Case 331. 42-year-old die setter was fatally injured when he was struck by a falling 6,800-pound die.

A 42-year-old male die setter died when he was struck by a falling 6,800-pound die. The decedent utilized a 12-ton capacity overhead bridge crane to perform a straight lift using one leg of a four leg sling. The die being transported had standard 1-inch tap holes. The hook of the single leg was hooked to a single M24 eyebolt that was set in the 1-inch hole. The sling, which was in good condition, was rated at 90 degrees for a lift up to 18,100 pounds. The decedent, who was working alone, had lifted the die and moved it across five dies to a narrow aisle way between dies. The decedent was positioned between the suspended load and a die located on the floor when the M24 eyebolt stripped out of the hole causing the die to fall and strike the decedent's head and chest. The fall of the die was attributed to insufficient thread contact between the M24 eyebolt and the 1-inch hole. Employees working in adjacent areas heard the crash and ran to the incident site. Emergency response was called. The decedent was declared dead at the scene. During the MIOSHA fatality investigation, the compliance officer performed measurements of the M24 eyebolt involved in the incident, a representative 1-inch eyebolt, a hole tapped for a M24 eyebolt on a different die, and the 1-inch holes on the die that struck the decedent. The measurements were as follows:

- M24 eyebolt – 23.49mm
- M24 hole representative – 20.91 mm
- 1-inch eyebolt representative – 25.05 mm
- 1-inch tap hole on die not used on the lift – 23.25 mm
- 1-inch tap hole on die used on the lift – 23.49 mm

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

SERIOUS: OVERHEAD AND GANTRY CRANES, PART 18

- RULE 1852(1):

  A prospective operator was not trained before the employee's assignment as an operator of a crane:

  (No training for employee operating cranes – Facility).

- RULE 1853(1):

  The knowledge and ability of an employee was not tested, as prescribed in Rule 1853(1) of Part 18, before authorizing him or her to operate a crane.

  (No testing for employee operating cranes – Facility).

- RULE 1854(1):

  A valid operator permit was not provided to a crane operator.

  (No permits and expired permits for employees operating cranes – Facility).

- RULE 1865(1):

  Carrying a load over an employee was not prohibited:

  (Plastic injection mold die was carried over an employee, 12-ton overhead crane and plastic injection mold – Facility).

- RULE 1852(5)(e):

  A rigger shall be trained in rigging procedures:

  (No training provided in rigging procedures– Facility).

- RULE 1865(6):

  When attaching or moving a load, the operator, rigger, or hooker did not make sure of all of the following: (a) the hoisting rope or chain was free of kinks or twists and was not wrapped around the load, (b) the load was attached to the load block hook by means of a sling or other approved device, (c) the sling and load were clear of all obstacles or obstructions, (d) the load was balanced and secured before lifting the load more than a few inches, (e) multiple lines were not twisted around each other, (f) the hook was brought over the load in a manner to prevent swinging, and (g) there was no sudden acceleration or deceleration of the moving load:

  (Plastic injection mold was attached to sling by improper device, 12-ton overhead crane and plastic injection mold – Facility)

- RULE 1872(1)(a):

  Frequent and/or periodic inspections were not made as designated in table 3 and appendix B of Part 18:

  (No frequent inspections, 12-ton overhead crane – Facility)

SERIOUS: PERSONAL PROTECTIVE EQUIPMENT, PART 33

- RULE 3309(1):

  Training was not provided to each employee who was required by Part 33 to use personal protective equipment:

(Inadequate training in the use of head protection was not address – Facility)

- RULE 3370(1):

  It was ensured that each affected employee was provided with, and wore, head protection equipment and accessories when the employee was required to be present in areas where a hazard existed from falling or flying objects or from other harmful contacts or exposures or where there was a risk of injury from electric shock, hair entanglement, chemical or temperature extremes:

  (Not enforcing the use of head protection – Facility)

OTHER THAN SERIOUS: PERSONAL PROTECTIVE EQUIPMENT, PART 33

- RULE 3308(2):

  There was no verification through a written certification that the required workplace hazard assessment had been performed:

  (No certification of hazard assessment – Facility)

- RULE 3309(4):

  There was no verification that each affected employee had received and understood the required training through a written certification that contains the name of each employee trained and the date of training and that identifies the subject of the certification:

  (No written certification of employee training – Facility)

OTHER THAN SERIOUS: DESIGN SAFETY STANDARDS FOR ELECTRICAL SYSTEMS, PART 39

- RULE 1910.305(g)(2)(iii):

  Flexible cords and cables were not connected to devices and fittings so that strain relief is provided that will prevent pull from being directly transmitted to joints or terminal screws:

  (No strain relief, chain has been disconnected, control pendant – 12-ton R-M crane, RM98087602)