

## Update to SF 11/19: Fatality and multiple injuries – flash fire onboard pipe-lay barge

Safety Flash Published on 22 October 2019 Generated on 16 January 2025 IMCA SF 24/19

This Safety Flash comprises an update on the flash fire which occurred onboard a pipe-lay barge earlier in 2019, and includes our members' findings on the causes of the incident, and lessons learned.

### IOGP Life Saving Rules:



Hot work

### What happened?

During pipelaying activities, Injection Moulded Polypropylene (IMPP) equipment used for field joint coating got stuck. 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 (i.e. seen tilted from the open flange) inside the accumulator chamber (Figure 1). While trying to pull out the stuck piston using a threaded bar, the heating elements were energised in order to avoid the solidification of the polypropylene contained in the accumulator chamber, and thus to ease the pulling operations.

Whilst at the final stage of extracting the piston, a cloud of flammable vapour and fine polypropylene droplets blew out from the accumulator chamber. The cloud ignited, resulting in a so called “flash-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 in hospital.

### Actions

- 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.

### Lessons learnt

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.

*IMCA Safety Flashes summarise key safety matters and incidents, allowing lessons to be more easily learnt for the benefit of the entire offshore industry.*

*The effectiveness of the IMCA Safety Flash system depends on the industry sharing information and so avoiding repeat incidents. Incidents are classified according to IOGP's Life Saving Rules.*

*All information is anonymised or sanitised, as appropriate, and warnings for graphic content included where possible.*

*IMCA makes every effort to ensure both the accuracy and reliability of the information shared, but is not be liable for any guidance and/or recommendation and/or statement herein contained.*

*The information contained in this document does not fulfil or replace any individual's or Member's legal, regulatory or other duties or obligations in respect of their operations. Individuals and Members remain solely responsible for the safe, lawful and proper conduct of their operations.*

Share your safety incidents with [IMCA online](#). Sign-up to receive Safety Flashes [straight to your email](#).