

Great Western Painting

Mining/Surface – Coal – Welding & Cutting

Welding & Cutting **30 CFR 77.1112**

Reference Interagency Agreement between the Mine Safety and Health Administration U.S. Department of Labor and the Occupational Safety and Health Administration U.S. Department of Labor. Many MSHA and OSHA standards and requirements are identical in nature and there may be some overlap in enforcement of standards.

When working as an operator in the capacity of an independent contractor performing services or construction at a facility that falls under MSHA standards, the provisions of our safety program apply except as modified below:

Methane, not uncommon in coal mine operations, is a highly combustible gas [explosive range (5%-15%)] , plus a spark, caused the explosion in West Virginia that killed 25 miners on April 6, 2010.

Before welding, cutting, or soldering is performed in area likely to contain methane, an examination will be made by a qualified person with a device approved by the Secretary for detecting methane. Examinations for methane will be made immediately before and periodically during welding, cutting, or soldering. The monitoring device will not be altered under any circumstances to indicate an incorrect reading.

Welding, cutting, or soldering work is not permitted to commence or continue in air which contains 1.0 volume per centum of methane.

When welding, cutting, or soldering with arc or flame near combustible materials, suitable precautions shall be taken to insure that smoldering metal or sparks do not result in a fire. These precautions would include:

1. relocating all movable fire hazards in the vicinity to a safe place.
2. using guards confine the heat, sparks, and slag to protect the immovable fire hazards.
3. ensuring suitable fire extinguishing equipment is maintained in a state of readiness for instant use.

Note: This 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.

4. wetting down the area prior to and after welding, cutting, or soldering work is done.

Special Requirements for Welding Conducted in Restricted Locations:

Special requirements are required when conducted welding in restricted locations such as surface fans, boreholes, coal storage areas, and stockpiles, boreholes and shafts.

These would include:

1. atmospheric testing and used of proper respiratory protection.
2. during suspension of arc welding for any substantial period of time, such as during lunch or overnight, all electrodes shall be removed from the holders and the holders carefully located so that accidental contact cannot occur and the machine be disconnected from the power source.
3. during suspension of gas welding or cutting whenever the torch is not to be used for a substantial period of time, such as during lunch hour or overnight, to eliminate the possibility of gas escaping through leaks or improperly closed valves the torch valves shall be closed and the gas supply to the torch positively shut off at some point outside the restricted location.

Note: Where practicable, the torch and hose shall also be removed from the restricted location.

4. Welding may never be done in the presence of explosive atmospheres (mixtures of flammable gases, vapors, liquids, or dusts with air), or in explosive atmospheres that may develop inside unclean or improperly prepared tanks or equipment which have previously contained such materials, or that may develop in areas with an accumulation of combustible dusts.

A flowable water source will be provided at each location where cutting and welding is to be performed and the area will be wet down prior to and after the work is done.

Note: If for some reason this cannot be accomplished, the shift foreman will approve an alternate plan.

A monitor system will be in place where cutting and/or welding has occurred, as well as a means to ensure that proper follow-up is conducted and recorded to ensure any potential hot spots have been extinguished.

Note: A record will be maintained of welding operations and the foreman on the following shift will recheck the area for hot spots. Many hot spots cannot be seen with the naked eye – an infrared camera may be required.

Alternative Methods to Cutting and Welding in Restricted Locations:

Whenever practical, alternative methods for cutting and welding in restricted area will be utilized to provide a greater measure of safety. These cold cuttings alternatives include hydraulic cutters and punches torch for cutting metals, when available. Several mines that were visited are using hydraulic cutters and punches.