



Petroleum Safety Significant Incident Report No. 01/2012

Poorly designed flooring leads to slip and scalding by hot drilling fluid

Incident

A new member of a drilling crew was asked to clear excess drill cuttings around a “possum belly”. Also known as a distribution box or flowline trap, this part of a drilling rig slows the velocity of hot drilling fluid pumped from the bore hole to a storage tank.

When the worker moved to get a shovel for the task, he slipped on the rig’s floor grating. His foot went through a gap on one side of the grating where his boot and foot came into contact with 63°C drilling fluid. The worker suffered second degree burns to his foot.

Contributory factors

The main contributor to this incident was inadequate hazard identification regarding this part of the drilling rig and therefore a lack of appropriate control measures.

There was also a lack of information communicated to new crew members about the hazards when working on wet and slippery surfaces above hot drilling fluids.

Comments and preventative actions

The incident could have been avoided if the drilling rig had properly designed flooring that:

- did not become slippery when wet
- extended to cover all gaps through which a worker’s limbs could protrude if they fell.

This incident also illustrates the importance of regular inspections and maintenance.

Preventive actions taken by the operator included:

- undertaking a risk assessment of the area, which led to the redesign of the grating and its surrounds to remove any slip hazard;
- closing gaps in the flooring that could present a fall hazard; and
- advising crews of the dangers of working with hot drilling fluid.

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