped with an audible alarm when manoeuvring?
- ✓ Are dangerous manoeuvres subject to procedures? Are they respected?
- ✓ Is there sufficient manoeuvring space?
- ✓ Are the floors sufficiently resistant, flat and free of obstacles?
- ✓ Are the receiving and shipping docks separated?
- ✓ Are the vehicles stable enough?
- ✓ Are the loads stabilised as far as possible in the event of sudden braking or sharp bends?
- ✓ Is the vehicle capacity sufficient?

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E) Risks on manoeuvring areas

LOADING/UNLOADING AND OTHER MANOEUVRES

- ✓ Is the signalling of the manoeuvring area clear?
- ✓ Is the perimeter of the manoeuvring area clearly defined?
- ✓ Are there pedestrian crossings in the manoeuvring area?
- ✓ Are bicycles prohibited in the zone?
- ✓ Is there a second man to guide the vehicle (in the case of heavy, bulky, blind vehicles, etc.)? Does the vehicle have visible clothing (reflective strips)?
- ✓ Are there mirrors to help the driver carry out his manoeuvre?
- ✓ Is the vehicle equipped with an audible alarm when manoeuvring?
- ✓ Are dangerous manoeuvres subject to procedures? Are they respected?
- ✓ Is there sufficient manoeuvring space?
- ✓ Are the floors sufficiently resistant, flat and free of obstacles?
- ✓ Are the receiving and shipping docks separated?
- ✓ Are the vehicles stable enough?
- ✓ Are the loads stabilised as far as possible in the event of sudden braking or sharp bends?
- ✓ Is the vehicle capacity sufficient?

PARKINGS

- ✓ Is each square clearly marked with conspicuous markings?
- ✓ Is the handbrake of the cars always applied?
- ✓ Are the parking spaces sufficiently large and numerous?
- ✓ Are the cars parked more than 4m from the hydrants to allow access to the fire brigade?

F) Behaviour

- ✓ Are site-specific staff well informed about the various procedures?
- ✓ Are ad hoc staff (contracted, temporary staff) and newcomers to the site informed of the procedures as soon as they arrive?
- ✓ Do drivers respect speed limits? If not, why not?
- ✓ Are barriers or fences crossed or moved without permission?
- ✓ Are prohibited lanes, zones and directions not respected? Why is this?
- ✓ Are the skill and knowledge levels of drivers and forklift operators regularly tested? Are training courses adapted to the test results?
- ✓ Are staff regularly made aware of traffic hazards?
- ✓ Are vehicles properly parked?
- ✓ Is the level of control sufficient? Do you notice a decrease in the number of infringements of the regulations?
- ✓ Is there a clear and fair system for penalising offenders and repeat offenders?

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G) Vehicles

- ✓ Are the vehicles in good condition? Is maintenance regular? Are repairs carried out quickly?
- ✓ Are the vehicles suitable for the task to be carried out (dimensioning, load resistance, sufficient or, on the contrary, too much power for good manoeuvrability, etc.)?
- ✓ Do they have audible and visual signals?
- ✓ Do the seats have belts and are they comfortable?
- ✓ Are the dangerous parts of the vehicle (visible mechanics) protected by guards?
- ✓ Are the drivers protected against particular conditions of use (rain, smoke, vibration, noise, etc.)?
- ✓ Is the driver protected against falling heavy objects?
- ✓ Can he get out of his vehicle quickly?
- ✓ Does the driver check his vehicle regularly?
- ✓ Does the construction equipment meet the requirements: emergency stop accessible from outside, European ATEX Directive, etc.?
- ✓ Do the service vehicles have an access form, an access badge and their apparent company name?
- ✓ Are delivery vehicles correctly registered at the entrance (registered number plate, etc.)?

End of document

Original version signed

HSE Requirements for Site Traffic

Executive summary

This rule defines the minimum HSE requirements for the management of risks related to site traffic for vehicles, motorised machines, and pedestrians.

This rule does not apply to rail vehicle traffic, aircraft, helicopter and unmanned aerial vehicle (i.e. drone) traffic, vessels and ships and traffic at aerodromes.

For service stations (sites open to the public) in operation, only the requirements relating to risk identification and analysis, the identification of risk control measures and the formalisation of the site traffic plan and rules, apply.

This rule does not cover aspects specific to loading / unloading and lifting operations, covered by other Group rules.

The following requirements apply:

- The identification and analysis of risks are reviewed regularly and after modification (temporary or permanent) of one or more of the elements characterising the site (e.g. type of vehicles used, road ways dimensions).
- Risk control measures are identified and implemented in order to:
 - Reduce, to the extent possible, the number of vehicles authorised to circulate on site;
 - Optimise the traffic flow;
 - Protect the parts of the installations exposed to risks;
 - Define rules concerning the types and zones used by vehicles and motorised machines.
- The traffic plan and rules are defined, taking into account the risk analysis and the identified risk control measures. This covers as a minimum:
 - General provisions for parking and on-site traffic (e.g. private vehicles not allowed to circulate on site, speed limit of 30 km/h on free road ways, 10 km/h on regulated road ways, in work areas and zones where pedestrian are present, 12 km/h for forklifts) and specific provisions for cyclists and pedestrians (e.g. holding the handrail when taking the stairs);
 - Specific provisions for motorised machines, particularly forklifts (e.g. no movement of motorised machines if their equipment is unsafe or deployed in an extended position).
 - Specific provisions for drivers of motor vehicles or machines.
- General safety instructions, including the procedure to be followed in the event of an incident or emergency (evacuation, assembly, etc.), as well as the traffic plan and rules, are communicated to all persons accessing the site.
- Drivers of motorised machines and in particular forklifts (with mounted drivers) are formally authorised by their employer to drive.
- Vehicles and motorised machines are regularly maintained and in good working order.
- Traffic lanes and equipment are regularly inspected and maintained.

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00	28/07/2020	Creation	PSR/HSE/FHOS/REE F. Menci	PSR/HSE/FHOS A. Abzizi	PSR/HSE X. Bontemps

	Group Rule		
	HSE Requirements for Site Traffic		
PSR/HSE Division	HSE		CR-GR-HSE-418 Rev. N°: 00 Date: 28/07/2020

Foreword	This English version is translated from the original French reference version.
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1 PURPOSE

This rule defines the minimum HSE requirements to be complied with for the management of risks related to site traffic for vehicles, motorised machines, and pedestrians inside sites operated¹ by Group entities or affiliates, existing or as a project, including buildings, parking lots and work sites.

This rule does not cover aspects specific to loading / unloading and lifting operations.

This rule is established to be in accordance with **CR-GR-HSE-001** One-MAESTRO HSE Expectations and complements the requirements of Golden Rule 2.

Guides and manuals **GM-GR-HSE-452** and **GM-GR-HSE-460** respectively provide additional information to this rule related to good practices for preventing traffic accidents (including the completion of the risk analysis/traffic plan) and good practices for using forklifts.

2 SCOPE OF APPLICATION

This rule is applicable in all Group entities and affiliates, when relevant, in accordance with their respective decision-making rules and subject to compliance with locally applicable laws and regulations.

The requirements applicable to contractors are identified and communicated to those contractors, and those contractors are required to comply with them.

Where an entity or affiliate holds an interest in assets, activities or sites which it does not operate¹, it promotes the requirements of this rule and seeks to have similar requirements adopted by the operator.

This rule does not apply to:

- Rail vehicle traffic;
- Aircraft, helicopter and unmanned aerial vehicle (i.e. drone) traffic;
- Vehicle and pedestrian traffic at aerodrome;
- Vessel and ship navigation;
- Traffic at operating service stations (open to the public), with the exception of Requirements 3.1.1, 3.1.2., and 3.1.3.

¹ "Operate" means organise, run, conduct and manage. The operator may for example hold an operating permit or be appointed as operator by way of an operating agreement.

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3 REQUIREMENTS

3.1 Risk Identification and Traffic Plan

Requirement 3.1.1: Risk Identification and Analysis of Site Traffic

The identification and analysis of risks related to site traffic are carried out. They take into account, as a minimum:

- The different types of transport and means of moving around on site;
- The technical characteristics of vehicles and motorised machines;
- General and specific traffic rules of the site;
- Roadways and any potential restrictions (e.g. size, dimensions or weight of the vehicles and motorised machines);
- Passage frequencies;
- Accident history and relevant return on experience (REX).

They are reviewed regularly and after modification (temporary or permanent) of one or more of the elements mentioned above.

(Expectations 03.01; 03.02)

This analysis contributes to defining or adapting the site traffic plan. The risk analysis takes into account the traffic conditions for normal operations (daytime and night-time) and for emergency situations.

