



Technical Circular

No.: 004/2025

Date: 20th January 2025

Subject: Incidents & Casualties reported due to Fire associated with thermal oil heating system.

1. In recent past a fire & explosion incident was reported on a ship at sea associated with thermal oil heating system. The incident occurred due to splashing of hot thermal oil from thermal oil expansion tank on exhaust trunking in funnel area. Due to leakage from tubes in hot water heater, thermal oil got mixed with fresh water resulting in water ingress into thermal oil expansion tank. Later on, during the inspection, it was observed that the thermal oil expansion tank overflow/recirculating pipeline was holed resulting in hot oil splashing on exhaust trunking in funnel. It appears that there were lapses in routine maintenance and monitoring of ship systems.

This fire incident resulted in major damage to the ship's structure, machineries and its equipment which led to loss of propulsion power and required vessel to be towed to port of refuge.

2. These incidents provide an opportunity to re-look at Safe Working Practices followed by ship staff onboard the ship and Safety Management System implemented by Companies.
3. A few effective ways to prevent similar incidents in future could be:
 - a) The overflow/recirculating pipeline inspected at regular intervals, particularly associated with oil systems to ensure that they are maintained in good condition and operationally efficient.
 - b) Thorough examination of thermal oil expansion tank along with associated system to ensure that the closed system is maintained in good condition at all times.
 - c) Adequate instruction/skill training is provided to ship staff so as to ensure that they are aware of pitfalls associated with thermal hot oil and/or other heating closed loop systems.
 - d) Safe working practices are followed at all times.
4. Owners & Managers are to take note of above in order that corrective actions can be taken to avoid similar situations in future.

Enclosure: Nil.



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