SHARP
Safety & Health Assessment & Research for Prevention

Worker Hospitalization Alert

Agriculture

August 2023

Worker's Leg Caught In Overloaded Conveyor

One late summer afternoon, a young worker was monitoring a load of potatoes being emptied from a semi-truck onto a mobile elevator conveyor at a potato processing plant. He had been working at the plant for about two months.

The truck driver usually stood at the back of the truck as the potatoes were loaded onto the conveyor, but on this day he walked around to the other side of his truck, where he could no longer see the worker.

While the truck driver was away, the potatoes overloaded the conveyor, causing it to jam and stop. The conveyor roller was guarded with a heavy rubber flap bolted to the conveyor frame.

The worker lifted the roller guard and put his right leg on the belt several times to clear the jam. When the jam cleared, the worker's leg was pulled into the roller and became entangled in the conveyor.

The truck driver heard the worker yelling and walked around the truck to discover the worker caught in the conveyor. He pressed the red emergency stop switch for the conveyor then ran inside the plant to get help.

The truck driver returned with two other plant workers. He tightened his belt around the injured worker's thigh to help control bleeding while the other employees tried to get him out by removing the lower roller and cutting the conveyor belt.

Emergency services arrived and were able to cut the worker free from the conveyor. The worker was taken to the hospital by ambulance.

His right leg was injured so severely that it had to be amputated above the knee.

Elevator conveyor overloaded with potatoes, which led to the jam.

Roller guard that the injured worker lifted to access the conveyor belt.

What do you think went wrong?

In the space below, list some of the factors that you think could have contributed to this incident. Then, flip the page over for contributing factors and safety recommendations and requirements.

Reporting: Employers are required to contact DOSH within eight hours of a workplace fatality or in-patient hospitalization of any employee. See WAC 296-27-031.

Contributing Factors

Lack of training. The employer did not provide the worker with sufficient training and oversight to safely clear jams on the potato conveyor. The machine was not stopped and was not locked out/tagged out before the worker started unclogging the equipment.

Conveyor guard was easily bypassed. The worker was able to easily bypass a guard to access the moving conveyor belt to clear the jam.

Recommendations

Hazard recognition.

- Train workers on the location of and how to recognize entanglement and nip point hazards when working around conveyors. Encourage workers to report hazards.
- Reinforce training on safe conveyor use through hands-on practice—including jam prevention, unjamming, and lock out/tag out procedures.
- Consider labeling guards to warn workers of the hazard. Only modify guarding with manufacturer approval.

Communication. Employers should implement a communication system so that outdoor workers, or those working alone, can call for help if an emergency should occur. Alarm/notification systems can be added to conveyors to identify and communicate jams and maintenance needs directly to relevant maintenance personnel, and supervisors.

Emergency drills. Perform regular emergency drills with workers to review emergency procedures in case of equipment caught-ins. Make sure all employees on site know the location of conveyor emergency stop devices and how to lock and tag out equipment.

Requirements

- At the time of initial assignment and at least annually thereafter, the employer must instruct every worker in the safe operation and servicing of all equipment that the worker will use, including at least the following:
  - Keep all guards in place when the machine is in operation. See WAC 296-307-18015(1)
  - Stop engine, disconnect the power source, and wait for all machine movement to stop before servicing, adjusting, cleaning, or unclogging the equipment. See WAC 296-307-18015(3)
- Employers must make sure guards protect workers by preventing hands or other body parts from reaching through, over, under, or around the guard into the hazard area. See WAC 296-806-20042(3)(a)
- Employers must make sure each emergency stopping device is easily identifiable. See WAC 296-806-42004(2)

Resources

- Chapter 296-307 WAC: Safety Standards for Agriculture—https://app.leg.wa.gov/wac/default.aspx?cite=296-307
- Chapter 296-806 WAC: Safety Standards for Machine Safety—https://app.leg.wa.gov/wac/default.aspx?dispo=true&cite=296-806
- Safeguarding Equipment and Protecting Employees from Amputations—https://www.osha.gov/sites/default/files/publications/osha3170.pdf
- L&I's Consultation Program offers confidential no-fee, professional advice and assistance to Washington businesses. To request an L&I Consultation go to: https://www.lni.wa.gov/safety-health/preventing-injuries-illnesses/request-consultation/

Safety Training Sign-In (Print Name Legibly) *Date:*_____

The Immediate Inpatient Hospitalizations Project is part of the Safety & Health Assessment & Research for Prevention (SHARP) program within the Washington State Department of Labor & Industries. Learn more at ***Lni.wa.gov/safety-health/safety-research/ongoing-projects/immediate-inpatient-hospitalizations.***

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