The technical characteristics of vehicles and motorised machines include the engine type, the associated equipment (e.g. dynamos, batteries), etc.

Requirement 3.1.2: Identification of Risk Control Measures

Based on the results of the risk analysis, risk control measures are implemented in order to:

- Reduce, to the extent possible, the number of vehicles authorised to circulate on site;
- Optimise the traffic flow (in particular, by reducing the number of crossings and the travel distance);
- Protect the parts of the installations exposed to risks;
- Define rules concerning the types and zones used by vehicles and motorised machines.

(Expectations 03.01; 03.04)

Risk control measures can be organisational, material or procedural.

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Requirement 3.1.3: Site Traffic Plan and Rules

The traffic plan and rules are defined, taking into account the risk analysis and the identified risk control measures.

As a minimum, the provisions provided in Appendix 1 and 2 are taken into account to establish site traffic rules.

The site traffic plan is implemented in a visible and comprehensible manner.

(Expectations 03.04; 04.01)

Site traffic rules can contain specific rules that apply to regulated roadways.

The implementation of traffic plan elements includes the physical separation of lanes, installation of road signs, ground markings, pedestrian paths, barriers, etc.

The traffic plan can be based on generic standard plans (e.g. service stations).

Requirement 3.1.4: Communication

General safety instructions, including the actions to be taken in the event of an incident or emergency (evacuation, muster points, etc.), and the traffic plan and rules are communicated to all persons who have access to the site.

(Expectations 01.08; 06.02)

For all persons who have access to the site, it is recommended to verify their knowledge and understanding of the traffic plan and rules.

3.2 Authorisation for Driving and Maintenance of Vehicles and Motorised Machines On Site

Requirement 3.2.1: Authorisation for Driving Motorised Machines On Site

Drivers of motorised machines and in particular forklifts (with mounted drivers) are formally authorised by their employer to drive on the basis of:

- Validation of medical fitness;
- Training for the operation of the motorised machine;
- Knowledge of the site's traffic rules.

(Expectation 06.01)

Authorisations for contractor personnel can be managed by their employers on the basis of the site traffic rules.

An up-to-date list of all authorised persons is maintained, including when an authorisation is issued by external companies.

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Requirement 3.2.2: Safety Specifications and Maintenance of Vehicles and Motorised Machines

Vehicles and motorised machines used on site shall comply with the safety specifications in Appendix 3, as a minimum.

They are regularly serviced and maintained in good working order.

They are subject to a daily visual check of their general condition before being used for the first time by drivers and cyclists.

In the event of a detected anomaly, the vehicle or motorised machine is removed from service and labelled until it is repaired.

(Expectation 03.04)

This concerns the functions contributing to the movement and safety of vehicles and motorised machines (e.g. brakes).

3.3 Roadway Maintenance

Requirement 3.3.1: Roadway Maintenance

Roadways remain permanently unobstructed; if necessary, any obstacle is visibly marked and remains visible both night and day.

Roadways and the implemented elements of the traffic plan are regularly inspected and maintained.

(Expectation 03.04)

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4 TERMS AND DEFINITIONS

This rule conforms to the terms and definitions of **CR-GR-HSE-001**. Additional terms and definitions specific to this rule are described herein.

Counterbalance lift truck

Stacking lift truck fitted with fork arms (or with the fork arms replaced by another device) on which the load, either palletised or not, is put in a cantilever position in relation to the front wheels and balanced by the mass truck.

Free roadway

Traffic lane on site subject to the general traffic rules applicable on site.

FGPS (Front Guard Protective Structure)

A system or structure designed to protect the driver situated in the operator's cab from frontal impacts.

FOPS (Falling Object Protective Structure)

A system or structure designed to protect the driver situated in the operator's cab from falling objects.

High-visibility clothing

Clothing that meets the requirements of ISO 20471 or is deemed valid following a risk analysis.

Motorised machine

Mobile equipment with one or more functions including forklift, cranes (wheeled, mobile, auxiliary), Mobile Elevation Work Platforms (MEWP), remotely controlled or driver-controlled worksite vehicles (farm tractors, excavating machinery, etc.).

Regulated roadway

An on-site roadway that crosses a zone defined by the site as having specific risks (e.g. technological, work) to which particular traffic rules apply.

Roadway

Zones where motorised machines, vehicles, or pedestrians circulate or park (including accesses, walkways, etc.).

ROPS (Roll Over Protective Structure)

A system or structure designed to protect the driver situated in the operator's cab during an overturn of a vehicle or motorised machine. A ROPS system consists of bars attached to the chassis that maintain space for the driver's body in the event of a rollover (e.g. cab, roll bar).

Traffic plan

Traffic information identified on the site layout relating to:

- The location of the site in its immediate environment (roadways, etc.);
- Access to the site;
- The location of the site's buildings, units and other facilities;
- Site roadways and the direction of traffic;
- The location of loading/unloading or parking areas;
- Muster points;
- The position and meaning of traffic signs;
- General traffic instructions.

Vehicle

In this rule, vehicle (motorised or not) refers to light or heavy transportation means used for people or goods.

This includes:

- Light vehicles (including minibuses);
- Light commercial vehicles;
- Heavy collective transport vehicles;
- Heavy goods transport vehicles;
- All-terrain vehicles;
- Two wheels (including bicycles), three wheels, quads and Utility Task Vehicle (UTV).

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5 REFERENCE DOCUMENTS

Reference	Title – Group Documents
CR-GR-HSE-001	One-MAESTRO HSE Expectations
GM-GR-HSE-452	Prevention of Onsite Traffic Accidents
GM-GR-HSE-460	Forklift Trucks Safety

Reference	Title – External Documents
ISO 3691-1	Industrial trucks - Safety requirements and verification - Part 1 : self-propelled industrial trucks, other than driverless trucks, variable-reach trucks and burden-carrier trucks
ISO 20471	High Visibility Clothing – Test Methods and Requirements (2013)

6 BIBLIOGRAPHY

Title	
INRS 975	<i>La circulation en entreprise</i>
INRS ED 6002	<i>Conception de l'organisation des circulations et des flux dans entreprise</i>
INRS 6083	<i>Prévenir les collision engins-piétons</i>
HSE UK HSG136	A Guide to Workplace Transport Safety
Australia worksafe	A Guidebook of Industrial Traffic Management & Forklift Safety

7 LIST OF APPENDICES

Reference	Title
APPENDIX 1	Minimum Provisions to Establish Site Traffic Rules (Excluding Service Stations in Operation)
APPENDIX 2	Minimum Provisions for Drivers of Vehicles and Motorised Machines Circulating on Site (excluding public vehicles at service stations and vehicles only accessing car parks)
APPENDIX 3	Minimum Safety Provisions for Vehicles or Motorised Machines and Their Use on Site (excluding public vehicles at service stations and vehicles only accessing car parks)

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8 DISTRIBUTION AND EFFECTIVE DATE

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9 REVISIONS

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00	28/07/2020	Creation	PSR/HSE/FHOS/REE F. Menci	PSR/HSE/FHOS A. Abzizi	PSR/HSE X. Bontemps

	Group Rule		
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APPENDIX 1

Minimum Provisions to Establish Site Traffic Rules (Excluding Service Stations in Operation)

Minimum General Provisions for Site Traffic

- Local traffic regulations are applicable.
- Only authorised vehicles can access the site (excluding unenclosed, exterior parking lots). Private vehicles are not allowed to circulate on site.
- The separation between motorised vehicle roadways and pedestrian or bicycle roadways is prioritised, and the number of crossings is minimised.
- Roadways with high pedestrian flow are, as a minimum, demarcated or identified by ground markings.
- Speed limits are defined and cannot exceed:
 - 30 km/h (18 miles/h) on free roadways (excluding roads connecting separate sites); and
 - 10 km/h (6 miles/h) on regulated roadways subject to authorisation as well as in work areas and zones where pedestrians are present.
- The seat belt is fastened by all occupants when the vehicle or motorised machine is in motion.
- The use of radio link systems, walkie-talkies (except listening mode) and/or mobile phones with or without hands-free devices (hands-free, Bluetooth, etc.) while driving is prohibited (active use of radio link or walkie-talkies is permitted in emergency situations).

Specific Provisions for Parking on Site

- Vehicles are parked exclusively in the spaces reserved for this purpose.
- Vehicles and motorised machines are not parked in front of any building or production unit access, in front of access points and walkways, or near fire-fighting facilities.
- Vehicles are parked in such a way that they can leave the parking space in a forward motion. When parked, the parking brake is activated.
- Vehicles and motorised machines parked in a regulated roadway are not locked. Keys and any start codes are placed in a visible position.

