

SAFETY BULLETIN

DATE: NOVEMBER 2019

Rapid face bolters incidents

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

Issue

Three incidents have occurred recently at longwall mines in which rapid face bolters have disengaged from the armoured face conveyor (AFC) rack bars. All three incidents involved rapid face bolters that had been hired by the mine operator.

Incident 1:

A rapid face bolter was tramming across a face. When it stopped, a spotter noticed that the trapping shoe was sitting 100 millimetres forward of the AFC rack bars. The rigs were not retracted while tramming.

Incident 2:

Towards the end of a shift, a worker had completed installing a roof bolt and trammed the rapid face bolter about 300 millimetres. A monitoring hole was then drilled. The worker was leaving the bolter when he noticed that the tailgate side trapping shoe was not engaged with the AFC rack bar.

Incident 3:

A rapid face bolter was positioned on an AFC near the tailgate drive. The operator extended the platforms and positioned the rigs, then identified the bolter was in the wrong location. The bolter was then trammed towards the maingate when it unexpectedly stopped. The worker assumed it was jammed and reversed towards the tailgate, freeing the bolter. The worker then started tramming the bolter towards the maingate. The bolter then disengaged from the AFC rack bar and tipped 45° towards the face (as shown in figure 1). The worker was ejected off the bolter, landing in front of the bolter between the two drill rigs. The worker suffered minor injuries requiring first aid treatment on site.

An investigation identified that when the rigs and platforms were extended, the centre of gravity shifted close to the skid shoe. As the rack bar position moved on the ramp pans, this shifted the bolter forward, tipping the bolter.

Figure 1 Rapid face bolter tipped 45° towards the face



Concerns

As most rapid face bolters are hired and move between mine sites, the interface between the bolter, the panline and rack bars must be managed on an individual basis at each site.

Recommendations

1. Conduct an engineering review of the compatibility with the panline, rack bar and rapid face bolter. Ensure the trapping shoe engagement is sufficient to retain the bolter in all foreseeable operating configurations.
2. Verify that rack bar engagement with the trapping shoe is sufficient to retain the bolter as part of commissioning checks.
3. Repeat the above checks for any non-standard sections of the panline such as transitions and ramp pans.
4. Update operating procedures and training material to require that rigs are parked and platforms are retracted as specified in the original equipment manufacturer (OEM) requirements when rapid face bolters are trammed.

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 bulletin should be processed in a systematic manner through the mine's information and communication process. It should also be placed on the mine's common area, such as your notice board where appropriate.

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