



Health and Safety Bulletin No. 14

Bridge crane and scissor lift collision during crane maintenance

Date: 20 December 2023

Background

In 2023, WorkSafe received reports of two near miss incidents involving overhead bridge cranes. In each case, crane technicians used a scissor lift type of elevating work platform (EWP) to work at height on bridge crane maintenance when the crane collided with the EWP.

The incidents had the potential to result in serious injuries or fatalities. It is common to use scissor lifts and boom-type EWPs to work at height inspecting and maintaining bridge or gantry cranes. Both types of EWPS carry similar safety risks.

During the first incident, a non-isolated crane collided with the bridge crane under repair, which then collided with the EWP. The EWP tilted to one side before returning to its normal vertical position, placing the technician at risk.

The second incident involved the collision of a bridge crane with an EWP while the technician was conducting crane maintenance. The technician managed to escape to the crane platform from the EWP as it tilted but before it tipped over.

Under section 19 of the *Work Health and Safety Act 2020* (WHS Act) a person conducting a business or undertaking (PCBU) must ensure, so far as is reasonably practicable, the health and safety of workers is not put at risk from work carried out as part of the conduct of the business or undertaking. This must include the provision and maintenance of safe systems of work.

Further, section 21 of the WHS Act requires the person with management or control of fixtures, fittings or plant at a workplace to ensure, so far as is reasonably practicable, the fixtures, fittings and plant are without risk to the health and safety of any person.

Summary of hazard

Where the bridge crane does not incorporate a service platform and does not have an out of service position to conduct inspections and maintenance, service technicians can be exposed to the following hazards:

- using EWPs to work at height near operating plant
- multiple bridge cranes operating on the same runway

- uncontrolled crane movement due to impacts from other cranes operating on the same runway
- absence of anti-collision devices where multiple cranes use the same runway
- failure to isolate the crane's long travel drive and or other cranes operating in the same runway.

Contributory factors

- Absence of adequate fixed maintenance platforms.
- Absence of dedicated out of service position to carry out the crane maintenance.
- When working on a crane that shares a runway, failure to isolate all cranes on the runway.
- Absence of anti-collision devices for all cranes on the runway.
- Failure to isolate long travel drives when servicing the crane.
- Inadequate risk assessments and control measures in place.
- Inadequate or no safe work method statements (SWMS).
- Inadequate training for workers on safe work methods.
- Inadequate supervision.

Actions required

- Conduct risk assessments to identify hazards and implement control measures, such as isolation of plant, then verify the effectiveness of the controls.
- Check safe work methods reflect the conditions at the workplace and the use of EWPs when working at heights.
- Ensure workers using EWPs to service cranes are trained in working at heights, are aware of the risks associated with servicing cranes, and hold the relevant high risk work licences.
- Provide adequate supervision to ensure SWMS requirements are followed and verify risk control measures are implemented and effective.
- Include appropriate anti-collision devices when designing a shared runway with multiple cranes. Retrofit suitable anti-collision devices, in consultation with the crane manufacturer or designer, for existing cranes operating alongside other cranes on a runway.
- Provide safe maintenance access to the crane.
- Display signage on crane isolations at the out of service position.
- Reassess the risks if a change occurs at the workplace.

References and further information

- [Bridge cranes](#)
- [Managing risks of plant in the workplace: Code of practice](#)
- [Information sheet - Duties of a competent person: Inspection and maintenance of plant](#)

Australian Standards:

- AS 1418.1 *Cranes hoists and winches, Part 1: General requirements*
- AS 1418.3 *Cranes, hoists and winches, Part 3: Bridge, gantry, portal (including container cranes) and jib cranes*
- AS 2550.1 *Cranes, hoists and winches – Safe use, Part 1: General requirements*
- AS 2550.3 *Cranes, hoists and winches – Safe use, Part 3: Bridge, gantry, portal (including container cranes) and jib cranes*
- AS 2550.10 *Cranes, hoists and winches – Safe use, Part 10: Mobile elevating work platforms*