

CSI Country Wide Case Study Safety Strategy Discussion

Construction Safety Investigator



Instructions

The objective of this tool is to provide field supervisors with information to proactively engage workers and discuss safety related concerns that they may encounter. Safety discussions should not be limited to the subject above and should pertain to the activities that workers will be involved in that may have the potential for safety related exposures.

Case Day:

May 2007

Accident Type:

Mechanical Accident - Equipment Maintenance

Relevant laws, rules and codes may include:

29CFR 1926.20(a)(1), 1926.21(a)(4), 1926.21(b)(2), Equipment Mfr's Operation and Maintenance Manual and Published Safety Precautions

Case:

A worker was killed when a quick-connect hydraulic coupling released, striking him in the throat at high velocity.

Accident Detail:

The worker was employed by a contractor as a maintenance mechanic and was assigned to the equipment yard. At the time of the incident, the mechanic was replacing hydraulic couplings on a piece of equipment.

As he was removing the coupling from the hydraulic cylinder on the equipment, he was unaware that pressure had built up behind it. As he unscrewed the coupling, the pressure was too great for the remaining threads to hold it in place and the coupling broke free of the cylinder at a high velocity, striking the worker in the throat.

Reconstructive Safety Evaluation:

- What are some of the possible causes of the accident being discussed?
- What actions could have been taken that might have prevented this accident from occurring?

Accident Scene Conclusion:

The investigation revealed that the female end of the coupling was faulty which resulted in the coupling trapping pressure behind it.

Preventive Safety Measures Include:

- All operations are preplanned using a Job Safety Task Analysis (JSTA) to ensure potential safety hazards associated with an operation are identified and appropriate steps are taken to eliminate or control them.
- Workers should be trained in the hazards of the work they are to perform, the personal protective equipment and safe work procedures necessary to perform their assigned tasks.
- When working with couplings, ensure each section (male and female) are in good working condition, couplings are clean and nothing to prevent the full connection of the male and female sections of the coupling.
- When disconnecting, keep your body out of any potential path should the coupling break free. Do not position yourself in front of fittings being removed from equipment.
- Ensure that pressure in the system is drained/relieved prior to removing any fittings.

Attendance Roster

Reference: This case is fictitious, and any resemblance to any persons, living or dead, is entirely coincidental. However, the type of accident described in this case summary happens all too often on construction sites.

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