

14/08/2018

Serious Injury

- **Incident date:** 30/07/2018
- **Event:** Struck by plant on construction site
- **Location:** Epping Road at Macquarie Park

Incident Overview

A 36-year-old male worker was agitating concrete being poured into a column. A blockage in the pipework has caused a build-up of pressure. Several pump and delivery line components failed, resulting in the rubber discharge hose striking the worker.

SafeWork NSW and NSW Ambulance responded to the incident. The worker was conveyed to Hospital and he received treatment for his injuries.



Image of the rubber end (discharge) hose, coupling, elbow and two pump line components.

The site

The site is located on Epping Road at Macquarie Park. It is a high rise residential construction site and is under the control of a principal contractor. A sub-contractor had also been engaged to carry out the concrete pour.

The investigation

SafeWork NSW Inspectors responded to the incident.

SafeWork NSW has commenced an investigation to determine the cause and circumstances of the incident.

Our [Prosecution Guidelines \(January 2018\)](#) outlines our approach to prosecutions and Safe Work Australia's [National Compliance and Enforcement Policy](#) provides guidance on their approach to compliance. These documents set out factors that will be considered in determining the investigative approach and appropriate outcome.

Safety Information

Businesses are reminded of their duty to identify hazards and manage risks to health and safety in accordance with the provisions of the [Work Health and Safety Act 2011](#) and [Work Health and Safety Regulation 2017](#).

Each year, we respond to incidents where workers have been struck by plant, including concrete placing equipment. Many of these incidents involve the sudden escape of pressurised concrete, the dislodgement or failure of pipeline components, or the sudden movement of the plant and/or components resulting from pressure build-up within the equipment.

Workers in the construction industry are most commonly injured.

Due to the cyclic loading of the pulsating pump, the risk of mechanical or structural failure of concrete pumping equipment is increased when compared to other plant, particularly risks associated with:

- fatigue failure of welds
- restraining devices such as pins and circlips becoming dislodged.

Businesses are reminded to consider reasonably practicable control measures to manage the risk of structural or mechanical failure of concrete placing equipment by ensuring that:

- operators of concrete placing booms hold the relevant high-risk work licence
- periodic inspection, testing and maintenance is undertaken in accordance with the manufacturer's instructions, including pipe wall thickness testing
- welding or repair work on the concrete pump or any associated equipment is only undertaken by a welder or service provider holding the appropriate qualifications and, where possible, in possession of the manufacturer's current specifications
- pre-operational inspections are undertaken, including the visual inspection of structural components and other critical components such as fasteners, pins, shafts, welds and locking devices such as pipe clamps are secured with safety pins, and clamp and anchor nuts are tightened adequately
- all lines, pipes, couplings and fittings can withstand the maximum pump pressure (including during blockages) or the pump pressure is adjusted so that it does not exceed pipeline capacity
- all metal pipes and pipeline components are identified and checked for compatibility
- pipes are anchored at intervals specified by the manufacturer, and near joints to prevent bending and casing fatigue failures
- reducers are only used as per the manufacturer's recommendations to avoid overload of the delivery line

Further information

Please refer to the following guidance materials:

- [SafeWork NSW Code of Practice: Managing the risks of plant in the workplace](#)
- Australian Standard AS2550.15, Cranes—Safe use Part 15: Concrete Placing equipment
- [Concrete pump delivery Industry guidelines](#)

About this information release

We have issued this information to draw attention to the occurrence of a serious injury in the construction industry. Investigations are ongoing and further information may be published as it becomes available.

The information contained in this publication is based on knowledge and understanding at the time of writing. Users are reminded of the need to ensure any information upon which they rely is up to date and to check the currency of the information with the appropriate SafeWork NSW officer or the user's independent adviser. No conclusions should be drawn from the information in this publication about the cause of the incident or the culpability of any party.

All photographs were taken by SafeWork NSW.