



Significant Incident Report No. 207

Subject: Potential for serious injury from uncontrolled rotation of rotary kiln dryer

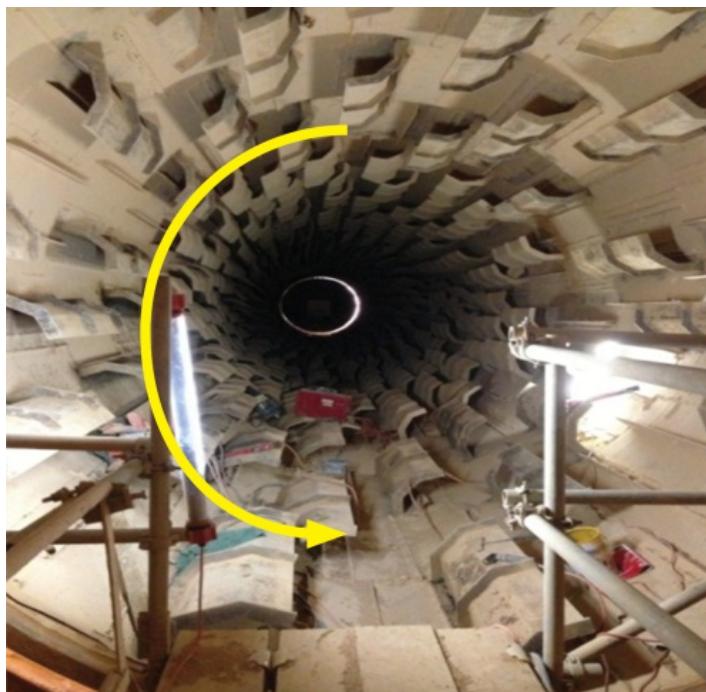
Date: 20 October 2014

Summary of incident

Three workers narrowly escaped serious injuries when the rotary kiln dryer they were working in unexpectedly rotated 180 degrees. They were about 6 metres from the exit platform at the end of the kiln, which is 26 metres long.

The workers were preparing to weld a lifter plate on the inside of the rotary kiln dryer's shell when the shell rotated.

The diameter of the rotary kiln dryer is 3.6 metres and there was the potential for serious injury from falling equipment (including a welding machine and other lifter plates) and tripping hazards.



Inside view of the rotary kiln dryer showing lifter plates welded to the shell and the direction of shell rotation during incident

Direct causes

- The rotary kiln dryer's shell was not restrained.
- There was no evidence that the rotary kiln dryer was energised or switched on at the time, and it appears that the rotation was caused by a shift in the centre of gravity during repairs in the dryer.

Contributory causes

- The risk analysis for the task did not identify the potential for the shell to rotate. Consequently, there were no controls in place to prevent inadvertent rotation.
- The workers did not have the original equipment manufacturer's (OEM's) instructions regarding maintenance tasks, and there was no site procedure for the replacement of lifter plates.
- The workers undertaking the maintenance work were neither familiar with the task nor adequately supervised while undertaking the task.

Actions required

Mine operators are reminded of the importance of maintaining safe systems of work for tasks carried out in, or in the vicinity of, rotary kiln dryers and similar plant that can rotate. They should apply the same rigour and standards as used for other workplace activities, and ensure that:

- the potential for the centre of gravity to move and cause uncontrolled rotation is recognised and addressed
- OEM's instructions for the safe use and maintenance of such plant are available and understood by those using them
- workers are adequately trained in infrequently performed tasks and are supervised to enable them to perform these tasks safely.

Further information

Visit www.dmp.wa.gov.au/ResourcesSafety for information on occupational safety and health in the resources sector.

This Significant Incident Report was approved for release by the State Mining Engineer on 20 October 2014