

# SAFETY ALERT



## CRANE DOGGER KILLED UNLOADING TRAILER - UPDATED

### INCIDENT

A crane dogger was killed when struck by a materials trailer, which detached from a crane while being moved to a new position in a pick and carry operation.

### CIRCUMSTANCES

The trailer had been lifted from a truck and was being placed in the surface storage area of an underground mine. The load was slung from four chains using 2 “two-leg” sets of chains. From the investigation it appears that the two supporting oblong links were placed directly on the crane hook and had a wide angle of separation, possibly up to 120 degrees.

Apparently the oblong link on the open side of the hook suddenly slid up the bill of the hook. In doing so, it smashed through the safety latch on the hook and became disengaged, causing the load to fall.

### INVESTIGATION

Investigations are continuing but contributing factors include, but were not limited to, the following:

1. The wide angle of separation of the links on the crane hook affected security of the load
2. The security was further reduced by the crane travelling with a suspended load.
3. The dogger did not use a tagline and was not in a safe position when the load fell.
4. The crane operator had a limited view of the dogger’s location and proximity to the load.

### OTHER INFORMATION

- Crane hooks are not intended to handle widely separated links
- Wide separation is inappropriate due to the hook geometry and design strength
- At least one hook manufacturer places marks 45° degrees from the vertical and specifies slings/chains are not to be outside the marks
- AS2550.1 (2002) at Section 8.2 requires use of a bow shackle to prevent overcrowding on a hook but does not provide guidance on an acceptable angle from the vertical for slings/links on a hook
- The WorkCover guide “Dogging” states “The recommended maximum angle between the vertical and any leg of a sling is 45°” and “The larger the angle from the vertical made by slings on a hook the more likely the slings eye is to slip off the point of the bill. In this case put the eyes into a ‘bow’ shackle ....”.

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## RECOMMENDATIONS

All mines review crane management and practices with regard to:

- Relevant Australian Standards – in particular AS2550.1 and AS2550.5 for mobile cranes.
- WorkCover guide “Dogging”.
- Cranes and lifting equipment being fit for purpose.
- Lifting equipment being appropriately tagged and checked by a competent person.
- Awareness of the increasing danger with widening separation of slings or links when they are hung from a hook without the use of a bow shackle.
- Crane hooks used to the manufacturer’s specifications.
- Ensuring all persons in the vicinity of a crane’s load are in a safe location in the event of an unforeseen failure.

A handwritten signature in black ink, appearing to read 'R Regan'.

R Regan  
ASSISTANT DIRECTOR SAFETY OPERATIONS

The following photographs have been staged for the purpose of showing:

Photo 1 : An example of lifting chain link separation on a hook where chains are approx. 110°

Photo 2 : An example of lifting chain links captured in a bow shackle where chains are approx. 110°



Photo 1 : Load with wide angle of separation of lifting chains

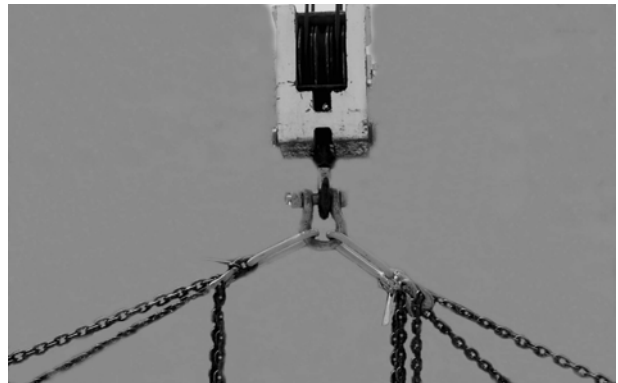


Photo 2 : Use of bow shackle ensures load remains captured