



Safety Alert

From the International Association of Drilling Contractors

ALERT: 01 – 28

FATALITY INVOLVING WATERTIGHT DOOR

WHAT HAPPENED:

A worker's body was found caught between a hydraulic powered watertight door and the door jam in the port aft column of a semi-submersible. The worker had been subcontracted to perform general cleaning on the rig associated with oil based mud use. The deceased was pinned in an upright position facing the doorjamb, with his left hand on the actuating handle for the door.

WHAT CAUSED IT:

The powered watertight doors on this installation can be set up from the IACS (Integrated Alarm and Control System) in the Central Control Room to operate in either the LOCAL or REMOTE mode. In LOCAL mode, the actuating handle which is used to open or close the door, must be held down for the duration of the door's movement, and if released, causes the door to cease movement at whatever partially-opened position it is in. In REMOTE mode, the default door position is closed, and if the actuating handle is released at any point while opening the door, the door will reverse direction automatically and begin to close. All doors were set to operate in LOCAL mode, however this particular door was operating in the REMOTE mode because parts had been removed from it to repair another "more critical" watertight door located below the waterline. The missing parts had been ordered. A warning light and audible alarm were installed on this door that normally will activate if the door is moving in REMOTE mode, but due to the missing parts, this circuit did not energize. Additionally, the actuating handle cannot be moved to the Open position if a person is caught between the door and the jamb, as the body itself blocks the 90-degree arc necessary. There were instructions on either side of the door that describe both LOCAL and REMOTE operation clearly. The deceased understood how to operate the door and was aware that it would close automatically when the handle was released. The traverse time for this door from fully-opened to fully-closed was found to be 37 seconds. The event logger in IACS did not register the door being fully open at that time, meaning the deceased had not opened the door completely before placing his body in the path of the door.

CORRECTIVE ACTIONS:

- All personnel are to be briefed on the safe operation and hazards of powered doors and hatches during their vessel orientation.
- Only those personnel trained in the use of the powered doors shall be allowed to operate them.
- The doors will be set to 'local' mode except in the case of emergency or in the case of tests or drills.
- During "local" operation of the doors, movement of the door will cease if the operator releases the control switch/handle regardless of door position or direction of door movement.
- All powered / remote controlled watertight doors will have signs posted adjacent to and on both sides of the door indicating: "Warning - Open Door Fully Before Passing Through. This Door May Close Automatically"
- Where safety critical equipment or potentially hazardous equipment is not operating in accordance with it's original design, a "Management of Change" process will be utilized to ensure that the risks are identified, assessed, and control measures implemented.

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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