DRILL SHIP DAMAGE BY LIQUID NITROGEN SPILL

An accident occurred recently on an offshore drilling vessel during a drill stem test operation using liquid nitrogen (LN_2). At the time of the accident, the Operator was using nitrogen as a means to lift fluid from the test zone. The person maintaining the LN_2 equipment left his duty station and a subsequent failure in the valve system released a spill of LN_2 on the deck of the vessel. This caused cracking in the main deck and main support beams. All well operations were shut down to determine deck damage to the vessel. Fortunately the damage did not endanger the vessel's stability.

To prevent a recurrence of this type of accident, the Operator is directing that the following action be taken:

- 1. Personnel are to stay at their duty stations unless relieved by qualified personnel.
- 2. Place water pans under all valving and pumping units within the LN₂ systems.
- 3. Flood with water any deck subjected to LN₂ contact to minimize metal cracking.

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