

SAFETY ALERT

Rock falls from elevated conveyor onto worker's head

INCIDENT

A 10 kilogram rock fell from an overhead elevating conveyor and hit the safety hat of a nearby worker resulting in head injuries, a broken tooth and injury to the area between the worker's head and shoulder.

CIRCUMSTANCES

The worker and his supervisor were investigating a noisy bearing on a conveyor pulley at the gravity take-up. The worker had completed greasing the bearing and had stepped back from the side of the operating conveyor when the rock hit him.

INVESTIGATION

The elevating conveyor was transporting rock from a crusher. The conveyor was tracking to one side and a section of the belt was narrower than it should be. The operation of the crusher was such that localised overloading of the conveyor was occurring periodically. Some of the material being conveyed was prone to rolling off the conveyor, particularly when there was little material on the conveyor.

During the production day following the accident, rocks were observed to still be falling from the conveyor.

A considerable quantity of rock was observed to be lying on the walkway next to the conveyor, on steel sections of the conveyor structure, on electrical cables and on the ground on both sides of the conveyor for much of the length of the conveyor.

A number of steel steps on the walkway at the side of the conveyor were damaged.

A rock deflection guard had been installed to protect road traffic but this covered only a small area under the conveyor and the deflector was not fitted with sides to prevent rocks deflecting sideways at right angles to the conveyor.



The injured worker was standing in this area when struck by the rock.



The rock which struck the worker.

RECOMMENDATIONS

1. Assess the potential for material to fall into any accessible area and cause injury, giving due consideration to the height of the fall, maximum speed and weight of the falling material.
2. Where there is any potential for material to fall from a height which may result in injury, take effective means to prevent such injuries.
3. Any area where conveyed materials can accidentally fall or be projected onto persons should be classified as a danger zone and appropriate guards and warning signs must be provided.
4. Consider installing belt tracking limits to prevent belt edge damage and reduce potential for material to spill from the conveyor.
5. Consider maximising the belt troughing angles for elevating conveyors to reduce potential for material to spill.
6. Where practical, take effective steps to prevent localised overload of conveyors which may result in spillage.

Refer to Australian Standard *AS 1755-2000 Conveyors - Safety requirements* for further information, in particular section 3.

NOTE: Please ensure all relevant people in your organisation receive a copy of this Safety Alert, and are informed of its content and recommendations. This Safety Alert should be processed in a systematic manner through the mine's information and communication process. It should also be placed on the mine's notice board.

Signed

Rob Regan
DIRECTOR, MINE SAFETY OPERATIONS BRANCH
INDUSTRY & INVESTMENT NSW

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