

A **30 year old male** employee was troubleshooting an issue with an injection molding machine and apparently was **electrocuted** when he contacted the frame of the loading conveyor.

Lasco Fittings, Inc., is a manufacturer of injection-molded, polyvinyl chloride (PVC) schedule 40 and schedule 80 pipe fittings (e.g.: couplings, elbows, reducers) and other fittings of varying sizes.

It was learned that there was an issue with the parts being manufactured by injection molding machine #B-19. The victim was troubleshooting the injection molding machine to determine why water was getting in the parts during the injection molding process. The injection molding machine was manufacturing PVC threaded male adapters from PVC pellets that the company received in bulk. The finished threaded male adapters fell from the opened mold sections of the injection molding machine onto the loading end of a parts conveyor. The adapters rode the parts conveyor up an incline and were dropped into a large storage or shipping container at the unloading end of the parts conveyor.

The 480v parts conveyor was a portable unit equipped with an appropriate cord and plug so it can be relocated or repositioned per the needs of the facility and/or the production schedule. The male plug end was equipped with a ground prong. However, the power cord's outer insulation was pulled from the strain relief fitting. The strain relief fitting was located on the bottom panel of the metal cabinet that housed the parts conveyor's electrical controller.

The electrical controller for the parts conveyor was housed in a metal cabinet. The metal cabinet was mounted to the metal side rail of the parts conveyor's frame. The cabinet was fitted with a door-mounted switch. The door-mounted switch turned the parts conveyor on and off. It was learned that one of the 480v power supply conductors to the controller had become pinched or crimped between the body of the controller and a piece of the metal mounting hardware of the door-mounted switch.

It appeared that the pinched or crimped wire had energized the metal frame of the parts conveyor with between 140-170v (as measured by the company's maintenance person). It was determined that the victim most likely leaned over the loading end of the parts conveyor in order to close a cooling water supply ball valve while troubleshooting the machine and apparently made contact with the metal frame of the parts conveyor where he received the mortal electric shock.

Citation(s) as Originally Issued

A complete inspection was conducted at the accident scene. Some of the items cited may not directly relate to the fatality.

Citation 1 Item 1

Type of Violation: Serious

\$2800

29 CFR 1910.303(b)(1): Electrical equipment was not free from recognized hazards that were likely to cause death or serious physical harm to employees:

In that the metal frame of the 480 VAC parts conveyor for the injection molding machine #B-19 was energized resulting in the fatal injury of an employee on 06/26/2020.

Citation 1 Item 2 **Type of Violation: Serious** **\$2800**

29 CFR 1910.303(b)(3): Complete wiring installations were not free from short circuits and from grounds:

In that a 480 VAC power supply conductor had become pinched or crimped between the body of the electrical controller and a piece of the metal mounting hardware of the door-mounted switch and energized the metal frame of the parts conveyor for injection molding machine #B-19 resulting in the fatal injury of an employee on 06/26/2020.

Citation 1 Item 3 **Type of Violation: Serious** **\$2800**

29 CFR 1910.303(b)(7): Electric equipment was not installed in a neat and workmanlike manner:

In that a 480 VAC power supply conductor was installed in a manner that allowed it to be pinched/crimped between the body of the electrical controller and the metal mounting hardware of the door-mounted switch energizing the frame of the conveyor, resulting in the fatal injury of an employee on 06/26/2020.

Citation 2 Item 1 **Type of Violation: Other-than-Serious** **\$175**

29 CFR 1910.305(g)(2)(iii): Flexible cords were not connected to devices and fittings so that tension would not be transmitted to joints or terminal screws:

In that the outer insulation was pulled out of its strain relief fitting, at the bottom of the controller cabinet, for the 480 VAC power supply cord for the parts conveyor at injection molding machine #B-19.

15 Electrocutation--Inspection #1481193 Lasco Fittings

