**SAFETY ALERT**

OISD/SA/2024-25/E&P/01 Dt.: 06/05/2024

**Title:** Finger Injury due to Unsafe act
**Location:** Onshore Drilling Rig
**Loss/ Outcome:** Amputation of two fingers of right hand

## INCIDENT

During makeup of drilling bit with SDMM (Steerable Downhole Mud Motor) at an onshore drilling rig, for proper clamping/ gripping purpose additional dies were being inserted in the upper Jaw of PCT (Power Compact Tong). IP was carrying out the job. Instead of using proper tools he used his hand to adjust the dies, at that time PCT was accidently operated & closed from HMI (Human Machine Interface). It led to crushing of three fingers of his right hand in the PCT. Immediately assistant shift-in-charge opened the upper part of jaw. The IP was rushed to the hospital for treatment but after ten days his two fingers were amputated.

## OBSERVATIONS

- There were 05 personnel working on the Derrick floor at the time of accident. All the personnel were using PPEs. Shift In charge and Assistant Shift In charge were present in the driller's console cabin. Though Impact resistant (IR) gloves were provided to the crew, but it was not being used.
- There was no mode of direct communication between the personnel present at the derrick floor and the personnel operating the driller's console cabin. Though walkie talkie were provided, it was not being used.
- During the tightening of SDMM with drill bit, dies of upper jaw of PCT were not able to latch with SDMM outer surface properly due to the gap between the upper jaws. To reduce the gap between both, the Injured Person put additional dies in the upper jaw for proper clamping. The PCT was operated in auto mode to tighten the joint. But it was half tightened (in auto mode) as the torque required to tighten the upper jaw was not enough in auto mode due to the gap. Shift In charge went to the drillers console cabin and told assistant shift In charge to operate the PCT in manual mode. Meanwhile the IP saw that one of the die fell down on C plate and he went to adjust the die. Till the time IP could have adjusted it, the PCT was operated in manual mode and his fingers got caught between the upper jaw and SDMM accidentally.
- There was no Job Safety Analysis carried out for this non routine job. Identification of hazards and assessment of risks and measures to eliminate the identified hazards risks

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hazards associated while working with PCT during tightening of SDMM with drill bit were not done.

- There was lack of communication between rig floor crew and personnel operating from drillers console cabin.
- 05 nos of CCTV facing the rig floor were non-operational.

## ROOT CAUSE

- Inadequate analysis of the risk related to PCT. Risk register was not rig specific.
- There was no communication between rig floor and drillers console cabin.
- SOP was not developed.

## RECOMMENDATIONS

- The Talk back system (explosion proof) needs to be made operational.
- Walkie talkie available at operational site must be used in an effective manner.
- Safe Operating Procedure for SS-1500-2 for different operations needs to be developed.
- Impact resistance gloves needs to be used while working with PCT.
- Risk register needs to be updated with respect to the operational risks involved while working with PCT.
- Effective CCTV surveillance to monitor all operations closely should be in place.

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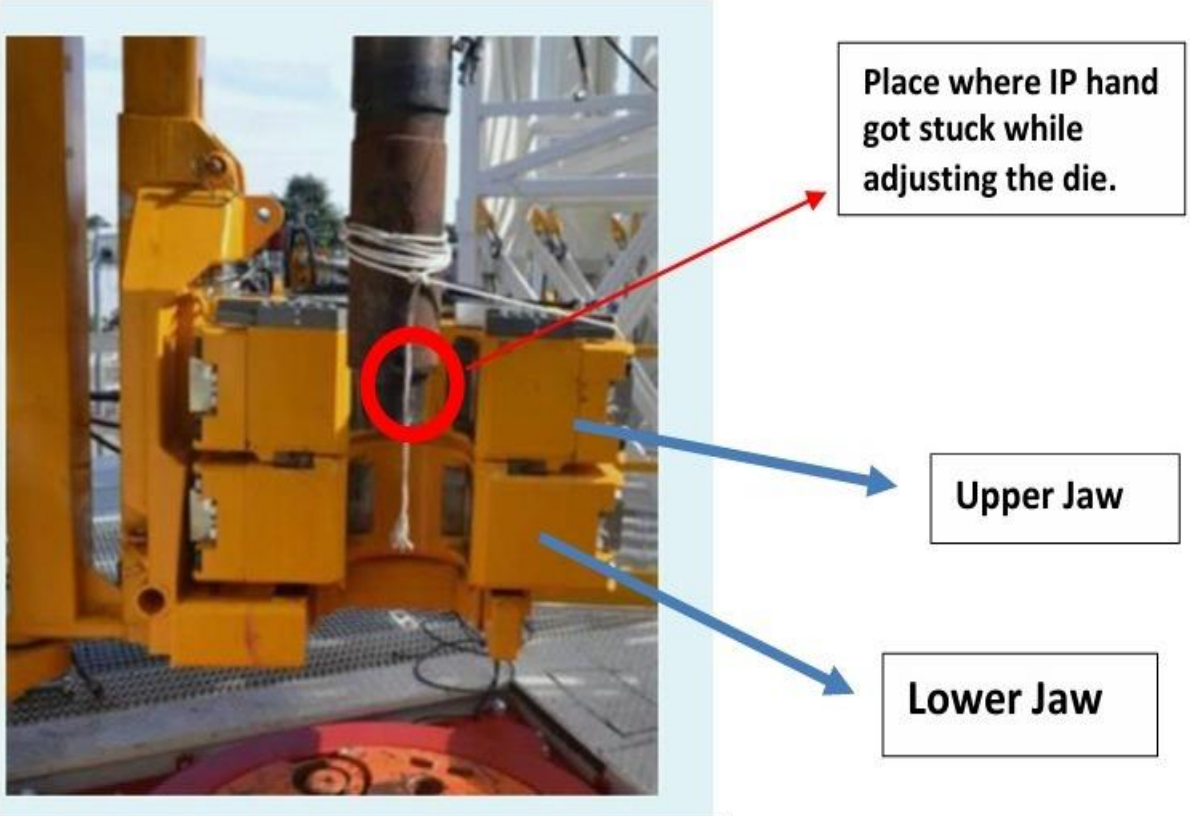


**POWER COMPACT TONG**

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