Specific Provisions for Motorised Machines, Particularly Forklifts

- Motorised machines are not moved if their equipment is unsafe or deployed in an extended position.
- Motorised machines with combustion engines (e.g. gasoline, diesel fuel, LPG, particularly forklifts) are not used inside buildings that are not big enough or not sufficiently aired or ventilated to eliminate the risks related to exhaust fumes.
- The speed of forklifts is limited to 12 km/h (7 miles/h). This speed is limited to 8 km/h (5 miles/h) in zones with mixed forklift and pedestrian traffic. Depending on the results of the risk analysis, lower speeds may be defined taking into account the environment (e.g. inside of a building/workshop) and the type of forklift used.

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- Drivers wear high-visibility clothing.
- When the forklift is parked, the driver sets the two forks flat on the ground. If this is not possible, the forks are lifted more than 2 meters off the ground without a load.
- When visibility moving forward is poor due to the bulk of the load, the driver is guided by a “spotter” or moves the forklift in reverse. This type of manoeuvre is to be used as little as possible and for short distances only, by putting in place appropriate measures based on a risk analysis (such as spotters, driving assistance devices, etc.).

Specific Provisions for Pedestrians and Cyclists

- Pedestrians use designated path/walkways and hold the handrail when taking the stairs.
- Personnel appointed as “spotter” or traffic assistants, pedestrians and cyclists having to move in or near busy traffic areas (e.g. loading/unloading zones, common forklift operating zones, pedestrian crossings in areas with a great number of vehicles and no physical separation of the road ways) are to wear high-visibility clothing.
- Personnel designated as "spotters" or traffic assistants are identifiable and can communicate effectively with the driver.

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APPENDIX 2

Minimum Provisions for Drivers of Vehicles and Motorised Machines Circulating on Site (excluding public vehicles at service stations and vehicles only accessing car parks)

Drivers:

- Perform a daily visual inspection of the general condition of the vehicles and motorised machines before they are used (or at shift change);
- Carry only the number of authorised passengers;
- If transporting loads, ensure the loads are properly loaded and secured to prevent any load movement, tipping or dropping during movement;
- Ensure there are no loose objects in the cab likely to become a dangerous projectile in the event of an overturn or a sudden manoeuvre.

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APPENDIX 3

Minimum Safety Provisions for Vehicles or Motorised Machines and Their Use on Site (excluding public vehicles at service stations and vehicles only accessing car parks)

- The authorised means for transport are vehicles or motorised machines with fixed driver protection (e.g. cabin, roll bar, ROPS) as well as bicycles without electric assistance. The use of other two-wheeled motorised vehicles is prohibited.
- Any vehicle or motorised machine with a seated driver are equipped with safety belts. This applies to counterbalance lift trucks, for other types of forklift trucks with the operator's seat facing sideways, the possible absence of a belt is compensated by the implementation of organisational measures to limit the risk of collision.
- Vehicles or motorised machines are equipped with driver protection structures according to the risk to which the driver is potentially exposed (FOPS, FGPS, etc.). For forklift trucks, driver protection is mandatory when the maximum lifting height is more than 1.8m above the ground according to [ISO 3691-1](#).
- The use of vehicles and motorised machines respects the instructions and operating procedures provided by the manufacturer and the regulatory obligations. No technical modifications may be made without the manufacturer's authorisation.
- Vehicles or motorised machines with access to an area with a risk of explosion or fire are subject to a special authorisation that includes the applicable preventive measures which are defined by the entity or affiliate.
- A person guiding the manoeuvres ("spotter" or traffic guide) and/or anti-collision systems (e.g. audible and/or visual warning devices automatically activated by the reverse gear engagement, pedestrian detection systems) are used when:
 - The driver of the vehicle or motorised machine is unable to perform the manoeuvre alone;
 - The area presents risks associated with the manoeuvre that may impact persons or equipment; or
 - It concerns the reverse of a heavy vehicle or collective transport of 9 or more persons.

These systems are selected taking into account the intended conditions of use.

- Bicycles are equipped with reflective elements.

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COMPANY RULE

CR-GR-HSE-425

HSE Requirements for Work at Height

Executive summary

This rule defines the minimum HSE requirements to be implemented during work and moving around at height where there is a risk of people falling with a vertical drop of ≥ 1.5 meters. It also applies to certain activities exposing risks of dropped objects, electrocution in proximity or in contact with overhead power lines, and crushing at height when using a mobile elevating work platform (MEWP).

The following requirements are mandatory:

Risk assessment

- Any work or moving around at height are subject to a risk analysis covering the four risks listed above;
- A risk assessment allows for the definition of the control measures that are to be implemented, by order of priority, starting with the installation design that limits work at height activities to wearing personal protective equipment (in particular a safety harness).

Installation management

- A periodic inspection program is implemented to check the condition of equipment required for access, moving and working at height (caged ladders, guard rails, grating floors, etc.);
- Removable guard rails are inventoried and the reason for their installation is justified. They are secured and flagged on site to ensure that no activity can compromise their safety function.

Work preparation

- Temporary equipment for work at height (scaffolds, MEWP, etc.) is selected in consideration of the work environment. Ladders, standard stepladders and other non-secured mobile equipment are not used as workstations;
- Prior to performing any work on roofs (storage tanks, buildings, service station canopies), excluding permanent secure walkways, an inspection of their robustness is conducted;
- A safety distance from overhead power lines is respected when working at height or moving temporary equipment (in particular mobile scaffolds);
- Permanent or temporary anchor points are identified or installed in installations so that personnel wearing a safety harness can secure themselves safely;
- Plans for rescue at height exist and are tested on a regular basis;
- Personnel working at height are trained and, as necessary, certified according to the activity concerned. Training is given to all personnel and is adapted to their role.

Execution of work

- Temporary equipment and personal protective equipment for work at height are used in compliance with the conditions of use defined by the manufacturer;
- When collective protection equipment (guard rails, grating floors, etc.) are removed, compensatory measures are taken to restrict access to the area of concern (in particular solid barricades);
- All personnel moving around or working at height wear a safety helmet with a chin strap;
- Any personnel performing a work at height ≥ 1.5 m above the reference ground and that is covered by a work permit, wears a safety harness tied off to previously defined suitable anchor points;
- The use of scaffolds, MEWP and rope access work are subject to the detailed requirements given in the appendices.

REVISION	DATE	PURPOSE	WRITTEN BY	CHECKED BY	APPROVED BY
01	08/12/2022	Revision Requirements 3.3.4	STS/HSE/AUD/SPR J.-L. Ohanessian	STS/HSE/AUD P. Hoorelbeke	STS/HSE M. Charton

Date of publication in REFLEX: 20/12/2022

	Company Rule		
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Foreword	This English version is translated from the original French reference version.
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1 Purpose

This rule defines the minimum HSE requirements to be implemented during work and moving around at height where there is a risk of people falling with a vertical drop of ≥ 1.5 meters.

By extension, this rule applies to activities necessary to perform certain works at height and exposing:

- A risk of dropped objects;
- A risk of electrocution in proximity or in contact with overhead power lines (particularly when using mobile scaffolds, mobile elevating work platforms (MEWPs), portable ladders, etc.); or
- A risk of crushing at height when using a MEWP.

This rule is established to be in accordance with **CR-GR-HSE-001** One-MAESTRO HSE Expectations and Golden Rule 10.

2 Scope of Application

This text only applies to TotalEnergies' companies^[1] and other controlled structures^[2] of the Company that fall within the reporting scope of the Sarbanes-Oxley Act (SOX). They must apply them in accordance with their respective decision-making rules and subject to local statutory and regulatory provisions.

Within companies and structures not controlled by the Company (TotalEnergies SE or one of its subsidiaries), the representatives of TotalEnergies SE or its subsidiary must endeavour to promote the principles of this Rule.

This text does not apply to all other entities. For such other entities, the Essentials of Internal Control constitute the necessary and sufficient internal control framework of the Company.

[1] "TotalEnergies' companies" are: TotalEnergies SE and all its subsidiaries; a subsidiary being a company in which TotalEnergies SE holds, directly or indirectly, the majority of voting rights.

[2] "Controlled structure" means any structure other than a company, formed in association with third parties and controlled by a TotalEnergies' company (i.e. joint ventures, EIG, partnerships, etc.).

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3 Requirements

3.1 Risks Analysis and Assessment



Requirement 3.1.1: Risk Analysis for Work and Moving Around at Height

All works or moving around at height are subject to a risk analysis covering as a minimum, when applicable:

- The risk of personnel falling;
- The risk of dropped objects;
- The risk of electrocution in proximity or in contact with overhead power lines;
- The risk of crushing at height when using MEWP.

