# FLAG STATE INSPECTIONS AND COMMON DEFICIENCIES

Presented by:
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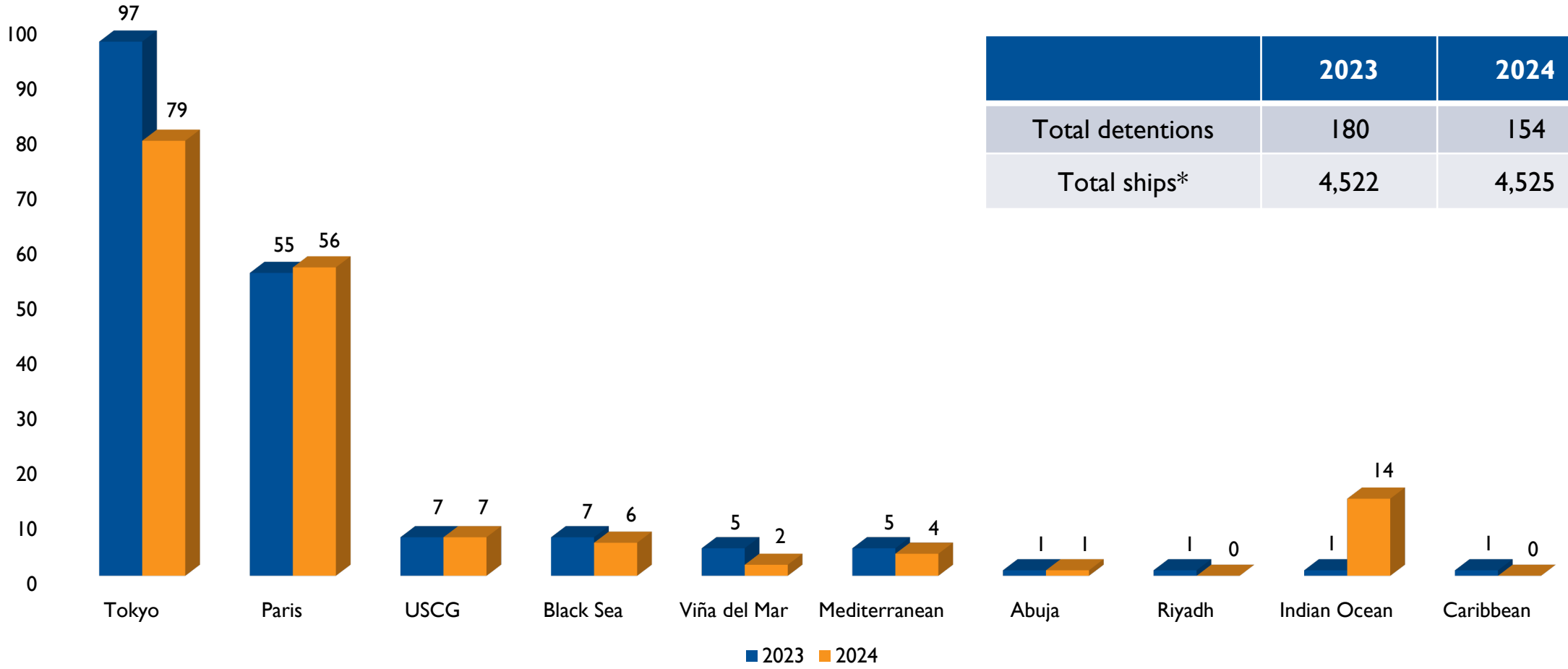
*Fleet Operations Manager (Hong Kong)*

March 2025

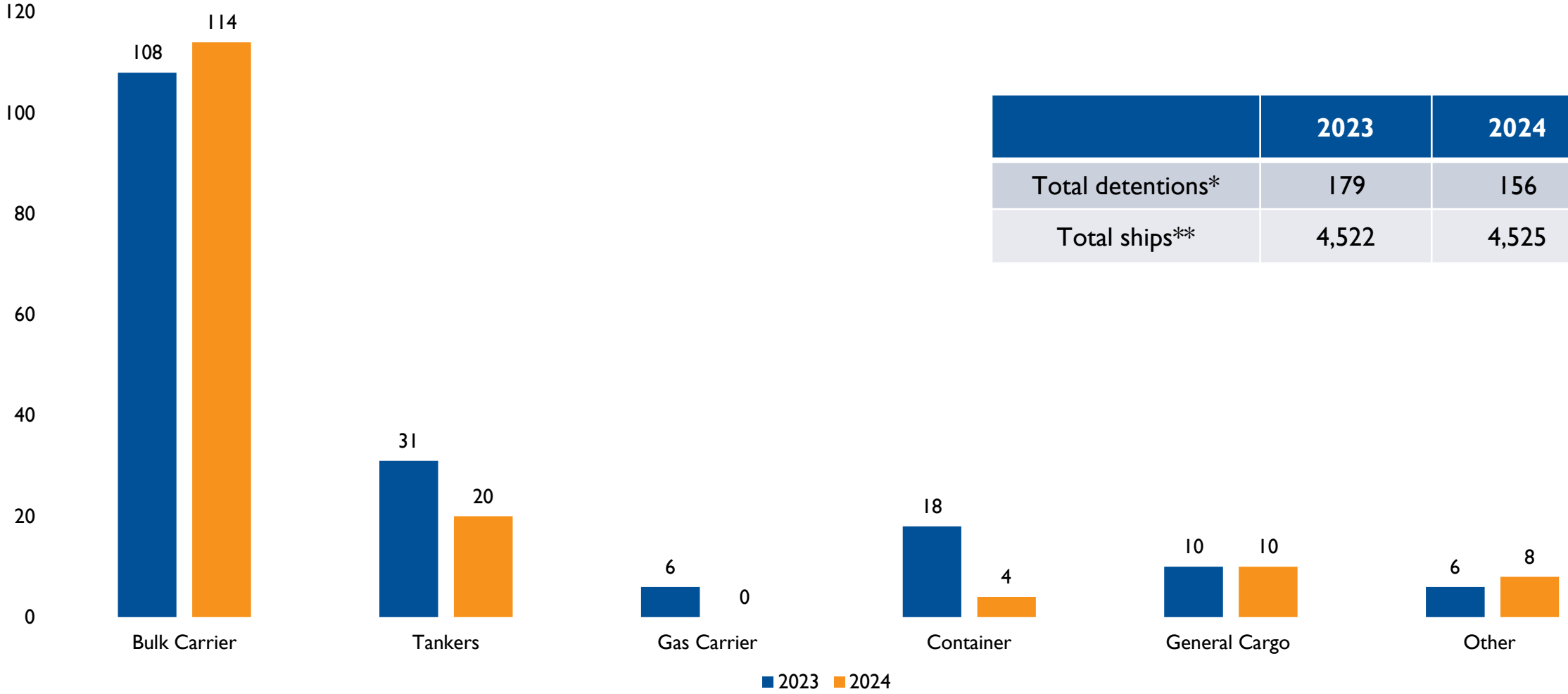
# PORT STATE CONTROL (PSC) DETENTIONS PER MEMORANDUM OF UNDERSTANDING (MoU) 2023–2024




| | 2023 | 2024 |
|---|---|---|
| Total detentions | 180 | 154 |
| Total ships* | 4,522 | 4,525 |

**Excludes mobile offshore units (MOUs) and yachts*

# PSC DETENTIONS PER TYPE 2023–2024




| | 2023 | 2024 |
|---|---|---|
| Total detentions* | 179 | 156 |
| Total ships** | 4,522 | 4,525 |

*Total Appeals Achieved: 2023: 5; 2024: 4*

***Excluding MOUs and yachts*

# Index with category (Tokyo MOU code)

# NAVIGATIONAL LIGHTS

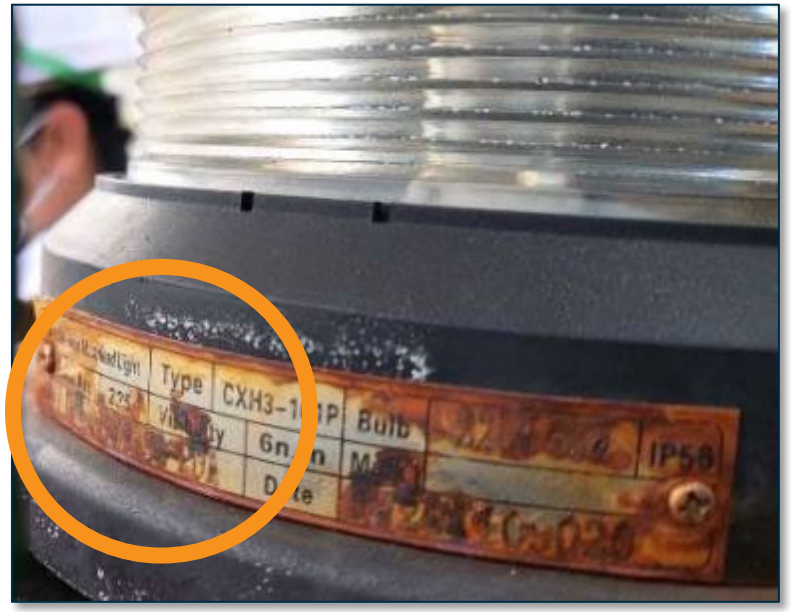
Starboard side light is mounted in the opposite way

- Are inboard screens painted with a matte black coating (non-glossy)?
- Most common deficiencies are related to the wrong installation

