Safety Alert

From the International Association of Drilling Contractors

ALERT 11 – 06

NEAR-HIT INCIDENT - DROPPED OBJECT PIPE HANDLING PUSH-ARM FELL TO THE RIG FLOOR

WHAT HAPPENED:

While drilling a 12 ¼" hole, the driller observed the unused Safety Push Arm fall 15 feet (4.5 meters) onto the rig floor just in front of the Driller's cabin. The arm caused dents to the rig floor cover plates. There were five (5) rig floor workers in the vicinity working near the V-Door, but luckily no one was injured and no other equipment was damaged. The piece of equipment that fell measured 12' 6" long and 8" X 8" wide, weighing 882lbs. It had the potential to cause fatalities.

WHAT CAUSED IT:

- An investigation revealed that the 882lb arm was held onto the davit by a 1 ½" long bolt. The short bolt did not allow a sufficient number of threads to screw into the support structure.

The amount of thread that held it in its place

The amount of thread that held it in place

- There was no secondary retention (safety sling) installed on the arm to arrest a potential fall.
- Once it was decided to discontinue use of the equipment, there was no decision whether to remove or to re-use the equipment.
- Vibration of the rig may have contributed to the bolt unscrewing from the support structure.
- The failed equipment was installed the after initial rig-up and was not included in the derrick's inspection checklist, nor was it included in the Toolpusher's weekly checklist.
- The failed equipment was installed after the DROPS survey was conducted; therefore it was not included in the DROPS survey list.
- There was no record of the last inspection of the failed equipment including maintenance and greasing.
- There was no way to visibly inspect the bolt inside the slot to see if the thread was still in place and properly engaged.

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

- The failed equipment has been removed from service before any further operations were conducted.
- A notice has been sent to the manufacturer to alert them of this incident indicating the reason for failure.

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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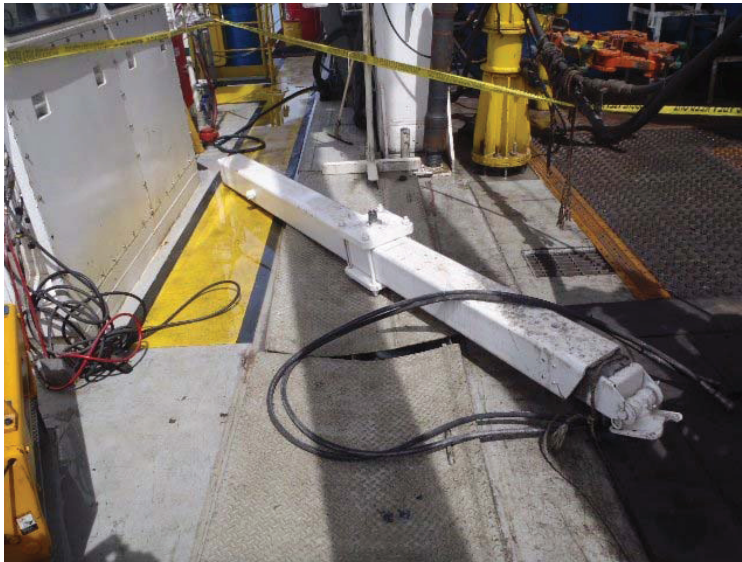
- Rig supervisors were instructed that all new equipment that is to be installed at heights shall always have an installation procedure prepared and documented in the company maintenance program prior to installation. This documentation is to include the following information:

  A. Secondary retention is a part of the installation procedure.
  B. Maintenance procedure is prepared and added into the company preventative maintenance system.
  C. Equipment documented and included in the derrick inspection checklist.
  D. Equipment documented and included in the DROPS program.

- There shall be a rotation of personnel performing derrick inspections (with the goal that a fresher pair of eyes might see something that has been missed)
- Instructed rig supervisors that all crew members shall be reminded of the importance of performing quality inspections, including important points, as well as giving examples at Weekly Safety Meetings and during Pre-Tour Meetings.



The 882lb arm that fell from the derrick

The davit that held the arm

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