

**The basic precautions for fire prevention in welding or cutting work are?
1910.252(a)(1)**

How well does your maintenance personnel understand the basic fire protection requirements for welding or cutting? This paper can be a short training session to use with your workers. Also place this on the back of your hot work permit. Keep this type of information in front of your welders and cutters as much as you can.

Fire hazards. If the object to be welded or cut cannot readily be moved, all movable fire hazards in the vicinity shall be taken to a safe place.

Guards. If the object to be welded or cut cannot be moved and if all the fire hazards cannot be removed, then guards shall be used to confine the heat, sparks, and slag, and to protect the immovable fire hazards.

Restrictions. If the requirements stated in paragraphs(a)(1)(i) and (a)(1)(ii) of this section cannot be followed then welding and cutting shall not be performed.

Special precautions. When the nature of the work to be performed falls within the scope of paragraph (a)(1)(ii) of this section certain additional precautions may be necessary:

Combustible material. Wherever there are floor openings or cracks in the flooring that cannot be closed, precautions shall be taken so that no readily combustible materials on the floor below will be exposed to sparks which might drop through the floor. The same precautions shall be observed with regard to cracks or holes in walls, open doorways and open or broken windows.

Fire extinguishers. Suitable fire extinguishing equipment shall be maintained in a state of readiness for instant use. Such equipment may consist of pails of water, buckets of sand, hose or portable extinguishers depending upon the nature and quantity of the combustible material exposed.

Fire watch. Fire watchers shall be required whenever welding or cutting is performed in locations where other than a minor fire might develop, or any of the following conditions exist:

Appreciable combustible material, in building construction or contents, closer than 35 feet (10.7 m) to the point of operation.

Appreciable combustibles are more than 35 feet (10.7 m) away but are easily ignited by sparks.

Wall or floor openings within a 35-foot (10.7 m) radius expose combustible material in adjacent areas including concealed spaces in walls or floors.

Combustible materials are adjacent to the opposite side of metal partitions, walls, ceilings, or roofs and are likely to be ignited by conduction or radiation.

Fire watchers shall have fire extinguishing equipment readily available and be trained in its use. They shall be familiar with facilities for sounding an alarm in the event of a fire. They shall watch for fires in all exposed areas, try to extinguish them only when obviously within the capacity of the equipment available, or otherwise sound the alarm. A fire watch shall be maintained for at least a half hour after completion of welding or cutting operations to detect and extinguish possible smoldering fires.

Authorization. Before cutting or welding is permitted, the area shall be inspected by the individual responsible for authorizing cutting and welding operations. He shall designate precautions to be followed in granting authorization to proceed preferably in the form of a written permit.

Floors. Where combustible materials such as paper clippings, wood shavings, or textile fibers are on the floor, the floor shall be swept clean for a radius of 35 feet (10.7 m). Combustible floors shall be kept wet, covered with damp sand, or protected by fire-resistant shields. Where floors have been wet down, personnel operating arc welding or cutting equipment shall be protected from possible shock.

I can remember one job where I personally stood near the welding job taking place with a water hose and was constantly keeping the area under the welding wet. Another job requires that all joints flanges, hatches, etc. on 4 80' distillation columns were checked continuously for leaks with a hand held LEL monitor. Tarps were used to cover equipment and, in some instances, adjacent equipment was shut down during the welding. At times this was very unpopular with the Production Manager but doing it safely always won the battle.

Questions? Contact The Redstone Group at 614-763-5034 x7007 or jwilliams@redstonegrp.com