

Case 499. 49-year-old machine builder was electrocuted when he contacted an energized conductor.

A 49-year-old male machine builder was electrocuted when he contacted an energized conductor. The manufacturing cell contained three engine block honing machines (A, B and C) and a conveyor system used to transfer engine blocks between each machine. Prior to lunch, the decedent had been aligning the spindle with an engine block that was mounted in the fixture on an indexing table on Machine B. Between Machine B and Machine C there was an approximately 10-foot long roller conveyor. The conveyor had electrical wiring, ethernet cables and a ground wire coming from Machine C that powered the conveyor. On the legs of the conveyor were brackets with bolts and nuts securing them to the conveyor legs. Machine C had an approximately two-inch-thick by six-inch-wide steel rail mounted to the side of the machine approximately 18 inches from the floor. The rail was spaced approximately 1.5 inches away from the machine. After lunch, the decedent returned to the work area. He had been at the work area for approximately five to ten minutes when a coworker noticed that the decedent was kneeling on the floor in the corner of Machine C and the conveyor. He had his left arm resting on top and his left chest leaning against the side of the metal rail. His right arm was moving and then stopped. The coworker called out his name but there was no response. Another coworker came by and they both went to the decedent to see what he was doing. One of his coworkers reached down and grabbed the decedent under the armpits and felt a vibration or tremor like electric current so he immediately let go and yelled for someone to turn off the machine. Once the machine was turned off his coworker grabbed the decedent's shirt and pulled him away from Machine C. The decedent did not have a pulse. The workers moved the conveyor (with all wiring attached) to provide room for emergency responders. After calling for emergency response, the employees performed CPR until EMS arrival, who took over emergency care. Subsequent investigation by the medical examiner found burn marks on his right forearm consistent with two nuts holding a bracket on the leg of the conveyor down by the floor. Burns to his left chest and left arm were consistent with him leaning against the metal rail with his chest while resting his arm on top of the metal rail. After EMS left the facility, the conveyor was put back in place. The next morning electricians repaired the ground, an ethernet cable and a 380-volt electric power connection that was damaged when the conveyor was removed.

MIOSHA General Industry Safety and Health Division did not issue a citation at the conclusion of its investigation. The Division issued a Safety and Health Recommendation to the employer.

A Safety and Health Recommendation

An inspection/investigation of your worksite revealed the following condition(s) that may constitute a safety or health hazard to your employees:

Before putting block honing machines *B* and *C* and all associated components into production, a thorough safety check of all electrical systems and components should be performed to verify that there are no electrical hazards present that could cause serious injury to any persons working on or near the machines. (*MIFACE changed the names of the machines*)