

Hazard Review

- **Burns (thermal and UV radiation)**
- **Hazardous fumes/vapors/gasses**
- **Confined/restricted spaces**

Related Safe Work Practices

- **Fire Safety**
- **Hazardous Materials**
- **Compressed Gas Cylinders**

Required Personal Protective Equipment

- **Non-Flammable gloves with gauntlets.**
- **Aprons (Leather) and shirts with long sleeves and collars.**
- **Welding helmets with built-in eye protection.**
- **Respiratory protection (if required).**
- **Heavy duty, leather work boots.**

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BEFORE

1. Do not weld, burn or cut in an explosive environment (i.e., an area where vapors may be present in sufficient quantities to explode upon contact with a spark or flame).
2. Review and understand MSDSs for any hazardous materials to be used (see *Hazardous Materials*)
3. Remove or guard all combustible materials (e.g., paper, cardboard) in the work area.
4. Ensure fire extinguishers are readily accessible in the work area (see *Fire Safety* for specific types of extinguishers).
5. Ensure water containers and/or water hoses, sand, etc. are on site.
6. Don the personal protective equipment as noted above to prevent personal injury.

7. Flash screens must be provided to protect eyes of non-welders from flash burns and ultra violet light.
8. Post a fire watch, if needed.
9. If you have to enter a confined space to perform welding, contact EHS 72 hours prior the scheduled work.
10. Exposure to airborne fumes/vapors should be controlled through local exhaust ventilation. If not, respiratory protection may be required, in which case, contact EHS (831-2776).
11. Refrain from eating or drinking while on the welding floor.

DURING

OXY-ACETYLENE WELDING

1. Fuel, gas and oxygen hoses must be distinguished from each other.
2. The following practices are **prohibited**:
 - Disconnecting couplings by pulling straight forward.
 - The contact of oil or grease with oxygen equipment.
 - The use of leaking equipment.
 - The use of oxygen without pressure regulators.
 - Lifting gas cylinders by magnet, rope, or chain.
3. Ensure that the gas cylinders are:
 - Not heated
 - Not shorted against electrical circuits
 - Secured upright
4. Gas cylinders must be handled in cradles with valve caps installed.
5. Leave valve stem wrench in use while welding.
6. Change the cylinder when the regulator reads **100 psi**.

ARC WELDING

1. The following practices are prohibited:
 - Splicing cables within 10 feet of the electrode.
 - Standing between the positive and negative cables.
 - Make contact with electrodes and holders when Arc Welder is not in use.
 - Using a defective piece of equipment.

2. Ground the Arc Welder.
3. When done using the Arc Welder, return the settings to what they were at the beginning of the job before leaving the welding room.

AFTER

1. Report any defective equipment or unsafe conditions you observe while welding to your Supervisor.

References:

1. "NIOSH Health Hazard Evaluation Report, Morton Metalcraft, Welcome, North Carolina", NIOSH, December 2005, HETA Report #2003-0257-2986.