(Expectation 03.01)

A person or object can fall from a structure that is raised above the ground but also from ground level into a pit or an excavation.

The potential consequences of dropped objects are to be considered for personnel and installations.

Routine or recurring operations or movement at height (such as tank gauging, top loading trucks or train wagons, inspection rounds etc.) can be managed by a generic risk assessment, and do not require an analysis to be conducted on a case-by-case basis. Specific preventive measures may be added when appropriate.

Requirement 3.1.2: Prioritisation of Risk Control Measures

A risk assessment on work at height defines the risk control measures to be implemented, as per the following order of priority:

- Limiting work at height (reducing risks at source);
- Installation of permanent and secured means of access and for work at height;
- Implementation of temporary equipment for collective protection (scaffolds, MEWP, fall arrest systems such as safety nets, etc.);
- Use of positioning techniques (rope access work) or personal protective equipment.

(Expectation 03.04)

As part of projects for new installations or modifications to existing ones, the engineering design limits, as far as possible, the future need for work at height situations during the operations and maintenance phases.

Examples of risk reduction at source:

- Low-point loading/unloading systems for tanker trucks;
- Equipment that can be lowered to ground level for maintenance operations;
- Air conditioning equipment installed at ground level (rather than on the roof) in certain service stations.

Modifications to existing installations are recommended on a case-by-case basis.

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Permanent means (e.g. stairways, walkways, work platforms) are installed and fitted with collective protection devices (guard rails, etc.) for frequently used access points and work stations at height.

Generally, collective protection equipment is to be used in priority to prevent people and objects from falling. For certain types of work at height, additional personal protective equipment is used (see Requirement 3.4.4: wearing a safety harness for tasks executed as part of a work permit).

Measures to restrict access to hazardous areas can complete risk control measures, for example: restricting access to truck domes to authorised personnel only, padlocking caged ladders giving access to building roofs, etc.

Risk assessments allow for consideration and decision on possible incompatibilities between personal protective equipment (PPE) for work at height and other PPE required for the execution of certain activities (e.g. wearing a safety harness versus wearing a chemical protective suit that can withstand hydrofluoric acid in certain refineries).

For work above water where removing the fall risk cannot be guaranteed, wearing a life jacket is mandatory.

3.2 Risk Control Measures for Installation Management



Requirement 3.2.1: Management of Collective Protection

The condition of equipment required for access, moving and working at height, including their protective measures (caged ladders, access gate, guard rails, grating floors, etc.) is part of a periodic inspection program executed by designated personnel.

(Expectation 09.02)

Requirement 3.2.2: Management of Removable Guard Rails

Removable guard rails are inventoried and the reason for their installation is justified. They are secured and flagged on site to ensure that no other activity can compromise their safety function.

(Expectation 03.01)

Removable guard rails can be secured using securing pins, padlocks, etc.

They are flagged on site by physical marking (color code, information sign, etc.) so that they can be easily identified.

This requirement concerns permanently installed removable guard rails used for collective fall protection and that can be temporarily removed for certain activities. It does not concern movable guard rails such as platform access gates or folding collective protection systems at truck loading stations.

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3.3 Risk Control Measures for Work Preparation



Requirement 3.3.1: Selection of Elevation Means to be Used

Temporary equipment for work at height (scaffolds, MEWP, etc.) is selected in consideration of the work environment, the height to be reached and manufacturers' instructions.

Picking ladders (that do not have a platform secured on all four sides), standard stepladders where the upper section is not secured, and portable ladders are not used as workstations.

(Expectation 03.04)

Examples of restrictions in the selection of elevation means to be used:

- Work environment: lightweight individual mobile platforms are not suitable for open area work sites or other areas where the ground is not level;
- Height to be reached: a mobile scaffold built with prefabricated materials is not suitable for work at a height of more than 8 m outside or 12 m inside buildings (as per standard [EN-1004](#));
- Manufacturers' instructions: a MEWP designed for use inside buildings is not suitable for use outside.

Picking ladders are authorised for activities corresponding to their main function, for example, simple access to an object located at height. On the contrary, a stock inventory is considered as work at height and cannot be performed using this type of equipment.

The use of secure equipment (such as lightweight individual mobile platforms inside buildings) is recommended even for working at heights of less than 1.5 m.

Portable ladders are to be used only as a means of access to an upper or lower level.

Requirement 3.3.2: Management of Risks Against Dropped Objects

Tools, materials and equipment used during work at height are transported, handled and stored so as to prevent them from being dropped.

The risk assessment defines any additional requirements for suitable protection against dropped objects, either at the work area (e.g. lateral protection devices such as netting), as the object is dropped (e.g. debris screen), or at ground level where a sufficiently large safety area is marked off.

(Expectation 03.04)

Examples of securing tools:

- Tools transported using tool belts or back-packs;
- Secure handling by using tool lanyards attached to the wrist;
- Storage in toolboxes or other containers on work platforms.

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Requirement 3.3.3: Work on Service Station Canopies and Tank or Building Roofs

Prior to performing any work on service station canopies, storage tank roofs or the roofs of buildings (excluding permanent secure walkways), an inspection of the structure is conducted to ensure its robustness.

In the absence of permanent collective protection means, temporary collective protection equipment (e.g. guard rails, safety nets below the work area, scaffolds at the bottom of slopes) is installed prior to performing the work, otherwise wearing a safety harness is required.

(Expectation 03.04)

Robustness can be checked for example by measuring the thickness of metal storage tank roofs or by identifying and protecting fragile areas on the roofs of buildings (asbestos cement roofs, skylights, etc.).

The evaluation of the robustness of roofs and canopies takes into account in the extra load generated by the personnel and equipment used during operations.

Requirement 3.3.4: Work Close to Overhead Power Lines

Any tasks performed at height underneath or in proximity to overhead power lines respect a minimum safety distance between the operator (or the equipment being used) and the power lines.

(Expectation 03.04)

The minimum safety distance is 3 meters for power lines under 50kV and 5 meters for power lines of 50kV and above.

Requirement 3.3.5: Anchor Devices for Safety Harnesses

For work at height requiring a safety harness, permanent or temporary anchor points are identified and/or installed.

(Expectation 03.04)

Example of a recognised standard as of June 01, 2019 for the installation of anchor points: [EN-795](#).

This requirement does not apply to erecting/dismantling scaffolds (see Appendix 1).

Entities or affiliates have at least one person trained in the identification of appropriate anchor points in installations (structural elements, etc.) or engage a competent external agency.

Requirement 3.3.6: Rescue Plans

A plan or procedure for rescue at height is tested on a regular basis.

All operators secured by a safety harness remain visible or audible.

(Expectation 03.04)

The rescue means available, internal or external to the entity or affiliate, enable in particular:

- Evacuation of victims from a workstation at height (following injury or fainting);

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- Recovery of personnel suspended in a safety harness (after a fall, with risk of suspension trauma that can be fatal after 15 to 20 minutes).

Requirement 3.3.7: Training for Personnel Working at Height

Personnel working at height are trained in the associated risks, in the use of temporary equipment and the personal protective equipment used.

Training is given at frequencies defined by local regulations or otherwise, by the entity, affiliate or contractor company involved.

(Expectation 06.02)

Training or awareness sessions on the risks related to work at height are attended by all personnel, at frequencies defined by the entity, affiliate, or the contractor company involved, depending on the risks to which personnel are exposed or the role they have in organising work at height.

3.4 Risk Control Measures for the Execution of Work



Requirement 3.4.1: Limits of Use for Work or Protective Equipment

Temporary equipment and personal protective equipment for work at height are used in compliance with the conditions of use defined by the manufacturer.

(Expectation 02.01)

For example:

- Respect the maximum limits of wind speed, load and arm extension when using a MEWP;
- Respect the minimum safety distances with respect to a lower level when using a safety harness ("fall clearance").

Requirement 3.4.2: Managing the Removal of Collective Protection Equipment

When work requires the temporary removal of permanent or provisional collective protection equipment (floors, guard rails, safety netting underneath the work area, etc.), compensatory measures are taken to restrict access to the area of concern (in particular solid barricades).

(Expectation 04.08)

The specific scaffold labeling process using orange tags (with associated rules) is an example of a compensatory measure put in place to limit access within a modified scaffold area.

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Requirement 3.4.3: Safety Helmet with a Chin Strap

All personnel moving around or working at height wear a safety helmet with a chin strap.

