

Case 318. 38-year-old robot weld technician died when he was pinned by the clamping mechanism of a transfer robot against a part in a buffer rack.

A 38-year-old male robot weld technician died when he was pinned by the clamping mechanism of a transfer robot against a part in a buffer rack. The automotive part assembly line was segmented into three areas – the A side, the B side and the West End, each with their own assigned robot weld technician. The decedent was assigned to the A side. Robot cells along the assembly line contained both welding robots and transfer robots (robots that transfer parts from one welding robot to either to a buffer rack or to another welding robot). The buffer fixture could accumulate parts when there was a hold up further down the line. Parts for assembly originated at the West End, and then were directed to either the A side or the B side (mirror images performing the same function). Stoppages on the line were frequent. When the line was “down”, an alarm sounded, indicating an issue that must be addressed by the robot weld technician. The transfer robot involved in this incident was described by coworkers as “having issues if the sensors are not detecting a part on the buffer rack”. The buffer rack contained one part at its lowest storage area. The decedent could access this transfer robot by entering either of two robot cell gates. It appeared that the decedent entered through a robot cell gate that, when opened, should have activated two light curtains, shutting down the applicable robot cells. The decedent did not place his lock on the interlock gate key. The decedent was kneeling on the floor, facing the buffer rack when the transfer robot activated. Coworkers heard the alarm sounding. When he was found, the gate thought to have been entered was closed with the interlock gate key inserted and the cycle in automatic. Coworkers using a teach pendant could not reposition the robot. The decedent was extracted by unbolting the buffer rack from the floor and pulling it away from the robot. The decedent was declared dead at the scene.

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

REPEAT SERIOUS: THE CONTROL OF HAZARDOUS ENERGY SOURCES, PART 85

- Rule 1910.147(c)(4)(ii):

Procedures were not developed, documented and utilized for the control of potentially hazardous energy when employees were engaged in activities covered by Part 85:

(The firm was previously cited for a violation of this Occupational Safety and Health Standard or its equivalent standard).

- Rule 1910.147(c)(7)(i)(A):

Authorized employee(s) did not receive training in the recognition of applicable hazardous energy sources, the type and magnitude of the energy available in the workplace, and the methods and means necessary for energy isolation and control:

(The firm was previously cited for a violation of this Occupational Safety and Health Standard or its equivalent standard).

OTHER THAN SERIOUS: THE CONTROL OF HAZARDOUS ENERGY SOURCES, PART 85

- Rule 1910.147(c)(7)(i)(B):

Affected employees were not instructed in the purpose and use of the energy control procedure.

(No training for affected employees – Facility).

- Rule 1910.147(c)(7)(iv):

The certification of employee training by the employer did not contain each employee name and date of training.

- a. Certification of employee training was not dated or titled – Facility.
- b. No certification of authorized employee training – Facility.
(this sub-item is abated)

REPEAT OTHER THAN SERIOUS: THE CONTROL OF HAZARDOUS ENERGY SOURCES, PART 85, Rule 1910.147(c)(6)(i):

The employer did not conduct an annual or more frequent inspection of the energy control procedure to ensure that the procedure and requirements of Part 85 were followed:

(The firm was previously cited for a violation of this Occupational Safety and Health Standard or its equivalent standard).

(No periodic inspections of energy control procedure – Facility)