# NAVIGATIONAL LIGHTS (continued)

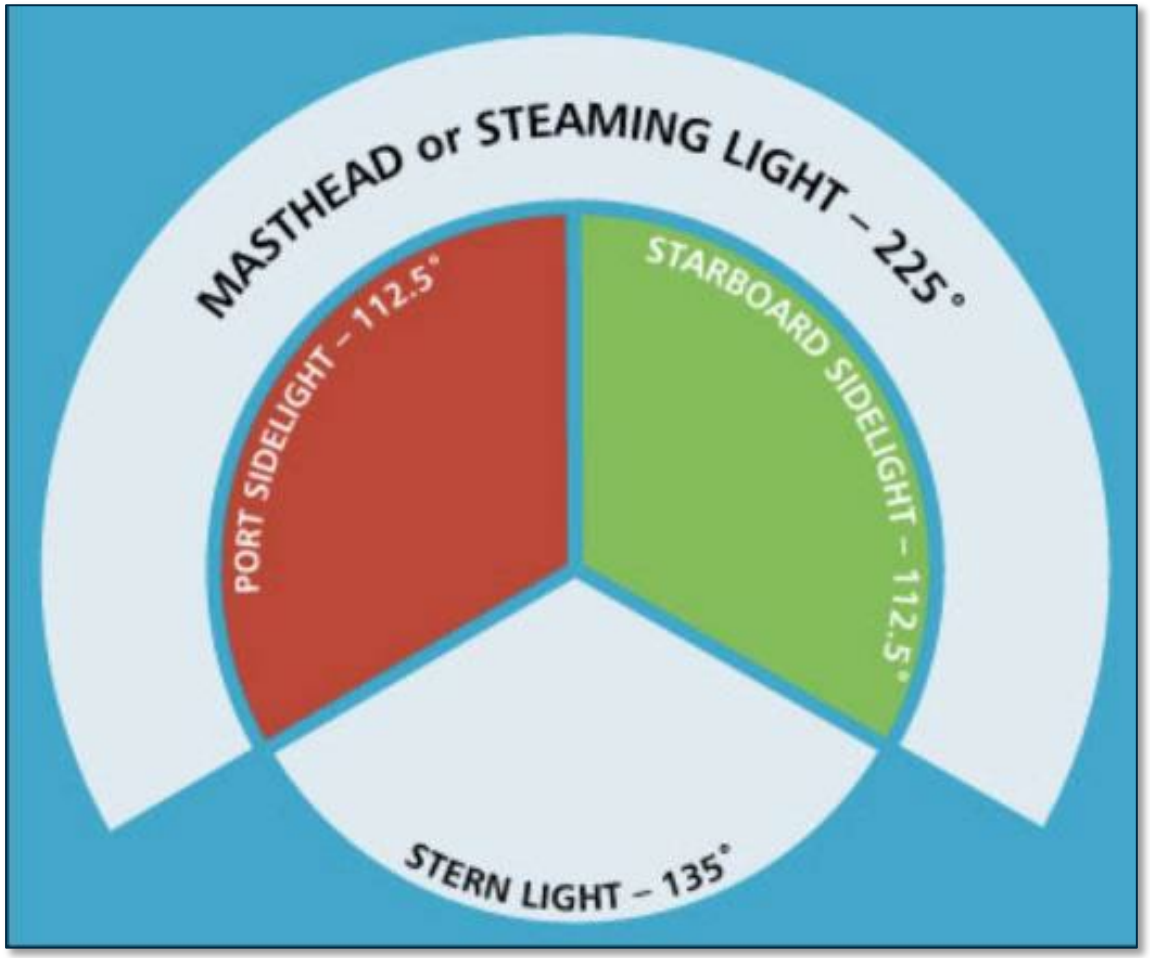
- Both sidelights are secured using duct tape
- Port sidelight installed without sector arc plate

# NAVIGATIONAL LIGHTS (continued)




- Masthead light installed as a stern light giving a 225° arc of visibility instead of 135°

# NAVIGATIONAL LIGHTS (continued)




- A reference of how arcs of visibility of the navigational lights indicate the vessel's aspect

# NAVIGATIONAL LIGHTS (continued)

- Starboard side navigation light, newbuild vessel

# NAVIGATIONAL LIGHTS (continued)

Stern light, before (10-year-old vessel)

Stern light, after

# LIFEBOAT

Rudder support is thinned down

# LIFEBOAT (continued)

Lifeboat winch drums corroded

# LIFEBOAT (continued)

Defective / seized limit switches

# LIFEBOAT (continued)

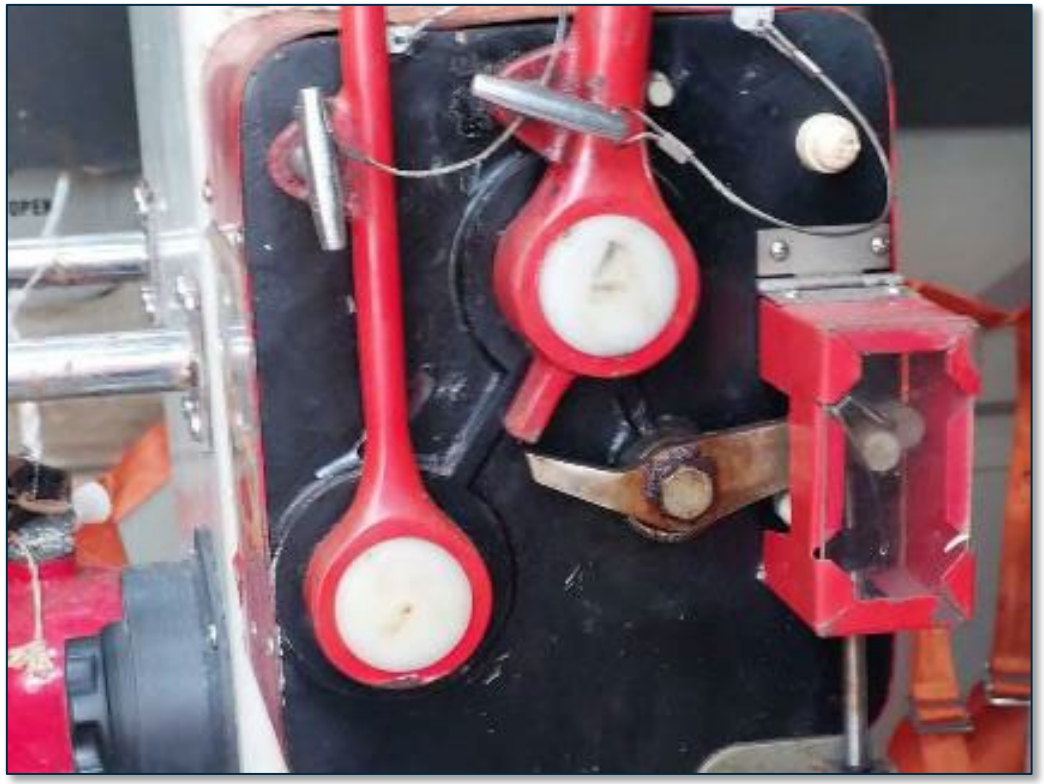


Defective tachometer

# LIFEBOAT (continued)

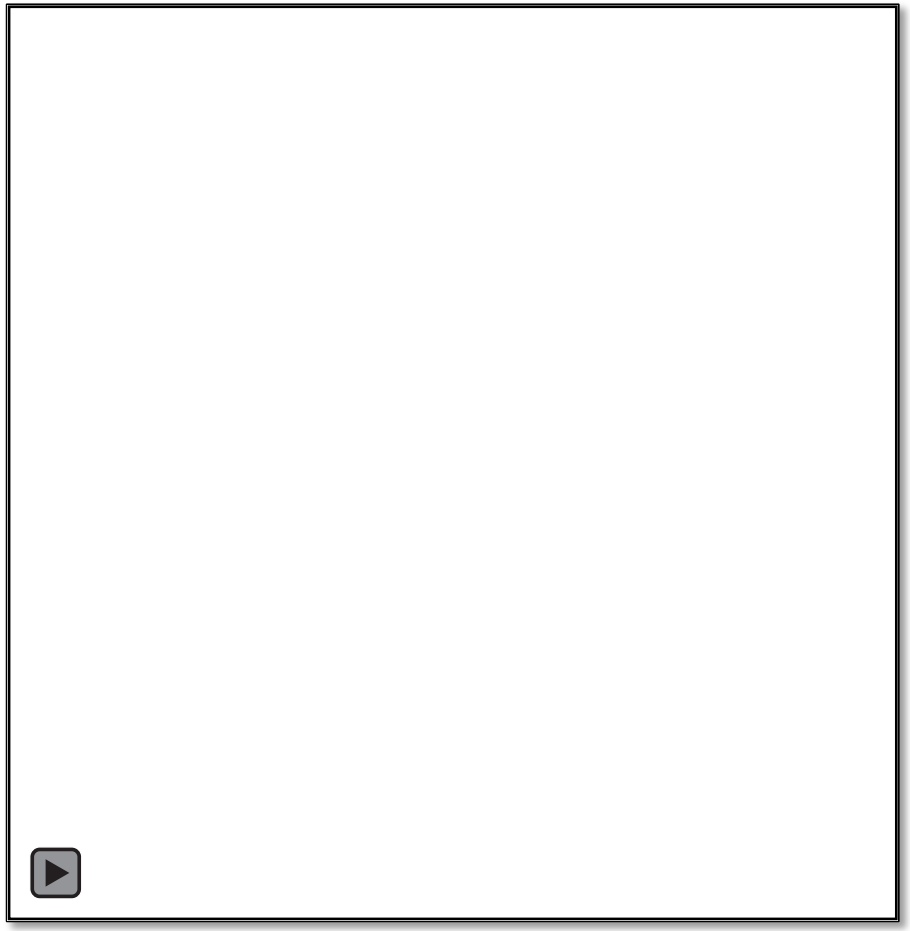

Lifeboat hooks painted covering lock indicators

# LIFEBOAT (continued)

Release handles not properly reset and left in an open / unlocked position

# LIFEBOAT (continued)



Test of release hook during simulated launching (mock release)

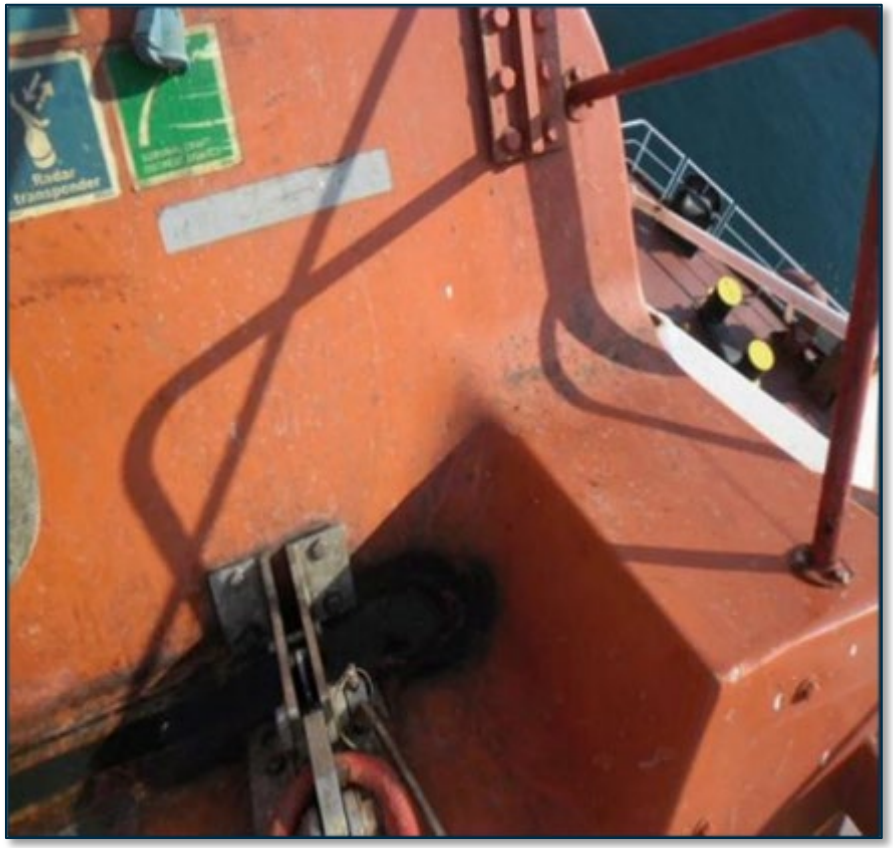
# LIFEBOAT (continued)

- Lifeboat glass / windows obscured or opaque.
- International Life-Saving Appliance (LSA) Code Chapter IV, Regulation 4.4.7.12.
- Every lifeboat shall be so arranged that an adequate view forward, aft, and to both sides is provided from the control and steering position for safe launching and maneuvering.

