MARINE Safety Forum

# Safety Alert

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**Subject: AB Struck on Head by Crane Hook**

## What Happened / Narrative

A PSV was carrying out routine deck cargo transfer operations at an offshore installation with the two AB's on the vessels deck routinely hooking on and off cargo as it was being discharged and back loaded to and from the vessel.

The AB's shift change was due so after discharge of a CCU (Cargo Carrying Unit) the off going AB's retreated to the forward end of the cargo deck to carry out the shift change however, critically, before departing from the deck they did not routinely check the next CCU to ensure it was ready for discharge. (Under normal circumstances checking that the next CCU is ready for discharge would be a routine part of the procedure however this critical step was overlooked due to the shift change of the AB's).

While the crane was landing the previous CCU on the installation deck the off going and oncoming AB's completed their handover on the PSV's deck and the oncoming AB's waited in the safe area for the crane hook to return to the vessel, so they could attach the next CCU.

As the crane hook was being lowered the newly on duty AB's approached the CCU and noticed that the lifting bridle was snagged. Immediately both AB's attention was drawn away from the approaching crane hook as they freed the lifting bridle in preparation for hooking on the lifting gear.

The AB's cleared the lifting bridle within a matter of seconds and stood back from the CCU to look up for the crane hook, meanwhile the crane hook had been continuing its decent to the vessel deck unchecked by the crane operator.

Just as the AB lifted his head to look up for the crane hook it struck his hard hat a glancing blow and continued its decent to the ships deck. Fortunately, the AB's hard hat performed as per its design intent and the AB was uninjured. The AB's collected the hook, attached the CCU and retreated to a safe area to monitor the CCU being lifted.

## Why Did it Happen / Cause

<u>There were several critical factors identified in this incident:</u>

1. The AB's had changed out as soon as the previous CCU had been discharged.
2. Neither the off going nor the oncoming AB's utilised the available time to ensure that the lifting bridle on the next CCU to be discharged was clear and ready to hook on.
3. When the oncoming AB's noticed that the lifting bridle was snagged their attention was drawn away from the approaching crane hook as they went to free the snagged lifting bridle.
4. The AB's did not contact the crane operator (neither by voice or hand signal) to advise him to stop lowering while they cleared the snagged lifting bridle.
5. The crane operator was unaware that the AB's had turned their attention to clearing the lifting bridle and so he did not stop the crane hooks downward path while the AB's were concentrating on clearing the snagged bridle.

The <u>Root Causes</u> of the incident were deemed to be a failure to follow established routines and best practice procedures. These being:

1. When the previous CCU is discharged and clear of the vessels deck the AB's should utilise the available time that the crane is landing the discharged CCU on the installations deck to inspect the next CCU to be discharged from the vessels deck and ensure it is ready in all respects for hooking on when the crane hook is lowered. Instead they utilised the available time to carry out a shift change and discuss handover information. (If they had required extra time to conduct a shift change handover they should have 'stopped the job' and taken the time required to conduct the handover).
2. A breakdown in communication between the AB's and the crane operator. i.e. the oncoming AB's should have advised the crane operator by radio and / or hand signals to stop lowering the crane hook while they diverted their attention to clearing the snagged bridle.

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## Corrective Actions Taken / Recommendations

The subsequent investigation identified that neither the vessel operators nor the crane operator's procedures provided clear, detailed information and guidance to the AB's nor the crane operator how cargo transfer operations should be conducted hence both parties were requested to review and update their procedures accordingly.

In the meantime, to allow the operators time to compile and roll out their updated procedures to their employees the client imposed the below step by step instruction to be followed by all involved in cargo transfer operations:

- **Step 1** – One AB shall be nominated as 'in charge of communications between vessel deck and installation crane'. He will also be the AB nominated to 'watch the crane hook' at all times.
- **Step 2** – Following hooking on of a CCU both AB's will retreat a safe distance and monitor the CCU being lifted from the vessels deck.
- **Step 3** – As the CCU is being lifted the AB's will watch to ensure it is lifting clear and not snagging. If there are any concerns the AB with communications must advise the crane operator to stop lifting immediately.
- **Step 4** – As soon as the CCU is clear of the vessels deck the installation (Crane operator, deck team leader, chargehand or designated delegate) will advise the vessel AB's of the next CCU to be discharged.
- **Step 5** – When safe to do so both AB's will utilise the available time that the crane operator is landing the previous CCU on the installation deck to inspect the next CCU to be discharged ensuring it is ready in all respects (Including a check for dropped objects) to be hooked on.
- **Step 6** – When the crane operator returns to the vessel with back load or 'empty hook' the AB with communications will ensure he is continually monitoring the back load or empty hook being lowered and he will instruct the crane operator if for any reason there is a need to stop.

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