

Welding - Physical Hazards

Welding operations can be found in almost every type of industry. Welders must be qualified to do the work, and part of their education includes welding safety. This week's **Tail Gate Safety Topic** discusses the physical hazards of welding and how you can protect yourself from those hazards.

If you are a welder, or work near a welding operation, you may encounter any of these hazards:

Excessive Noise - Fire or Excessive Heat - Electrical Shock - Ultraviolet Radiation

All of these hazards can cause an injury. Knowing how to protect yourself is important. To protect yourself from **excessive noise**, you must wear hearing protection if the noise level exceeds regulatory standards. A noise evaluation should be included in the routine safety evaluation for every job with the potential for noise exposure. If you are required to use hearing protection, use it. Also, make sure you use the right kind of hearing protection. Not every type is suitable for every situation. Most important of all, don't be misled by thinking you don't need the protection because you don't currently have a hearing problem. Hearing loss can happen gradually, and very little can be done to restore hearing once it's damaged. If you are concerned about the noise level in a welding area, report your concern.

Fire and excessive heat are hazards with great potential for injury and damage. If welding is done in an area where a fire hazard exists, a welding permit should be used in accordance with established procedures. These permits may also be called hot work permits. These precautions are based on regulatory requirements. In addition, a trained fire watch must be posted to look for fires during and after the welding job. Combustible and flammable materials must be cleared from the welding area. A spark or a piece of hot slag could easily ignite these materials and cause a tragic fire. To protect yourself from burns from these sparks and pieces of slag, wear appropriate Personal Protective Equipment (PPE) such as aprons, gloves, leggings, and footwear.

As with any task involving energized equipment, welding also presents an **electrical shock** hazard. To protect yourself from the electrical hazards, thoroughly inspect your welding equipment before you use it. Be alert for loose connections and damaged components. Make sure electrical equipment is grounded properly each time it is used.

Ultraviolet (UV) radiation can cause burns to the skin and eyes. Welding hoods and special welding goggles with UV filter lenses and side shields are designed to protect your eyes and face from UV exposure. Appropriate gloves and aprons must be used to protect exposed skin. Welding curtains may be used for the same purpose to protect others in the vicinity of the welding area. This equipment must be used faithfully for every welding job in order to prevent UV burns. Flashburns to the eyes are extremely painful and can cause permanent damage, including blindness.

You can protect yourself from the physical hazards of welding. Follow company policies for using PPE to prevent hearing loss and UV burns, and follow them consistently.

Correct any situations which 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.