



SAFETY ALERT

OISD/SA/2020-21/E&P/02

Dt.: 13.01.2021

INTRODUCTION

Title: Left Hand Caught in Between Mud Pump Liner & Piston.

Location: Jack Up Drilling Rig.

Loss/ Outcome: Hand Injury.

BRIEF OF INCIDENT

Drilling of 12 ¼" hole section was in progress and both the mud pumps were running. Suddenly mud leak from middle piston was observed. Operation was suspended to replace the liner & piston. Drilling crew replaced the liner and subsequently installation of piston assembly was taken up. Injured Person (IP) was holding the piston assembly for alignment with liner, while other three crew members were manually rotating the crank shaft to push the piston cup inside the liner. During this activity, the hand glove of the IP got stuck between piston cup and liner inner surface. The crew, who were rotating the crankshaft could not stop crank shaft immediately and piston continued to move inside the liner, which resulted major injury to left hand of the IP. Crew stopped the movement of the crankshaft and removed the left hand of the IP and shifted him to the rig dispensary. After providing first aid, IP was finally shifted to base for treatment.

OBSERVATIONS/ SHORTCOMINGS

- Job Safety Analysis was not carried out before the commencement of the liner-piston replacement job. The risk involved and their role to mitigate the risks was not explained to young officers.
- Among the available drilling crew members, only shift In-charge (IP) had some first-hand experience of replacement of mud pump liner and piston and other crew members only assisted during such jobs in the past.
- Shift In-charge (IP) himself was leading the team for this job and he deputed two crew members for the rig floor operation as drilling string was in open hole.
- While aligning the piston assembly with liner, the IP seemed to be incorrectly holding the piston rod very close to the piston cup.
- Due to limited man power, there was no independent supervision during the job.

REASONS OF FAILURE/ ROOT CAUSE

- Due to improper positioning of hand of IP on piston assembly for alignment, left hand of IP got caught between piston and liner.
- Adequate supervision was not available for this job due to shortage of manpower.
- Lack of experienced manpower for this job due to disruption of shift schedule caused by ongoing pandemic.

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.

RECOMMENDATIONS

- Job Safety Analysis should be carried out in more focused manner. More so over, when new/inexperienced crew members are in team or non regular crew are performing the job. Crew members may be unaware about the hazard associated with the operation they were carrying out.
- The crew should not be dependent on few individuals for such regular maintenance jobs. Other crew members should be trained under supervision of experienced crew to gain first-hand experience for such regular maintenance jobs.
- All Activities should be supervised by competent person(s).