

Case 356. 60-year-old shot blast operator died when a firm-built 632-pound steel plate guard fell on him.

A 60-year-old shot blast operator died when a firm-built 632-pound steel plate guard fell on him. Parts to be blasted in the machine were too long to fit within the machine and allow the doors to be closed. The firm had previously manufactured two 130-inch-tall by 72-inch-wide one-quarter-inch plate steel guards to extend the enclosure, each weighing approximately 632 pounds. A 15-inch by 3-inch “L” bracket was welded to the back of each guard. A forklift was used to hang the steel plates on a rail located on the top of the shot blast enclosure. The firm had instructed employees to climb on top of the enclosure to verify the “L” brackets were properly nested over the rail. The decedent crawled under the guards and entered the blast area with a shovel. While crawling out of the machine, it is hypothesized he bumped one of the guards causing it to fall on him. Post investigation determined the guards had not been hung properly with the edge of the “L” bracket sitting on top of the rail opposed to being nested over it. It was unknown why the decedent crawled under the guards – no part was in the machine at the time of the incident. The shot blast table could be rolled out of the machine to be cleaned. Additionally, fellow employees indicated that the shot blast table should be cleaned prior to installing the plates. The decedent was found by his coworkers, who called 911. The decedent was declared dead at the scene.

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

SERIOUS: GENERAL PROVISIONS, PART 1, 408.10034(2):

Guards shall be secured to the machine, if possible, or to other fixed objects.

The two (2) guard plates, each weighing approximately 632 pounds, were not hung and secured properly to the shot blast machine frame.

SERIOUS: PERSONAL PROTECTIVE EQUIPMENT, PART 33, 408.13390:

An employer shall ensure that each employee whose fall protection is not covered by another MIOSHA safety standard and the employee’s work area is more than 6 feet above the ground, floor, water, or other surface, shall be protected as prescribed in Construction Safety Standard Part 45 “Fall Protection”, as referenced in R408.13301a. The following systems are included in CS Part 45 “Fall Protection”:

- (a) Guardrail systems
- (b) Safety net systems
- (c) Personal fall arrest systems

Employees climb onto the roof of shot blast machine with an approximate height of 12 feet to verify door guards are secured in place and/or to clean blower screens.