(Expectation 04.06)

Requirement 3.4.4: Work at Height Covered by a Work Permit

Any personnel performing a work at height ≥ 1.5 m above the reference ground or a body of water¹ and that is covered by a work permit, wears a safety harness tied off to previously defined suitable anchor points.

(Expectation 04.06)

This requirement does not apply to the use of mobile individual platforms, lightweight mobile individual platforms and to mobile scaffolds that do not have anchor points originally installed by the manufacturer (except in the case where an anchor point above the work area is technically feasible and without disproportionate effort). Neither does it apply if solid lateral protection measures are present such as a wall, metal facade, safety cage, etc. making it impossible to fall.

Requirement 3.4.5: Specific Equipment and Operations

Scaffolds, mobile elevating work platforms (MEWP) and rope access work comply with the instructions given in Appendices 1, 2 and 3 respectively.

(Expectation 03.04)

4 Terms and Definitions

This rule conforms to the terms and definitions of **CR-GR-HSE-001**.

5 Reference Documents

Reference	Title – Company Document
CR-GR-HSE-001	One-MAESTRO HSE Expectations

¹ For E&P offshore platforms and FPSO, the ground reference level corresponds to solid floors (decks) and the flooring of structures fitted with permanent collective protection means such as guard rails, where personnel stand before beginning to work at height.

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6 Bibliography

Title	
EN-1004	Mobile access and working towers made of prefabricated elements – Materials, dimensions, design loads, safety and performance requirements
EN-795	Personal fall protection equipment – Anchor devices

7 List of Appendices and additional documents

Reference	Title
Appendix 1	Specific HSE Requirements for Scaffolding
Appendix 2	Specific HSE Requirements for Mobile Elevating Work Platforms (MEWP)
Appendix 3	Specific HSE Requirements for Rope Access Work

8 Distribution and effective date

This document has been published in REFLEX, which is available on the WAT intranet: (The Company / Referentials and publications or WAT / Practical tools / The referentials)

Effective date is the date of publication in REFLEX.

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9 Revisions

REV	DATE	PURPOSE	AUTHOR	CHECKED BY	APPROVED BY
00	01/07/2019	Creation	PSR/HSE/FHOS/REE D. Doyonnas	PSR/HSE/FHOS A. Abzizi	PSR/HSE X. Bontemps
01	08/12/2022	Revision Requirements 3.3.4	STS/HSE/AUD/SPR J.-L. Ohanessian	STS/HSE/AUD P. Hoorelbeke	STS/HSE M. Charton

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Appendix 1 : Specific HSE Requirements for Scaffolding

A) Erecting, dismantling and modification

A1	Scaffolding selection meets the needs expressed by the requester (height of work area, loads applied to flooring, need for lateral protection nets, etc.).
A2	A specific risk assessment defines the need to provide technical instructions, erection plans and design notes for scaffolding.
A3	Scaffold erection, dismantling or modification operations are performed by authorised personnel (authorisation given by the employer, to be renewed periodically, based in particular on a recognised training course), using suitable fall protection PPE such as a safety harness and double lanyards (except for erection/dismantling of specific scaffolds that provide a safe construction process - upper levels secured prior to access).
A4	Access to scaffolds prior to acceptance is strictly reserved to personnel responsible for their construction and inspection before use.

B) Acceptance and inspection

B1	Adequate and visible labeling provides clear information on the scaffold status: green tags for compliance after acceptance, or red tags prohibiting access before acceptance or whenever a scaffold is considered as non-compliant (an orange tag can be used to indicate that a scaffold has been temporarily modified as part of a specific operation, e.g. removal of guard rails or floor panels to take out a heat exchanger bundle).
B2	When in use, scaffolds are checked on a regular basis (as a minimum once a week and after bad weather conditions likely to impact their integrity) by an authorised person, according to a set procedure. In particular, the general condition of the scaffold and the absence of any damages or changes to the structural elements are checked.
B3	In the case of long-term use, an in-depth inspection is performed on a regular basis by an authorised person (as a minimum every quarter).
B4	The different scaffolding inspections mentioned above are documented.

C) Specific rules for construction and use

C1	The passage between means of access and scaffold's flooring does not give rise to any additional risks of falling (use of flooring trap doors, platform access gates, etc.).
C2	The elements comprising scaffold flooring are securely fastened down to ensure they cannot be inadvertently moved.
C3	Scaffold flooring is kept clear and is cleaned on a regular basis to facilitate their use and limit the risk of incidents (in particular same-level falls and dropped objects).
C4	Storing equipment on scaffolds is prohibited unless covered in the risk assessment. In this case, users respect the maximum tolerable load thresholds.

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Appendix 2 : Specific HSE Requirements for Mobile Elevating Work Platforms (MEWP)

A) Personnel

A1	MEWP drivers are authorised by their employers (authorisation to be renewed periodically). To obtain authorisation, they are trained and certified in the use and risks of such equipment and given specific training for each type of MEWP used (IPAF's PAL training courses, CACES in France, or equivalent).
A2	A passenger with no specific training for driving a MEWP is authorised to access a MEWP to perform a specific task, provided that basic information on the inherent risks and rules to be respected has been received.
A3	A person authorised to operate a MEWP is present on the ground each time a MEWP is used to ensure that the operations is carried out properly, including when the MEWP is circulating between two work areas on site.

B) Inspections

B1	All MEWPs undergo a periodic general inspection by an accredited organisation. These inspections are documented.
B2	MEWP operators check the overall condition of the equipment before each use (visual inspection) and test the safety devices (battery arrestor, emergency shutdown, etc.).
B3	The risk analysis performed before using a MEWP takes into account, in particular, the ground condition (risk of tipping over), the presence of structures at height (crushing risk) and the presence of power lines (electrocution risk).

C) Use

C1	The conditions of use defined by the manufacturer for each MEWP are available with the machine and strictly followed (internal/external use, maximum admissible wind speeds and loads, etc.).
C2	Occupants of a MEWP wear a safety harness, tied off to a suitable anchor point on the platform (via a short lanyard attached to a low point), regardless of the type of MEWP used and the task performed.
C3	Occupants of a MEWP are not to climb out of the working platform when the boom is elevated, except in specific cases (e.g. access via a multi-directional MEWP to a secure area such as a terrace roof with collective protection equipment installed, or whenever it is impossible to use any other means to reach and evacuate a victim at height).
C4	MEWPs are moved only when the boom is folded.
C5	A MEWP is not a means for transporting people. All travel of a MEWP is carried out by the driver alone at the control panel, except where short-distance maneuvers directly related to the task to be performed are needed.
C6	MEWPs are not designed for loading/unloading equipment at height, unless the loads transported (people and equipment) are below the MEWP capacity, the equipment taken on board does not create risks for the occupants and other operators, and after checking to ensure there is not another more suitable and less risky alternative.

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Appendix 3 : Specific HSE Requirements for Rope Access Work

A) Risk assessment

A1	<p>The risk assessment concludes that:</p> <ul style="list-style-type: none"> - Rope access work can be safely executed (in particular, taking into account the risks generated by the installations and the working environment for both operators and equipment); and - The use of any safer work equipment (scaffolding, MEWPs, etc.) is not justified, either due to a technical or physical impossibility of use (e.g. on offshore platforms), or due to an increase in exposure of personnel to falling risks (e.g. when erecting/dismantling a scaffold for work at great height, such as on a refinery flare).
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B) Qualification for contractor companies and operators

B1	Rope access work is performed by specialist companies with certified personnel. Rope access companies are affiliated to institutes such as the IRATA ² or equivalent (international scope) or employ personnel who are CQP ³ (France) qualified or equivalent.
B2	<p>An operating team has at least two personnel:</p> <ul style="list-style-type: none"> - One of whom has supervision competencies (IRATA 3, CQP 2 or equivalent); - Other rope technicians with lower qualifications (IRATA 1&2, CQP 1, CATC⁴ or equivalent); - With a maximum quota of 33% having IRATA level 1 when the team is IRATA certified.

C) Technical requirements

C1	The system is comprised of at least two separately anchored ropes, one as a means of access, descent, and support (work rope) and the other as a backup (security rope).
C2	Rope technicians are provided with an appropriate harness connected to the security rope.
C3	The work rope is equipped with safe means of ascent and descent and have a self-locking system to prevent the user from falling, should the rope technician lose control of their movements.
C4	The security rope is equipped with a mobile fall prevention system which follows the movements of the rope technician.
C5	Tools and other accessories used by rope technicians are secured to their harness or seat or by some other appropriate means.

