

# Fire in engine room and subsequent collision with structure on transport barge

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## What happened?

During the tow of a structure to location, a fire occurred in the engine room of the tow tug. This led to a blackout resulting in a collision with the structure on the transport barge.

The crew's interpretation of a project specific requirement led to a pressure test being conducted on the fuel oil system. During this test fuel oil started spraying out of a gasket in the engine room. The fuel oil spray was eventually ignited by the heat of the engines.

The fire in the engine room caused a short circuit which was followed by a blackout. With the failing of the power supply, the tow tug started drifting.

The transport barge drifted past the tow tug; however, the structure, which protruded outside the stern of the transport barge, struck the tow tug.

## What were the causes? What went wrong?

Contributing factors include:

- The emergency generator failed to start, resulting in a black out.
- The fire extinguisher system did not activate (the fire was extinguished with a combination of the sprinkler system and the residue fuel oil burning out).
- Crew members were not familiar with characteristics of fire-fighting systems on-board.
- Unreliable gasket material used in the FO system.
- The engine emergency stop button in the engine control room could not be accessed by the crew as too much smoke had escaped from the engine room.
- The permit to work (PTW) failed to address or communicate the specific situation related risks.
- There was reliance on third-parties' expertise during design, build, commissioning and operations.

## What actions were taken?

- Any non-standard activity should be subject to control of work procedures.
- Offshore and onshore organisation need to communicate proactively when non-standard activities are considered/required.
- There should be thorough familiarisation of emergency and fire-fighting

### IOGP Life Saving Rules:



Bypassing safety controls



Energy isolation

systems on-board – this is a must. Not only how they are operated, but also specific characteristics of the system and the effectiveness of the medium used.

- Ensure that the PTW is also used as an effective communication tool.

Members may wish to refer to:

- [IMO Circular MSC.1/Circ.1321 Guidelines For Measures To Prevent Fires In Engine-Rooms And Cargo Pump-Rooms](#)

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