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Tipping Over of Mobile Cranes



Details

Last year two mobile slewing cranes tipped over in separate incidents in the north of the state. This was despite the weight of the loads being within the safe working capability of the cranes. In both cases the damage caused to the cranes was extensive, leaving both cranes unserviceable. Fortunately no one was injured as a result of these incidents.

The operators both held appropriate certificates of competency to operate the cranes but failed to operate them in accordance with the crane manufacturer's information and the competency standards they were assessed against when obtaining their certificates of competency. As a result, both operators had their certificates of competency suspended.

see over...

Contributing Factors

An investigation into these accidents revealed that:

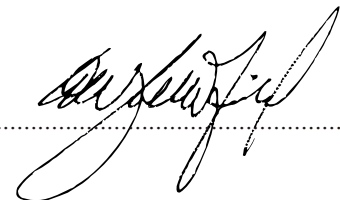
- An adequate risk assessment addressing the particular hazards associated with the task had not been carried out before the start of work.
- The operators held certificates of competency but were part-time crane drivers.
- In the first crane incident, the outrigger legs were extended on one side of the crane only. In the second crane incident, the outrigger legs were not extended at all. This significantly reduced the safe working capacity of the cranes. Had the outrigger legs been fully extended, neither crane would have tipped over.
- One operator had knowingly entered incorrect information into the 'moment limiting device' fitted to his crane. This rendered it ineffective in warning the operator of a pending tip-over. The second machine did not have any moment limiting or warning devices fitted.

Recommendations

- Install moment limiting or load indicating devices to the crane. These provide valuable information and signals to the operator. While these are not a substitute for good judgement and experience, they can significantly reduce the risk of tip-over or structural failure provided the correct information is entered into the device. These devices provide extra margins of safety, which is especially relevant with part-time operators.
- Always operate the crane in accordance with the manufacturer's information contained in the operator's manuals.
- Set up the crane with the outrigger legs fully extended at all times to maximise the safe working capacity of the machine.
- Provide training for operators on the risk assessment process, and ensure a risk assessment is carried out before setting up the crane.

If you would like further information contact Workplace Standards Tasmania on:
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