



SAFETY ALERT

Structural bin failure

INCIDENT

A cone-shaped 100-tonne truck loading bin failed suddenly and fell to the ground.

CIRCUMSTANCES

The bin had been in normal regular use throughout the day and it is unclear at this stage why the structure failed. However, it is known that about 48 hours before the incident a workman reported a concern with the bin to management.



INVESTIGATION

Preliminary investigations have indicated the two lower sections of the bin had been previously removed for liner replacement. It was noted that bolt holes on the support flanges had been elongated which had allowed some bolts, complete with washers, to pull through the greater than 20mm holes in the support flange.

As part of the investigation a design review of the bin has been requested and a review on the practice of elongating bolt holes.

RECOMMENDATIONS

1. Employers, designers, manufacturers and suppliers of such structural equipment/plant are reminded of their obligation under Sections 8, 10 and 11 of the *NSW Occupational Health and Safety Act 2000*. Employers, designers, manufacturers and suppliers must ensure that equipment/plant is safe and without risk to health when properly used.

2. The Mine Safety Management Plan (*Mines Inspection Act 1901*) or Mechanical Engineering Management Plan (*Coal Mine Health and Safety Act 2002*) must make provision for:
 - the safety of mechanical structures and installations
 - inspection and testing systems to ensure plant and installations are safe to operate
 - arrangements for the maintenance, repair and alteration of plant and installations
 - the competence of people who deal with plant
 - arrangements for the supervision of people maintaining and repairing mechanical plant by people with appropriate mechanical engineering competence.
3. Inspections, maintenance and repairs must be conducted on the equipment/plant as per the procedures by the designer or the procedures developed by a competent person (refer to Clause 137 of the *NSW Occupational Health and Safety Regulation 2001*).
4. Where design changes or alterations are made to equipment/plant without the consultation of the 'designer', then the person making those changes assumes the role of the 'designer' and therefore must comply with the duties of a 'designer' under Part 5.2 of the OHS Regulation.
5. All structural equipment/plant must be periodically inspected by a competent person (eg structural engineer) to ensure it is safe to use.
6. Steel structures should be designed, manufactured, erected and modified in accordance with Australian Standard *AS 4100 Steel Structures* or *AS 3990 Mechanical equipment – Steelwork*.

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



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