

**Case 242. 49-year-old male welder for a boardwalk construction firm died from a probable electrocution due to contact with 120 volts while preparing to conduct a shielded metal arc weld on a guardrail system for a floating dock.**

A 49-year-old male welder for a boardwalk construction firm died from a probable electrocution due to contact with 120 volts while preparing to conduct a shielded metal arc weld on a guardrail system for a floating dock. MIOSHA inspection of the welding-related equipment identified that a new 6013 welding rod was present in the stinger and had not yet been utilized (no obvious signs, such as discoloration, fresh welding bead or weld over-spatter were present) and that one side of the jaws of the stinger was missing its insulator cover. The welding cables were in good condition. Both MIOSHA and the decedent's coworkers could not identify the area on the metal railing or brackets along the length of the dock system where the ground clamp may have been installed. The gas-powered Miller arc welder approximately 20-25 feet away from the decedent's location and was running at the time of the incident. It appeared that the decedent may have been reaching between the railing sections to complete the weld at the bottom of the railing to perform the weld when the probable electrocution took place. A coworker nearby heard a groan/grunt and turned to see decedent slumped over between the railing sections. The coworker immediately yelled to another coworker (Coworker 2) that something was wrong and ran to the decedent's location to pull him back onto the deck of the dock. The decedent's welding hood and the electrode holder/stinger was in the water. Coworker #2 turned the welder off and ran to the decedent and began CPR. Emergency response was called, and after performing further resuscitation, the decedent was declared dead at the scene. The medical examiner did not note obvious entry or exit sites usually found with effects of being electrocuted.

MIOSHA Construction Safety and Health Division issued the following Serious and Other-than-Serious citations at the conclusion of its investigation.

**SERIOUS: GENERAL RULES, PART 1, RULE 114(2)(b)**

No instruction provided to each employee regarding the operation procedures, hazards and safeguards of tools and equipment when necessary to perform the job.

No instructions related to hazards associated with welding operations are addressed in employer's Accident Prevention Program. Employee welding handrail sections on a floating dock.

**SERIOUS: WELDING AND CUTTING, PART 7, RULE 744(1)**

A current-carrying part passing through the portion of the holder that the employee grips by hand and the outer surface of the jaws of the holder shall be insulated against the maximum voltage encountered to ground.

Electrode holder is broken and not insulated against maximum voltage to ground.

OTHER-THAN-SERIOUS: PERSONAL PROTECTIVE EQUIPMENT, PART 6, RULE 617)1)

An employer shall provide to an employee at no expense to the employee, the initial issue of personal protective equipment required by this part or any other construction safety standard rules, unless specifically indicated otherwise in this part or any other construction safety standard rules, or unless a collective bargaining or other employer-employee agreement specifically requires employees to provide such equipment.

Leather gloves are damaged with holes in fingers and palm area.