

## Hot Work Leads to Fire

### What happened?

A recent fire on a normally unattended platform has highlighted the requirement to ensure that risk assessments are conducted as thoroughly as possible and are not over-reliant on referencing previously conducted risk assessments from similar tasks.

The fire was detected visually from an approaching vessel transporting a crew of workers to the facility to continue repair work, replacing structural steel.

During the morning approach it was identified that a section of the timber scaffold planking was on fire. The boat stopped on approach and stood by at a safe distance while the alarm was raised and the facility production, shutdown and blowdown, was initiated.

When it was deemed safe to board the facility the crew identified a 3 metre by 3 metre section of the planking missing (assumed burned) and some remaining boards were burning and smouldering. Affected boards were jettisoned into the ocean and recovered by another vessel.

The crew's work on the day previous to the fire involved the removal of structural steel members using oxy-acetylene cutting equipment, conducted in hides, located on scaffolding. The timber planking at the base of the hides was covered in fire blankets and a fire watch was engaged to observe the work.

At the completion of the day's work a final inspection of the hides was conducted prior to the crew departing the facility.

During the period between personnel departing the facility and returning the following morning, a flame detector at the facility went into alarm and returned to normal. While this alarm was captured in logs, the information was not communicated to the crew prior to attending the facility.

### What could go wrong?

Despite the fire blankets providing good coverage of the hide flooring there will always be pockets and folds in the blankets, particularly around areas where piping and structural members penetrate through the hide / habitat.

Hot "slag" from oxy-acetylene gouging may find its way into the pockets and folds without being visually detected on inspections. Where this slag comes in contact with a combustible material (e.g. timber planks) there is potential for a fire to take hold.

Several factors, both planned and good fortune, prevented escalation of the fire to a far more significant event. These included:

- The fire blankets on top of the boards prevented the natural escalation of the flames;
- Good housekeeping within the hides meant that no flammable materials were left exposed;
- The area where the work was being conducted was furthest from the facility's hydrocarbon piping; and

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- Favourable weather conditions in regard to wind speed and direction.

### Key Lessons:

- HAZIDs, Risk Assessments, JHAs and other evaluations should be conducted for each individual project / work scope. What worked previously does not necessarily apply to the task at hand.
- Consideration should be given to alternative methods of work and equipment. In this instance the risk of hot work as opposed to cold cutting; the use of steel or grid mesh as opposed to timber planking.
- Operators should develop a specification for construction of their hides / habitats that includes consideration of detection equipment / instrumentation, both existing and temporary.
- Consider the development of guidelines / procedures / competencies for personnel required to perform fire-watch duties.
- Consider the development of checklists for (pre-) and (post-) hot work within habitats / hides.
- Fires can smoulder for a significant period after work has ceased and therefore consideration should also be given to making thorough post-job inspections and possibly work-site wet down, a requirement of the permit.

### Who is responsible?

- (i) The Operator of an offshore facility has a general duty of care under the *Offshore Petroleum and Greenhouse Gas Storage Act 2006* to ensure that all work and other activities are safe, and that the risk to the health of people is as low as reasonably practicable. Specifically, the Operator must implement and maintain safe systems of work and ensure any plant and equipment are safe.
- (ii) Any person who is in control of any part of a facility or particular work carried out at a facility has similar duties to the Operator for that part of the facility or that particular activity.
- (iii) Every person at a facility must at all times take all reasonably practicable steps to ensure that by any act or omission, they do not create or increase a risk to the health or safety of either themselves or anyone else.

### Contact

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