



Safety Alert

From the International Association of Drilling Contractors

ALERT 10 – 24

AIR VALVE MALFUNCTION RESULTS IN HIGH-POTENTIAL NEAR MISS

WHAT HAPPENED:

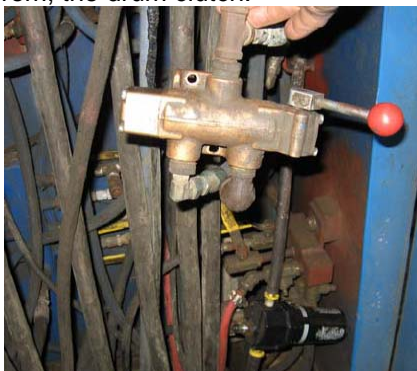
The driller was in the process of back reaming when the air supply to the drum clutch of the draw works suddenly bled off. This allowed the drum clutch to release and the top drive system, with a 5-inch drill string attached, to move down approximately 4-meters (13 feet). The drill pipe elevators came in contact with the rotary table resulting in damage to the bails and the link tilt hydraulic cylinders.



WHAT CAUSED IT:

Combination of leaking o-rings and the valve “tattletale hole” being plugged.

- The o-rings were found to be brittle and allowed air to leak by the shaft into the end cap.
- The “tattletale” hole was found to be plugged causing the pressure leaking by the o-rings to build up in the end cap exerting internal pressure against the end of the valve.
- The reverse pressure shifted the valve into the vent position which shut off the air to, and dumped air from, the drum clutch.



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.

This material is presented for information purposes only. Managers & Supervisors should evaluate this information to determine if it can be applied to their own situations and practices

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Issued August 2010



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

1. As an immediate corrective action, the o-rings were changed on this valve.
2. Contacted the valve manufacturer and informed them of the incident and inquired if there have been similar incidents in the past.
3. Obtained recommended maintenance and inspection procedures from the valve manufacturer and added the procedures to the company Preventative Maintenance System.
4. Communicated these procedures to maintenance personnel.

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