



# Safety Alert

From the International Association of Drilling Contractors

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ALERT 03 – 19

## LIFTING EYE FAILURE RESULTS IN DROPPED PUMP

### WHAT HAPPENED:

While a centrifugal pump pedestal was being transferred with the crane from the starboard side main deck to the mechanic shop, the integral-lifting eye forged into the pump housing failed. The pump fell on top of the gravel pack screens that were on the port pipe rack, ready to be run into the well bore. The lift was well within the SWL for the sling / shackles. Tag lines were being used to assist with controlling the load movement. All personnel were well away (20 feet) from where the pump fell and struck the tubulars. There were no injuries to any personnel. Five gravel pack screens were damaged.

### WHAT CAUSED IT:

- Potential failure of the lifting eye was not identified.
- The housing of the centrifugal pump had a fresh coat of paint, which covered any possible crack indicators that may have been present.
- Presently in the Company's lifting equipment inspection procedures, this type of integral lifting eye is not specified for Non-Destructive inspection.
- The normal operation and life of this type pump housing does not require frequent moving or replacement, and it is not unusual for a well-maintained pump to be in service for extended years.
- JSA and the PTW were properly utilized, but in this case neither of these identified a potential for failure of the integral lifting point.
- Closer inspection of the lifting point prior to handling of the pump housing may have identified the failure visually, but without MPI or dye penetrant inspection this would probably have not been visible to the naked eye.

**CORRECTIVE ACTIONS:** To address this incident, this company did the following:  
Instructed Rig Personnel:

- Do not use individual eyebolts for lifting coupled equipment. Eye bolts and the threaded holes for them are normally meant to lift that individual component only, not an assembled unit or coupled components. Lifting eyes that are built into or integral to cast iron housings are always susceptible to crack failure from impact. The cast components should be checked by dye penetrant prior to lifting the equipment. Care should be taken with all lifts and avoidance of personnel and equipment considered when a lift is made.
- Revised all JSAs of specific jobs to identify possible integral lifting eyes for potential risk and failures.
- Review safe lifting practices when handling ancillary equipment that is not normally moved on a routine basis to include close inspection of the lifting attachment point.
- Perform onboard dye penetrant inspection of all equipment that has dedicated lift points prior to commencing operations, which includes moving equipment with integral lifting points.
- Determine different slinging methods/lifting points if applicable and make sure that the sling and shackles are in excellent shape.
- All JSAs need to reflect this Alert. This should apply to all lifts.

**The Corrective Actions stated in this alert are one company's attempts to address the incident, and do not necessarily reflect the position of IADC or the IADC HSE Committee.**

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**Location of Integral Lifting Eye Failure**



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