

SAFETY ALERT

Pneumatic air tool fitting fails

INCIDENT

A worker was struck on the left forearm with compressed and foreign particles when a swivel fitting on an air hose detached from the pneumatic ratchet he was using. The incident occurred at a NSW mine on 10 March 2017.

CIRCUMSTANCES

The worker was tensioning recovery mesh on a longwall in preparation for a change-out using a hired pneumatic ratchet on a boat winch. During this process the pneumatic ratchet came apart at the location of a new swivel fitting and released compressed air. The threaded fitting had become loose and unscrewed at the swivel fitting.

The worker was treated at the scene by ambulance officers for bruising and swelling, and advised to go to hospital for an x-ray.

The mine returned all of the air ratchets to the original equipment manufacturer (OEM) and completed the longwall recovery mesh installation using hand ratchet tools.

Figure 1 – photo of failed screw fitting



INVESTIGATION

A similar incident with a pneumatic ratchet had previously occurred at the mine during a longwall change-out. Following an incident investigation, one of the recommended controls was to install hose swivels to prevent rotation of the air hose when undoing the fitting into the ratchet tool.

The swivel fitting was installed on the pneumatic tool, however it was found that there was no thread lock applied to the screw end of the swivel.

Investigations by the original equipment manufacturer at their workshop found that three of the nine ratchets used had no thread lock at the swivel and would undo easily. The remaining six were difficult to undo and had a thread lock.

RECOMMENDATIONS

When using portable pneumatic power tools mines should consider:

- a) installing a swivel fitting to assist in preventing the unwinding of screwed fittings during use and tool changes
- b) using a mechanism to prevent the unscrewing of screw fittings, such as a thread lock compound, tab washers, grub screws or pins
- c) using automated hose rupture detection air shut-off valves.

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.

Issued by

Dave McLean

Chief Inspector of Mines

Appointed pursuant to Work Health and Safety (Mines and Petroleum Sites) Act 2013

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