

Worksite: _____ Instructor: _____ Date/Time: _____

Topic C580: Welding

Introduction: During construction operations, employers must provide reasonable safety to employees involved in, or exposed to, welding operations, welding equipment, and the compressed gases used. Following are safety guidelines for general welding operations:

- Ensure that employees have been trained in the safe use of welding equipment before allowing them to use the equipment.
- Employers must provide protection to an employee against toxic, or hazardous materials, or deficient oxygen.
- Assure that an employee in charge of the oxygen or fuel gas supply equipment, or of oxygen, or fuel gas systems is instructed and judged competent for this work by the employer.
- Information and instructions about the operation and maintenance of oxygen, or gas distribution piping systems must be readily available.

An employee is required to do all of the following:

- Use welding and cutting equipment as trained
- Use the protective equipment required by the hazard.
- Not tamper with safety devices.
- Report any faulty or defective equipment.

Welding operations are not permitted in the following situations:

- In an area not authorized by the building or structure occupant.
- In a building while the sprinkler system is impaired, unless a fire watch is provided.
- In the presence of a potentially explosive atmosphere.

Operations: Before the start of a welding operation in a confined space, the atmosphere must be tested and ventilation provided.

- When working in a confined space, the torch valves and the gas supply and oxygen valves outside of the space must be shut off during any prolonged idle period and the torch and hose removed from the confined space.
- Torches must be inspected before each shift for leaking shutoff valves, hose and tip connections, or clogged tips.
- Cylinders must be legibly marked (stenciled, stamped, or labeled) with either the chemical or trade name.
- Hoses and connections must be inspected before each shift for burns, leaks, wear, or other defects.
- Welding operations must not be performed within 50 feet of explosives, stored cylinders, or stored fuel. Combustible and flammable materials located within 35 feet of a welding operation must either be removed, or covered with fire-resistant material. Cracks or openings in the floor or wall that are within 35 feet of a welding operation must also be covered.
- Fire extinguishing equipment must be maintained in a state of readiness for instant use. This may consist of buckets of water or sand, hoses or portable extinguishers depending on the material exposed.
- Employees working on platforms, scaffolds, or runways must be protected against falling by railings, safety belts, life lines, or other equally effective safeguards.
- Welders are required to keep welding cable and equipment clear of passageways, ladders, and stairways.

Personal Protective Equipment: Helmets or hand shields shall be used during all arc welding or arc cutting operations, except for submerged arc welding. Helpers or attendants shall be provided with proper eye protection. Goggles or other suitable eye protection are required to be used during all gas welding or oxygen cutting operations. All employees using resistance welding or brazing equipment must use transparent face shields, or goggles, to protect their faces or eyes.

- Helmets and hand shields must be made of a material that is insulated for heat and electricity. Helmets, shields, and goggles must be not flammable, and capable of withstanding sterilization. Helmets must protect the face, neck and ears from direct radiant energy from the arc. Helmets must be provided with filter plates and cover plates designed for easy removal.
- Where hazards to life exist, a full face-piece, pressure-demand, self-contained breathing apparatus, or a combination full face-piece, pressure-demand supplied-air respirator with an auxiliary, self-contained air supply must be used.
- Employees exposed to hazards created by welding, cutting, or brazing must be protected by personal protective clothing.

Conclusion: There are many health hazards involved with welding operations. These risks vary depending upon the type of welding materials and welding surfaces. Everyone involved in welding operations must take precautions to prevent fires, explosions, or personal injuries. Always remember to utilize these safety guidelines for safe welding operations.

Employee Attendance: (Names or signatures of personnel who are attending this meeting)

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

These guidelines do not supersede local, state, or federal regulations and must not be construed as a substitute for, or legal interpretation of, any OSHA regulations.