# LIFEBOAT (continued)

Free fall (FF) lifeboat front glass is obscured or opaque

# LIFEBOAT (continued)



FF lifeboat cracks (internal)

# LIFEBOAT (continued)



# RESCUE BOAT

# RESCUE BOAT (continued)

- Let the outboard motor run for five minutes during the test.
- Cooling water circulation is to be observed while the propeller is immersed in water.
- Davit is to be tested using emergency power.
- Common deficiencies are related to limit switches, cooling water, davit, and outboard motor failure.

# RESCUE BOAT (continued)


Outboard motor cooling system not functioning

# RESCUE BOAT (continued)


- Limit switches were found out of order during the swinging test of davit

# RESCUE BOAT (continued)


Rescue boat limit switch

# LIFE RAFT

- Life raft's hydrostatic release units (HRUs) / painters' wrong connection and/or extra securing ropes

# ENGINE ROOM FIRE DOORS

- Are they self-closing? Is door closure functional (if fitted)?
- Drilled / holed / repaired?
- Door handle latch in good order?
- Door lock space – vacant, lock fitted, or a cavity stuffed with materials?

# ENGINE ROOM FIRE DOORS (continued)


# ENGINE ROOM FIRE DOORS (continued)

# ENGINE ROOM FIRE DOORS (continued)

Class A door secured open

# EMERGENCY ESCAPE

- Lights working?
- Clearly marked?

# EMERGENCY ESCAPE (continued)

Escape trunk insulation missing

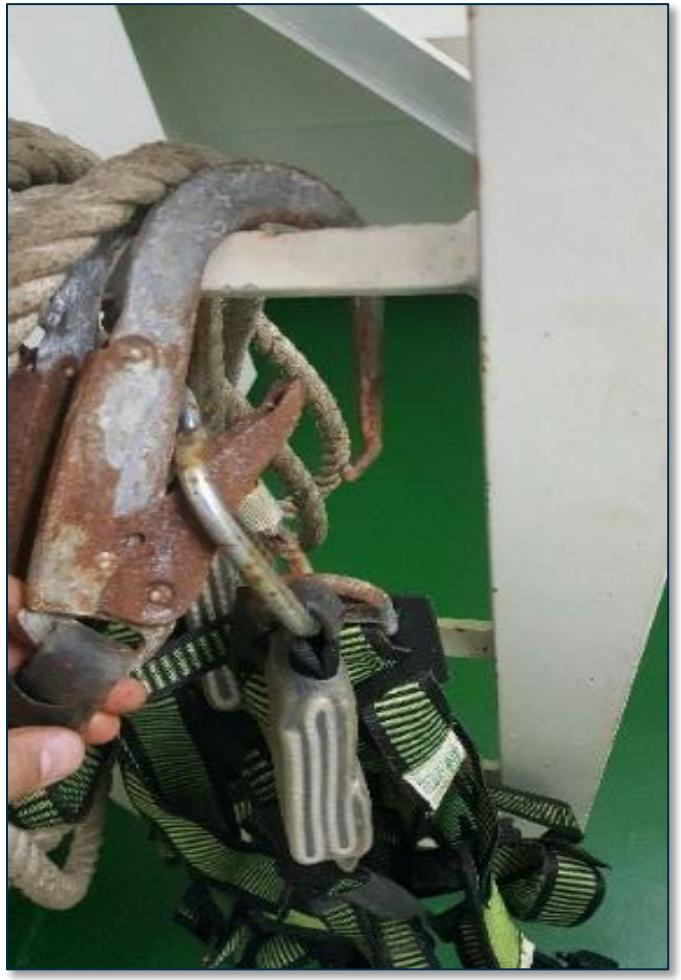
# EMERGENCY ESCAPE (continued)


Signs leading?

# EMERGENCY ESCAPE (continued)


Condition of rescue harness / rope / pulley

# EMERGENCY ESCAPE (continued)



# EMERGENCY FIRE PUMP (EFP)

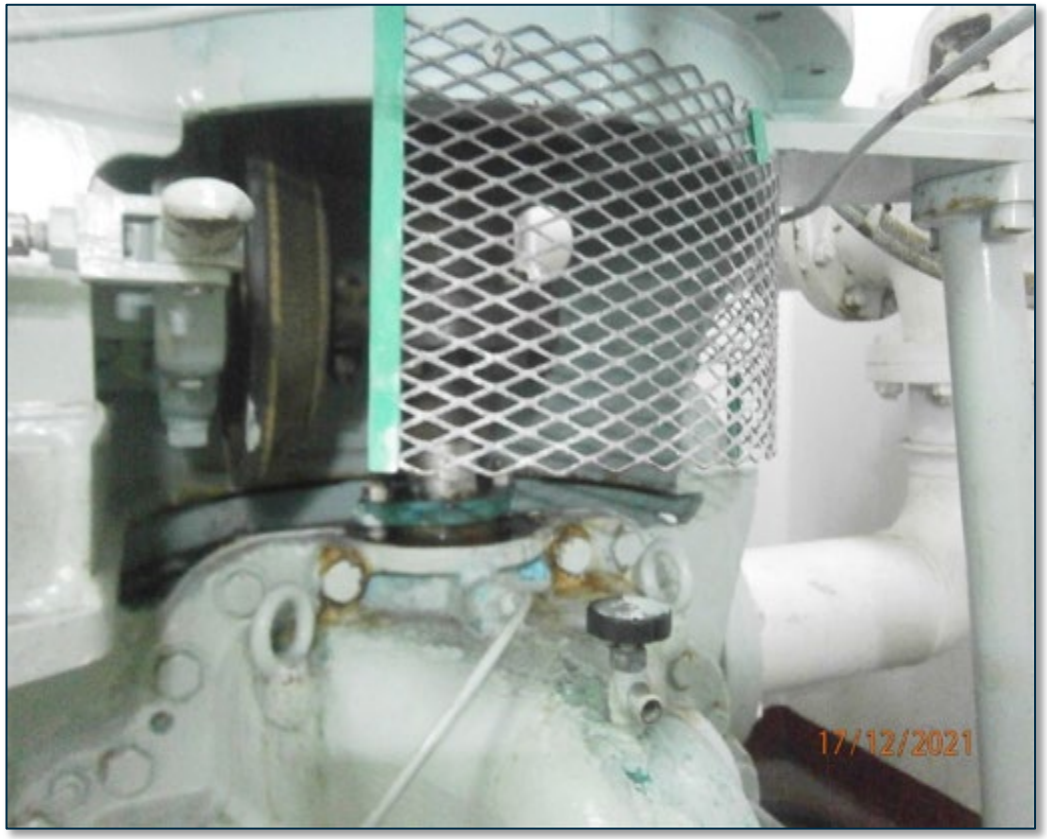
- Remote start possible, if yes start from the bridge.
- Any gauges fitted on bridge wing / remote readouts to verify the pressure?

# EFP (continued)



EFP not developing pressure and priming device non-operational

# EFP (continued)





Compound gauge reading – vacuum, zero, or positive

# EFP (continued)


# EFP (continued)

- Any leakages / water deposited in the emergency fire pump space?
- Priming device functioning correctly?
- Require manual priming by closing any valves?
- The above will provide a clear indication regarding the health of the priming system.
- More important especially when the ship is under light conditions.

# EFP (continued)

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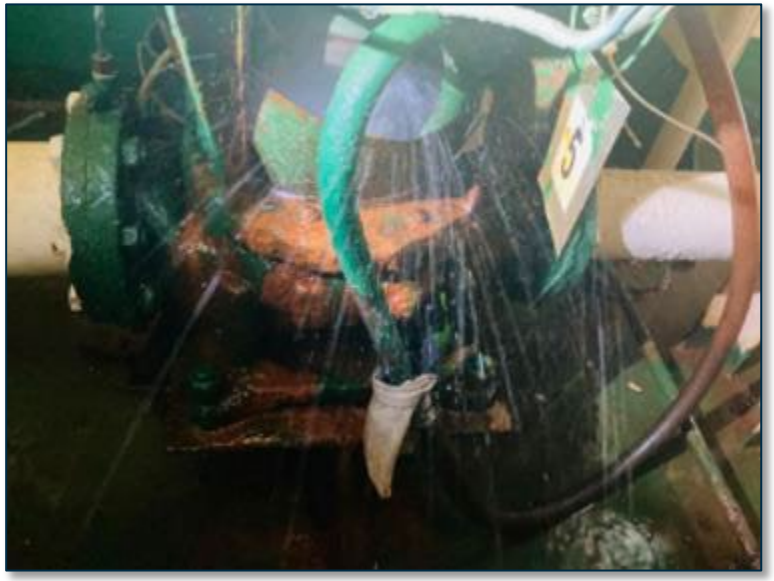


Leaking EFP gland packing / mechanical seal

# PAINT LOCKER SPRINKLERS


Sprinklers are choked

# BALLAST WATER TANK (BWT) VENT HEADS

- Need to be opened (top and side covers) to see conditions inside.
- No missing bolts and nuts on covers.
- No damages to the float discs / balls.
- Seals intact, no corrosion or misplaced floats / spindles.
- Are BWT vent heads opened regularly?

