Multiple Barriers Thinking – a Road to a Proactive Culture

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Multiple barriers thinking technique can reduce the risk of incidents occurring on a drilling rig. The objective of the technique is to improve the crew's ability to observe the potential risks at the lowest possible level in the process of an incident developing. The ability to observe is developed through a “What if” mindset and a deeper understanding of barriers.

A review of several high potential incidents over the last years show that our highly developed procedures and advanced use of task risk assessment only gets us so far. There is a danger that comfort taken from these systems creates a perception that processes make the job safe. This feeling of comfort can lead to lack of attention. The multiple barriers thinking technique stimulates to a continuous awareness and learning culture among the crew in the daily working process. It is a technique to avoid feeling of comfort, lack of attention and complacency. Further, the technique drives a culture that makes safety everyone’s responsibility.

This paper provides a detailed introduction to the multiple barriers thinking technique and further, how the technique is introduced and implemented with a drilling crew. A case study is provided to demonstrate the use of the technique, why this technique stimulates to a proactive learning culture and why the technique is accepted by the drilling rig crew.

Background

The multiple barriers thinking technique has been applied on 25 offshore drilling locations. The majority of the drilling rigs had very good safety records based on traditional key performance indicators like lost time incidents and total recordable incidents. Several of these drilling rigs had shortly before been audited by company management and authorities with overall good results. However, after applying the multiple barriers thinking technique a high number of potential risk observations were revealed. A typical number of observations on each drilling rig were between 500 and 1000. This situation tells us that we need to take a look at our safety work in a new perspective. We need to find a road to a more professional proactive approach.

In order to improve the safety results offshore the understanding and competence of potential existing risks apparent on the rigs need to be brought to attention. Further, the knowledge about barriers and why these are so vital to maintain the safety integrity must be improved.
This paper introduces a method to take the next step to a safer drilling rig. It gives each member of the crew on a drilling rig a tool which can be applied while doing his/her normal worktask at the work place. At the same time this tool increases profession competence and stimulates to continuous learning for the individual worker.

**Description of the technique**

The multiple barriers thinking technique is founded on the ability to know the equipment and what potential risks that might be present in the interface between the equipment and the human being. The technique is not based on checklists or any other formal instructions, but it stimulates the individual’s ability to learn and get a deeper understanding of multiple barriers. It appeals to everyone’s curiosity and interest towards continuous improvement. It is more like a mental process that will help you build on existing processes and develop good practices.

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