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² IRATA: Industrial Rope Access Trade Association

³ CQP: *Certification de qualification professionnelle cordiste* (Professional qualification certification for rope access work)

⁴ CATC: *Certificat agent technique cordiste* (Technical rope operator certificate)



HSE Requirements for Confined Space Entry

Executive Summary

This rule defines the following HSE requirements for the management of entries into confined spaces:

- The general process regulating confined space entry is described in a documented procedure which includes the requirements of this rule as a minimum.
- For any confined space entry, a risk analysis covering each stage of the operation and any specific risks, as well as a risk control plan, are drawn up. They are developed and validated jointly by the representatives of the entity and affiliate and by any contractors involved, following a prior joint visit to the worksite.
- Confined space evacuation and rescue plans are established and regularly tested.
- Personnel who prepare, supervise, or perform confined space entry operations are trained to fulfil their role. Personnel required to enter a confined space are physically fit.
- Any operation involving entries into a confined space is subject to the issue of a confined space entry certificate.
- The final validation of the confined space entry certificate is subject to the required prior checks in the field. The certificate is approved by a certified authority.
- Provisions are made to ensure a permanent surveillance for any operation involving confined space entry.
- Once a confined space has been opened, and as long as the necessary conditions for entry are not met, access points are physically prevented (using plates, bars, chains) and explicit signs prohibiting entry are put in place.
- Gas tests (oxygen, explosiveness, toxicity if relevant) are carried out before the initial entry and after each interruption of the operation. A continuous gas monitoring is implemented throughout the confined space entry operation; failing this, all entrants are equipped with an individual gas detector (oxygen as a minimum), and gas tests are carried out at regular intervals.
- Where confined space entry requires respiratory protective equipment to be worn, the type of equipment is suitable for the nature of the atmosphere in question, the ambient conditions, and the actual time spent in the confined space.

Date of Publication in REFLEX: 31/08/2021

REVISION	DATE	PURPOSE	AUTHOR	CHECKED BY	APPROVED BY
00	24/08/2021	Creation	PSR/HSE/FHOS/REE D. Doyonnas	PSR/HSE/FHOS A. Abzizi	PSR/HSE X. Bontemps

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	HSE Requirements for Confined Space Entry		
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Foreword	This English version is translated from the original French version.
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1. Purpose

This rule defines the minimum HSE requirements to be implemented to authorise, prepare, and supervise entries into confined spaces (for work, inspection, sampling, etc.).

Given the associated risks, personnel only enter confined spaces if there are justified reasons to do so and if alternative solutions have been ruled out.

This rule is drawn up in keeping with **CR-GR-HSE-001** – One-MAESTRO HSE Expectations – and completes the requirements of Golden Rule 8.

2. Scope of Application

This rule applies to all TotalEnergies' companies¹ and other controlled structures² in accordance with their respective decision-making rules and subject to local statutory and regulatory provisions.

The requirements applicable to contractors are identified and communicated to those contractors, and those contractors are required to comply with them.

Where an entity or affiliates of TotalEnergies holds an interest in assets, activities or sites which it does not operate³, it promotes the requirements of this rule and seeks to have similar requirements adopted by the operator.

This rule does not apply to closed rooms that are not designed as routine work areas but usually have door-type access (such as analyser cabins, electrical substations, pump rooms, hazardous substance warehouses, etc.). Entries into these closed rooms, for carrying out occasional activities of adjustment, maintenance, inventory, etc., are managed via local procedures and instructions, which specify for example:

- Securing access by key;
- Signalling of the potential risks;
- Limitation of access to authorised personnel only;
- Information to colleagues before accessing such a room;
- Verification that no alarms specific to the room concerned are activated (e.g. to control the atmosphere or ventilation issue).

¹ "TotalEnergies' companies" are: TotalEnergies SE and all its subsidiaries; a subsidiary being a company in which TotalEnergies SE holds, directly or indirectly, the majority of voting rights.

² "Controlled structure" means any structure other than a company, formed in association with third parties and controlled by a TotalEnergies' company (i.e. joint ventures, EIG, partnerships, etc.).

³ "Operate" means organise, direct, steer and manage. For example, the operator can hold an operating permit or be designated as operator through an operating agreement.

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3. Requirements

3.1. Organisation

Requirement 3.1.1: Confined Space Entry Procedure

The general process regulating confined space entry is described in a documented procedure which includes the requirements of this rule as a minimum.

(Expectation 04.01)

The confined space entry procedure describes the stakeholders' roles and responsibilities. It limits entry into a confined space, which takes place only if no other alternative has been identified. It promotes any design change that can facilitate access to and rescue from a confined space.

3.2. Preparation

Requirement 3.2.1: Risk Analysis and Risk Control Plan

The risk analysis for a confined space entry specifically covers each stage of the operation and any special risks.

A risk control plan is drawn up and specifies how the risk control measures identified in the risk analysis will be implemented.

The risk analysis and the risk control plan are developed and validated jointly by representatives of the entity or affiliate, and by any contractors if involved, following a prior joint visit to the worksite.

(Expectations 03.01; 03.04)

The different minimum steps to be covered in the risk analysis are: opening; degassing (if applicable); first entry; cleaning (if applicable); internal activities; closing; rescue.

Appendix 2 lists the principal hazards and risks to consider for confined space entry.

For operations in a non-breathable nitrogen atmosphere **GS-RC-HSE-078** "Confined Space Entry under nitrogen atmosphere conditions for catalyst handling" is applicable.

Appendix 3 mentions some specific points to be implemented when preparing entries into confined spaces that may contain sulphide type pyrophoric deposits.

For activities in the presence of NORM radioactive substances refer to **GM-GR-ENV-015** "Management of Naturally Occurring Radioactive Materials (NORM)".

Appendix 4 presents the main points to cover in the risk control plan.

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Requirement 3.2.2: Emergency Plans

Confined space evacuation and rescue plans are established and regularly tested.

Any operation involving confined space entry requires validation of the associated emergency plans and is conditional on the availability of designated rescue teams and associated equipment.

(Expectations 07.02; 07.04)

The evacuation plan covers self-rescue of entrants, according to predefined arrangements for:

- Warning signals (i.e. communication codes: oral, visual or by knocking on the walls of the confined space);
- Specific actions (e.g. use of Emergency Escape Breathing Devices - EEBD);
- Routes to use (which may include creating additional dedicated openings).

The evacuation plan is explained to the personnel involved before anyone enters the confined space and is tested regularly throughout the operation.

The rescue plan covers:

- Rescue of the victim(s) from outside the confined space, using appropriate equipment handled by personnel trained in its use (e.g. rescue tripod connected to the safety harness of the entrants, handled by a member of the work team); or
- Rescue of the victim(s) by qualified rescuers entering the confined space.

The rescue plans are tested, without endangering personnel, before first entering a confined space.

Requirement 3.2.3: Personnel Training and Aptitude

Personnel who prepare, supervise, or perform confined space entry operations are trained to fulfil their role.

Personnel required to enter a confined space are physically fit.

(Expectation 06.02)

Training with refresher courses (five-yearly frequency recommended) covers:

- Knowledge of the risks associated with confined space entry and the general principles that apply when entering such spaces (need for specific authorisation, atmospheric controls, emergency plans, etc.);
- For the safety watcher especially, knowledge of their role and duties;
- As needed, training in confined space evacuation and rescue equipment;
- For personnel external to the entity or affiliate, information on the local confined space entry procedure.

Checking the physical fitness of entrants includes:

- At least, the absence of claustrophobia;
- Where applicable, physical fitness and body shape (depending on the complexity and narrowness of the confined space).

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3.3. Formal Authorisation for Confined Space Entry

Requirement 3.3.1: Confined Space Entry Certificate

Any operation involving entries into a confined space is subject to the issue of a confined space entry certificate.

The certificate alone does not authorise physical entry into a confined space (which remains subject to prior and regular checks of the actual conditions of the operation), nor the start of works covered by work permits.

(Expectation 04.02)

The confined space entry certificate (introduced by rule **CR-GR-HSE-402** – Permit to Work Process):

- Attests to the identification of the general principles for securing a confined space before entry;
- Separately complements the work permits potentially issued for the activities planned in a confined space;
- Is issued formally (drafted, signed) and specifically (equipment, entrants' companies);
- Has a maximum validity period compatible with the duration of associated permits or required activities;
- May undergo extension of validity, with verification in this case of the adequacy of the organisation in place and the safety means implemented, and that no new risks have arisen.

Requirement 3.3.2: Final Validation of the Certificate

The final validation of the confined space entry certificate is conditional on prior field checks of the:

- Required confined space isolations;
- Authorised atmospheric conditions;
- Effective implementation of the measures defined in the risk control plan and in the emergency plan.

