

WELDING HAZARDS

Welding on construction sites can impact the safety of the welder as well as adjacent workers in other trades, site foreman and supervisors, and inspectors. While on a site with welding being conducted, the following hazards should be assessed and the worksite set up to protect yourself and others from these hazards.

Flash Burns

The most common injuries due to welding are flash burns, caused by the ultraviolet light produced by the arc. A flash burn is like sunburn of the outer surface of the eye or the skin. You do NOT have to be looking at the arc to get flash burns. If the UV light can reach your eye, even from the side, you will get burned; it often happens to people working near the welder. Decking installation can cause the arc to reflect all over the site due to the shiny surface. Welders should wear appropriate clothing to protect their skin from flash burns. Anyone within 20 feet of a welding arc should be wearing safety glasses or shielded by an opaque barrier. Remember, it's not whether you can see the arc - it's whether the arc can see you!

Retinal Burns

The arc also produces intense visible light and heat, which is focused on the back of the eye by the lens and can cause blindness in someone staring directly at the arc. That's why the welder needs a hood with a dark lens. Unfortunately that can make it hard to see what you're doing, so people tend to "cheat", lifting up the hood while striking the arc, resulting in flash burns and occasionally pieces of slag in their eyes. The best solution is to use a helmet equipped with an auto darkening lens, but if you don't have one available use a lens dark enough to reduce the arc to a comfortable brightness and use a bright light to illuminate the work area so you can see it through the lens. Any time you strike an arc, the eyes must be protected from the intense light. Closing your eyes or holding your hand between you and the arc will not provide protection from retinal burns.

Additional Dangers Associated with Arc Welding

- Arc welding equipment may not be designed to operate safely in damp, rainy and windy weather, or in the presence of flammable vapors or gasses, corrosive fumes, dirt, or dust.



- Wet equipment or wet welders can be disastrous. If the welding equipment is wet, it should be dried off, but only after the power source has been disconnected. Prior to using the welding cables, check the insulation and lead cables for exposed conductors.
- Welding leads are not to have any splices or repairs within ten feet of the holder. Inspect daily and red tag and replace if damaged.
- Check the lead for any exposed wiring that could start a fire or energize the work surface, causing personal injury.
- If inert gas welding is used, examine the gas hose for leaks.
- Never coil or loop electrode cable around any part of your body.
- Be sure the welding machine frame is properly grounded and double check the grounding connections. Never use pipelines carrying gases or flammable liquids or conduits carrying electrical conductors as grounds. Don't ground to a building structure that is a great distance from the weld area.
- Never weld on a load suspended from a crane or hoist if the wire rope or hoist chain can become a path for even part of the current flowing back to the welder. The current can damage the wire or hoist chain and potentially cause a failure during hoisting operations. If you need to weld a suspended load, use a nonconductive sling rated for the load to isolate the current from the cable or chain hoist.
- Wet floors or decking can cause electrical shock. Make sure the insulation is sufficient on higher open-circuit voltage. If you are AC welding under wet conditions, including perspiration, be sure to have an automatic control to reduce the no-load voltage; this prevents electrical shock.
- Do not change the polarity switch when your machine is under load. Arcing because of high current can burn the switch contact surface and can seriously burn you. Make sure there is a power disconnect switch on the welding machine; this switch shuts down the machine immediately in an emergency.
- Electrode holders should be stored where they cannot make contact with personnel, conductors, fuels or compressed gas tanks. If you are not going to be welding for a few minutes, disconnect the power source and remove the electrodes.
- Sources of ignition, such as arc welding, must be greater than 50 feet from flammable liquids, unless conditions warrant greater clearance. Never strike an arc on a gas cylinder. Always keep electrodes and their holders and any other live parts away from gas cylinders.



Company: _____

Location: _____

Topic: _____

Date: _____

WEEKLY SAFETY PROGRAM REVIEW AND PRESENTATION

1. Remind all employees that it is their right to a safe work place. Each employee is responsible to report and respond to unsafe work practices and conditions.

2. Review of recent incidents, injuries, and reported near misses.

3. Recent observations, safety violations, and demonstrated lack of knowledge or skills.

4. Employee suggested corrective actions for avoiding future reoccurrences.

5. Existing and upcoming work activities and potential hazards. Include review of supporting materials or documents and demonstrate safe work procedures.

6. Employee workplace safety concerns and recommendations.

7. Safety topic presentation. Include review of company policies, procedures, and location specific expectations. Encourage questions and clarifications.

8. Additional meeting notes.

Company: _____

Location: _____

Topic: _____

Date: _____

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Printed Full Legal Name	Signature
Instructor 1:	
Instructor 2:	
Translator:	