



Significant Incident Report No. 248

Subject: Worker seriously injured when caught in moving conveyor

Date: 12 September 2016

Summary of incident

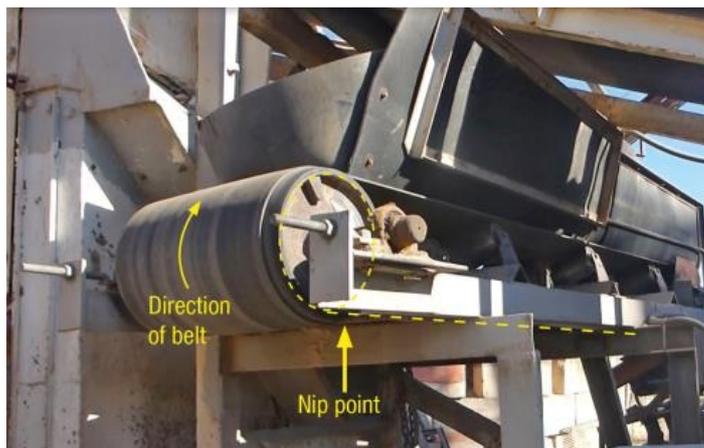
Note: The Department of Mines and Petroleum's investigation is ongoing. The information contained in this significant incident report is based on materials received, knowledge and understanding at the time of writing.

In June 2016, a boilermaker, working alone, was in the process of shutting down a crushing plant. A conveyor, positioned at head height, was part of the crushing circuit and adjacent to a screen deck.

The boilermaker observed a rock rotating in the nip point of the conveyor's tail-end pulley. Material from the screen deck had accumulated on the ground beside the conveyor next to the nip point. He stood on this material and reached between the belts with both hands, using a spanner in an attempt to knock out the rock. However, the moving conveyor had not been isolated.

Both his arms were drawn into the conveyor's nip point. Fortunately, he managed to free his arms when the tail-end pulley came to a stop and was able to seek emergency assistance. The boilermaker was hospitalised with a de-gloving injury, friction burns and multiple fractures to his hand, arms and back.

Note: The incident was reported to the Department of Mines and Petroleum 26 days after the event. The boilermaker was seriously injured and was immediately disabled by the accident from performing his duties.



Direct causes

- The conveyor was not guarded to prevent access to moving parts.
- The conveyor was not isolated before the attempt was made to remove the rock.

Contributory causes

- Materials from the nearby screen deck were not effectively controlled, resulting in a rock landing inside the belt.
- The build-up of material on the ground enabled easy access to the nip point of the conveyor.
- No isolation procedure had been developed for the conveyor.

Actions required

The following actions are recommended to reduce the potential for injury, or worse, while working with or around conveyors.

Control measures

- Provide adequate guarding to the dangerous parts of a conveyor.
- Implement and enforce suitable isolation procedures for plant and machinery. The procedures must include de-energising plant and the lock, tag and try method.
- Install sufficient and effective emergency stop devices or emergency stop lanyards on conveyors.
- Provide suitable controls for plant and machinery to manage material spillage.

Safe systems of work

- Undertake risk assessments on all plant and machinery in the workplace to identify, assess and control all hazards to which workers are likely to be exposed.
- Confirm that workers conducting cleaning, maintenance and repair work are adequately instructed, trained, assessed and supervised.
- Keep ground areas and platforms adjacent to plant free of spilled material through good housekeeping practices.
- Implement practicable measures to minimise the time a person working alone remains unattended.

Reporting

- If an injury appears to be serious, the manager of the mine must notify the district inspector by the fastest practicable method of communication as soon as it is reasonably practicable to do so, and this must subsequently be confirmed in writing [s. 76, *Mines Safety and Inspection Act 1994*].

Further information

Injuries from incidents involving conveyors

Between 01 January 2011 and 08 September 2016 there have been 107 reported injuries at mine sites involving conveyors. 79 were serious injuries requiring workers to be away from work for more than two weeks. Of these serious injuries:

- 16 per cent were the result of contact with the moving parts of the conveyor
- 16 per cent were crush injuries
- 14 per cent resulted in fractures.

Guidance

- Department of Mines and Petroleum, Mining safety publications,
www.dmp.wa.gov.au/Safety/Mining-Safety-publications-16162.aspx

Safeguarding of machinery and plant – code of practice

Isolation of hazardous energies associated with plant in Western Australian mining operations – guideline

Accident and incident reporting – guideline

- Department of Mines and Petroleum, Guidance about working alone
www.dmp.wa.gov.au/Safety/Guidance-about-working-alone-6814.aspx

- Standards Australia, www.standards.org.au

AS 4024.3610 Safety of machinery – Conveyors – General requirements

AS 4024.3611 Safety of machinery – Conveyors – Belt conveyors for bulk materials handling

This Significant Incident Report was approved for release by the State Mining Engineer on 12 September 2016