# BWT VENT HEADS (continued)

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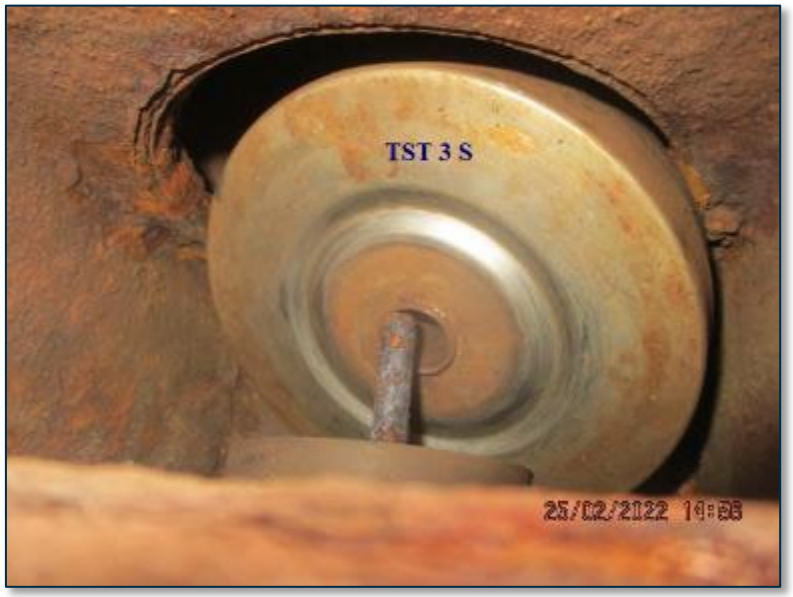


# BWT VENT HEADS (continued)

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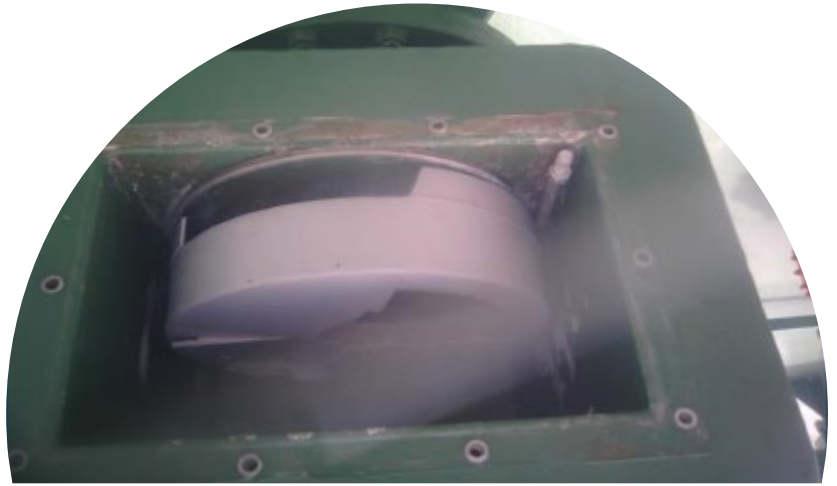
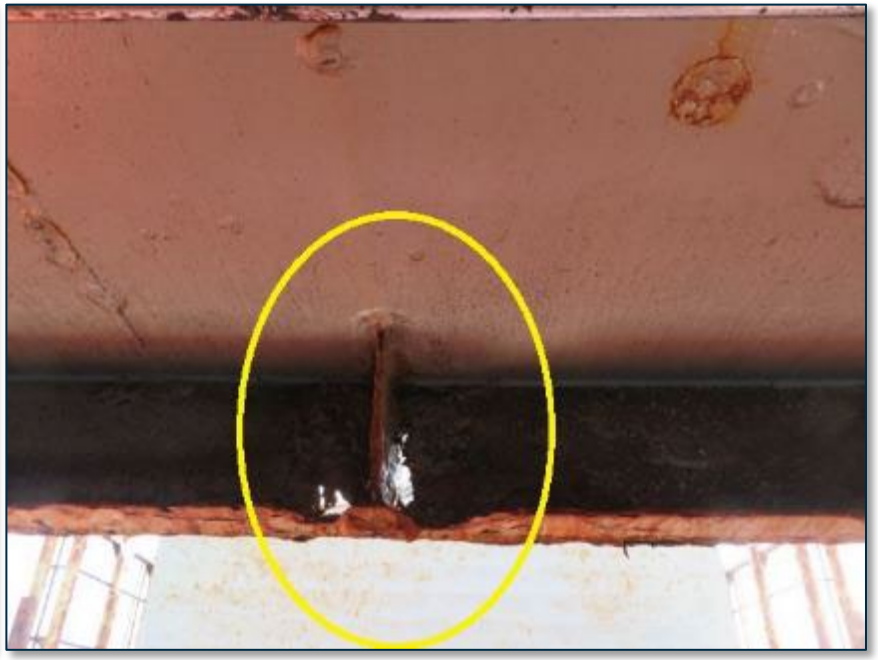


# HATCH COVERS

- In general, no significant wastages on hatch cover components?
- Must be free from hydraulic leaks.
- Watertight? No foam (expanded polystyrene) is used to keep the water integrity of holds.
- Properly locked when in the open position?
- Securing cleats complete and in good condition?
- Natural vent closures well maintained?

# HATCH COVERS (continued)



Wasted hatch cover wheel and panels

# HATCH COVERS (continued)

Seized / damaged securing cleats

# HATCH COVERS (continued)



Hatch cover natural vents in poor condition

# HATCH COVERS (continued)

- Hatch covers are not secured while in the open position.
- Locking pins are stuck / seized.

# HATCH COVERS (continued)

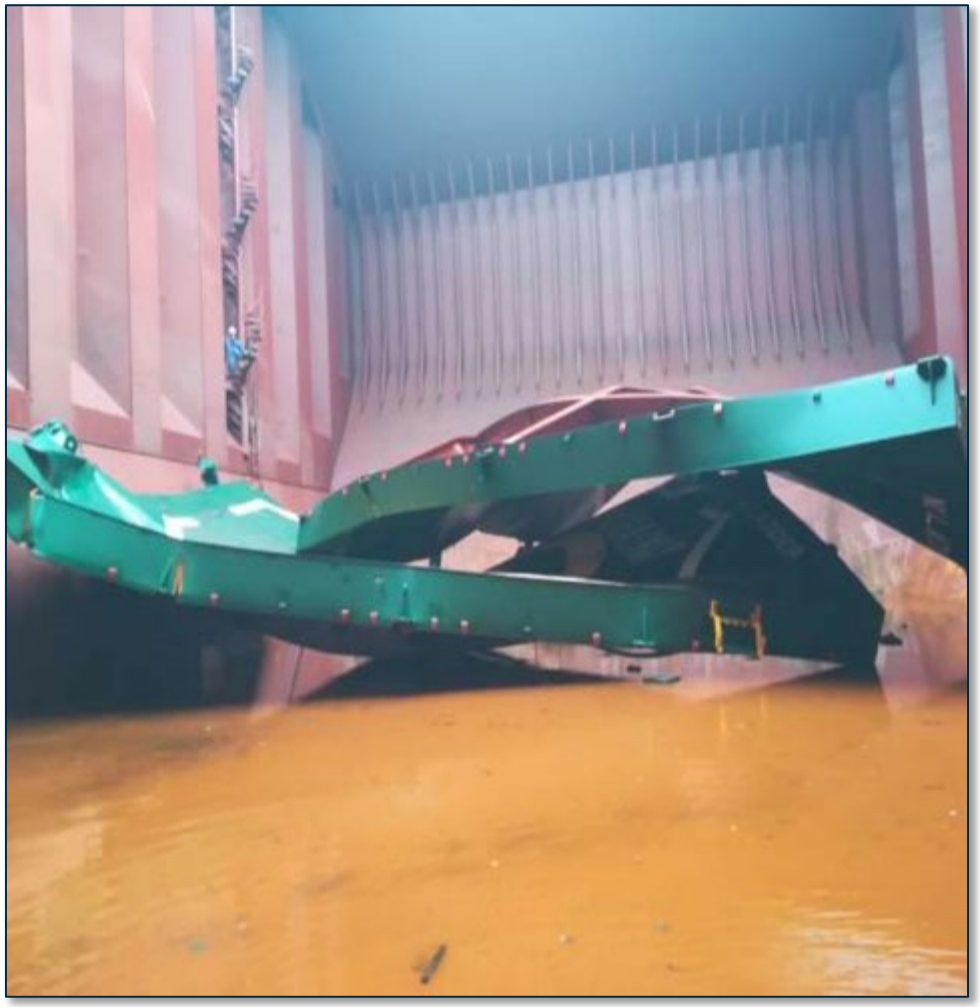

- Use of expanded polystyrene foam on hatch covers hold access and vents
- The cargo hold is not watertight

# HATCH COVERS (continued)

Hydraulic leaks

**Second most common deficiency related to hatch covers from January to June 2022.**

# CARGO HATCH



# MOORING – DECK MACHINERIES

Most common deficiencies are related to:

- Roller fairleads
- Hydraulic leaks
- Brake linings
- Anchor securing
- Mooring winches

# MOORING – DECK MACHINERIES (continued)

Roller fairleads seized / damaged

# MOORING – DECK MACHINERIES (continued)

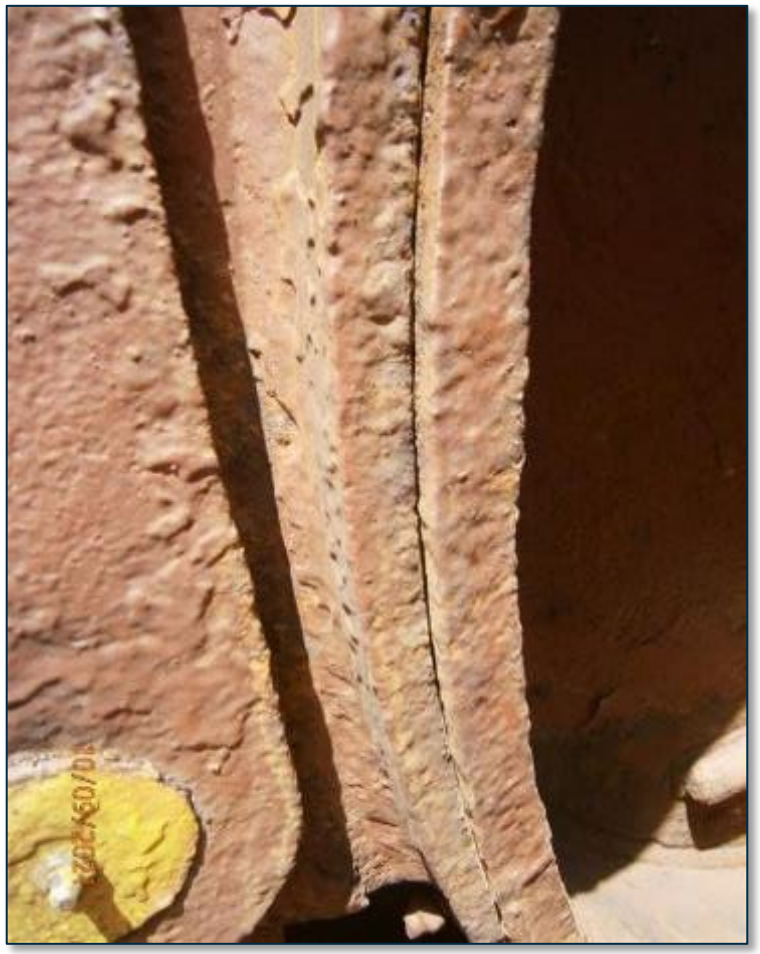


Hydraulic leaks from winches and windlasses

# MOORING – DECK MACHINERIES (continued)

- Any leakages?
- Condition of brake band packing.
- Braker rendering markings?

