



# Arc-Welding Safety — Basic

West Virginia University  
Environmental Health and Safety



## Pre-Use Activities

- Review and understand information provided in the arc-welding operator's manual, specifically the safety procedures.
- Inspect the input power cord, grounding connections, welding cables, and welding gun or electrode holder for damage or disrepair.
- Assure the welding machine frame is grounded properly.
- Notify supervisor and remove the welding equipment from service by attaching a red tag that states "OUT OF SERVICE." if any cords, cables, connections, and/or other mechanisms fail the pre-use inspection. Complete red tag with appropriate information.
- **HOT WORK PERMIT REQUIRED.** Obtain a hot work permit from the Environmental Health and Safety webpage: <http://www.wvu.edu/~ehs/formsinstructions.cfm>.

## Operating Precautions

- Wear a welding hood with **SHADED** safety glasses; requires at least a No.10 lens shade for arc welding.
- Wear appropriate protective clothing (fire-resistant gauntlet gloves, rubber-soled shoes, leather apron, non-synthetic fiber, etc) when using arc-welding equipment.
- Use hearing protection during noisy welding tasks.
- Never use wet arc-welding equipment or perform arc welding in wet or damp locations.
- Conduct arc welding in well ventilated areas. Avoid breathing welding fumes.
- Do not arc weld on coated metals (galvanized, lead, or cadmium plated steel) unless the coating is completely removed from the area to be welded and the welding area is well ventilated.
- Never arc-weld on a compressed gas cylinder. Keep compressed gas cylinders away from arc-welding work areas.
- **Do not touch** electrical connections, wires, or other electrically charged machine parts, when operating an arc welder.
- Do not arc-weld where flying sparks can reach flammable materials. Keep flammable materials at least 35 feet from arc welding operations.
- Ensure a fire blanket and extinguisher are present in the arc-welding work area. Remove combustible items, such as matches or a lighter, from your pockets before beginning to arc-weld.
- Never dip hot electrode holders in water.
- Remove electrodes and place holders to prevent employee injury when welder is left unattended.
- Avoid having electrode cables wrap around your body when arc welding.
- Use vises or clamps to secure work pieces while arc-welding, **when** possible.
- Turn off inverter, disconnect power cord, and discharge capacitors before performing any arc-welder maintenance.
- Call 911 for emergency assistance in event of arc welding incident or injury.

