



Technical Circular

No.: 030/2024

Date: 24th December 2024

Subject: Incident & Casualties reported due to Fire in Engine Room

1. In recent past, fire incident occurred on a ship on full sea passage when ship staff prepared to start a standby auxiliary engine for change over. In the process when ship staff attempted to open the fuel oil inlet valve with wheel spanner by turning it in open direction there was a strong fuel oil spray towards running auxiliary engine.

Later an inspection of fuel oil valve revealed that the bonnet had bent upward away & detached from the valve body, exposing the valve's interior. It appeared that even after valve spindle in the fully open position, the trainee engineer continued to turn the spindle beyond a point, causing the bonnet to loosen and failure leading to strong fuel oil spray on hot surface.

Also the emergency services, fixed fire-fighting and water mist system failed to operate after incident. Emergency generator failed to come on load due to faulty Air Circuit Breaker (ACB) which led to the loss of electric power for activation of Water Mist System & Emergency Fire Pump; while the engine room pilot release CO2 system failed to operate due to faulty valve.

2. This caused major damages to ship and its equipment including all four of the vessel's Auxiliary Engines and Emergency generator went out of service, and the vessel remained without propulsion and electrical power and remained a "dead ship" requiring towing assistance until reaching the port of refuge.
3. These incidents provide an opportunity to re-look at Safe Working Practices followed by for critical operations on-board and Safety Management System implemented by Companies.
4. A few effective ways to prevent similar incidents in future could be:
 - a) Adequate initial instruction/skill training is provided to junior crew members and watch keepers of pitfalls associated with improper operation of tool/equipment / machinery/device.
 - b) Ensuring the securing device of all of valves of essential machineries / critical operations are maintained in satisfactory condition and corresponding warning notices posted for safe operation & easily understood.
 - c) Maintaining satisfactory condition of lagging and anti-splash tapes on various exhaust systems and joints of valves and fuel oil pipeline joints.



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- d) Fixed fire-fighting system including local fire-fighting systems are maintained in good condition. Where Fixed CO2 system is provided, satisfactory condition of bleed valve in the pilot line of the CO2 system and satisfactory operation of the actuation mechanism to be ensured by the designated person during annual and/or renewal servicing.
 - e) Identification and elimination of Hot Spots in the exhaust system and compliance verified during company internal inspection and audits.
 - f) Trying out emergency generator for automatic start & connecting to switchboards including satisfactory operation on full load.
 - g) Critical operations undertaken on ships are in accordance with established SOPs/ Checklists as per the safety management system including test & trials of essential machineries / systems to ensure operational readiness at all times.
 - h) Safe working practices are followed at all times.
5. 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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