

# HASLIN

## Hot Work Procedure

SEQ-PR-010

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## 1. Scope

The purpose of this procedure is to provide instructions to manage risks associated with hot work.

## 2. Application

This procedure applies to any heat, spark and flame producing processes under Haslin's management including but not limited to welding, burning, cutting, brazing and grinding.

## 3. Definitions

<b>Authorised Person</b>	A competent person with approval from the Haslin Project Manager to perform checks and issue a Hot Work Permit.
<b>Combustible</b>	A liquid with a flash point lower than its boiling point, but not a flammable liquid.
<b>Competent Person</b>	A person with the necessary training, qualifications, or experience to carry out a task..
<b>Explosive Atmosphere</b>	An area where an explosive atmosphere may be present and requires special safety precautions for potential ignition sources.
<b>Fire watch</b>	A trained person assigned to prevent fires and use fire-fighting equipment
<b>Flammable</b>	Liquids or mixtures that give off flammable vapour at temperatures up to 60°C (flash point).
<b>Hammertech</b>	Haslin's cloud-based Safety Management Software
<b>Hot Work</b>	<p>Any activity that creates heat or sparks, which may introduce an ignition source into the work area or adjacent areas. Examples of hot work include:</p> <ul style="list-style-type: none"><li>• Electric welding, brazing, acetylene cutting.</li><li>• Use of equipment with naked flames such as burning torches and blowlamps.</li><li>• Work which could produce incendiary sparks, such as grinding steel or concrete cutting.</li><li>• Use of cartridge operated tools and other explosive devices.</li><li>• Any other work that can generate flames, heat or sparks.</li></ul>
<b>Hot Works Permit (HWP)</b>	A permit issued by an Authorised Person in conformance with this procedure to ensure hot work is done safely.
<b>Ignition</b>	A source of energy that can start a fire or explosion.
<b>Recipient</b>	A person who receives a Hot Work Permit to carry out hot work tasks.

## 4. References



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- NSW Work Health and Safety Act 2011
- NSW Work Health and Safety Regulation 2025
- NSW Code of Practice – Welding processes 2022
- NSW Code of Practice – Confined Spaces 2022
- QLD Work Health and Safety Regulation 2011
- QLD Work Health and Safety Act 2011
- QLD Code of Practice – Welding processes 2021
- Australian Standard 60079 – Explosive atmospheres.
- Australian Standard 1674 – Safety in Welding and Allied Processes
- WTIA Welding Technology Institute Technical note 7 (Health and safety in welding) and Technical note 20 (repair of steel pipelines)

## 5. Legal requirements

Health and safety risks from ignition sources in hazardous atmospheres must be eliminated as much as possible. If that's not possible, the risk must be minimised.

Ignition sources should not be brought into a confined space if they could cause a fire or explosion. For more details on working in confined spaces, refer to SEQ-PR-008 Confined Space Entry Procedure.

## 6. Procedure

### 6.1. Responsibilities

Project Managers, Site Engineers, Site Managers, and Leading Hands must ensure this procedure is followed. Employees, Contractors, and Sub-contractors must also comply. Everyone at the workplace must follow reasonable instructions from Haslin and take care of their own health and safety, ensuring their actions don't harm others.

Hot work is not allowed on equipment, piping, tanks, or drums that previously contained flammable substances without approval from the Haslin Project Manager.

### 6.2. General

#### 6.2.1. Requirements for a Hot Work Permit

A Hot Work Permit & Checklist (SEQ-FM-030) must be created in Hammertech and approved by an Authorised Person before starting hot work. Ignition sources must not be introduced into spaces where fire or explosion risks exist.

#### 6.2.2. Appointment of Authorised Person and Fire Watch

The Authorised Person is appointed by the Project Manager. The Authorised Person is typically the Haslin Project Manager, Site Manager, Engineer or HSEQ Coordinator. The scope of hot work must be clearly outlined on the permit and the person issuing the permit must be competent to supervise the work. The fire watch is appointed by the Authorised Person.

#### 6.2.3. Assessment and Control of Risks

The Authorised Person must inspect and approve the work area before issuing the permit. Fire or explosion risks must be eliminated as much as possible. If that's not possible, the risk must be minimised.

Prior to issuing a Hot Works Permit (on Hammertech), the Authorised Person must ensure that:

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- Equipment is used in accordance with manufacturer's recommendations.
- Gas cylinders are secured and in an upright position in accordance with AS 4332 (acetylene) and AS1596 (LPG)
- Electrical tools and portable equipment are protected by an ELCB complying with AS3190
- All combustible and flammable materials are removed from the work area
- 'Danger: Welding in Progress signs' are displayed in the area where welding is being carried out
- Firefighting equipment is in direct proximity of the work area and is specific to the type of fire hazard
- Welding is to be performed from a ladder

Hot works must not be conducted within 15 meters of the outer edge of an identified explosive atmosphere. If this isn't possible, a specific risk assessment must be completed with the owner/operator of the area where the explosive atmosphere exists.

