

Damage to crane winch

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A Member has reported an incident in which a crane winch was badly damaged and the load dropped as a result.

What happened?

The incident occurred on a vessel when the crane was being used to deploy a small boat for personnel transfer.

The crane operator started the crane and also disabled the limit switch. Whilst one of the riggers on deck connected the hook to the small boat, another rigger (banksman) gave the signal to the crane operator to start heaving up. Two tag lines were connected to help control the movement of the small boat. The crane operator heaved up till the 'headache ball' touched the limit switch weight, then the rigger (banksman) signalled for the operator to swing the boom to the port side and over the bulwarks.

It was observed that, when the small boat was situated 2-3 metres above the water, it was still not clear from the vessel's fenders. The crane operator extended the boom in order to clear the boat from the fenders; however, as the headache ball was already against the stopper, tension was placed on the winch drum sufficient enough so as to cause it to break from its foundation bolts. As a result, the boat fell into water and the crane block fell into the boat. There were no injuries, as no one was in the boat at the time.

Findings

Our Member's investigation revealed the following:

- The vessel initially had one crane operator on board and, two weeks before the incident, had switched to 24-hour operations which required the use of a second crane operator.
- The limit switch for the crane was disabled by the crane operator without prior approval from the officer in charge of the watch. The more senior crane operator onboard revealed that he normally disables the limit switch for the crane as this causes a nuisance every time the crane shuts off when the vessel is rolling.
- Internal company checklists were not followed.
- The crane operator had full visibility on the lift and the crane block from the crane cabin.

- A toolbox meeting and risk assessment for lifting operations had been conducted and was in place, although some specific control measures within the risk assessment were not complied with.
- The crane operator extended the boom without observing that the block was already heaved to the maximum level.

Lessons learnt

The following lessons were learnt:

- As part of a planned maintenance programme, functionality of crane limit switches should be regularly tested
- Alarms on the switch limits should not be altered without approval.
- Crane limit switches should be checked and calibrated only by competent persons.
- Full induction and training should be given to crane operators for the specific crane type being used, with crane operator competency assessed by an agreed third party company.
- There should only be one identified banksman for each shift, who should be provided with special vest for easy identification.
- Always ensure communications (including hand signals and radio) are tested prior to starting operations.

Members should refer to the following IMCA publications for further information:

- [Guidelines for lifting operations](#)
- [Lifting operations \(pocket card\), Lifting equipment \(pocket card\), and Safe lifting \(video\)](#)

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