Learning Event

Safer Together

Lifting – Failure of Equipment

Hazard
Lifting

led to

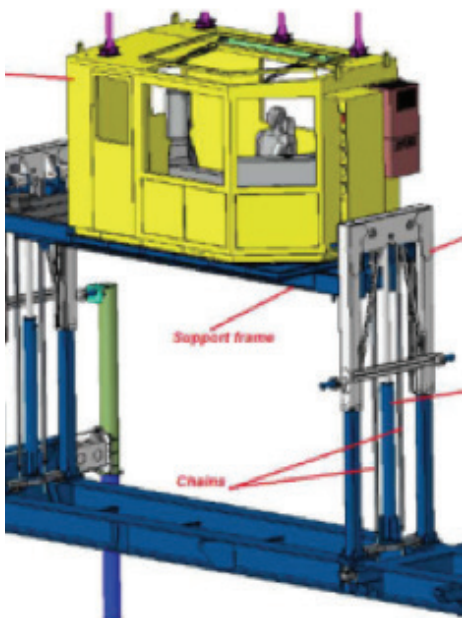
Unwanted Event
Failure of Equipment

Description

As a doghouse was being lowered, the hoisting chain pin anchor points of the doghouse support framed failed. The doghouse support frame descended back to its transport skid in an uncontrolled manner.

The incident resulted in equipment damage and the rig was shut down for an extended investigation and repair period.

An exclusion zone was in place and operating. No personnel were in the line of fire.



Risk Event Statement

Due to changes in equipment and/or its operation, lifting equipment failure may occur, which can lead to loads descending in an uncontrolled manner potentially causing equipment damage and/or serious injury/fatality.

Habits

✓ Exclusion zone in place.

✗ Equipment operated outside allowable parameters.

Learnings

The doghouse support frame was lowered at an acute angle outside of its allowable parameters. This resulted in an uneven distribution of weight across the chain pin anchor points on the doghouse support frame. The failure of one pin caused shock loading on the other anchor point pins resulting in the three pins shearing.

Management of Change deficiencies contributed to the incident. Changes in weight on the equipment had the potential to impact on operation and lifting points. The Original Equipment Manufacturer (OEM) requirements were not adequately considered when the equipment and its mode of operation was modified.

Critical allowable parameters were not known. As such, they were not communicated.

Considerations

> Use Management of Change processes when modifying equipment or changing its operation. Ensure OEM requirements are considered.

> Review operating procedures for critical tasks to ensure that they provide adequate information about allowable parameters.

Could this happen to you?

> Have you modified any equipment or changed how it is operated? Did you consider OEM requirements when you made these changes?

> Do you know the safe allowable parameters of the equipment that you operate?. How are these parameters communicated to you? Do you know how to operate the equipment within these parameters?

> Do your lifting and lowering procedures include line of fire considerations? Do you put exclusion zones in place and follow them?

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