

SAFETY BULLETIN

DATE: NOVEMBER 2019

Workers injured while installing conveyor boot ends

This safety bulletin provides safety advice for the NSW mining industry.

Issue

Within a seven-day period, two incidents occurred while installing boot ends during conveyor belt extensions.

Incident 1:

A belt move had been completed and the conveyor was running. A supervisor reviewed the location of the boot end and the loop take-up capacity and determined the boot end was not in the correct position. Tension was removed from the loop take-up. A load haul dump (LHD) machine was attached to the quick detach system (QDS) plate on the boot end and it was moved to the correct position.

A worker was checking the level of the inbye end of the boot end. The boot end unexpectedly released and moved outbye four metres. At the time, the worker was at the outbye end of the boot end. As it moved, the worker was pulled into the boot end and pinned. An emergency response was initiated. The worker was freed and taken to hospital by helicopter. The worker suffered a dislocated shoulder, lacerations and soft tissue injuries.

An investigation identified that the boot end disengaged from the QDS plate because it was not used, not engaged or misaligned.

Figure 1 The damaged conveyor structure



Incident 2:

A boot end was attached to an LHD by a QDS plate and was being placed in its final position. While the boot end was raised to allow a worker to place packing timber underneath, he was not in the line of sight and couldn't communicate with the LHD operator. When the worker was about to place the timber, the boot end moved unexpectedly, pushing the worker against the mine rib. The worker was taken to hospital by helicopter and suffered six broken ribs.

An investigation identified that the boot end was on the ground when the LHD was articulated. This loaded the connection between the QDS plate and QDS horns. When the boot end was lifted, this allowed the boot end to swing towards the worker. A job hazard identification check was not completed for the task and a safe work procedure was not available to workers completing the task.

Figure 1 The boot end where the worker was injured

**Concerns**

These incidents highlight the risks associated with mobile plant and conveyor belt tension. Extending conveyors requires workers to be in close proximity to, and interact with, mobile plant and equipment. Both injured workers were on the outbye end of the boot end while a LHD operator was operating a LHD attached to the inbye end. In both incidents, the LHD operator lost sight of the worker on the ground immediately prior to the incident occurring.

Recommendations

1. Review the risk assessment for conveyor belt extensions to confirm the risks of interactions between workers and plant is as low as reasonably practicable.
2. Review the adequacy of no go zones around attachments when connecting to LHDs.
3. Implement controls to manage the risks when an external load (such as an LHD) is applied to conveyor belts, to remove the tension in the conveyor belt.
4. Schedule workplace inspections to verify compliance with no go zones and other risk controls required to be applied to the task.

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