

Hot Work

I PURPOSE

This standard was established for the purpose of ensuring and taking all necessary precautions to prevent accidents caused by any activity that generates spark, flame or ignition sources.

2 SCOPE

This procedure applies to all functional areas, operations, projects, offices, employees and contractors.

3 DEFINITIONS AND ACRONYMS

Definitions

Combustible, Flammable or Explosive Materials are resources such as wood, plastic, rubber, paint, oil, grease, solvent, compressed gas, powdered metal, volatile fumes or gas, and explosives, which could ignite or explode when exposed to heat or flame.

Designated Hot Work Areas are places such as in shops where flammable and combustible materials have been removed, compressed gas cylinders are secured and located at least 15 feet away from the actual hot work, ventilation considerations have been made, fire extinguishing equipment is available, welding screens, where applicable, are in place to protect other workers in the area, and the area has been posted as a hot work area by management.

Fire Watch is a person positioned at the job site and designated to monitor the area until the hot work is completed and the area has been secured from any potential fire hazards.

Hot Work is any work that creates enough heat from spark, molten metal, torches, etc. to ignite combustible or flammable material. Grinding, cutting and welding are all considered types of hot work.

Acronyms

HMR HSLP Management Representative

HSLP Health, Safety and Loss Prevention

PPE Personal Protective Equipment

4 ROLES AND RESPONSIBILITIES

Document Owner

HMR

Responsible Roles and Position-Holders

Contractors/Vendors are businesses performing a service for the COMPANY. They are responsible for ensuring their employees working on COMPANY sites have completed the required permit as specified in this procedure and that their employees understand and comply with the requirements as outlined in this procedure.

Employee and Contracted Employees all employees in any position whether COMPANY or contracted employees working on any COMPANY site. They are responsible for complying with the requirements as outlined in this procedure and ensure that the required permits completed.

HSLP is any COMPANY employee working under and including the Regional Director of HSLP. They are responsible for periodically auditing for compliance to this procedure. They provide advice regarding the standards governing the performance of hot work and check compliance with these standards on a random and sufficiently frequent basis.

A Supervisor/Foreman or Designee can be a COMPANY employee or a contractor/vendor working or traveling on any COMPANY site. They are responsible for ensuring that the permit is completed correctly and enforcing all hot work requirements, rules, and established guidelines as outlined in this procedure. They ensure personnel are provided with the needed resources to properly carry out the requirements of this procedure and that they are adequately trained, and understand the provisions outlined in the hot work procedure. They inspect the location where the hot work will be performed and review information on the permit ensuring that the precautions and descriptions of work are on the permit before signing it.

5 DIRECTION

All employees, vendors, contractors, and visitors traveling/working on site shall comply with and ensure personnel accountable to them comply with the following requirements of this procedure.

General Rules

All Employees shall:

- a** Keep their work area free of any fire hazards (accumulation of combustible, flammable, or explosive material).
- b** Know the location of firefighting equipment, fire alarm pull stations, communication systems etc. and how to use them.
- c** Inspect their equipment before starting any hot work to ensure it is free from defects and safe to use.

- d** Correctly use the appropriate Personal Protective Equipment, bearing in mind the provisions set forth in this document.
- e** Obtain authorization to carry out hot work before starting to work. Notify their immediate supervisor before carrying out any hot work.

When hot work is to be performed outside of designated hot work areas the appropriate supervisor or designee will issue a hot work permit only after:

- a** The fire watch person has inspected the area and removed all combustible, flammable, and explosive materials within a minimum radius of 60 feet, or
- b** When removal is not possible the material shall be protected with fire resistant material such as fire blankets or welding screens and this information shall be noted on the permit.

The work area and equipment being utilized must be inspected before, during and after the performance of work, in order to detect any substandard condition.

No hot work shall take place unless the Fire Watch is present and all safety precautions have been taken (an exception to the Fire Watch requirement is in pit areas where there are no combustible materials within 40 feet of the hot work e.g. welding on open buckets).

The Fire Watch must have a fire extinguisher in operating condition, which must be within at least 6 feet of the work being performed. The Fire Watch person must position themselves so they can extinguish a fire from the upwind side of the fire.

The completed Hot Work Permit Form must be displayed in a visible place in the work area.

All hot work must be suspended if the conditions under which the permit was issued change. Example: Gas leak, fuel spill, adverse weather conditions etc.

When hot work is suspended due to changing conditions, the work can be resumed only when the safety conditions are re-established and a new Hot Work Permit is issued.

Fire Watch

Shall be familiar with the location and use of fire alarms, fire-fighting equipment, first-aid equipment, radios and telephones for emergency cases.

Inspect the hot work area prior to performing any hot work.

Remove all combustible and flammable materials from the work area. A distance of 40 feet should be used as a minimum guideline.

Fill out the hot work permit listing all pertinent safety precautions, get signatures, and then post it in the hot work area.

Properly use the appropriate PPE, bearing in mind the provisions set forth in this document and those outlined in the permit.

Ensure an adequate fire extinguisher or water hose is at hand, the permit is posted in the area, observe the hot work activity as it progresses and extinguish any fires resulting from the hot work.

Inspect the area 30 minutes after the hot work has been completed to ensure no fire has started.

Oxygen Acetylene Cutting Operation

Gages and regulators used with oxygen or acetylene cylinders shall be kept clean and free of oil or grease.

To prevent accidental release of gases from hoses and torches attached to oxygen and acetylene cylinders, valves shall be closed when:

- The cylinders are moved;
- The torch and hoses are left unattended: or
- The task or series of tasks is completed.

The oxygen and acetylene cylinders and hoses must be located in such a manner to protect them from possible damage due to the hot work.

Torches shall be attended at all times while lit.

Cutting torches must be equipped with anti-flame back flash valves in both hoses going to the cylinder.

Regarding the cylinders, the provisions set forth in the Compressed Gas Standards of the COMPANY must be complied with.

Safety Considerations when filling out the permit.

Air quality must always be considered and when necessary, ventilation systems must be utilized.

Use of welding screens and blankets is mandatory when other personnel will be in the vicinity of the hot work.

Evaluate barricading and posting of the area to keep personnel away from the hot work when necessary.

Additional Personal Protective Equipment such as welding leathers, gloves, respirators and fall protection should be specified on the permit as conditions dictate.

When hot work is carried out at heights or within confined spaces, the relevant COMPANY procedures must be complied with.

Before starting any hot work in tanks, ponds, containers or pipes that have contained fuel or flammable liquids, the appropriate steps must be taken to ensure that they are empty and that they have been properly drained, ventilated and washed.

Welding Operation

- Welding machines must be properly grounded.
- Welding operations must be shielded when performed at locations where arc flash could be hazardous to persons.
- Hearing protection is required while air arcing.