Safety Alert

From the International Association of Drilling Contractors

ALERT 11 – 01

SAND LINE FLAGGING OPERATION RESULTS IN FATALITY

WHAT HAPPENED:

A completions rig crew was attempting to attach flags to the rig sand line. After they had installed the third set of flags, the rig operator reached into the drum area to help one of the rig floor crewmen remove his pipe wrench from the sand-line. While reaching in, his stomach area came in contact with the sand-line drum clutch lever and engaged the drum resulting in the drum turning several revolutions. One of the rig crewmen become entangled, resulting in his death.

WHAT CAUSED IT:

Direct Causes:

Inadequate guards or barriers: There were no barriers to prevent personnel from entering or falling into the sand-line drum area.
Making safety devices inoperative: The person in control of the job did not isolate the sand line drum (air shut off valve), which would have prevented it from being engaged while workers were working on live equipment.
Failure to identify hazard
Personnel on location did not recognize the dangers associated with entering the drum area and the possibility of failing to close the air shut-off.
Improper position for task
As a result of the factors set out above the two crewmen were in a very awkward and high risk position.

Potential Basic/Underlying Causes

Inadequate instructions/procedures: Personnel should not have been instructed to enter the drum area before it was verified that it was locked out and there were barriers installed to prevent workers from falling into the draw works.
Lack of knowledge/situational awareness: The person in control of the activity should have recognized this as a high risk task and implemented controls to eliminate/reduce the risk to an acceptable level.
Inadequate leadership and/or supervision: Work procedures should have been implemented to ensure that the work could have been done safely.
Inadequate work standards: The procedures for conducting this work were insufficient to prevent the accident.
Inadequate engineering: A method for preventing entry to the drum area should have been in place; i.e. barriers to prevent personnel from entering the area, mechanical devices to prevent accidental engagement of the clutch lever.

CORRECTIVE ACTIONS: To address this incident, this company did the following:

- Created a rig activity database and developed procedures/JSA for critical activities.
- Developed and began implementing rig procedures/rules and ensure there is a mechanism for measuring compliance.
- Instructed rig supervisors to ensure equipment isolation mechanisms are installed and used.
- Developed service/completion rigs training matrix and ensure competency.
- Installed barriers over the sand-line/draw works area to prevent entry.
- Began a process to improve the safety culture and promote the use of a ‘Stop Unsafe Work Process’.

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.

Issued January 2011

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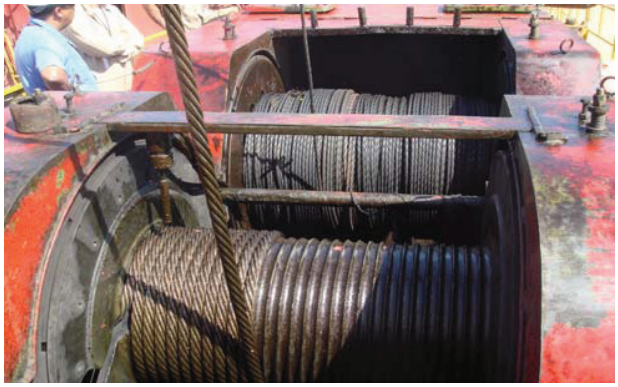
Location of shut down lever and clutch



View of drawworks drum and sand-line drum

Location of the fatally injured person at the time of incident (one foot on top of drum housing and the other foot on the sand-line drum).

Location of the second individual (one foot on the sand-line drum and one foot on a lower bar of the draw works housing

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