If flammable gases or vapours may be present in the work area, atmospheric testing must be done within two hours before issuing the permit and continuously during the work. The testing must show the atmosphere has less than 5% of the Lower Explosive Limit (LEL) of the specific gas or vapour.

A risk assessment must be performed for all hot work tasks. The risk assessment must cover:

- The tasks to be performed under a hot work permit
- Fire and explosion hazard controls
- Appropriate non-flammable PPE for workers
- Worker competencies
- Adequate firefighting equipment
- Conditions preventing hot works from proceeding (explosive atmospheres etc. – see Section 6.2.5)
- Electrical or hydraulic safety measures
- Adequate ventilation in the work area
- Emergency and evacuation procedures
- Weather conditions
- Limiting personnel and vehicle traffic in the area



## 6.2.4. High-Risk Hot Work

For high-risk hot works, the Project Manager must be appointed as Authorised Person/Permit Issuer and the permit is valid for a maximum of 12 hours. A comprehensive risk assessment must be completed and gas testing may be required.

Hot works are considered high-risk if any of the following statements applies:

- Flammable/explosive materials are present in the work area
- A Total Fire Ban is in place
- The hot work is being carried out in a confined space
- The hot work is being carried out on equipment that has previously held flammable substances.

## 6.2.5. The Hot Work Permit

The validity of a Hot Work Permit must be limited to 7 days, except for high-risk hot work, where the permit validity must not exceed 12 hours. The fire watch must be in attendance for the duration of the hot works and after the task is completed as per hot works permit form. The assigned fire watch must watch for uncontrolled sparks, slag, embers, and hot metal off cuts.

The Authorised Person must complete the permit (in Hammertech). The permit is active once the Authorised Person and the recipient have signed and dated the permit. Permit recipient and fire watch can sign in and out of the permit through the Hammertech Sign In Book.

## 6.2.6. Action when Hot Work Completed

After hot work is completed, the permit recipient must notify the Authorised Person, who will then inspect the area.

The fire watch must monitor the area for at least 30 minutes after work ends. After 30 minutes, if the area is safe, the fire watch must inform the Authorised Person to close the permit in Hammertech. The Authorised Person will then notify the site manager that the area is safe to resume other work.

All hot work permits, risk assessments, and related documents must be kept in Hammertech for at least two years. Any discharged fire extinguishers must be replaced or recharged.



## 6.2.7. Duties of the Fire Watch and Permit Recipient

The fire watch and permit recipient share the responsibility in minimising the risks associated with the hot works. Their duties include, but are not limited to:

### a. Before the hot work starts

- Discuss the job with the Authorised Person:  
Before starting, ensure there is clear communication about the tasks, potential hazards, and safety measures. The Authorised Person, who has issued the Hot Work Permit, and the permit recipient, who will carry out the work, must both be involved in this discussion to ensure everyone is on the same page regarding the work being done and the precautions in place.
- Read and understand the permit:  
The Hot Work Permit contains vital information about the task, the hazards involved, safety measures, and the area where the work will be carried out. Make sure to carefully read through the entire permit to understand the requirements, any specific instructions, and how to manage risks associated with the work.
- Know the location of the nearest means of communication with the Local Fire Brigade:  
In case of an emergency, it's essential to quickly contact the Local Fire Brigade. Be familiar with the nearest phone or communication system to quickly alert emergency responders if needed.
- Ensure welding flash protection is adequate:  
To prevent eye injuries from welding flashes, ensure that proper flash protection is in place. This includes using welding screens and face shields or goggles for workers in the vicinity to protect their eyes from harmful radiation and sparks.
- Position an appropriate fire extinguisher in a location that is directly accessible:  
Ensure that a suitable fire extinguisher is placed within 10 metres of the hot works. The type of fire extinguisher must match the potential hazards (e.g., a CO2 or dry chemical extinguisher for electrical or general fires).
- For electrical welding, locate the electrical isolator:  
In case of an emergency or to stop the equipment safely, know where the electrical isolator or power switch is located. This will allow workers to quickly disconnect power to the welding equipment if necessary.
- It may be necessary to wet down the immediate area – check for electrical hazards first:  
To reduce the risk of fire, it may be necessary to dampen surfaces around the work area. However, before doing so, check for any electrical hazards (such as exposed wires or electrical equipment) to ensure water does not cause an electrical shock or short circuit.
- The area must be cordoned off with barriers to prevent unauthorised access:  
The work area should be clearly marked and blocked off with physical barriers to prevent unauthorized personnel from entering. This ensures the safety of people who are not involved in the hot work and reduces the risk of accidents. Barriers can include cones, fencing, or warning signs to alert others to the potential dangers.

