CASE STUDY

OISD/CS/2025-26/E&P/19 Dt.: 02.01.2026

INTRODUCTION

Title : Fatal Accident during dismantling of Drilling Rig

Location : Onshore

Loss/ Outcome: Fatal Accident

BRIEF OF INCIDENT

The rig was scheduled to be dismantled for inter location movement after completion of drilling activities at well pad site. The team was preparing to dismantle the rig after the mast was lowered down. The task involved moving the travelling block closer to the crown block for dismantling. A tragic incident occurred during un-securing of travelling block.

The Driller assigned the job of moving the travelling block towards the crown block to IP and one more floorhand. The travelling block was already tied to the mast with two slings and a chain with a ratchet boomer for stability. The IP and other floorhand used a cherry picker to access the travelling block. The IP climbed on the 'laid down' mast securing his safety harness to the cross member of the mast. Then IP removed a sling from the off-driller side (ODS) that secured the travelling block. He then attached the sling to the crane's hook.

The crane operator, acting on signals from the Driller who was relaying the IP's instructions, began tensioning the sling. When the chain securing the travelling block appeared slightly slack, the IP started loosening it using the ratchet boomer. Suddenly, the travelling block shifted approximately 1.5 meters toward the crown block, pulling the IP along with it. The IP struck the TDS (Top Drive System) guide rails and nearby rig structures, sustaining severe injuries. He was taken to a nearby hospital and later referred to city hospital, where he was declared dead on arrival.

OBSERVATIONS/ SHORTCOMINGS

1) SOP for mast lowering didn't address securing or un-securing the travelling block; separate SOPs for monkey board removal and mast top section also didn't have coverage regarding block movement for dismantling.
2) The Job Safety Analysis (JSA) did not include any steps for un-securing the travelling block during mast dismantling.
3) Installation Manager (IM - Company), HSE Engineer (Company), Rig Superintendent (Contractual), Rig Manager (Contractual) and HSE Advisor (Contractual)- All these key

personnel were absent at the same time from the worksite during the critical job. Hence, job was done without adequate supervision.

4) Safety Harness of IP was anchored at incorrect location and harness lanyard was in the line of movement of the travelling block sling. Correct anchoring position for lanyard was not discussed in JSA.
5) Crew might have incorrectly assumed the travelling block would slide toward the derrick floor due to mast incline; instead, slack drill lines and block weight caused upward movement toward the crown.
6) Communication gap was observed between signalman and Crane operator. Signalman informed that signal was given to provide load to the sling which was attached in Crane hook while the crane operator claimed that no such signal was given.
7) The boomer's hook portion detached from one side during loosening, possibly due to excessive tension or pre-existing damage. Part of the failed ratchet boomer remained stuck with the travelling block. No periodic inspection report was available.
8) As per discussion, it was understood that crew members other than Driller had no prior experience on dismantling procedure of such rig.
9) Periodic training and awareness sessions on hazard identification, risk assessment, and evaluation of potential consequences are not being conducted in a structured and consistent manner for personnel at the operational (working) level.

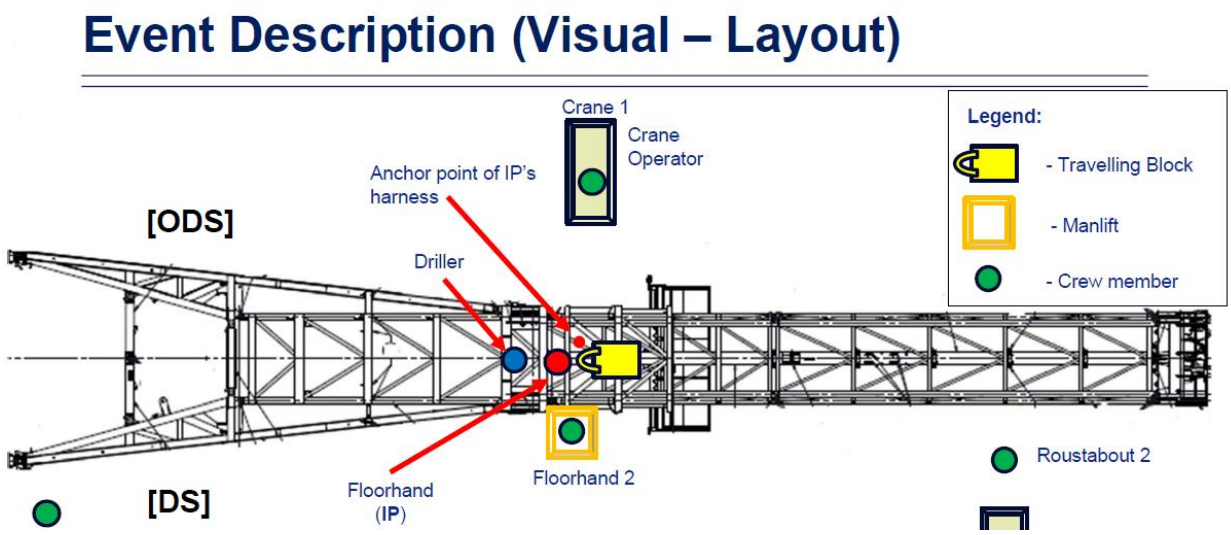
ROOT CAUSE OF THE INCIDENT

1) Lack of SOP for the operation- handling travelling block during dismantling.
2) Lack of supervision- absence of all key personnel.
3) Inexperienced crew- incorrect anchoring of lanyard.
4) Communication gap- poor coordination between Signalman and Crane operator.
5) Equipment failure- the ratchet boomer's hook section detached from one side.

RECOMMENDATIONS

1) Written down operating instructions & procedures should be developed for all activities related with de-rigging, mast lowering, rig dismantling, mast up and mast down.
2) JSA shall include all hazards and the method to eliminate the hazards/reduce the risk for such critical activities.
3) Adequate supervision by key persons is required throughout critical phases of any operation.
4) A pre-task harness inspection checklist should be incorporated requiring verification that the lanyard anchor point allows movement without risk of entanglement or getting trapped in the path of movement of heavy objects.
5) A pre-job briefing should be included in the JSA covering weight distribution, slack in drill lines, and mast incline effects and harness anchor point selection.
6) A dedicated signalman stationed with direct line-of-sight to worker and crane operator should be deputed for the job.
7) All equipment including ratchet boomer should be inspected before use. Periodic inspection of lifting and associated devices (including slings and ratchet boomer) should be practiced.
8) Only competent and experienced personnel should be assigned to rig activities including dismantling activities.
9) Periodic training and awareness sessions shall be conducted on hazard identification, risk assessment, and evaluation of potential consequences to reinforce effective risk recognition and control, with specific focus on personnel at the operational (working) level.

Some of photographs of the incidents are provided below.



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Provided for information purpose only. This information should be evaluated to determine if it is applicable in your operations, to avoid recurrence of such incidents.