SAFETY
ALERT

CRUSHED BY/CAUGHT BETWEEN FATALITY *ALERT 3-21*

WHAT HAPPENED:

Two personnel were performing loose lifting gear inspections around the riser deck area of an offshore drilling unit. The task included visually inspecting slings, recording serial numbers and applying the current color code.

During the inspection, the inspection team leader observed two slings rigged up to a load of 5 metal plates which were stacked vertically, resting on dunnage, and secured to a stanchion by a single 2" ratchet strap (see Figure 1). The slings had been left in place on the plates after they were landed by the crane for efficiency and ease of relocation when needed.

The plates were all 4 x 8 feet; three were 3/8" thickness and the other two were 1" thickness (see Figure 2).

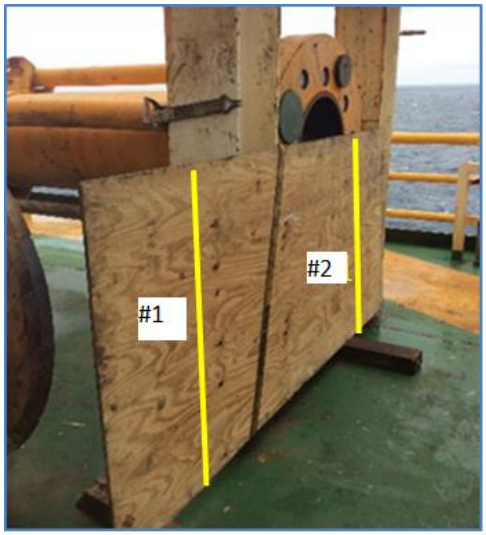

Figure #1: illustration of the position of the plates, using one piece of 4x8 plywood, with the ratchet strap in place and sling position identified

Figure #2: The 5 metal plates, combined weight of approximately 2 T

The plates were onboard for deck strengthening as some configurations of well test equipment require deck strengthening for safe operation.

The inspection team leader attempted to, and was successful in, sliding one of the slings from the plates on the inboard side (#1 represented above in Figure #1), but he discovered the second sling (#2 represented above in Figure #1) was pinched between the rear of the plates and the stanchion, preventing it from being taken off on the outboard side. He then called his assistant and requested that he loosen the ratchet strap, presumably to allow for movement of the plates for the pinched sling to be removed for inspection.

The inspection team leader then leaned his back against the plates; The reason for this is unknown, but it is assumed the intention was to keep the plates in their standing position when the ratchet strap was loosened. When he was standing in this position, directly in front of him was a framework for the drilling bail rack. When the ratchet strap was manipulated by the assistant, the hook (rachet strap) released, (see Figure #3), allowing the plates to free fall forward (away from the stanchion) under their own weight, fatally trapping the inspection team leader between the plates and the framework of the drilling bail rack (see Figure #4).

CONTRIBUTING FACTORS & LESSONS LEARNED:

Figure #3: illustration of the ratchet strap hook that came free from the stanchion

Figure #4: The position of the inspection team leader

The weight of the falling metal plates, overwhelmed the lead inspector, who was caught in the line of fire and pinned between the plates and the solid frame. First responders arrived at the scene and attempted to manually remove the plates but were unable due to their weight.

Lessons Learned:

- Line of fire awareness – reinforce with all personnel the importance of avoiding body positioning in the line of fire, including avoiding getting between loads and structures
- Risk perception and stopping the job are essential to working safely
- Ensure tasks are clear and well planned, including pre-job discussion of factors that would necessitate stop work and reinforce the need to stop and re-assess when the task changes. In this incident, a low-risk task of visually inspecting loose lifting gear changed to a much higher risk task without the team recognizing they were deviating from their task – by removing rigged-up slings on sea-fastened cargo, the nature of the task and risk profile changed. It was no longer a low-risk task of visually inspecting loose lifting gear at that point.
- Where there is a prolonged activity with multiple steps (e.g., a task or program of work extending over multiple tours or areas of the rig,) ensure the overall risk and the risk of each step been fully understood by all involved
- Are there sufficient measures in place to prevent unauthorized manipulation of sea-fastenings? Service provider personnel may not recognize cargo straps as sea fastenings when a rig is in operation. Procedures, including the use of warning tags, should be reviewed to ensure it is clear what needs authorization to release or manipulate
- Review housekeeping and sea-fastening – are materials around the rig stored safely and has the potential for gravitational energy to be released been minimized as far as practical (e.g. if a strap comes loose, will the stored material fall or tip over?) Can this be mitigated by storing in an alternative location or an alternative orientation (e.g., by lying flat)?
- Service providers are an integral part of an offshore operation. Ensure service providers and crew are fully integrated into daily operations management and supervision of activities. Service providers should attend drilling contractors pre-tour safety meetings when applicable.