



# Arc Welding and Electrical Safety

**Arc welding is safe if the unit is properly inspected and used. You can receive a shock, however, from the primary (input) voltage if you touch a lead or other electrically “hot” component inside the welder while touching the welder case or grounded metal.**

## Marc’s Story

Marc was using an arc welder to install metal subflooring on a balcony at a construction site. He touched exposed wires on the welding cables and was electrocuted. Investigators found that earlier repairs to the welding cables had been done wrong, leaving them frayed and exposed.

- ✘ **Why did this incident happen?**
- ✘ **Have you known or heard of anyone who was injured or killed while welding? If so, what happened?**

## Remember This

- Inspect the arc welder before starting any operation.
- Look for frayed welding leads and any damage to the welder.
- Read all warning labels and instruction manuals for the welder.

- Ground the welder case so that if a problem develops inside it a fuse will blow, disconnecting the power.
- Insulate your body from the metal you are welding.
- Do not rest your body, arms, or legs on the metal being welded, especially if your clothing is wet or your skin is exposed.
- Stand or lie on a mat of plywood, rubber, or some other dry insulation.
- Do not touch the electrode or metal parts of the electrode holder with skin or wet clothing.
- Wear long sleeves and appropriate protective clothing, eye protection, gloves, and footwear to protect skin from burns due to ultraviolet light, sparks, and molten metal.
- Wear dry gloves in good condition when welding.
- Avoid welding in wet or damp areas, to prevent electrical shock.

## How can we stay safe today?

What will we do at the worksite to prevent injuries from arc welding and electrical hazards?

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2. \_\_\_\_\_  
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OSHA Regulations: 1926.351 and 1926.352

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- ✘ Look for frayed welding leads and any damage to the welder.
- ✘ Ground the welder case.
- ✘ Use mats of plywood, rubber, or some other dry insulation to stand or lie on.
- ✘ Wear dry gloves in good condition and other personal protective equipment when welding.