

COS SAFETY SHARE

WHAT WILL WE DO TO PREVENT THIS FROM HAPPENING HERE?

DBMs SLIP AND ASCEND IN UNCONTROLLED MANNER

What happened?

During the installation of Distributed Buoyancy Modules (DBMs) on the 10in Water Injection Riser (WIR) the DBMs which had been previously installed to create the mid-water hog-bend, slipped on the riser, and ascended to the surface in an uncontrolled manner, before impacting the underside of the moonpool doors. The impact caused a member of the deck team to sustain an injury to his hand. The incident also resulted in damage to the DBMs and minor damage to the vessel's moonpool doors.

What went wrong?

Remote Operating Vehicles (ROVs) were deployed to perform inspection of the riser and subsequently identified that 16 of the 17 installed modules had slipped. Only DBM number 1 remained in situ. Given the nature of the incident surveys were undertaken of the adjacent Gas Injection Riser (GIR) which established that 28 of 31 DBMs on the GIR had also become dislodged but had not ascended to the surface as per the WIR DBMs.

Why did it happen?

Late communication on critical instructions on tool configuration were received with instructions on how to set up and operate the tool. The requirement to monitor ram travel was mentioned but there was no indication on the criticality or impact of this step. These requirements were not captured in the [JSA] and they were not in any formal documentation nor shared when the vessel was preparing for riser installation.

There was no equipment or process to measure actual clamp tension, instead readings from the Hydraulic Pressure Units gauge were relied on which provided a false positive in the event the tool had stroked out. There was no visual or audible on the tensioning tool to signal the tool was stroking out. Key elements were missing from the procedure: the need to adjust the tensioning tool after changes in riser diameter and the means of recognizing when the tool is stroking out. Stroking out in this sense means that the travelling rams in the hydraulic cylinders came to the limit of their travel prior to achieving the desired tension in the straps.

What areas were identified for improvement?

Perform risk assessment to understand the design limitation of new technology or redesign of tensioning tool clamp including how to adjust the tension tool with changes in the riser diameter tubular when using newly designed tools.

Risk assess and mitigate line of fire risk to personnel in the vicinity.

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