



Best Practice Series

BP-78

Cutting and welding procedures should be established which minimize the risk of a mine fire. This operation should be conducted by persons trained to recognize the fire hazards associated with cutting and welding. Too often, miners have taken for granted that an area is safe following cutting and welding, only to have a fire develop later.

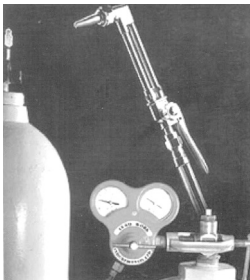
- **ALWAYS** follow your mine's cutting and welding procedures.
- **ALWAYS** wear appropriate personal protective clothing and equipment.
- **ALWAYS** check the work area for methane gas and make sure that methane concentrations are less than 1%.
- **ALWAYS** examine the work area for potential hazards.
- **ALWAYS** provide good ventilation.
- **ALWAYS** use suitable curtains to shield surrounding areas from sparks and molten metal.
- **ALWAYS** remove combustibles from the work area if possible.
- **ALWAYS** wet down combustibles or cover them with suitable non-combustible material.
- **ALWAYS** use the proper wrench and striker.
- **ALWAYS** ensure that the cutting torch is equipped with check valves and flame arrestors to prevent flames from flashing back into the acetylene gas cylinder.
- **ALWAYS** inspect area for fire and maintain a fire watch for at least 30 minutes after work has been completed.
- **NEVER** apply heat to an enclosed vessel or confined spaces such as tanks,

mounted tires, or mechanical equipment with enclosed cavities.

- **NEVER** conduct cutting and welding when mine fire protection water is out of service.

IT HAPPENED . . .

- ☛ A belt examiner found a fire along the main belt entry caused by hot slag from cutting and welding operations conducted days prior.
- ☛ A fire occurred in the tailgate entry of a longwall when a methane gas feeder was ignited by a torch that was used for cutting off a roof bolt protruding from the roof.
- ☛ A fire occurred in an area where belt conveyor supports were being recovered. A cutting torch had been used to remove roof bolts supporting the belt conveyor structure. The fire was found on the shift after cutting was completed.
- ☛ A miner was cutting the hub off a scoop. The grease in the hub caught fire.



Typical cutting torch arrangement

Arrive Home Alive

*U.S. Department of Labor
Mine Safety and Health Administration
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