

DATE: APRIL 2018

Drill rig worker sustains facial fractures in incident

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

Issue

A build-up of stored energy was released in an uncontrolled manner, resulting in a haul plug and rope socket accelerating upwards, hitting a drill rig offsider in the face, fracturing his nose and cheek bone.

The incident

The drill rig operator activated the hydraulic winch to lift the haul plug and rope socket to allow the offsider to attach a short section of drill pipe casing. The shoulder of the pin attaching the haul plug to the rope socket caught on the edge of C-section a foot clamp table, which allowed tension to build up in the winch rope. The force was sufficient to bend the 25 mm frame of the table, chamfer the shoulder off the connecting pin and pull the threaded bolts of the retaining cap from the connecting pin. The connecting pin released from the haul plug and rope socket resulting in the rope socket, haul plug and pin being ejected upward due to the sudden release of the stored energy.

Investigation

The incident investigation determined that the:

- shoulder of the haul plug connecting pin had caught on the steel C-section of the foot clamp table
- potential hazard of the haul plug and rope socket being caught was not identified
- operator was not aware that the winch rope was under tension
- offsider was standing in an unprotected position
- offsider standing in a position where he was at risk of harm had not been identified
- drill rig operator had 10 years' experience operating drill rigs for other companies and started work three weeks before the incident as an offsider. He was assessed by the site trainer for one day and deemed competent to operate the rig, and was elevated to the main driller due to an operator injuring a finger
- offsider was inexperienced and under the care of the drill rig operator.

Photo 1: Foot clamp table C-section before guarding.



Foot clamp table with guarding fitted



Recommendations

Drilling operators:

- should assess their drilling rigs to ensure that the potential for an uncontrolled increase of stored energy in the winch rope and all other systems is reduced to as low as reasonably practical
- must develop safe operating procedures based on the outcomes of a risk assessment
- must ensure that only competent trained operators and offsiders are permitted to operate drilling equipment and that they undergo regular scheduled refresher training.

NOTE: Please ensure all relevant people in your organisation receive a copy of this safety bulletin, 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.

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