

Tool Box Talk – Hazards from Electric Arc Welding

- The biggest hazard in arc welding is not from heat, sparks, fumes or intense infrared radiation but from electrical current (electrocution).
- On most manual arc welding operations, the electric current ranges from 10 amps to 600 amps. Remember that it only takes 70 to 100 milliamps to kill most people and 70 milliamps is only a fraction of one single amp.
- Your best protection is to keep from becoming grounded.
- Make sure you are always insulated from the work itself because it is probably grounded. For example, if you are welding one pipe to another pipe that is already in place, the new pipe also becomes grounded. If you are not insulated from it you too will become grounded.
- Inspect the stinger leads for damage. There can be no damage in the first 10 feet of active stinger lead. Minimal lead damage elsewhere can be repaired by a qualified person with vulcanizing or heat shrinking kits.
- Always keep yourself insulated from the electrode and electrode holder, especially if you are wet from sweat or some other source. Use well insulated electrode holders and welding cables.
- Keep your clothes and hands as dry as possible. Use insulation between your body and the ground such as a welding mat, where possible.
- Cover or otherwise arrange the cables in a way that will prevent falling sparks from burning through the insulation.
- Avoid changing electrodes with bare hands or wet gloves.

Ground the welding unit according to the National Fire Protection Association's National Electrical Code (NFPA 70).