EMPLOYEE KILLED WHEN GANTRY CRANE STRIKES RISER SKATE

WHAT HAPPENED?

A roustabout was crushed to death between the riser skate and V-door frame as he attempted to walk from the rig floor to the riser skate deck.

The gantry crane operator had been instructed to hook on to the 36” casing saddle adapter located on the main deck and place it onto the upper bucket at the rear of the riser skate. After attaching one hook to the saddle adapter, the load was hoisted a few feet and moved starboard to port toward the riser skate, which is located at the center of the deck. The riser deck, catwalk and skate in the parked position are located aft of the rig floor and riser is transported forward to the rotary.

Once he neared the skate, the crane operator then hoisted the load to an adequate height to clear the catwalk handrails. As he did, and even though he was still starboard of the center of the skate, it became apparent the load would not be centered forward / aft over the upper bucket on the skate. He was still several feet starboard of the skate at the time. Although the hooks are controlled independently and have the ability to move forward and aft to some degree, the crane operator did not feel he would be able to center the load onto the bucket without moving the whole skate assembly. He then called the drill floor and requested the driller to move the skate assembly forward. The driller in turn instructed the AD to move the skate, which he did, actually positioning it over the forward gantry crane track, extending through the V-door, into the rig floor. It was not recognized that it would be impossible to accomplish the job with the skate positioned as it was. It also was not recognize that the independently driven upper bucket was all that needed to be moved instead of the entire riser skate assembly.

Prior to this operation, the truck adapter had been installed for transferring various equipment and was still in place. Due to the forward end of the skate being positioned into the rig floor and the additional width of the truck adapter, the space between the V-door and skate was reduced to the point employees had to turn sideways to pass from the rig floor to the riser catwalk.

As the skate now covered the forward crane track blocking the crane from continuing over the center of the skate, the crane operator continued to move to port and was concentrating on centering the load in order to lower onto the bucket. He was unaware the forward crane track was obstructed by the skate assembly.

The Corrective Actions stated in this alert are one company’s attempts to address the incident, and do not necessarily reflect the position of IADC or the IADC HSE Committee.
The deceased employee had traveled from the main deck up to the rig floor to help unhook the load once it was placed onto the skate. As he passed through the V-door, the gantry crane collided with the riser skate, knocking the skate off its tracks and into the employee. He was pinned between the truck on the riser skate and the V-door.

WHAT CAUSED IT:

It was not recognized that it would be impossible to accomplish the job with the skate positioned as it was. It also was not recognized that the independently driven upper bucket was all that needed to be moved instead of the entire riser skate assembly. Prior to this operation, the truck adapter had been installed for transferring various equipment and was still in place. Members of another crew were asked to assist without fully understanding the scope of the job. Due to the forward end of the skate being positioned into the rig floor and the additional width of the truck adapter, the space between the V-door and skate was reduced to the point employees had to turn sideways to pass from the rig floor to the riser catwalk. The skate covered the forward crane track blocking the crane from continuing over the center of the skate. As the crane operator continued to move to port and was concentrating on centering the load over the bucket he was unaware that the skate assembly obstructed the forward crane track. The deceased was not aware that the crane was about to collide with the riser skate as he stepped into the narrow gap at the Vee-door.

CORRECTIVE ACTIONS:

- Verify that key HSE management elements related to job planning (JSA, pre-tour / pre-job meetings, use of operational procedures, etc.) are understood and working effectively.
- When a job scope changes or additional personnel are needed to complete the job, the job plan information must be clearly communicated to personnel that have joined the job after the initial planning process.
- Ensure that the processes are effectively implemented to monitor work practices and conditions, and to reinforce safe behavior, and correct at risk behavior and conditions.
- Ensure that each employee understands and exercises his/her obligation to observe for and identify unsafe acts or conditions and interrupt any unsafe operations.
- Perform formal HAZARD Identification exercises for high-risk equipment systems and areas. This is especially critical for equipment systems and areas that have prototype equipment, a high degree of automation, and/or where equipment from various manufacturers combine and interface to make up the system.