# MOORING – DECK MACHINERIES (continued)

# MOORING – DECK MACHINERIES (continued)

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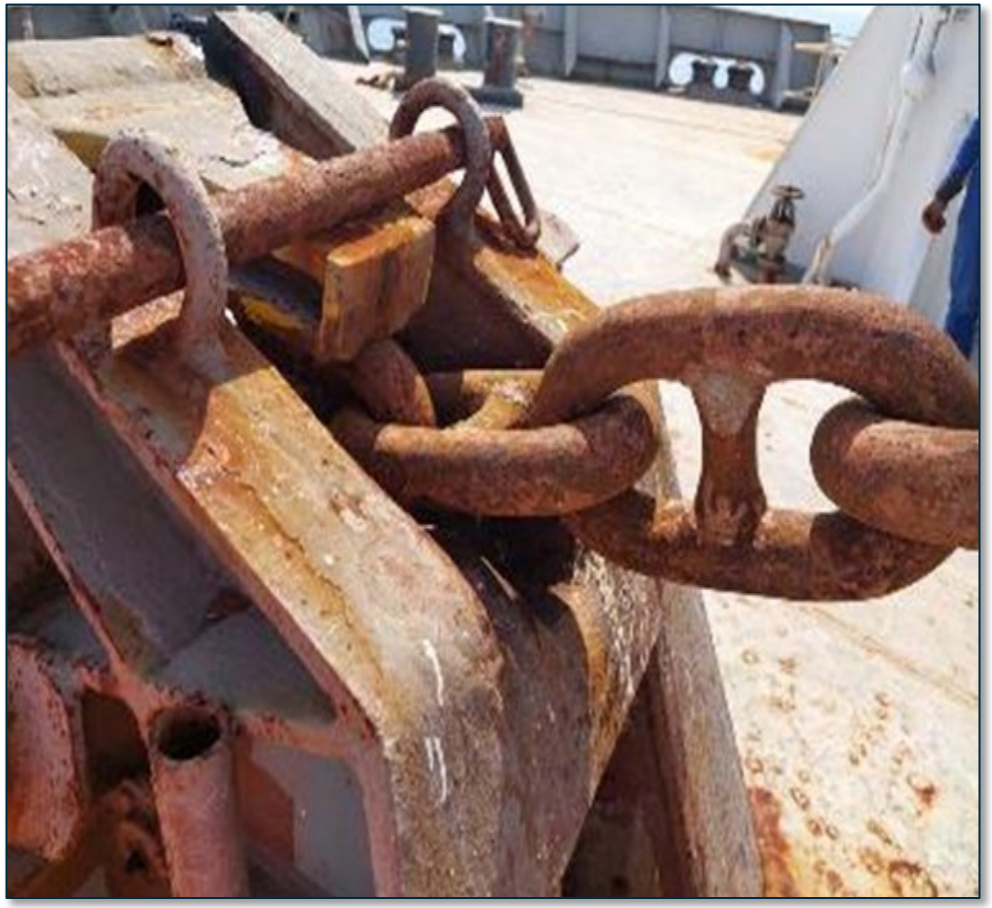


Chain not resting on stopper at anchor home position

# MOORING – DECK MACHINERIES (continued)

# PILOT LADDERS – MARITIME SAFETY COMMITTEE (MSC).1/CIRCULAR (Circ).1428

- *Pilot Transfer Arrangements*, MSC.1/Circ.1428 includes the revised poster under the cover of MSC/Circ.568/Revision (Rev).1.

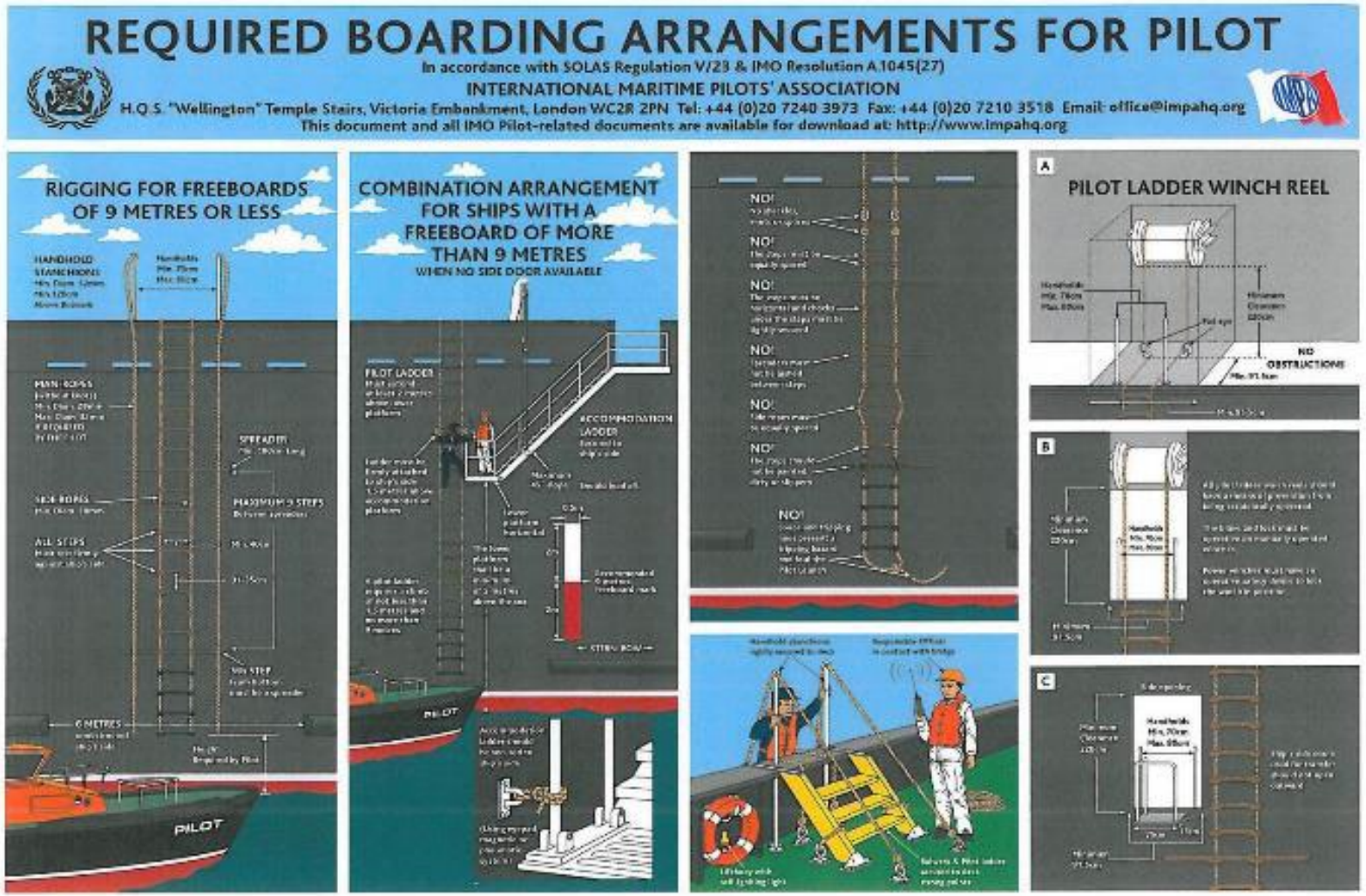
- Revisions in the previous poster incorporate the most significant changes adopted by the *Amendments to the International Convention for the Safety of Life at Sea, 1974, as amended,* MSC.308(88).

- Member States are requested to bring the revised poster to the attention of their pilots, seafarers, shipowners, ship operators, and others concerned with pilot boarding arrangements.

# PILOT LADDERS – MSC.1/Circ.1428 (continued)



ANNEX



# PILOT LADDERS – MSC.1/Circ.1495/Rev.1

**Interpretation**

Subparagraphs 1 and 2 of SOLAS regulation V/23.3.3. address two different and distinct arrangements – the former when only a pilot ladder is provided; the latter when a combined arrangement of "an accommodation ladder used in conjunction with the pilot ladder" is provided.

1 SOLAS regulation V/23.3.3.1 prescribes an operational instruction that limits the climb to not more than 9 m on a single ladder regardless of the trim or list of the ship.

2 SOLAS regulation V/23.3.3.2 and section 3 of resolution A.1045(27) applies to a combined arrangement of "an accommodation ladder used in conjunction with the pilot ladder" for "Safe and convenient access to, and egress from, the ship" for which a 15° list requirement does not apply.

3 Member States are invited to use the unified interpretation provided in paragraphs 1 and 2 above as guidance when applying the relevant provisions of SOLAS regulation V/23.3.3 for pilot transfer equipment and arrangements and to bring them to the attention of all parties concerned.

# PILOT LADDERS – INTERNATIONAL MARITIME ORGANIZATION (IMO) RESOLUTION A.1045(27)



Annex

**RECOMMENDATION ON PILOT TRANSFER ARRANGEMENTS**

**1 GENERAL**

Ship designers are encouraged to consider all aspects of pilot transfer arrangements at an early stage in design. Equipment designers and manufacturers are similarly encouraged, particularly with respect to the provisions of paragraphs 2.1.2, 3.1 and 3.3.

**2 PILOT LADDERS**

A pilot ladder should be certified by the manufacturer as complying with this section or with the requirements of an international standard acceptable to the Organization.[1]

Where was the International Organization for Standardization (ISO) 799:2004 mentioned in this resolution?

