



SAFETY UNLIMITED, INC.

Weekly Safety Meeting

Hazards of Hot Work

For some of you, welding is a hands-on job, but welding safety is really up to everyone. It involves not only the welder, but also those working in the vicinity of welding operations. We also need to watch out for hazards should a contractor enter our facility to do a welding job. In short, we want to make sure everyone knows how to stay safe.

Experts estimate that 6% of all fires on industrial properties are caused by welding or cutting. The main cause is the sparks or hot slag welding necessarily produces.

There are different types of welding that use electricity and welding rods, or compressed gases, both flammable and nonflammable.

Accidents and Injuries Related to Welding Include:

- Burns to unprotected eyes, known as welding flash, and burns to the skin from ultraviolet (UV) radiation in a welding arc - the bright light from welding;
- Fires from ignition of scrap, stored flammable materials, or even the buildings where welding is done;
- Explosions caused by ignition of flammable gas and flammable liquid vapors in pipes, tanks, and other containers that have not been cleaned or purged properly before welding.
- Inhalation of toxic fumes when metals are heated and welded in confined, or poorly ventilated, areas; and
- Electrocutation from damaged or defective welding equipment or equipment hooked up incorrectly or used improperly.

To Prevent These Types of Accidents You Must:

- Wear proper Personal Protective Equipment (PPE). Filtered eyewear including face shields, goggles and glasses must be worn to protect the eyes. Both the welder and the workers nearby should have appropriate eye protection. Other protective clothing should include nonflammable head protection, leather jackets and aprons, welding gloves, and long-sleeved (buttoned cuff and collar) shirts. Pant legs should be covering the tops of high cut leather safety toed boots.
- Screens and shields should be placed around the welding to protect nearby workers who are not involved in the work.

- Remove or use fireproof material to cover equipment, stock, or floors that could be ignited by welding. Post a fire watch and wet down areas when necessary. Always have the right fire extinguishing equipment nearby.
- Clean and purge piping, tanks, and other containers properly before welding.
- Keep work areas well-ventilated and use proper respirators correctly if these are required.
- Hook up equipment properly, using the right cable size and proper grounding of the metal being welded.
- Repair or replace damaged or defective equipment properly and immediately.

For Welding Involving Compressed Gases That Can Burn or Explode:

- Be careful with sources of heat, spark, or flame.
- Repair or remove and replace leaking cylinders and connections immediately.
- Keep cylinders upright, secure at all times, and stored in well-ventilated areas with the caps threaded on.
- Store cylinders at least 20' from all combustibles.
- Do not allow grease or oil to contact valves and connections. Oxygen will accelerate a fire involving grease or oil.

Questions to Consider Before Beginning Hot Work:

- Does everyone understand the scope of the work?
- Have all the affected employees been notified?
- Have security and emergency response personnel?
- Has the permit been filled out?
- Has the area been inspected before hot work is to start?
- Are all flammables/combustibles removed from the area?
- Has the area been evaluated to ensure that no flammable vapors are present?
- Is a fire extinguisher available?
- Are immovable fire hazards covered with a tarp or other non-combustible covering?
- Is hot work immediately stopped if conditions change, odors become present, etc., until the area is re-inspected?

You can protect yourself from the physical hazards of welding. Follow company policies for using PPE to prevent injury and follow them consistently. Correct any situations that pose a fire or electrical shock hazard.

If you do have a safety concern about welding hazards, don't let it become an accident waiting to happen--report it to your supervisor.

DON'T GET BURNED...PRACTICE WELDING SAFETY!!

