



INDUSTRY HSE ALERT

This is a Thiess Industry HSE Alert and is provided in the interests of sharing incident learnings.

Incident: Luffing Rope failure on Lattice Boom Crane

Description:

In December 2004, the luffing rope on a Manitowoc 4100 lattice boom crane failed, resulting in the boom falling. The boom landed in the pre cast yard destroying the crane boom, a utility and a number of pre-cast beams. No workers were injured.

The failed rope showed localised damage due to surface peening.

In the period prior to the incident, the crane had been working in a narrow luffing range in the pre cast yard.

Pre start and maintenance inspections had not revealed any unacceptable rope damage.



Potential Issues to Be Aware Of:

1. Luffing ropes can be difficult to comprehensively check because of the manner in which they are rigged. A fully documented inspection procedure should be considered.
2. Industry standards for recording of inspections do not include an appropriate amount of quantitative and qualitative information on location and nature of rope condition. Existing damage may therefore be difficult to track between inspections.
3. Operations involving repetitive crane use in a narrow luffing range have the potential to cause localised rope damage and therefore risk based inspection practices should be adopted.

Possible Actions to Prevent Recurrence:

1. Improve luffing rope inspection practices including increasing inspection frequency where risk dictates.
2. Improve inspection recording practices to include both qualitative and quantitative data on rope condition.
3. Review operating practices that limit crane use to a narrow luffing range for repetitive lifting.

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