



## SAFETY ALERT

OISD/SA/2020-21/E&P/03

Dt.: 25/04/2020

Title : Accident Due to Failure of DP System.

Location : E&P Offshore

Loss/ Outcome : Damage to Rig Hull and OSV

### **INCIDENT**

Vessel was carrying deck cargo for jack up rig from shore. After the mandatory checks and clearance, the vessel reached below the port side crane and suddenly Dynamic Positioning malfunctioned and the vessel lost control and made contact with hull of the rig, which resulted in significant loss to the vessel as well as the rig. The weather condition was moderate at that time and the vessel had delivered cargo to other rigs in the same night successfully. The vessel had valid annual class survey along with annual DP trials.

### **OBSERVATIONS**

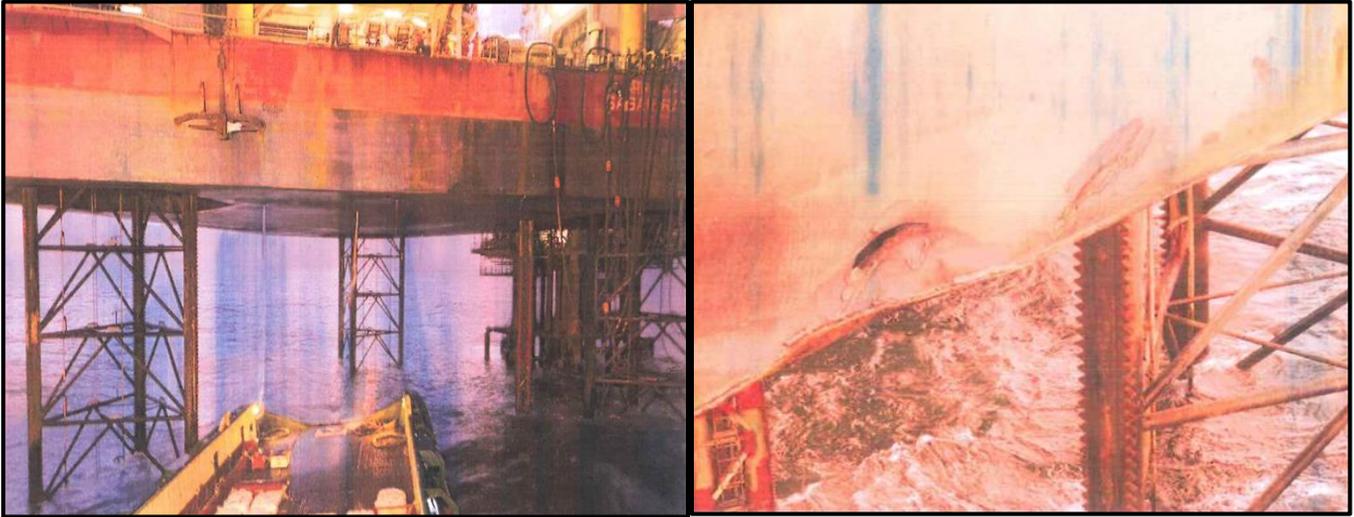
The vessel completed the checklist and entered 500 meter zone at 05:48 hours and was under the port crane of the rig at 06:10 hours. At that time Rig heading was 340 degrees and vessel heading was 256 degrees with the stern towards the rig. Chief Officer and 2<sup>nd</sup> officer were on duty at bridge. Suddenly, the starboard propeller got deselected from DP console. In this situation, the duty officers attempted to switch the controls to manual mode with the intension of pulling out the vessel safely but in doing so the controls were not effectively transferred to the aft console. In the interim, devoid of any control the vessel continued to drift under the influence of weather, till the stern made contact with the starboard leg and simultaneously, the funnel and mast also made contact with rig's hull. Subsequently the star board side made contact with the rig's forward leg. Controls were finally transferred to the forward console on manual mode and the vessel was pulled out at 06:12 hours under her own power. Vessel maneuvered to safe distance and carried out damage assessment and noted as below:

#### **Vessel Damage:**

- Damage at starboard quarter from crash rail to top and bottom steel fenders.
- Damage to exhaust uptake of both main engines on mast deck.
- Observed deformation in the support pipe of main mast.
- Damage also sustained in under water area and starboard fuel oil tank due to contact with the forward leg.

**Rig damage:** Damage was found in the hull due to impact.

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### **ROOT CAUSE**

- Misjudgement: The vessel was DP compliant and a single failure would not have led to loss of position or heading. Alarm log also show no loss of position or heading on the de-selection of the starboard propeller from DP console. However, the chief officer misperceived the risk and attempted to switch the controls to manual to pull the vessel out safely but in doing so the controls were not effectively transferred to the aft console. During this time the vessel drifted under the rig and was steady on DP and could have been maneuvered away from the rig.
- It appears that proper risk assessment was not carried out before making approach to the rig. As per the procedure, vessel should have an exit path and exit strategy clearly defined under eventualities.

### **RECOMMENDATIONS**

- System should be in place for pre joining briefing of senior officers of vessel by the concerned company with sessions to ensure thorough understanding of DP systems and responses in case of failure of critical controls and varied operations conditions.
- SOPs to be briefed to all operating staff and must be clearly displayed at the DP console.
- Emergency response drills and simulator trainings should be carried out by the vessel at regular intervals. A briefing to crew on emergency response need to be arranged before they resume their duty after their off period.
- The de-selection of the starboard propeller from DP console triggered the incident. It is recommended that the cause of deselection must be identified and suitable measures to be taken, to prevent recurrence of such incidents in future.
- Steps to be taken to ensure compliance of marine manuals.
- All the navigating personnel of vessel should be thoroughly sensitized about the risks involved while working at offshore installations, importance of DP setting time, Emergency Response Procedures, SOPs and response to various failures of controls and equipment.

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