### b. During the hot work

- If in doubt, stop the work and seek advice:  
If any uncertainties or concerns arise during hot work, stop immediately and consult the Authorised Person or relevant expert for guidance. The Fire Watch is also authorised to stop the hot work at any time if they notice any safety risks.
- Attendance for the duration of the works:  
The appointed Fire Watch person must remain present for the entire duration of the hot work. If for any reason the Fire Watch cannot attend, the hot work must stop until a suitable replacement is available.
- Observe the work area for any arising hazards:  
Continuously monitor the work area for new hazards, such as sparks, leaks, or dangerous conditions, that may emerge during the hot work. Stay alert to potential risks.
- Know where fire equipment is located and how to use it:  
Be familiar with the location of fire extinguishers and other emergency firefighting equipment in the area. Make sure you know how to properly use the equipment in case of a fire.
- Ensure all controls listed on the HWP remain in place:  
Ensure that all safety controls, measures, and precautions mentioned in the Hot Work Permit (HWP) are



followed throughout the work. These may include fire watch requirements, ventilation needs, and equipment checks.

- Ensure people not involved in the works stay clear of the work area:  
Keep unauthorised personnel away from the hot work area. Ensure that only those directly involved in the work are present, reducing the risk of accidents or exposure to hazards.
- Ensure that during Oxy Acetylene cutting or welding, the torch is only alight and kept in the hand when being used:  
For Oxy Acetylene cutting or welding, the torch should only be ignited when actively being used. Never leave the torch lit when not in use to prevent unnecessary fire risks.
- Ensure the direct work area is free of flammable and combustible materials and gases:  
Before starting work, check that the immediate area is clear of any flammable materials, gases, or vapours that could ignite during the hot work process. Take steps to remove or control these hazards.
- Ensure water is not sprayed on the electric welding equipment:  
Do not spray water on or near electrical welding equipment, as this could cause electric shock or short-circuiting. Always keep electrical equipment dry.
- Ensure only dry powder extinguishers are used for electric welding jobs:  
For electrical welding work, only dry powder fire extinguishers should be used. Water or foam-based extinguishers could cause further electrical hazards.

### c. After hot work is completed

- Fire watch must observe the hot work area for a minimum of 30 minutes after work ceases:  
Once the hot work is finished, the Fire Watch must continue monitoring the area for at least 30 minutes to ensure no smouldering debris, sparks, or ignition sources remain.
- Notify the authorised person after 30 minutes observation that the area is safe:  
After the 30-minute observation period, the Fire Watch must inform the Authorised Person that the work area is free from fire hazards, confirming it is safe.
- Alert the authorised person or site manager if a risk of fire or explosion remains:  
If, after 30 minutes, there are still signs of fire or explosion risks, the Fire Watch must immediately alert the Authorised Person or Site Manager to take further action and prevent any accidents.

## 6.3. Personnel Protective Equipment

When performing hot work, workers must wear the appropriate Personal Protective Equipment (PPE) to protect themselves from potential hazards such as heat, sparks, flying debris, fumes, and radiation. The required PPE varies depending on the type of hot work being performed. Below are the key PPE items for different tasks:

For Grinding:

Grinding activities, which generate heat, sparks, and debris, require the following PPE:

- Fire-resistant clothing: This includes long-sleeve shirts, pants, or coveralls made from materials that resist flames and heat to protect against sparks and hot metal particles.
- Gloves: Protective gloves should be worn to safeguard hands from abrasions, cuts, and burns from the grinding process.
- Face shield: A face shield is essential to protect the face and eyes from sparks, metal fragments, and dust that are commonly produced during grinding.
- Hearing protection: Grinding equipment is often loud, and workers should wear earmuffs and/or earplugs to protect against long-term hearing damage from the noise.

For Welding, Brazing, and Oxy Acetylene Cutting:

Welding, brazing, and oxy-acetylene cutting involve higher temperatures, UV radiation, and the production of harmful fumes. The PPE required includes:

- Fire-resistant clothing: Similar to grinding, fire-resistant clothing such as flame-retardant jackets, aprons, and trousers should be worn to protect the body from intense heat, sparks, and molten metal.
- Welding gloves: Thick, insulated gloves are necessary to protect hands from heat, burns, and potential electric shock (in the case of welding).



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- Welding helmet with filter lens: A welding helmet with an automatic or fixed shade filter lens is crucial to protect the eyes and face from the intense ultraviolet (UV) and infrared (IR) light emitted during welding and cutting. This prevents eye damage such as "welder's flash" or retinal burns.
- Respiratory protection: In cases where welding, brazing, or cutting produces harmful fumes, welding respirators or face respirators with the appropriate filter cartridges should be worn. These protect the lungs from toxic gases, dust, and particulate matter, especially in confined spaces.
- Hearing protection: Depending on the type of welding or cutting being done, hearing protection such as earplugs or earmuffs should be worn to protect against noise exposure from welding equipment and tools.

Each type of hot work poses different hazards, and the appropriate PPE must be chosen based on these specific risks. Workers should also ensure that their PPE is in good condition and properly maintained, as any damage could compromise its protective qualities. Always follow safety guidelines and employer requirements to minimise the risk of injury during hot work activities.

## 7. Training

All Haslin personnel, hot work permit recipients and fire watch persons must be trained in the content of this SEQ-PR-010 Hot Work Procedure.

## 8. Relevant Templates, Forms and Checklists

SEQ-FM-030 Hot Work Permit (Hammertech)