

Inspector Fatally Injured While Inspecting an Enclosed Facility Crane Alert 24-4

WHAT HAPPENED:

An inspector was fatally injured while inspecting a gantry crane at an indoor enclosed compressor station. The gantry crane had a walkway with limited clearance, only about 2 inches, between the handrail and the overhead ceiling beam.

The inspector was positioned facing north, towards the handrail and away from the direction of crane travel, as they inspected the J-bolts. The crane operator moved the crane from the north to the south wall, with the inspector standing on the crane walkway. The location of the walkways made it difficult for the operator of the crane, who was positioned at the crane controls on the engine level walkway, to maintain line of sight with the inspector on the far end of the crane walkway. Without clear visual or audible communication, the operator was unaware of the inspector's positioning as the crane approached the overhead beam.

The fatal incident occurred when the moving crane pinned the inspector between the handrail and the overhead ceiling beam, due to the severe crush hazard created by the limited clearance.

CONTRIBUTING FACTORS:

- 1.) Overhead/Crush Hazard: The limited clearance (only 2 inches) between the top of the gantry crane handrail and the ceiling beam presented a significant crush hazard for the inspector when the crane was moving.
- 2.) Line of Sight/Communication Breakdown: The location of the walkway and crane made it difficult to maintain a clear line of sight between the crane operator and the inspector on the far end of the crane. The lack of audible communication also contributed to the operator not being aware of the inspector's location.
- 3.) Work Positioning: The inspector was facing away from the direction of crane travel while inspecting the J-bolts, which put them in the line of fire as the crane moved towards the inspector.

LESSONS LEARNED:

- 1. Identify similar overhead/pinch point hazard.
 - a. Review facilities with cranes and internal beams to identify similar hazards.
- 2. Employ engineering controls to eliminate the pinch point risk.

A Safety Alert can consist of any type of health, safety & environment (HSE) notification or Near Miss/Near Hit alert. Proactive Alerts on jobs well done are also encouraged.

- a. Limit access to crane walkway or installing additional guarding or barriers around the perimeter of the crane walkway to prevent access to the pinch point.
- 3. Utilize administrative controls to raise awareness of the hazard.
 - a. Increase understanding of the crane design and the clearance between the crane handrail and overhead structures.
 - b. Establish communication protocols such as hand signals, line of sight, radio usage or equivalent.
 - c. Designate a dedicated safety observer/spotter.
 - d. Develop inspection procedures and designate safe zones or positioning areas on the crane walkway that allow the inspector to work while facing the direction of crane movement.
- 4. Additional recommendations.
 - a. Ensure inspectors and crane operators are sufficiently trained and experienced on the crane equipment.
 - b. Ensure procedures consider any pinch hazard and properly identify hazards as part of the JSA.
 - c. Reinforce stop work authority that empowers the inspector to pause operations if they must work in an unsafe position.

