

**Case 227. 41-year-old temporary agency laborer died when a 30-foot, 3,600-pound steel beam rack fell onto him.**

A 41-year-old male temporary agency laborer died when a 30-foot, 3,600-pound steel beam rack fell onto him. The beam rack was held in a stationary elevated position, approximately six feet above the ground by a saddle horse placed at each end. Welded to the top of each saddle horse were two V-shaped saddle supports; each saddle horse accommodated two beam racks. The saddle horses were aligned directly across from each other so the end of each beam rack could be placed into a V-shaped saddle support. Affixed to the underside of the metal beam were the racks; rectangular metal pieces from which parts ready for galvanizing were hung. Welded to the top of the beam rack were two triangular-shaped attachments positioned to permit an overhead crane equipped with two hooks to lift the beam rack from or place the beam rack onto the saddle horses. The two saddle horses were not secured to the floor.

The crane operator placed one beam rack (Beam Rack #1) into the V-shaped saddle supports. Each end of Beam Rack #1 was secured with a wire tie to its respective saddle horse. The second beam rack (Beam Rack #2) was placed into its V-shaped saddle supports. It is unknown if Beam #2 was secured to the saddle horses. The crew hung the parts on the rack of Beam Rack #1. When all parts had been hung, one of the decedent's coworkers lifted Beam Rack #1 from the saddle horses with the overhead crane. To clear Beam Rack #2, Beam Rack #1 was required to be raised to at least 15 feet above the ground. The decedent began hanging parts on Beam Rack #2. The galvanizing area was located in a direction that required Beam Rack #1 to be lifted up and over Beam Rack #2. The hanging parts to be galvanized on the beam of Beam Rack #1 may have caught on the lip of one of Beam Rack #2's V-shaped saddle support. Police photographs show that one of the saddle horses that supported the beam racks had fallen to the ground. The saddle horse had rotated counterclockwise 90 degrees and landed with its V-shaped saddle supports resting on the floor. It is postulated that as the saddle horse fell and rotated, the end of Beam Rack #2 became unsupported and slid from the saddle supports. The beam fell at an angle in the direction of the saddle horse that tipped over. The beam struck the decedent and pinned him to the floor. The second saddle horse remained upright and in its original position. Three fork lift trucks were used to lift Beam Rack #2 from the decedent. Emergency response was called. The decedent was declared dead at the scene.

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

**SERIOUS: OVERHEAD AND GANTRY CRANES, PART 18**

- Rule 1854(1): A valid operator permit was not provided to a crane operator:
  - a. Expired crane permits. Employees are required to use overhead cranes to move large pieces of metal through the facility.
  - b. No permit testing or training.

- Rule 1865(6)(c): When a load was attached or moved, it was not ensured that the sling and load would clear all obstacles or obstructions.

A load did not clear a rack or beam that employees were attaching metal parts to, prior to galvanizing the parts. On the day of the incident, when a crane was used to lift one rack loaded with hanging parts, over another rack, the load did not clear the other rack.

**WILLFUL SERIOUS: MICHIGAN OCCUPATIONAL SAFETY AND HEALTH ACT, ACT 154, P.A. 1974, AS AMENDED, SECTION 11(a)**

- The employer did not furnish to each employee, employment and a place of employment, which was free from recognized hazards that were causing or were likely to cause death or serious physical harm to the employee: Allows employees to load parts on racks supported by two rack stands. The rack stands were not secured to the floor. When one rack was lifted off the rack stands, the second rack that was still supported by the rack stands and the rack fell on the employee

Among other methods of abatement, one feasible and acceptable means of abatement is to secure the rack stands to the floor.

**WILLFUL SERIOUS: OVERHEAD AND GANTRY CRANES, PART 18, RULE 1865(1)**

- Carrying a load over an employee was not prohibited. Cranes are used to move 3,600 pound racks that are loaded with parts, over the heads of employees while they are loading parts onto a second rack. A crane operator picks up one rack that has been loaded with parts and lifts it over the heads of employees. These employees continue to load parts onto another rack which is directly in the path of the load while it is being moved over their heads.