MAIB

MARINE ACCIDENT INVESTIGATION BRANCH

SAFETY FLYER TO THE FISHING INDUSTRY

Fatal enclosed space accident, on board the pelagic trawler *Sunbeam* on 14 August 2018

Sunbeam

Narrative

During the afternoon of 14 August 2018, a second engineer working on board the pelagic trawler *Sunbeam* was found collapsed inside a refrigerated salt water (RSW) tank. *Sunbeam* was in Fraserburgh and the crew were preparing for a refit; the evidence suggested that the second engineer had entered the RSW tank to sweep away residual water.

When the second engineer was found, other members of the crew rushed to his aid, including three others who entered the tank, one of whom also collapsed. The crew members in the tank were rescued by *Sunbeam*'s mates, who were wearing breathing apparatus; only three of the four crew who entered the tank survived.

Safety Lessons

1. *Sunbeam*'s RSW tanks were enclosed spaces because they had limited openings, no ventilation and were not intended for continual worker occupation. The accident happened because the second engineer entered the tank without any of the safety precautions normally associated with such a hazard being in place, specifically: the atmosphere was not monitored, there was no plan for the work or a rescue, and the second engineer was working alone without means of communication.

2. Entering *Sunbeam*'s RSW tanks without safety precautions having been implemented had become normalised by the crew as this had been completed without consequence over many years of the vessel's operations. However, on this occasion the atmosphere could not support life as refrigerant gas (Freon in this case) had leaked into the space through failed evaporator tubes in one of the vessel's refrigeration plants.

3. While a leak of refrigerant gas might have been less foreseeable than hazards such as oxygen depletion from corrosion or hydrogen sulphide from rotting fish, it simply serves to underpin the critical need for atmosphere monitoring in enclosed spaces.

4. All work activities should be subject to risk assessment and safe systems of work. Working in enclosed spaces is particularly hazardous, and procedures for entering and working in them should be robust and understood. Similarly, rescue plans need to be put in place and rehearsed.

This flyer and the MAIB's investigation report are posted on our website: www.gov.uk/maib

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Extract from The United Kingdom Merchant Shipping (Accident Reporting and Investigation) Regulations 2012 – Regulation 5:

"The sole objective of the investigation of an accident under the Merchant Shipping (Accident Reporting and Investigation) Regulations 2012 shall be the prevention of future accidents through the ascertainment of its causes and circumstances. It shall not be the purpose of an such investigation to determine liability nor, except so far as is necessary to achieve its objective, to apportion blame."

NOTE

This safety flyer is not written with litigation in mind and, pursuant to Regulation 14(14) of the Merchant Shipping (Accident Reporting and Investigation) Regulations 2012, shall be inadmissible in any judicial proceedings whose purpose, or one of whose purposes is to attribute or apportion liability or blame.