



Safety Alert

From the International Association of Drilling Contractors

ALERT 04 – 05

FATAL ACCIDENT INVOLVING A FLEXIBLE HOSE

WHAT HAPPENED:

A supply boat crewman was struck on the head by a flexible hose during pressure venting after transfer of bulk drilling chemicals. Transfer of bulk drilling chemicals used compressed air at a low pressure. On transfer completion, instructions were given to close all valves, purge and depressurize the transfer lines and disconnect the bulk transfer hose. The 4" diameter flexible vent hose was lowered over the starboard side of the vessel into the sea to prevent dust clouds during venting. To keep the hose submerged an old valve and ballast chain had been secured to its outboard end. A length of rope was tied between the outboard hose end and the vessel rail to allow for hose recovery, leaving about a 4m (13.2 feet) arc of movement between secured points.



Hose with valve and chain attached after whipping out of the sea



Approximate position of man when struck by hose

Upon opening the vent valve in the engine room there was a sudden release of compressed air causing the vent hose to whip out of the sea onto the deck of the vessel.

WHAT CAUSED IT:

1. An uncontrolled release of pressure resulted when the vent valves on the vessel were opened in the wrong sequence. There were no detailed written procedures for the venting process.
2. The hose was able to whip out of the sea onto the deck because:
 - The hose was not adequately secured to prevent it whipping onto deck.
 - Ballast was insufficient to prevent the hose whipping, and acted as a club striking the victim. (Note: use of ballast to weigh down a flexible hose is not a safe practice in any case)
 - No detailed procedure existed for securing the end of the hose.
 - Previous incidents of hoses whipping had been reported in the supply boat fleet but not acted on by fleet management.
3. Root Cause – Position of the crewman in a dangerous location due to:
 - Crewman apparently ignoring a verbal instruction to clear the area before venting.
 - Possible lack of attention. The crewman had been at sea for 8 months and it was the end of his shift.
 - Poor supervision and communications. The supervisor was in the engine room to operate the final vent valve. If the valve operating sequence had been different, a valve on the upper deck could have been opened last. The deck can be seen from this location.
4. Lack of crew training resulted in a lack of safety awareness among the crew individually and generally.
5. No specific safety management system for the boat was documented.
6. Lack of job safety analysis.
7. Chartering of the supply boat in spite of a negative technical inspection.

CORRECTIVE ACTIONS: To address this incident, this company issued the following recommendations to prevent recurrence:

1. Venting operations should be subject to risk assessment (Job Safety Analysis)
2. Ensure that hose venting and disconnection procedures are in place and followed. They should be detailed, contain drawings and describe specific safety precautions required. Results of JSA can be used to prepare procedures.
3. The boats should have a Safety Management System that complies with company's marine specifications.
4. Crew safety awareness should be of an adequate standard meaning a training program must be provided.
5. Subsidiaries should comply with Headquarters policies for contracted services.

IADC Note: Thanks to the Marine Safety Forum for sharing this alert with the industry.

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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