The confined space entry certificate is approved by a certified authority, as per the confined space entry process defined by the entity or affiliate.

The certificate is declared void when the work execution method is modified or following the activation of an emergency plan.

(Expectation 04.02)

Traceability of controls is ensured (appropriate certificates, checklists, etc.), especially regarding the atmospheric conditions.

Isolations are traced using a powered system isolation certificate (as per the rule **CR-GR-HSE-428**).

If applicable, a cleaning/degassing certificate is issued (as per the rule **CR-GR-HSE-402**).

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3.4. Supervision

Requirement 3.4.1: Permanent Surveillance

Provisions are made to ensure a permanent surveillance for any operation involving confined space entry.

If this task is performed in-person by a safety watcher, they never enter the confined space on their own initiative, even for rescue purposes.

(Expectation 03.04)

Permanent surveillance is ensured by either:

- The continuous presence of a safety watcher, trained for and assigned to their mission, positioned immediately next to the access points, and in permanent contact with the entrants;
- Any other technical means offering an equivalent level of control, such as complete and centralised remote surveillance systems.

In particular, permanent surveillance serves to:

- Control the entrants (access authorisation, maximum number, materials/tools introduced, etc.);
- Assess the physical condition of entrants (e.g. breathing difficulties, dizziness, tiredness, heat stress, etc.) and the general safety of activities in the confined space;
- Make sure the conditions and measures in place match those in the risk control plan;
- If necessary, order evacuation of entrants or alert the emergency rescue teams.

Requirement 3.4.2: Control of Unintentional Entries

Once a confined space has been opened, and as long as the necessary conditions for entry are not met or the operation within the space is subsequently temporarily interrupted, access points are physically prevented (using plates, bars, chains) and explicit signs prohibiting entry without authorisation are put in place.

(Expectation 03.04)

Physical securing of access points concerns both the openings provided for entry into a confined space and those made for other needs, if accessible to personnel (ventilation, transfer of materials, emergency evacuation, etc.). Securing with simple marker tape is not sufficient.

In addition to securing access points and putting up signs prohibiting entry without authorisation, it is strongly advisable to signal the main risk(s) with warning notices near the entry points or in the surrounding area, especially if there is a risk of asphyxia.

A permanent warning sign is installed on the dipping hatch of each underground tank in a service station, to remind anyone who opens the manhole chamber cover that it is forbidden to enter this confined space without authorisation.

A colour-code system may be used at the main access point to the confined space to inform personnel of its atmospheric status; for example:

- Green: valid atmospheric controls, entry authorised;
- Orange: specific risks, entry under certain conditions (e.g. wearing Self-Contained Breathing Apparatus – SCBA);
- Red: hazardous atmosphere, entry prohibited.

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Requirement 3.4.3: Atmospheric Conditions and Evacuation Criteria

Gas tests (of oxygen level and explosiveness as a minimum, and toxicity if relevant) are carried out:

- Before the initial entry into a confined space;
- And after each significant interruption of the operation, in order to authorise the resumption of entries.

Gas monitoring is implemented during any confined space entry operation:

- Continuously by means of a collective gas detection device;
- Failing this, all entrants are equipped with an individual gas detector (oxygen as a minimum; other gases according to the risk analysis). In this case, gas tests are carried out at regular intervals, at a frequency defined during the risk analysis.

Criteria are defined for the validation of entries and the triggering of evacuations.

(Expectation 03.04)

Atmosphere controls are representative of the whole confined space.

If the atmospheric conditions are likely to change, it is advisable that all entrants are equipped with an individual gas detector, even if continuous gas monitoring by means of a collective gas detection device is implemented (example of an atmosphere likely to change: an operation to remove settled sludge from the bottom of a hydrocarbons storage tank, in which a pocket of flammable or toxic gas may be released unexpectedly as the sludge is moved around).

Confined Space Entry is prohibited:

- With or without breathing apparatus, if oxygen level exceeds 23.5% or if explosiveness exceeds 10% of the LEL (Lower Explosive Limit);
- Without suitable breathing apparatus, if oxygen level is below 19.5%, if toxic gas concentrations (hydrocarbons, benzene, CO, H₂S, NH₃, etc.) exceed 10% of their OEL (Occupational Exposure Limits), or if the fresh air renewal rate (or fume removal rate) is insufficient to guarantee the atmospheric quality in the work area.

Evacuation from a confined space is ordered when:

- The atmospheric criteria indicated above for entry control occur while personnel are already present in a confined space;
- Conditions inside or outside the confined space change in such a way that the safety of personnel entering is no longer ensured (e.g. changing weather conditions, with lightning when working in metal structures or heavy rain when present in sewer systems);
- An external alert is activated (detection of gas nearby, general site alert, etc.);
- Permanent surveillance is no longer ensured;
- Alert or rescue means are unavailable.

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Requirement 3.4.4: Suitability of Respiratory Protective Equipment (RPE)

Where confined space entry requires respiratory protective equipment to be worn, this equipment is suitable for the:

- Nature of the atmosphere in question (inert and/or toxic gases);
- Ambient conditions (temperature, humidity, dust, etc.);
- The actual time spent in the confined space.

(Expectation 04.06)

There are two categories of respiratory protective equipment:

- The filtering devices (for ambient air purification): their use is conditional on the presence of a sufficient oxygen content in the confined space. Definition of the usage limits, especially as regards saturation of the filter elements, considers the ambient conditions within the confined space and the manufacturer's recommendations;
- The breathing apparatus (supply of air other than internal ambient air): their use, especially for non-self-contained equipment (with external free air or compressed air supply) is conditional on a supply of breathing-quality air from an unpolluted source.

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4. Derogations

This rule, or specific requirements within it, may be subject to derogation in line with branch-specific processes.

5. Terms and Definitions

The terms and definitions given in **CR-GR-HSE-001** apply and are completed by the following terms and definitions for this rule.

Confined Spaces

Confined spaces are:

- Completely or partially enclosed spaces,
- Not designed for continuous human occupancy,
- Offering limited means for entry or exit,

AND

- Where there is a risk of injury or illness to entrants due to hazardous substances or conditions:
 - Either because the space may contain a hazardous atmosphere (oxygen-deficient, flammable or toxic; for example, because of limited natural ventilation, the historic usage of the space, etc.);
 - Or because the space may have conditions that present a potential hazard to entrants (direct presence of energy sources or hazardous substances; possibility of burial or drowning; cramped internal routes, etc.);
 - Or because an activity being conducted inside or outside the space may affect the health or safety of entrants (welding fumes generated within the space, use of tools involving inert or flammable gases, possibility of untimely arrival of external gases released near the space, etc.).

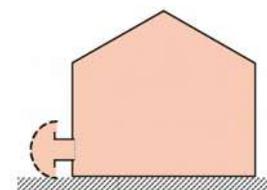
(See identification flowchart detailed in Appendix 1)

Typical examples of confined spaces include the following: storage capacities, process equipment, transport tanks, sewer systems, closed piping, and ducting systems.

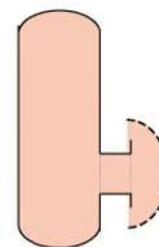
Confined Space Entry

Confined Space Entry is considered to be any action by a person consisting of:

- Passing any part of the body through the plane of the opening of a confined space (especially the head); or
- Being in a zone outside and in the immediate vicinity of an opening, whose radius is defined on a case-by-case basis during the risk analysis, depending on the type and concentration of potential flows of gases that can be emitted through the opening.



Storage tank



Process equipment

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6. Reference Documents

References	Titles – Company Documents
CR-GR-HSE-001	One-MAESTRO Expectations
CR-GR-HSE-402	Permit to Work Process
CR-GR-HSE-428	HSE Requirements for the Isolation of Powered Systems
GS-RC-HSE-078	Confined Space Entry Under Nitrogen Atmosphere Conditions for Catalyst Handling
GM-GR-ENV-015	Naturally Occurring Radioactive Material (NORM) Management

7. Bibliography

Titles
IOGP - Report 577 / November 2018 - Fabrication site construction safety recommended practice - Hazardous activities (International association of Oil & Gas Producers)
Guideline for developing a code of practice for Confined Space Entry - Government of Alberta - CS001 - 2009

8. List of Appendices

References	Titles
APPENDIX 1	Confined Space Identification Flowchart
APPENDIX 2	Principal Hazards and Risks of Confined Spaces
APPENDIX 3	Specific Points Regarding Pyrophoric Sulphides
APPENDIX 4	Points to Cover in the Risk Control Plan

9. Effective Date and Distribution

Effective date is 6 months following date of publication in REFLEX.