# PILOT LADDERS – IMO RESOLUTION A.1045(27) (continued)

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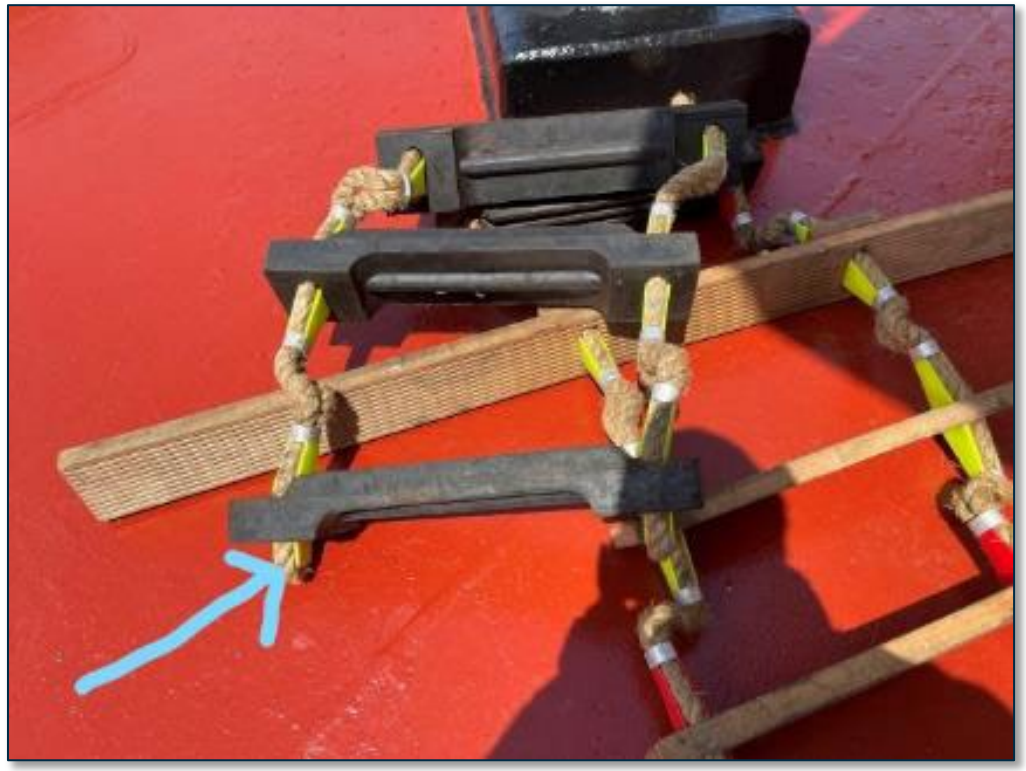
1 Refer to the recommendations by the International Organization for Standardization, in particular publication ISO 799:2004, *Ships and marine technology – Pilot ladders*.

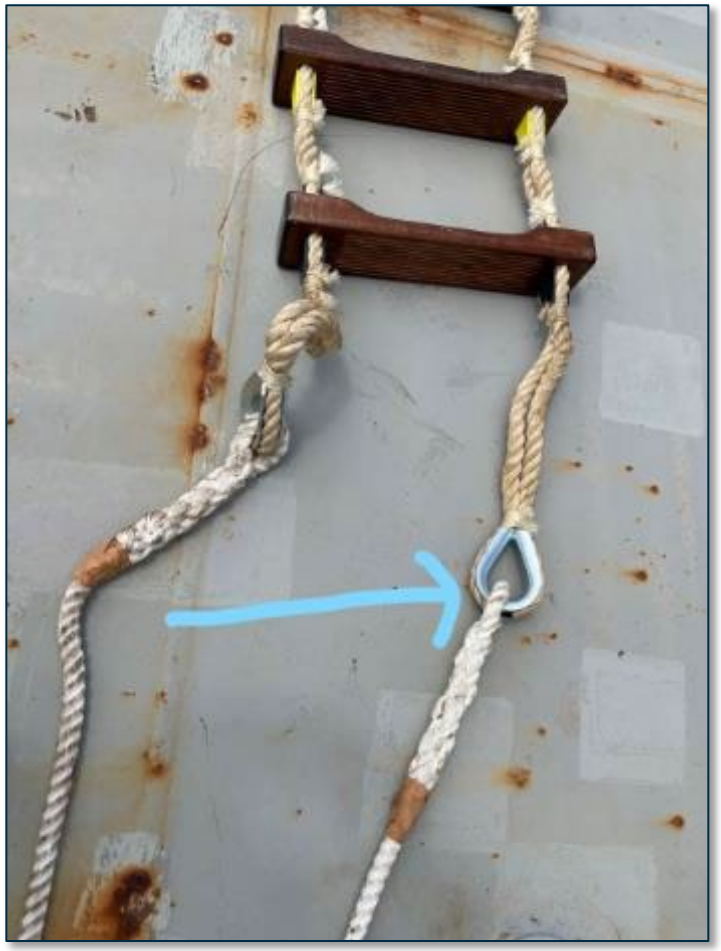
# PILOT LADDERS

- Side rope's mid-point half length is not located on thimbles as specified in IMO Resolution A.1045(27) as recommended by the ISO 799:2004
- Updates stated in ISO 799:2019 say otherwise BUT currently it is not yet incorporated by IMO

# PILOT LADDERS (continued)



# PILOT LADDERS (continued)



Sample of pilot ladders which have their side ropes' mid-point half length around thimbles

# PILOT LADDERS (continued)

If an ISO 799:2004 compliant pilot ladder's topmost step looks like this:

Then the side ropes below the bottom rubber steps must look like this:

# PILOT LADDERS (continued)

Pilot ladders must also have a name tag plate under one of its steps

# PILOT LADDERS (continued)

PTR HOLLAND® GROUP

EUROPEAN COMMUNITY DECLARATION OF CONFORMITY

We hereby declare that the following specified equipment complies with the

Marine Equipment Directive 2014/90/EU

| | |
|---|---|
| Equipment description | : Pilot ladder (MED / 4.4g) |
| Type | : Goliath |
| **Ladder/Serial No.** | : 3156773 |
| Ladder Length (mtr) | : 3.30mtr |
| Date of manufacture | : 07/03/2018 |
| Manufacturer | : PTR Holland Group |
| Manufacturer address | : Dintelweg 107, 3198 LB, Europoort Rotterdam, The Netherlands. |

**Equipment intended for:**
Purchaser :
**Vessel Name** :
Purchase Order No. :

This equipment has been tested to verify compliance with the following Regulations and Testing Standards:

| | |
|---|---|
| - Type approval requirements | : SOLAS 74 Reg. VI/23 & SOLAS 74 Reg. X/3 |
| - Carriage and performance requirements | : SOLAS 74 Reg. VI/23, X/3<br>IMO Res. A.1045(27)<br>IMO Res. MSC/Circ. 1428 |
| - Testing Standards | : IMO Res. A.1045(27) & ISO 799:2004. |

**EC Type-Examination Certificate No.**
(for module B) : MEDB00002T9
Issued By : DNV GL / 0575

**Quality System Certificate No.**
For module D : MEDD00000154
Issued By : DNV GL / 0575

Technical documentation for this equipment is retained at the following address : info@ptrholland.com

**Marking and stamping / Marguage:** 0575 / 2018

DNV·GL

SIGNED ON BEHALF OF THE MANUFACTURER

Name :
Position :
Place & date : Rotterdam, 07/03/2018

Register your rope ladder and receive a free 30 months mandatory load test
www.ptrholland.com/load-test-registration

Items on the name tag plate can be referenced with a corresponding certificate

# PILOT LADDERS (continued)

Pilot ladder rubber steps damaged

# PILOT LADDERS (continued)

Pilot ladder chocks loosened / missing
(It does not ensure that the steps are prevented from moving)

# PILOT LADDERS (continued)

Pilot ladder wastages and cracks

# PILOT LADDERS (continued)

- D-shackles used to secure the pilot ladder on the deck.
- Damaging to the chocks and steps of the ladder.
- This will put all weights in the ladder steps and chocks which they are not designed to withstand.

# PILOT LADDERS (continued)

# PILOT LADDERS (continued)

- The rolling hitch knot used on a well-rigged pilot ladder arrangement
- The pilot ladder should be secured to the ship's deck, on designated strong points, using the ladder's side ropes

# EMBARKATION LADDERS

# EMBARKATION LADDERS (continued)

# WATCHKEEPING

- Engine room independent watches by engine ratings have been a common deficiency.
- It is either that the management purposely assigns them single duties per the shipboard working arrangement, or the shipboard working arrangement says they have engine watch together with an engineer, but their rest hour records say otherwise.
- It is best to compare the two documents.
- *Principles of Watchkeeping*, Marine Notice (MN) 7-038-4.

# DRILLS

- Lifeboat and rescue boat overdue launching drills are the most common deficiency related to drills.
- Next are related to general crew response and equipment.
- Then next are unsatisfactory lifeboat and fire drills.

# DRILLS (continued)

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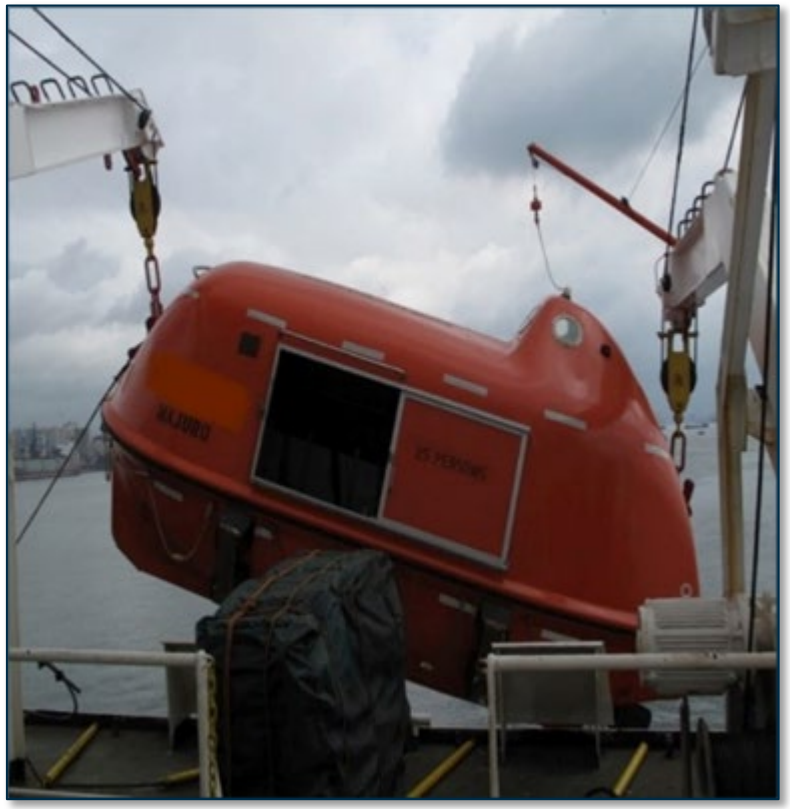


Lifeboat drill outcome

# DRILLS (continued)

Simulated launching procedures for FF lifeboats
(see *Simulated Launching Procedures for Free-Fall Lifeboats* (MN 7-041-4))

# EMERGENCY PREPAREDNESS

The top three deficiencies related to emergency preparedness are:

1. Issues with public address / talk-back system.
2. Inoperative general alarm system.
3. Busted emergency lights on deck.

These three are to be tested during drills. Emergency lights can be left turned on until the switchboards inside the Engine Control Room (ECR) have been checked for low insulation.

# EMERGENCY GENERATOR

- Any obvious leaks – oil / water?
- Air cooler condition / leakages?
- Quick Closing Valve (QCV) functional?
- Primary / secondary means of starting?
- Tank level sufficient / marked / gauge glass?
- Any issues with the gauges / panel / alarms when emergency generator operating?
- On load simulation working using test modes?
- Requiring manual intervention for bringing on load?

