

HOT WORK

Supplement to Standard Training Module

TRAINING REQUIREMENTS OVERVIEW

This standard Vivid training module provides a general overview of Hot Work safety during tasks such as welding, cutting and brazing. Although no particular training regimen is required by the OSHA standard, employees and supervisors involved in hot work activities **must** receive training on the hazards of hot work, and the procedures for authorizing and conducting hot work tasks.

In addition to the general overview, employees and supervisors who engage in hot work activities must receive facility-specific information. This additional training must cover:

- Specific hot work permit procedures
- Special conditions that prohibit hot work

Frequency: : This training **should** be provided at the time of employment, and when employee responsibilities change.

GENERAL OVERVIEW OF THE STANDARD

HOT WORK (General Requirements for Welding, Cutting and Brazing) – 29 CFR 1910.252

PURPOSE: To ensure the safety of employees and the protection of property when hot work such as welding, cutting or brazing is performed outside of designated hot work areas.

1. **SCOPE:** Applies to all facilities covered under OSHA's Occupational Safety and Health Standards for General Industry.
2. **FIRE PREVENTION AND PROTECTION:** Requirements are stated for engaging in hot work:

Basic Precautions –

- Remove fire hazards if the object being welded or cut cannot be readily moved to a designated hot work area,
- Guarding fire hazards that cannot be removed, and
- Restrict welding and cutting if the above cannot be performed

Special Precautions – When hot work is performed in areas where fire hazards cannot be removed, the following subtopics contain precautions for:

- Combustible material protection
- Fire extinguishers
- Fire watch
- Area inspection and authorization of hot work
- Floors
- Prohibited areas
- Relocation of combustibles
- Ducts
- Combustible walls
- Noncombustible walls
- Combustible cover
- Pipes
- Manager and supervisor responsibilities
- Training on safe use and operation of equipment
- Fire prevention precautions

Specific precautions are also stated for welding, cutting or other hot work on/in:

- Containers or other hollow cavities
- Confined Spaces

3. PROTECTION OF PERSONNEL: Requirements are stated specifically for the protection of personnel performing hot work at heights. Subtopic requirements are also stated for:

- Eye and face protection
- Personal protective clothing - appropriate to nature and location of work
- Confined space work (relatively small or restricted spaces)
 - Ventilation
 - Securing cylinders and machinery
 - Lifelines
 - Electrode removal

- Gas cylinder shutoff
- Warning signs

4. HEALTH PROTECTION AND VENTILATION: General health requirements are stated for:

- Air contamination
- Use of welding screens
- Maximum allowable concentrations of toxic fumes
- Precautionary labels of hazardous materials

Additional specifications/requirements are outlined for:

- General dilution mechanical ventilation
- Ventilation hoods and fixed enclosures
- Ventilation in confined spaces:
 - Air replacement
 - Airline respirators
 - Self-contained units
 - Outside helpers
 - Oxygen for ventilation
- Hazardous Compounds
 - Fluorine compounds
 - Zinc
 - Lead
 - Beryllium
 - Cadmium
 - Mercury
- Cleaning materials, degreasing and cleaning operations
- Mechanical ventilation while cutting stainless steel.
- First aid equipment and services

5. INDUSTRIAL APPLICATIONS: this section provides requirements for the fabrication, installation, and testing of transmission pipelines and mechanical piping systems.

- Field shop operations
- Electric shock potential
- Pressure testing of pipelines
- Construction standards
- Flammable substance lines
- X-ray inspections
- Mechanical piping systems

REFERENCE MATERIALS

Website

OSHA website:

<http://www.osha.gov/SLTC/weldingcuttingbrazing/index.html>