

WELDING

General Information

Welding and cutting presents the risk of serious burns, electrical shock, and eye damage. The cutting and welding process emits sparks, which presents a fire hazard. However, following a few simple safety precautions can keep your welding and cutting activities injury-free.

Preventive Measures

- Read the operator's manual and familiarize yourself with the cutting/welding equipment.
- Proper training.
- Wear proper personal protective equipment:
 - welding gloves
 - long sleeved leathers or apron
 - welding helmet with appropriate filter shade
 - safety glasses
 - leather boots
 - fire-resistant welding pants
- Ensure the work area is:
 - free of clutter
 - free of combustible and flammable materials
 - ventilated (use engineered ventilation or a respirator)
 - Ensure work is performed in a designated hot work area or a hot work permit is obtained.
- Ensure a fire extinguisher is readily available.
- Ensure the work piece is properly grounded when arc welding.
- When using gas cylinders, chain them securely to a stationary, upright support or cart at all times.
- Examine hoses/cables regularly for leaks, wear, and loose connections.
- Inspect the cylinder valve for damage and/or the presence of contaminants such as oil, grease, or dust before using.
- Handle hot metal with pliers or tongs.

Three "F's" of Welding

FIRE

Always check carefully for fire hazards before starting to weld. Wood, paper, or other flammable materials should be removed from the area. Don't weld near flammable liquids.



Wooden floors should be clean before you weld, and covered with metal or a nonflammable material.

Be sure there are no cracks into which sparks or slag may fall. Never allow hot slag to fall into machine pits. Protect openings (doorways, windows, etc.) with non-combustible material.

When welding near combustible materials, a fire extinguisher, pail of water, fire hose, or a pail of sand should be kept close at hand. You may have to establish a fire watch with a trained individual who knows how to use the emergency equipment.

FUMES

Don't cut or weld any tank or drum that contained flammable liquids until it's tested for dangerous vapors. Insist on a test before you start your work.

Good ventilation is a must for all welding operations. Fumes can be harmful and good ventilation is necessary. Check the SDS before you start. Welding screens should not block the air flow. Don't weld in small rooms, tanks, or enclosed spaces without following your confined space entry policy.

FACE

Eye protection is a must on all welding jobs. Many jobs require full face protection. Face and eye protection is needed in many operations performed by welders besides the cutting and welding. Electric welders need goggles as well as the regular helmet. A good deal of chipping and cleaning of metal may throw particles of metal at eyes. Always use the type of protection required for the job.

Look out for the three F's of welding and you'll be able to weld safely.