सत्यमेव जयते
भारत सरकार / GOVERNMENT OF INDIA
पत्तन, पोत परिवहन और जलमार्ग मंत्रालय
MINISTRY OF PORTS, SHIPPING AND WATERWAYS
नौवहन महानिदेशालय, मुंबई
DIRECTORATE GENERAL OF SHIPPING, MUMBAI

F. No.25-19011/6/2020-NT-DGS

Date:26.12.2023

Casualty Circular - 01 of 2018

Sub: Loss of Life of One Crew Member due to Engine Room Explosion

Summary of Incident:

Vessel had loaded cargo of Naphtha at Karachi, Pakistan and was on passage to Kolkata, India, after part discharging at Mundra, India. During the loaded passage from Karachi to Mundra, vessel had carried out repairs of No.3 cargo oil pump, where reconditioned shaft along seals was assembled and pump was used without problem in Mundra. On 09.06.2018 AM hrs, on passage to Kolkata gas was felt in the engine room, and thereafter upon checking it was noted that some liquid was seeping from bulkhead separating engine room and pumproom. Thereafter, upon checking the pumproom it was noted that the gas alarm was activated and pumproom was flooded up to 2 m by liquid i.e Naphtha, which was also seeping into the engine room. Thereafter efforts were made to transfer the pumproom liquid to slops and other tanks, and initially it was done by pneumatic diaphragm pump, however this transfer did not result in any decrease in level of liquid in the pumproom. It was noted that gas level were increasing in engine room and were observed to be around 30% LEL, and engine room staff was using EEBD in the engine room. Vessel diverted Kochi and anchored at OPL Kochi for dealing with the situation.

Thereafter, instructions were received from Manager / Charterer to use stripping pump for transferring liquid from pumproom to other cargo tank. The senior officers after deliberating with owners and DPA decided to go ahead and try using stripping pump. Thereafter, breaker for the stripping pump was turned on, and trainee engineer went down in the engine room to see if the pump motor is operating correctly. Chief Officer in the cargo control room, upon seeing stripping pump energized, he started the pump, and immediately loud sound was heard and smoke was seen coming from the port side.

Emergency alarm was raised, crew was mustered, head count take, and it was found the trainee engineer who had gone down to check the pump was missing. Emergency team in fireman suit went in the engine room, and found the trainee engineer injured, who was then immediately brought out. Thereafter he was evacuated to shore hospital by chopper, but was declared brought dead. Once, all crew as accounted for CO2 was released in the engine room to extinguish the fire. Thereafter all remaining crew were evacuated from the vessel, and salvage operations commenced.

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Causal Factors:

1. Substandard condition of the vessel, especially the valves and the pipelines which led to ingress of cargo in engine room.
2. Poor condition of shaft seals, which led to seepage of cargo into engine room creating a flammable air mixture.
3. Poor safety culture on board, whereby officers on board did not understand the grave risk due to flammable gas concentration in the engine room.
4. In adequate support and direction from the shore management of the vessel.
5. Complete failure of the safety management on board vessel.

Action Taken:

1. Emergency alarm was raised immediately
2. Emergency team was formed and sent to engine room to search for the missing person
3. Missing person was rescued and transferred to shore hospital for treatment by chopper
4. CO2 was released in engine room to extinguish fire
5. All crew were evacuated from the vessel, and thereafter salvage operations commenced

Lessons Learnt:

1. Vessels should be properly maintained at all times
2. Company should ensure that proper safety culture is inculcated on board their ships
3. All officers should be well aware of the circumstances and situations thereof, and risks posed by them, and should ensure that no action is taken prior to mitigating risks to acceptable levels.
4. Safety management on board should be implemented in letter and spirit
5. Leakage in pumproom should have been detected prior to cargo seepage in engine room

26/12/13

(Capt. Vikram Singh Manhas)
Dy. Nautical Adviser cum Sr. DDG (Tech.)

To,
All stakeholders through DGS website.