# EMERGENCY GENERATOR (continued)


Emergency generator batteries explosion during testing

# SEWAGE TREATMENT PLAN


Operational? First impression by looking at the lights / pressure gauges

# SEWAGE TREATMENT PLAN (continued)


# SEWAGE TREATMENT PLAN (continued)

# SEWAGE TREATMENT PLAN (continued)

- Any foul smell before and after opening the aeration chamber?
- Any temporary repairs?
- Internal condition, aeration quality?

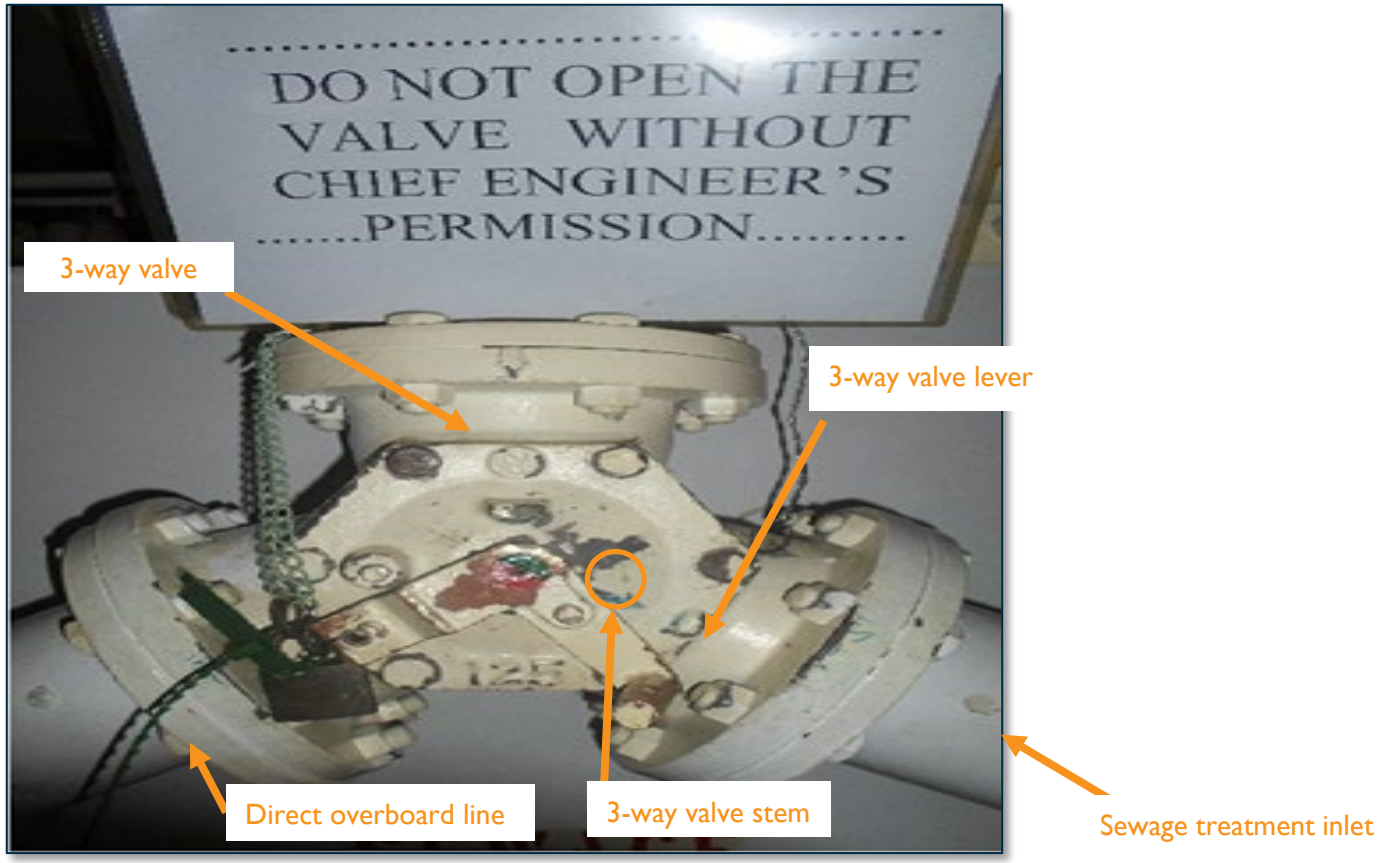
# SEWAGE TREATMENT PLAN (continued)

# SEWAGE TREATMENT PLAN (continued)




# SEWAGE TREATMENT PLAN (continued)

# SEWAGE TREATMENT PLAN (continued)



# ENGINE ROOM FAN DAMPERS

- Local / remote or both?
- Any inspection windows available?
- Condition of flaps verified?
- Pneumatic controller indicator showing closed, flaps closing as well?
- Does it require the removal of any mesh for inspection?

# ENGINE ROOM FAN DAMPERS (continued)

# ENGINE ROOM FAN DAMPERS (continued)

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# ENGINE ROOM FAN DAMPERS (continued)



# ENGINE ROOM FAN DAMPERS (continued)

# ENGINE ROOM FAN DAMPERS (continued)

# ENGINE ROOM FAN DAMPERS (continued)

- Engine room fan casing
- Emergency generator exhaust fan

# ENGINE ROOM FAN DAMPERS (continued)

Main engine vent fan wire mesh in poor condition

# ENGINE ROOM FAN DAMPERS (continued)



Visual inspection of the main engine fan

# ENGINE ROOM FAN DAMPERS (continued)

Damper (louver) before

# ENGINE ROOM FAN DAMPERS (continued)

And after repairs were made by the ship's staff within three hours

# ENGINE ROOM FAN DAMPERS (continued)

Engine louvers condition before

# ENGINE ROOM FAN DAMPERS (continued)

Fan louvers condition after

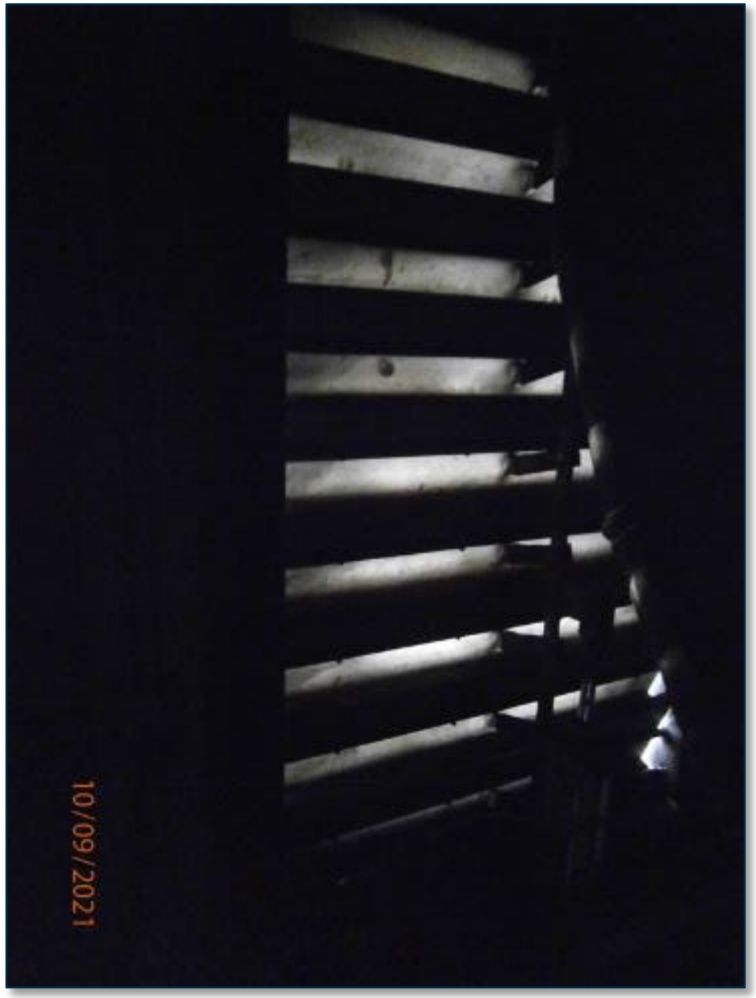
# ENGINE ROOM FAN DAMPERS (continued)


Flaps do not close fully

# FUNNEL DAMPERS

- Verified from the funnel deck?
- Local, remote, or both?
- Are all flaps closing or some are partially closed?
- Design limitations acceptable?

# FUNNEL DAMPERS (continued)



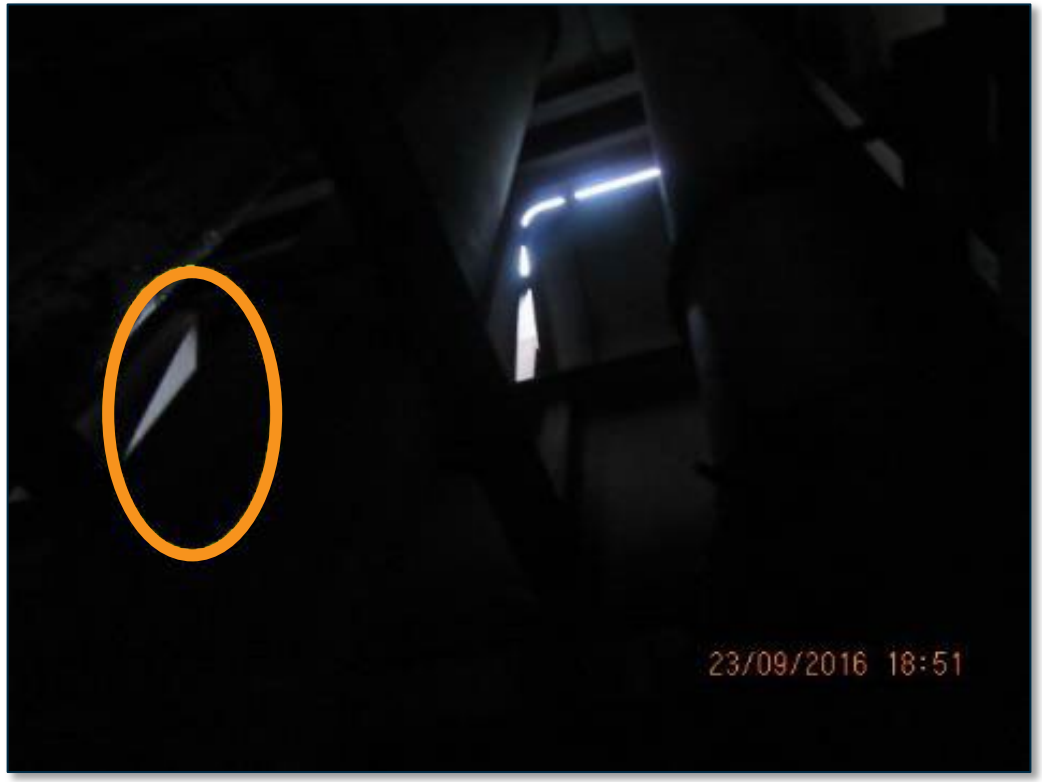

# FUNNEL DAMPERS (continued)

# FUNNEL DAMPERS (continued)




Large gap on sides or between the flaps as well?

