

## For industry comment

### Draft Position paper – mobile concrete placing booms - outriggers -

issued January | 2018

This paper sets out SafeWork NSW's position on 'short legging' and 'one sided supporting' on mobile concrete placing booms.

Outriggers are fitted to the sides of mobile concrete placing booms to increase stability. Not having all outriggers fully extended has been a factor in a number of booms tipping over.

Short legging or one sided supporting reduces the stability of the concrete placing boom, creating a potential tip over situation when the boom is positioned on the same side as short legged or retracted outriggers – including when setting up or stowing for travelling.

In this paper:

- short legged means the outrigger is partially extended
- retracted means the outrigger is fully retracted
- one sided supporting means the outriggers on the boom operating side (boom side) are fully extended and other outriggers are either retracted or short legged
- an engineering control is when the management of the safety function, for example maintaining the stability of the boom, is automatic and does not depend on following a procedure to control the risk or other human behaviour.

#### SafeWork's position

##### One sided supporting

One sided supporting of booms could be carried out only if:

- full outrigger extension is not reasonably practicable
- boom set up, concrete placement and boom pack up can be undertaken without the boom needing to be moved into a position that would reduce the unit's stability to below its stability design factor
- there is an engineering system that prevents the boom moving out of the safe range, or
- a documented system of work prepared by the manufacturer or a competent person that prevents the boom moving to an unstable position, including during setup and pack up is being followed.

Note: depending on the worksite the system may include visual markers such as traffic cones, bunting or tape to identify the safe operating range of the boom and a spotter.

- evidence is available with the boom for inspection that;
  - the manufacturer does not preclude one sided supporting of the specific model for concrete delivery
  - a set up procedure recommended by the manufacturer

- modifications (if retrofitted) are approved by the manufacturer or a competent person, and
  - the scope and limitations of modifications, where applicable.
- where slew limits are fitted, after each setup but before pumping concrete;
  - check that the boom will not go beyond the slew limits, and
  - record in the logbook that the boom slew limits were tested satisfactorily
- in all situations; jacks of short legged or retracted outriggers are lowered and set up unless the manufacturer's instruction is to not do so.

### **Short legging on boom side**

Short legging on the boom side presents a greater risk and should not be undertaken unless an engineering control system is fitted that automatically monitors the position of the boom and outriggers, and will stop the motion of the boom before the machine exceeds the design stability limits.

This is usually a computer controlled system of monitoring and limiting devices installed by the manufacturer or supplier, and can limit all boom movement functions that could lead to reduced stability, not just slew.