



Prevention through comprehensive research and investigation

INVESTIGATION/RESEARCH

CASE# 03MI193: ELECTROCUTED WHILE WELDING

- In 2003, 44-year-old male farmer was welding on a feed bunker wagon using a very old 240-volt plug-in cord-connected SMAW-type Hobart® welder in disrepair.
- Victim connected two sets of welding lead cables and placed the un-insulated cable splices on bare dirt.
- Victim was lying on damp, bare ground and was sweating heavily wearing a short-sleeve work shirt.
- Victim was wearing his welding helmet. He was not wearing gloves.
- Victim found sitting under the feed bunker wagon with the welder cables lying across his lap.

IN ORDER TO PREVENT SIMILAR INCIDENTS IN THE FUTURE

- Maintain welding equipment, including the welder, leads, stingers, and the welding rods so you can safely conduct a welding operation.
- Use appropriate personal protective equipment as required, such as a welding helmet, gauntlet leather welding gloves/protective sleeves, long sleeve shirt with buttonable cuffs made from heavyweight, tightly woven 100% wool or cotton, leather apron, jacket, or leg chaps, high top leather boots, and an insulated electrical safety mat.
- Develop safe work procedures for welding operations, especially for splicing welding leads.
- Identify other potential safety issues, such as the need for a ground fault circuit interrupter (GFCI).
- Purchase approved welding cable splice connectors if joining two sets of cables.
- Purchase welding mat to prevent electrical shock/electrocution in wet or damp ground locations.

DID YOU KNOW?

- 2 of 4 electrocutions that we know of which have occurred on Michigan farms in the past 3 years have involved very old Hobart®-brand SMAW welders in disrepair
- An unintentional electric path between a source of current and a grounded surface is referred to as a "ground fault"
- Ground Fault Circuit Interrupters (GFCIs) may provide protection from the "wall to the welder"
- A GFCI will not protect you from faults between the "welder and the work"
- Approved welding cable splice connectors are sold at welding equipment stores

Full MIFACE investigation report #03MI193
www.chm.msu.edu/oem. Click on MIFACE icon

MIOSHA Standards have good information:
www.michigan.gov/mioshastandards
Welding and Cutting
Personal Protective Equipment

Check out National Ag Safety Database:
www.cdc.gov/nasd/

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TO REPORT A NEW WORKPLACE
FATALITY TO MIOSHA

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MICHIGAN FATALITY ASSESSMENT &
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