SA0176: Failure of lifting chain on hoist.

Authorised by: Neil Murray, Head of Health, Safety and Environment

Date: 17 March 2011

Distribution list: All Managers
Executive Team Members

What is the danger?
Serious injuries / fatality caused by failure of lifting equipment, ancillaries or falling load.

Incident information
During a routine pump lifting operation, the lifting chain failed causing the pump unit to fall into the pump well. The lifting equipment was within its test / inspection validity period.

The model of hoist used, made in 2003, has no limit switches or buffers and relies on the slipping clutch engaging to prevent the load chain from being overloaded.

The immediate cause for the load chain failure was due to the slipping clutch not engaging at 1.2 times the safe working load (SWL). The motor finally stalled at 2.7 times the SWL without the slipping clutch engaging.

This resulted from the pump being lifted high to clear a recently installed handrail; to do this the hook block was raised as high as possible so that it jammed against the bottom of the hoist casing. This put double the load on the chain.

There are issues on safe operation and alteration of equipment as detailed below.

Actions required

All Managers must take the following actions in relation to lifting equipment in their control:

- Ensure that risk assessment guidelines RAG135 are in place for lifting operations.
- Ensure operators receive the RAG135 risk assessment tool box talk.
- Instruct staff never to adjust or interfere with lifting equipment.
- Ensure inspection reports are current and any rectification actions have been taken within the defined timescales.
- Ensure that the attached briefing is given to all relevant employees, including the circumstances of this incident, and that they sign that they have received the briefing.
SA0176: Failure of lifting chain on STAHL ST10 hoist.

Authorised by: Neil Murray, Head of Health, Safety and Environment  Date: 17th March 2011

Briefing for SA0176: Failure of lifting chain on STAHL ST10 hoist:

- Be aware of the incident information provided at this briefing.
- Before using any lifting equipment make sure that you have received a tool box talk on the risk assessment.
- Do not interfere or alter any settings of any part of the hoist or lifting equipment unless you are trained and authorised to do so.
- Inspect the condition of all equipment before use.
- Do not allow hook blocks or loads to become jammed against hoist casings.
- If there are signs of damage or misuse stop activities and report it immediately.

We the undersigned have been made aware of the contents of this briefing. If we are unable to carry out the work safely, we agree that we must immediately stop work and inform our manager/supervisor.

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Manager/supervisor’s signature:  Date:

Continue on another copy for additional employees