	<p>HEALTH, SAFETY, ENVIRONMENT AND QUALITY MANAGEMENT SYSTEM</p> <p><b>76.0 PROTECTION OF HIGH TEMPERATURE SURFACES</b></p> <p>ON THE JOB TRAINING</p>	<p>OJT : 076  Page : 1 of 2  Date : 07-Nov-25  Rev : 10.1  Appr : DPA</p>
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VESSEL : \_\_\_\_\_

DATE : \_\_\_\_\_

### **Details of training: Protection of high-temperature surfaces**

**Reference – SOLAS – CH – II - Regulation 4 - Probability of Ignition - 2.2.6 Protection of high-temperature surfaces.**

- ***2.2.6.1 Surfaces with temperatures above 220°C which may be impinged as a result of a fuel system failure shall be properly insulated.***
- ***2.2.6.2 Precautions shall be taken to prevent any oil that may escape under pressure from any pump, filter or heater from coming into contact with heated surfaces.***
- All hotspots offers a potential ignition source if a heated surface comes into contact with a spray of oil or any flammable liquid substance which may have been atomized or sprayed under pressure.
- Hot surfaces have proven to be the number ONE cause of engine room fires in the last few years. SOLAS now requires that we protect all hot spots from coming into accidental contact with oil or oil sprays.
- Maintenance routines shall be strictly complied with. A Mespas scheduled job has been created for every quarter that the Engineer shall examine all machinery in the engine room for potential hot spots. If spots exceeding 220 deg C are detected, then adequate insulation is required to be wrapped around this area.
- Ship staff shall ensure stringent inspection and maintenance as per PMS and report if any lagging is missing from any equipment/ machinery. Laggings shall be adequate , covering the entire surface and not missing at any area and the lagging and insulation shall be in good condition, tight and free from oil. If the laggings are not in good condition , they shall be renewed.
- IF the ship cannot rectify it, then the Chief Engineer is to contact the SM to discuss shore side attendance to insulate the area properly. Areas of concern include the following ( the list is not exhaustive and ship staff shall identify all the pipelines):
  - ME turbo charger exhaust casing
  - ME indicator cocks
  - ME exhaust bellows from each unit to exhaust manifold
  - Generators turbo charger exhaust casing
  - Generators indicator cocks
  - Generators exhaust bellows from each unit to exhaust manifold
  - Incinerator exhaust uptake
  - Incinerator outer shell temp
  - Emergency generator Exhaust manifolds
  - Emergency generator exhaust uptakes
  - Bellows connections in all exhaust uptakes in funnel
  - Any internal combustion engine fire pumps exhaust systems

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- Any internal combustion engine hydraulic power packs
- Apart from adhering to the guidance on protecting hotspots, it is also highly advisable to have all flanges, valve connections, fittings to High pressure pipes protected with anti-splash tape, approved by Class for this purpose. The reason for this is to stop liquids spraying at high pressure into the atmosphere creating a fog effect. When this fog comes into contact with hotspots, an ignition takes place. Anti-splash tape covering an accidental leaking flange will stop that fogging effect, allowing the leaking liquid to drip down instead of permeating into the air as a fog.
- Please note unshielded heated surfaces are also the subject of Port State Control inspections.

**Training conducted to all engineering officers and crew on board:**

Master: \_\_\_\_\_

CEO: \_\_\_\_\_

2EO: \_\_\_\_\_

3EO: \_\_\_\_\_

4EO: \_\_\_\_\_

JEO: \_\_\_\_\_