Fatal Accident Resulting from Engine Room Fire

To: Shipowners, Ship Managers, Ship Operators, Masters and Officers

Summary

A fire broke out in the engine room of a Hong Kong registered ship while she was en route from Tenerife to Lagos. The fire resulted in the death of an Engineer and serious damage to the vessel. The fire was caused by overflowing fuel oil that came into contact with the main engine hot exhaust gas manifold and ignited. This Note draws the attention of the shore management and shipboard staff to ensure that all fuel and lubrication oil piping systems should be properly maintained for the intended purposes.

The Incident

1. On 24 March 2005, while en routing from Tenerife to Lagos near the west coast of Africa, a fire broke out in the engine room of a Hong Kong registered ship. The fire spread into the accommodation areas resulting in the death of the Third Engineer. The incident caused substantial damage to the engine room and the accommodation space.

2. The investigation revealed that the fire was caused by the overflow of heavy fuel oil from the boiler fuel oil tank. The fuel oil was ignited when it came into contact with the hot main engine exhaust gas manifold.

3. The primary cause of the fire was that the Junior Engineer mistakenly opened the filling valve for the boiler fuel oil tank in fuel transfer. This mistake was unfortunately compounded with two major defects on the boiler fuel oil tank system. Firstly, a length of the boiler fuel oil return line had been removed leaving an opening on the top of the boiler fuel oil tank. Secondly, the overflow line for the boiler fuel oil tank was blocked with rusty debris. As a result, excess fuel oil could not be drained away through the overflow line but flew out from the opening at the top of the tank and came into contact with the hot main engine exhaust trunk.
Lessons Learnt

4. No modification of any fuel oil system should be made without prior approval from Flag Administration or Classification Society.

5. It is utmost importance that overflow pipes for fuel and lubrication oil tanks are properly maintained for the intended services.

6. The attention of shipowners, ship managers, ship operators, master and officers is drawn to the lessons learnt above.

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