

**Case 307. 49-year-old produce broker was electrocuted by 480 volts when he reached in to adjust the temperature on a digital thermostat located inside a Knack 480-volt electrical control cabinet.**

A 49-year-old male produce broker was electrocuted by 480 volts when he reached in to adjust the temperature on a digital thermostat located inside a Knack 480-volt electrical control cabinet. The electrical control cabinet was located outside of a cooler warehouse. A concrete block barrier on a wood pallet was positioned 18 inches in front of the electrical control cabinet to protect the cabinet from forklift traffic in the area. To access the thermostat in the interior of the cabinet, the decedent was required to open both of the electrical cabinet doors. The thermostat was electric and required power to operate/adjust. The electrical cabinet was powered by 480 volts and was further reduced to 230 volts by step down transformers. The fuse block and terminal screws were unguarded. Additionally, other 110 volt contacts on internally mounted switches were exposed. The decedent, who was wearing a metal ring, was found by another employee lying on his back on top of the concrete barrier. This employee contacted emergency response while other employees administered CPR. The decedent was transported to a local hospital by emergency responders, where he died.

MIOSHA General Industry Safety and Health Division issued the following Serious citations at the conclusion of its investigation.

**SERIOUS: PERSONAL PROTECTIVE EQUIPMENT, PART 33, RULE 3312(1)**

- Each affected employee did not use appropriate eye and/or face protection as prescribed in rule 3311 of Part 33 where a hazard existed due to flying objects or particles, harmful contacts, exposures, molten metal, liquid chemicals, acids or caustic liquids, chemical gasses or vapors, glare, injurious radiation, or electrical flash.

(No eye protection, employee did not use adequate eye protection when working near live 480-volt electrical conductors/terminal screws, Knack electrical control cabinet)

**SERIOUS: DESIGN SAFETY STANDARDS FOR ELECTRICAL SYSTEMS, PART 39, RULE 1910.303(g)(1):**

- Sufficient access and working space was not provided and maintained about all electric equipment to permit ready and safe operation and maintenance of such equipment:

(Inadequate distance between electrical control cabinet and cement block. Large cement block located within 18 inches of electrical control cabinet doors not allowing to fully open, Knack electrical control cabinet)

**SERIOUS: ELECTRICAL SAFETY-RELATED WORK PRACTICES, PART 40**

- RULE 4002(3):

Employees were not trained in, familiar with, the safety-related work practices required by the rules of Part 40 that pertain to their respective job assignments:

(Employee did not receive adequate training when required to open live 480-volt electrical control to adjust thermostat, Knack electrical control cabinet)

- RULE 4009(9):

When normally enclosed energized parts were exposed for maintenance or repair, they were not guarded to protect unqualified person from contact with the energized parts:

(Unguarded, exposed live parts including 480-volt terminal screws/fuse block, Knack electrical control cabinet)

- RULE 4006(4):

Conductive articles of jewelry and clothing, such as watchbands, bracelets, rings, key chains, necklaces, metalized aprons, cloth with conductive thread, and metal headgear, were allowed to be worn when they might have contacted exposed energized parts:

(Employee wearing metal ring on finger while adjusting digital thermostat in 480-volt control cabinet, Knack electrical control cabinet)