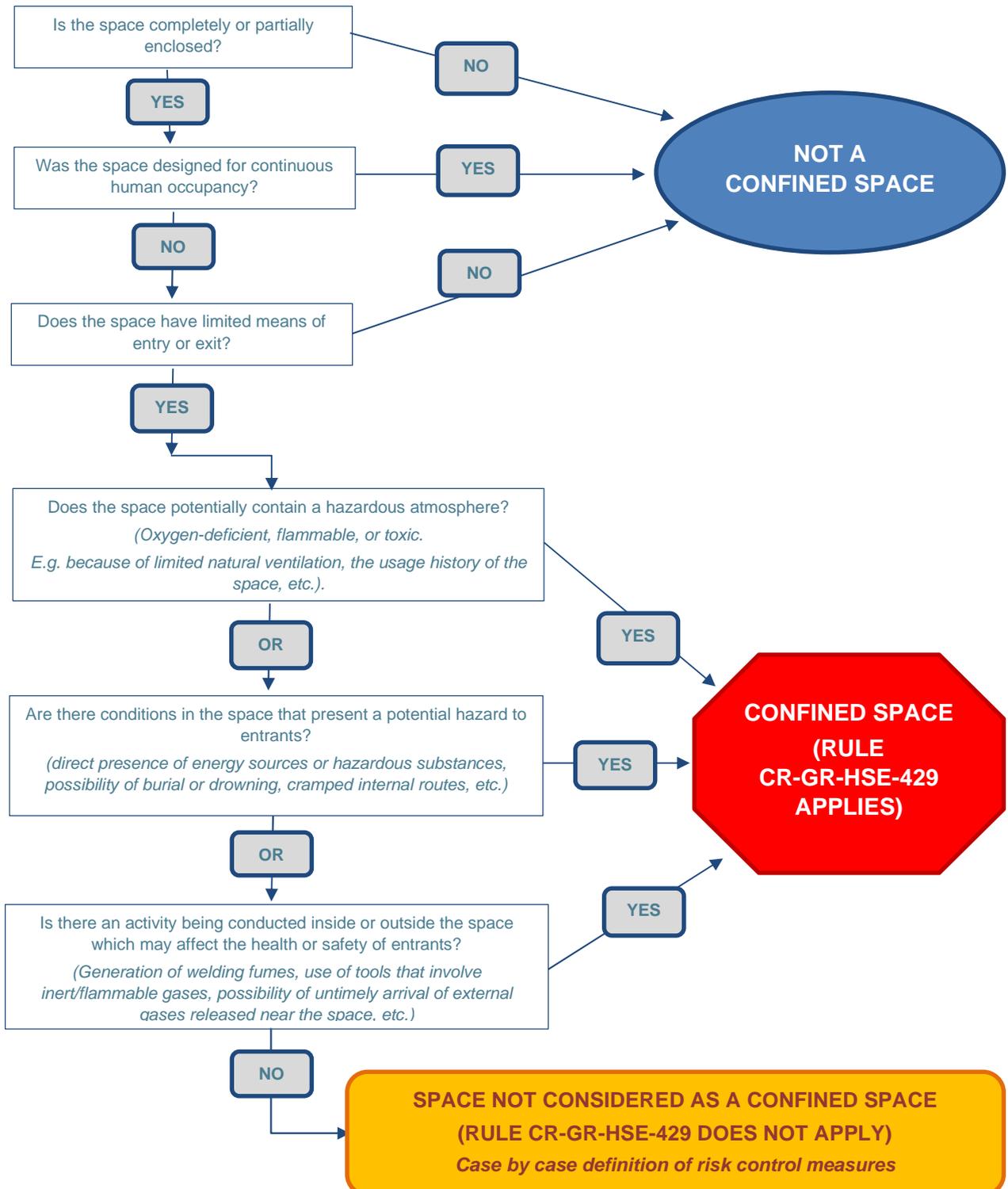
This rule has been published in REFLEX, which is available on the WAT intranet (“The Company / Referentials and Publications” or “Practical tools / The Referentials”).

10. Revisions

REVISION	DATE	PURPOSE	AUTHOR	CHECKED BY	APPROVED BY
00	24/08/2021	Creation	PSR/HSE/FHOS/REE D. Doyonnas	PSR/HSE/FHOS A. Abzizi	PSR/HSE X. Bontemps

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APPENDIX 1 – CONFINED SPACE IDENTIFICATION FLOWCHART



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APPENDIX 2 – PRINCIPAL HAZARDS AND RISKS OF CONFINED SPACES

This appendix lists (non-exhaustively) the principal hazards and risks to consider for Confined Space Entry.

- a) Quality of the atmosphere in the confined space and at its openings (risk of asphyxia, explosion, toxicity);
- b) Internal presence of energy sources (mechanical, electrical, hydraulic, thermal, radioactive, etc.);
- c) Internal presence of substances (combustible, biological, pyrophoric, radioactive NORM, etc.);
- d) Risks arising from the work environment (burial, drowning, fall from height, etc.);
- e) Risks created by the characteristics of the confined space (temperature, brightness, narrowness, etc.);
- f) Risks induced by internal activities (argon welding, fumes, spray painting, etc.);
- g) Failure risk of the preventive/protective equipment (isolations, ventilation, breathing apparatus, etc.);
- h) Specific risks (e.g. non-breathable atmosphere, presence of pyrophoric or radioactive substances NORM, confined asbestos removal sites).

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APPENDIX 3 – SPECIFIC POINTS REGARDING PYROPHORIC SULPHIDES

This appendix specifies certain specific points to be implemented when preparing entries into confined spaces that may contain sulphide type pyrophoric deposits.

- a) Wash all internal parts of the equipment with water and rinse the space completely until the temperature is below 40°C, to avoid any risk of sulphide deposits auto-igniting in the presence of air:
 - In the case of a distillation column, use (if present) the internal fluid distribution system above the packings to carry out the washing;
 - Continue washing until all liftable deposits have been removed (observation of clean discharged washing water);
 - However, keep washing in case of the presence of internal parts liable to trap pyrophoric deposits (e.g. demister pad, packing), as long as these elements are not dismantled;
 - Otherwise, leave the washing system in position, ready to be used again.

- b) Ventilate the equipment by opening manholes or all features that similarly create an opening, starting with the upper parts and keeping an eye on the temperature inside the tank, to detect any incipient combustion.

If the temperature rises, restart rinsing immediately.

Internal elements removed from the equipment and potentially containing pyrophoric deposits are to be immersed in water until they can be cleaned or adequately eliminated.

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APPENDIX 4 – POINTS TO COVER IN THE RISK CONTROL PLAN

(DEPENDING ON RELEVANCE; TO BE COMPLETED AS NEEDED)

- a) Access control measures and signs/warnings needed for the space openings and surrounding areas, to avoid hazardous approach and/or untimely entry;
- b) Maximum number of people authorised to enter simultaneously, depending on the space configuration, the possibility of interference between activities and the capacity to evacuate or rescue;
- c) Authorised atmospheric conditions and associated control programme. Identification of the required ventilation, either natural or forced (by blowing in or extracting air). Analysis of the history of use of the confined space, with review of the material safety data sheets of the products contained;
- d) Maximum duration of Confined Space Entry and associated break times, based on criteria of apparent air temperature and the arduousness of the tasks to be performed;
- e) Isolations required to guard against all sources of materials or energy, with for the sources of materials an absolute priority given to the physical disconnection or the use of blind flanges as close to the confined space as possible;
- f) Equipment necessary to facilitate and secure ingress/egress, both normal and emergency (needs for ladders, hoist arm with winch, etc.);
- g) Lighting requirements, and particularly emergency lighting;
- h) Conditions of use for tools, particularly electrical or pneumatic equipment and apparatus that introduces flammable gas. Management of associated supply lines (isolation, and removal as soon as possible);
- i) Personal protections required (respiratory, fall-arrest, etc.) and associated control process (equipment certifications, personnel training and aptitude, etc.);
- j) Surveillance methods at access points (in-person/remote control, distribution of safety watchers depending on the number of access points, etc.);
- k) Means of communication and associated test process: on the one hand between safety watchers and entrants (redundant and independent communication methods, e.g. direct – visual, radio, etc. – plus an emergency device such as a foghorn, whistle, etc.); on the other hand between safety watchers and the emergency rescue teams or the person(s) responsible for alerting them;
- l) Evacuation options, including any requirement to create additional openings. Anticipated technical and human resources needed to rescue personnel from the space;
- m) Specific instructions and rules, particularly prohibiting entry to metal tanks during a storm;
- n) Organisation of the handover between shifts while Confined Space Entry occurs.

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