



Safety Alert

From the International Association of Drilling Contractors

ALERT 99-26

FATALITY – STANDING UNDER SUSPENDED LOAD

WHAT HAPPENED:

A sub-sea engineer was fatally injured while working on a semi-submersible rig. The deceased was standing inside the H4 Connector cavity of the Blowout Preventer (BOP) inspecting the ring gasket seating area. The BOP (approximately 110 tons) was suspended by two 70-ton bridge cranes (forward and aft). The mechanical brakes of the forward bridge crane failed. This allowed the BOP to swing free from the forward side of the drill rig toward the aft. The subsea engineer was pinned between the BOP and the test stump.

WHAT CAUSED IT:

1. Investigation revealed it was common practice on this rig to examine the H4 Connector ring gasket sealing face of BOP's by standing under the suspended load.
2. The bridge crane did not have a positive mechanical locking device. (i.e., mechanical pin, etc.), but relied on a friction braking system using a drum and brake bands.
3. Prior to the incident, it was believed that the bridge cranes contained a redundant hydraulic braking system. Later it was found that only the mechanical braking device was designed to hold a suspended load. The hydraulic system was designed only to provide a controlled descent when lowering a load.
4. The crane's braking systems were not properly maintained. The forward and aft crane mechanical brakes were found to be out of adjustment.

CORRECTIVE ACTIONS:

1. Procedural changes were initiated on the rig to prevent personnel from working under a suspended load,. All owner and contractor personnel will be informed of the incident and the requirements for strict adherence to this safety rule.
2. The Contractor's Preventive Maintenance (PM) program will be amended to include the crane's mechanical braking systems.
3. The owner and other personnel will be requested to review all crane systems, particularly the braking systems, and ensure that adequate PM programs are in place.

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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