

A 58-year-old who worked in maintenance died when struck by part of a pressurized stainless steel furnace door that ruptured. The 3-person maintenance crew was conducting tests to determine the location(s) of a leak in the approximately 55-inch diameter hollow door of an electric ferritic nitrocarburizing furnace with vacuum purge, Model VDR914 E 60490. The door was insulated with Fiber Frax blanket insulation. The electric furnace was a form of annealing for automotive steel, heated to 1060 degrees F, and had a vacuum pressure to 50 millibar. A crack in the furnace door had recently been welded, but it had been determined that other leaks were present. The maintenance crew tried to locate the leak(s) by their usual procedure - visual inspection and using a smoke generator inside of the furnace. The crew, for the first time, then tried to locate the door leak(s) using plant pressurized air. The crew detached the vacuum line to the door and attached plant air (100psi) to the inlet portion of the door. There was no pressure gauge at the door inlet and no one was positioned at the quick disconnect for the plant air. The plant airline was attached for less than 5 minutes. During the pressurization of the door the weld failed and ruptured a portion of the door, striking both the decedent and another worker.

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

SERIOUS: GI Part 1, General Provisions 408.10036(6)

An employee shall be protected by guards or location when pressure tests are being performed on materials or equipment where rupture or failure would create a hazard.

Employees were not adequately protected by guards or location to safely complete this task which resulted in the center cap of the door rupturing from pressure testing. This resulted in one employee fatality and another employee injures on *date*. *Date removed by MIFACE*.