

U.S. Department of Labor
Mine Safety and Health Administration
Educational Field and Small Mine Services



Location _____ Date _____

Competent Person _____ Duration _____ Time _____

Welding Hazards

Remember, Accidents do not just happen. Invariably, they occur because of indifferences to safety rules and lack of information or effective training.

- **SLAM Stop Look Analyze Manage** every project should begin with a plan that includes discussion on how this type of task had been completed before and any problems that may occur.
- **Task training is essential** for any new miners or on new equipment that has not been involved in these types of projects in the past. [46.7](#)
- **Lock-out, tag-out, test, Never** work on equipment unless you have locked out the power. Each person doing work must lock-out and tag. Each person must keep their key in their possession. Each person should remove their lock at the completion of the project. [56.12016;.12017](#)
- **Test** stored energy make sure any project you are working on will not move. Equipment with unbalanced drives may have a tendency to move. Blocking of moving parts is required when any possibility exist of non-powered movement. [56.14211](#)
- **Inspect all tools** for damage prior to starting project. This includes grinders, drills, extension cords, etc... Make sure tools are adequate for the task such as chains, cables, come-along never use tools beyond their design capacity. [56.14100b;.14205](#)
- **Proper PPE** is required hard hats, safety glasses, boots, gloves, goggles, hearing protection, flash ark curtains if others are in the area, **if there is a danger of falling fall protection is required.** [56.15002;.15003;.15004;.15005;.15007;.15014;.14213](#)
- **Survey your working area**, never use a welder where sparks will be a hazard, such as near a room containing flammable or combustible materials, keep flammable containers in a cabinet away from the working area. [56.4100;.4104;.4200;.4201;.18002](#)
- **If welding needs** to be done near flammable or combustible materials and materials cannot be removed, suitable fire-resistant guards, partitions, or covers must be used. Keep a spotter nearby with a fire extinguisher in case of an emergency. [56.4600](#)
- **Good housekeeping** is essential to reduce any potential for fires and explosions by keeping work areas clean. [56.20003](#)
- **Never weld on** any barrels, drums, old drill steels until you have properly identified the products contained and cleaned of any left-over product. Never weld on a sealed barrel or drum as an explosion can occur from a build-up from gases. [56.4604](#)

- **Make sure that the welder** is equipped with a conveniently located power disconnect and that any repair or adjustments made to the temperature is done when the welder is powered off.
- **Properly ground welders**, stray current may develop, which can cause severe shock if ungrounded parts are touched. Never ground to pipes that carry gases or flammable liquids. Keep connections tight between cables and electrode holders.
- **Do not change the polarity switch** while the welder is under load. Wait until the welder idles and the circuit is open, the contact surface of the switch may be burned, and the person throwing the switch may receive a severe burn from the arching.
- **Do not change range switch under load**, the range switch, which determines the current setting, should be changed only while the welder is off. Switching the current while the welder is under load will cause an arc to form between contact surfaces.
- **Weld only in dry areas**, use suitable material to stand on under damp or wet conditions. Keep hands and clothing dry; avoid contact with grounded metal while welding.

Fatalgrams: [46.7](#); [.56.4100](#); [.4201](#); [.4600](#); [.4604](#); [.12016](#); [.12017](#); [.14100](#); [.14205](#); [.14211](#); [.15002](#); [.15005](#); [.20003](#)

Attendees: