HOT WORK SAFE WORK PRACTICES

REVISED DECEMBER 22 2014 OH&S Code Part 10 Section 169 & Part 25 Section 375

A hot work permit may be required in advance of any work requiring heat or open flame within a facility under the management of ASSURANCE and outside a regularly designated area like a mechanics shop.

Hot work permit safe work practices

These hot work practices apply to all employees or subcontractors carrying out or assisting in the above noted type of work on any ASSURANCE work site. They outline the requirements for the issuance of a Hot work permit prior to undertaking of any cutting, welding, soldering, any work requiring open flame within a facility under the management of ASSURANCE.

Fire watch. See Emergency Preparedness.

PURPOSE

Welding and Hot Work, Such as brazing or grinding present a significant opportunity for fire and injury. All precautions of this program must be applied prior to commencing any welding or hot work by the company employees or contractors.

DEFINITIONS

Welding/Hot Works Procedure: any activity that results in sparks, fire, molten slag, or hot material that has the potential to cause fires or explosions.

Examples of Hot Work: Cutting, Brazing, Soldering, Thawing Pipes, Grinding and Welding.

RESPONSIBILITIES

Management:

1. Provide training for all employees whose tasks include heat, spark or flame producing operations such as welding, brazing, or grinding.
2. Develop and monitor effective hot work procedures.
3. Provide safe equipment for hot work.
4. Provide proper and effective PPE for all hot work.

Supervisors:

1. Monitor all hot work operations and ensure that proper procedures are being followed.
2. Ensure all hot work equipment and PPE are in safe working order.
3. Allow only trained and authorized employees to conduct hot work.
4. Ensure permits are used for all hot work outside authorized areas or as required by the client.

Employees:

1. Follow hot work procedures.
2. Properly use appropriate hot work PPE.
3. Inspect all hot work equipment before use.
4. Do not use damaged hot work equipment.

TRAINING SHALL INCLUDE

1. Review of requirements listed in the O.H. & S. codes.
2. Use of Hot Work Permit System.
3. Supervisor responsibilities.
4. Fire watch responsibilities—specifically, the fire watch must know:
    a) That their ONLY duty is to fire watch.
    b) When they can terminate the watch.
    c) How to use the provided fire extinguisher
    d) How to activate fire alarm if fire is beyond the initial stage.
5. Operator responsibilities.
6. Contractor's responsibilities.
7. Documentation requirements.
8. Fire Extinguisher training.

HOT WORK PROCEDURES

Fire Prevention Actions for Welding/Hot Works: Where practicable, all combustibles shall be relocated at least 12 meters from the work site. Where relocation is impractical, combustibles shall be protected with flame proof covers, shielded with metal, guards, curtains or wet down material to help prevent ignition of material.

Ducts, conveyor systems, and augers that might carry sparks to distant combustibles shall be protected or shut down.

Where cutting or welding is done near walls, partitions, ceilings, or a roof of combustible construction, fire resistant shields or guards shall be provided to prevent ignition

If welding is to be done on a metal wall, partition, ceiling, or roof, precautions shall be taken to prevent ignition of combustibles on the other side, due to conduction of radiant heat. Where combustibles cannot be relocated on the opposite side of the work, a fire watch person shall be provided on the opposite side of the work.

Welding shall not be attempted on a metal partition, wall, ceiling or roof having a covering or on walls having combustible sandwich panel construction.

Cutting or welding on pipes or other metal in contact with combustible walls, partitions, ceilings, or roofs shall not be undertaken if the work is close enough to cause ignition by combustion.

Cutting or welding shall not be permitted in the following situations:

1. In areas not authorized by management.
2. In sprinkled buildings while such protection is impaired.
3. In the presence of potentially explosive atmospheres.
4. In areas where there is dust accumulation of greater the 2 mm within 12 meters of the area where welding/hot works will be conducted. All dust accumulation should be cleaned up following the housekeeping program of their facility before welding/hot work is permitted.

Suitable extinguishers shall be provided and maintained ready for instant use.

A fire watch person shall be provided during and for 30 minutes past the completion of the hot work.

A hot work permit will be issued on all welding or cutting outside of the designated welding area.

Welding & Hot Work Fire Prevention Measures

A designated welding area (mechanics shop) should be established to meet the following requirements:
1. Floors swept and clean of combustibles within 35 feet of work area.
2. Flammable and combustible liquids and material will be kept 35 feet from work area.
3. Adequate ventilation providing 20 air changes per hour, such as a suction hood system should be provided to the work area.
4. At least a 5 lb. dry chemical fire extinguisher should be within access of the 35 feet of work area.
5. Protective dividers such as welding curtains or non-combustible walls will be provided to contain sparks and slag to the combustible free area.
6. No hot work is to be performed within 30 of minutes closing up shop or at a point where no one will be returning within 5 minutes.

Requirements for welding conducted outside the designated welding area:
1. Portable welding curtains or shields must be used to protect other workers in the welding area.
2. An R-7 Hot Work Permit must be completed and complied with prior to welding operation. (As required by the client and as stipulated in the OHS Code).
3. Respiratory protection is mandatory unless an adequate monitored air flow away from the welder and others present can be established.
4. Plastic materials are covered with welding tarps during welding procedures.
5. Fire watch must be provided for all hot work operations.

Restricted Space Definition - (Occupational Health and Safety Code 2009 Explanation Guide)
A “restricted space” is an enclosed or partially enclosed space, not intended for continuous human occupancy that has a restricted, limited or impeded means of entry or exit because of its construction. It can be thought of as a work area in which the only hazard is the difficulty of getting into or out of the space. All other hazards are either non-existent or have been eliminated or controlled as required by Part 2. Restricted spaces are therefore not subject to the permitting, atmosphere testing and tending worker requirements of a confined space. Employers and workers must be mindful that a restricted space can become a confined space if conditions or work practices change. Employers who voluntarily apply relevant sections of ANSI Z117.1-2003, Safety Requirements for Confined Spaces, might refer to restricted spaces as “non-permitted confined spaces”.

See “Confined Space Code of Practice” for further information.