

Fatality and multiple injuries: Flash fire incident onboard pipelay barge

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During pipelaying activities on a pipelay barge, Injection Moulded Polypropylene (IMPP) equipment at a coating station got stuck.

What happened?

Pipelaying activities were stopped and repair operations were started. The crew started to dismantle the machine to investigate the problem. It was discovered that the piston was stuck inside the polypropylene accumulator chamber.

Whilst trying to pull out the stuck piston, a vapour cloud blew out from the accumulator chamber. The cloud ignited, resulting in a fire in which fourteen persons were injured. The fire was extinguished by the barge crew.

After medical evacuation, one of the injured crew members subsequently died at the hospital.

IOGP Life Saving Rules:



Work authorisation



Hot work



Energy isolation



Bypassing safety controls

What actions were taken?

- Injured personnel were treated in the barge clinic and then evacuated to the local hospital for immediate treatment and stabilisation.
- A dedicated air ambulance was organised to transfer the injured persons to specialised centres abroad within the following two days.
- An investigation team was appointed and mobilised on-site.
- The barge operations were stopped, and the barge was towed alongside.

Our Member notes that this incident is still under investigation, but confirms the following general recommendations:

- Be aware that Polypropylene should always be kept within the temperature range specified in the safety data sheet.
- Check that the IMPP equipment has a reliable integrated control system to monitor the Polypropylene accumulator chamber temperature to prevent overheating.
- Heating of the system should only be carried via the integrated control system.
- The range of repair operations that may be conducted by the user should

be established in consultation with the manufacturer.

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