



Mines Safety Significant Incident Report No. 157

Work platform struck by skip and dislodged into shaft

Incident

At an underground mine, routine non-destructive testing (NDT) of a skip conveyance rope was being conducted from a work platform placed across the skip compartment at the shaft brace. The NDT instrument was located on the platform and installed around the rope. The platform was fabricated from steel and weighed about 900 kg.

While conducting the test, the conveyance was lowered to the bottom of the shaft as per the procedure outlined in the task risk assessment. A decision was made to conduct another test, and the winder driver was instructed to bring the skip to the surface in readiness for another test run.

As the skip was brought to the surface, the rope attachments struck and dislodged the platform, which fell 4 metres into the shaft before coming to rest when it wedged between the skip and shaft furniture.

No injuries and minimal actual damage were sustained. However, had the platform fallen to the bottom of the shaft (1000 m), the consequences could have been more serious, including serious injury to persons and major disruption to winding operations.

Immediate causes and contributory factors

- The platform was dislodged into the shaft when it was inadvertently struck by the skip being brought to the surface. The method of securing the platform in place did not prevent it from falling into the shaft.
- There was no standard procedure for this routine task. Risks were identified using a task risk assessment process and form.
- The risk assessment and change management processes for the task were inadequate — not all risks were identified; the actual task sequence was different to the planned sequence; and not everyone involved in the task signed onto the original task risk assessment. When the task was modified, the task risk assessment was not reviewed and, as a consequence, controls were not put into place to manage the new risks associated with raising the conveyance with the platform covering the shaft brace.
- Communication between the personnel conducting the NDT and the winder driver was inadequate. The winder driver was not informed that the platform was still in place, and the skip was raised faster than normal with a platform in position.
- Detection and protection systems or devices to alert the winder driver that a platform was installed or to limit hoisting speed were not in place or were inadequate. A closed circuit television (CCTV) monitor showing a view of the shaft brace area was available in the winder room but not easily viewed by the winder driver when operating the winder.

Comments and preventative actions

To avoid a recurrence of this type of incident, the following actions should be implemented.

- Ensure formal risk assessment is conducted for tasks involving the use of platforms in and around shafts. The scope of the risk assessment should consider all activities involved in the life cycle of the task, including installation and removal of the platform. The risk assessment team should contain persons involved in the task, including contractors.

- When a platform is used in a shaft, it should be secured to prevent it falling into the shaft due to inadvertent contact or other means of failure. A platform should be properly designed, constructed and installed to be fit for purpose and minimise risk of harm to persons, considering operational and environmental factors.
- Appropriate detection and protection devices should be considered based on the risk assessment. This may include warning devices when platforms are installed, speed limiting devices and CCTV monitors. Ergonomic factors need to be considered when designing the layout of visual displays and instrumentation.
- Rigorous change management procedures and practices need to be established outlining actions to be taken when tasks are modified, including review of risk assessment and required authorisations.
- Appropriate documentation must be prepared outlining safe work procedures and controls to manage the risks associated with the task. All personnel involved in the task, including contractors and the winder or hoist driver, need to be properly trained and instructed in the performance of the task.
- Communication methods need to be established to ensure that all personnel understand the task and any instructions given during the task, including during an emergency situation. If a stage or any other object is placed in the shaft affecting the winding path, an entry should be made in the winding engine log book maintained under regulation 11.8 of the Mines Safety and Inspection Regulations 1995. Should there be any doubt then personnel should not proceed with the task until clarification is obtained from appropriate personnel or authority.
- Adequate supervision is required for such high risk tasks to ensure proper task allocation and instruction, job planning and monitoring of performance.
- Where work is undertaken that could result in an object falling into a shaft, precautionary measures and controls should be in place to ensure the safety of persons working below (e.g. at or near shaft plats). These may include physical barriers, warning signage, temporary suspension of man-riding, and consideration of risks and interactions during job planning.



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