NSW GOVERNMENT

NSW Resources Regulator

INVESTIGATION INFORMATION RELEASE

JUNE 2020

Worker's arm injured in belt press filter

Incident date: 17 May 2020.

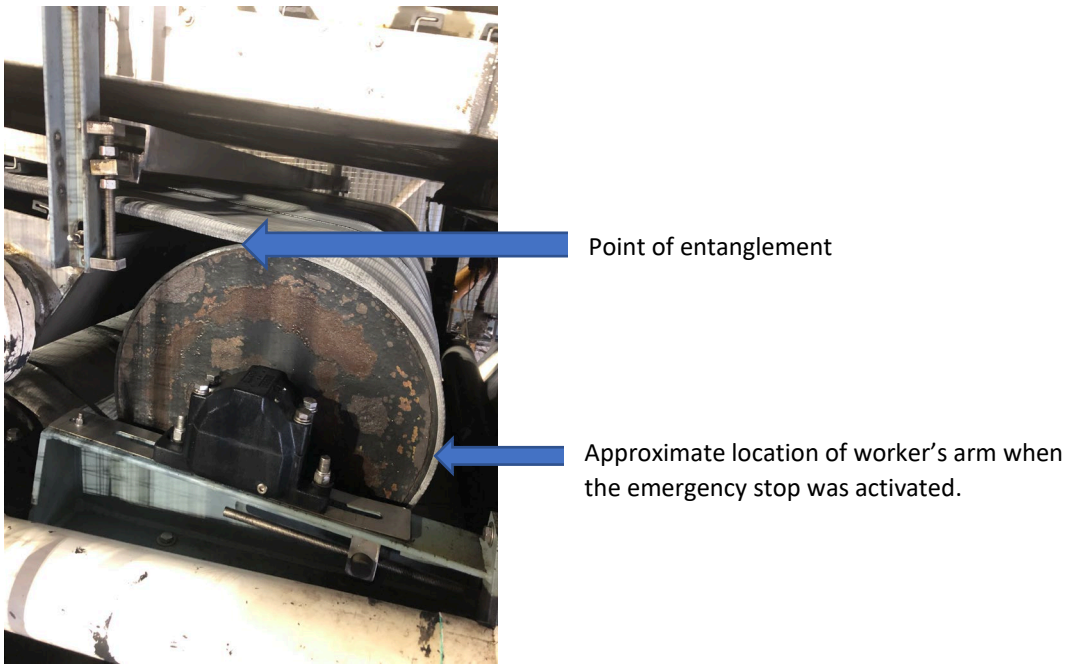
Event: Worker sustains serious injuries in work-related incident.

Location: Moolarben Coal Operations – Coal Handling and Processing Plant ('the CHPP')

Overview

A worker opened guarding around an operating belt press filter in order to correct a misaligned belt. He lost his balance while moving towards the filter, causing his arm to become caught between the belt and a moving drum. He sustained serious arm injuries which required surgery.

Figure 1 – Location of belt press filter where the worker's arm became caught



The mine

Moolarben Coal Operations is located 40 kilometres north of Mudgee, in the western coalfield's region of NSW. It consists of open cut and underground mining areas. Mined coal from these areas is processed at the CHPP. There are eight identical belt press filters used at the CHPP to remove moisture from reject material from washed coal.

Moolarben Coal Operations Pty Ltd (MCO) is the mine operator and is owned by a joint venture comprised of Moolarben Coal Mines Pty Ltd, Sojitz Moolarben Resources Pty Ltd and a consortium of Korean energy companies. MCO and Moolarben Coal Mines Pty Ltd are wholly owned subsidiaries of Yancoal Australia Limited.

The incident

About 10am on 17 May 2020, a worker observed that the belt on belt press filter 3 ('the filter') was out of alignment with a rotating drum. The worker stated that the belt had lost alignment because the hydraulic air lines servicing the filter's tracking drum and tracking limit switch had become separated, resulting in a loss of air pressure to these components. The worker opened several doors in the guarding around the filter, using a key that he was authorised to use. The worker requested assistance from his supervisor by radio and began reconnecting the air supply.

The worker restored air pressure to the above components. He believed that the tracking drum would straighten the misaligned belt as it rotated. However, the tracking limit switch on the filter was designed to stop the plant from operating when a metal prong referred to as a 'cats' whisker' contacted a misaligned belt. In order to override this function and allow the tracking drum to continue to turn and align the belt, the worker removed the 'cat's whisker' by disconnecting it from the limit switch.

The worker was moving towards a rotating drum located in an area where the guarding had been opened. He stated that he lost balance and reached out to what he thought was part of a fixed structure adjacent to the drum. His left forearm was caught between the belt and the rotating drum. The drum had rotated approximately 135 degrees, when the supervisor arrived in response to the worker's earlier radio message. The supervisor and another staff member activated the filter's emergency stop and reversed the drum to release the worker's arm.

The worker was airlifted to John Hunter Hospital where he underwent surgery for arm and wrist fractures.

Figure 2 – Filter 3 with cat's whisker removed

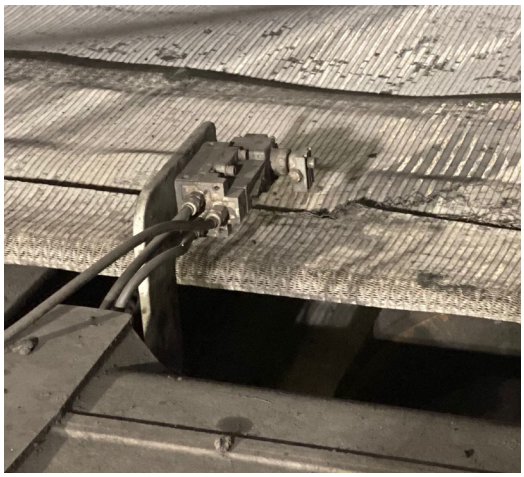


Figure 3 – Adjacent filter with cat's whisker fitted

Figure 4 – Proximity of filter to the open guard door

The investigation

The NSW Resources Regulator is investigating the incident. The mine operator is cooperating with the investigation.

Safety observations

Entanglement between moving parts is a foreseeable risk. Mine operators are reminded of their duty to identify hazards and manage risks to health and safety associated with the operation, maintenance and cleaning of plant.

Mine operators and workers must ensure that when guarding around plant is removed for maintenance or cleaning purposes, all energy sources are isolated. Consideration must be given to installing interlock

devices that prevent unguarded plant from operating when risks are present. Guarding must be restored to its secured position before the plant resumes operation.

Where it is identified that guards must be removed to complete a particular task while the plant is in operation (i.e. when replacing belts on filters) , a risk assessment must be undertaken and additional controls implemented to ensure that risks are reduced as low as reasonably practicable.

Mine operators should review:

- Division 6 of Part 5.1 of the *Work Health and Safety Regulation 2017,* in particular clauses 208 and 210.
- SafeWork NSW – Code of Practice – Managing the risks of plant in the workplace.

Further information

Please refer to the Code of Practice - Managing the risks of plant in the workplace.

About this information release

The Regulator has issued this information to draw attention to the occurrence of a serious incident in the mining industry. Further information may be published as it becomes available.

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DOCUMENT CONTROL	
CM9 reference	DOC20/457807
Mine safety reference	IIR20-08
Date published	18 June 2020
Authorised by	Chief Inspector