



Safety Alert

From the International Association of Drilling Contractors

ALERT 99-05

WIRE ROPE FAILURE

WHAT HAPPENED:

A floorman was moving a drill pipe hydraulic torque wrench over to some subs on the rig floor to break a connection. Both of the lifting cables broke. The unit fell approximately 24" to the floor. The control lever guard bruised the floorman's arm.

WHAT CAUSED IT:

The cables that broke were four months old and had wire rope lubricant/preservative applied when installed. The cables had been visually inspected two days prior to the incident and no broken wires or damage was found. Later examination of the broken cables revealed the inner wires had deteriorated from rust. Heavy brine completion fluid had been in use on the rig. Contamination by this fluid, as well as the lubricant/preservative not fully penetrating the cable, had caused the rapid corrosion of the cable's inner wires.

CORRECTIVE ACTIONS:

1. Proper wire rope should be selected for the job. In this case, with the torque wrench manufacturer's approval, stainless steel cables were installed.
2. Wire rope lubricant/preservative should be applied according to the directions, making sure it has fully penetrated through the cable.
3. Protect the wire rope from damaging fluids. The drilling company is now removing this unit from the floor when completion fluid is being used. The cables are cleaned, inspected and re-lubricated.
4. Inspect wire rope in accordance with manufacturer's recommendations. Pay particular attention to any instructions the manufacturer may provide for inspecting the inner strands of the rope.

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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