# FUNNEL DAMPERS (continued)

# VARIOUS DECK VENTILATORS

- Functional?
- Butterfly nuts free?
- Rubber gaskets condition.
- Any wastage / corrosion?
- Require removal of any mesh?

# VARIOUS DECK VENTILATORS (continued)

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# VARIOUS DECK VENTILATORS (continued)


# VARIOUS DECK VENTILATORS (continued)

# VARIOUS DECK VENTILATORS (continued)


Wheelhouse natural vent

# OILY WATER SEPARATOR (OWS)

- Visually inspected for any leakages, soft patches, and suspicious piping?
- Running test carried out from bilge tank?
- Condition of OWS bilge pump or bilge pump.
- 15 pumps per minute (ppm) alarm monitor reading steady.
- Sampling line valve open?
- Water coming out from the 15 ppm monitor vent line?
- Is sampling done with fresh water or with sample water during the test?
- Oil content light ON?
- Three-way valve / change-over valves operational or pump stopping?
- Any indicator fitted to the three-way valve?
- Is the three-way valve sealing?
- Any hopper or sight glass fitted to verify water stopping?

# OWS (continued)


# OWS (continued)



# OWS (continued)



# OWS (continued)


# OWS (continued)



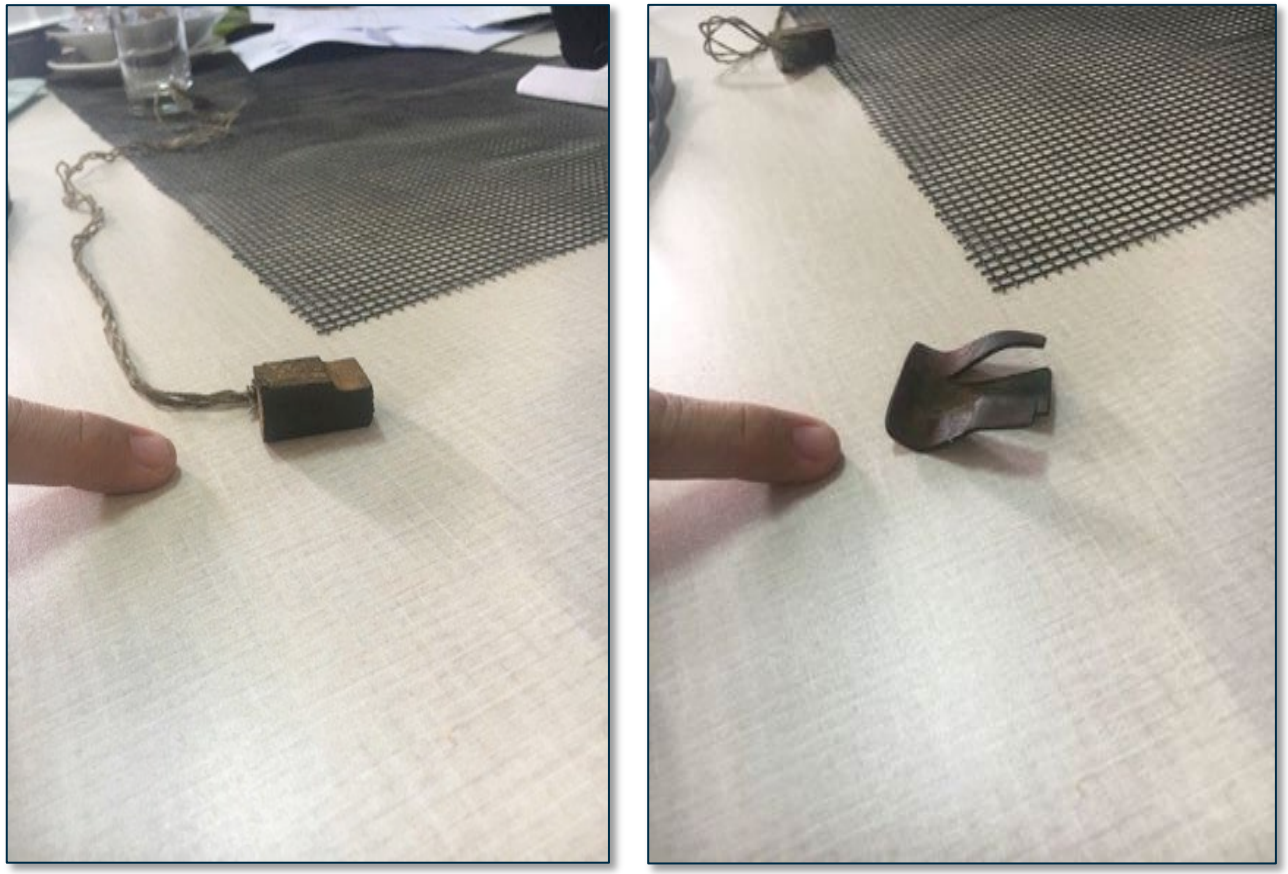
# OWS (continued)

# QCVs

- Visual inspection – looks maintained or neglected?
- Any leakages from the seal or valve body?
- Any blockages, wedges, or gagging noted?
- Any physical damage to the operating mechanism especially on the auxiliary engine platform?
- On testing is the piston moving? Is the valve closing or stuck?

# QCVs (continued)


# QCVs (continued)



Materials used to block the QCV

# QCVs (continued)


QCV blocked open

QCV tied open

# QCVs (continued)

# OIL MIST DETECTOR

- Any alarm on the panel?
- Any sensor locally showing under the alarm?
- Alarm off scan / active on the ECR alarm monitoring panel?

# OIL MIST DETECTOR (continued)

# SEA WATER (SW) PIPING AND COOLERS

- Visual inspection.
- Any funnels / hoses or catchment trays fitted?
- Any fresh paint noted on certain sections?
- How are the pipe entry / exit areas at the SW coolers?
- Any SW stains on the drip tray or from the overhead pipelines?

# SW PIPING AND COOLERS (continued)

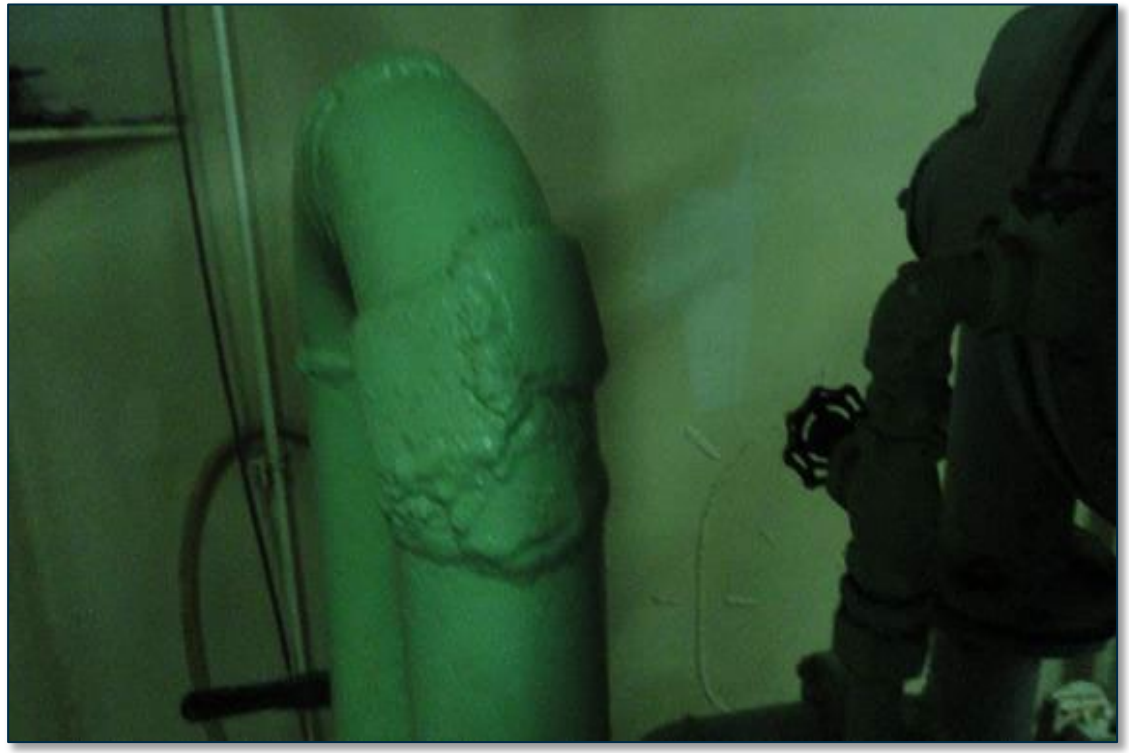

# SW PIPING AND COOLERS (continued)


# SW PIPING AND COOLERS (continued)


# SW PIPING AND COOLERS (continued)



# SW PIPING AND COOLERS (continued)



# PIPE LAGGINGS AND PURIFIER ROOM

- Visual inspection.
- Oily / clean / painted?
- Any signs of leakage / catchment containers / leaking seals / leaking filters?
- Condition of bilge?

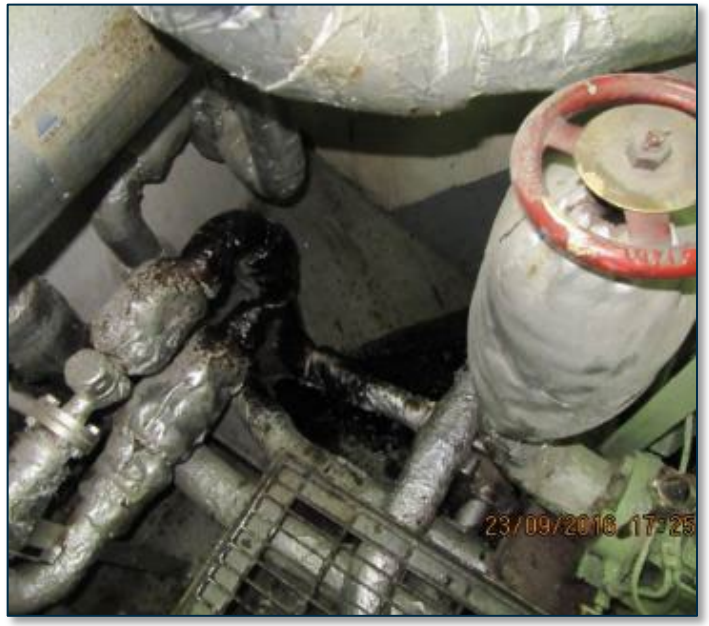
# PIPE LAGGINGS AND PURIFIER ROOM (continued)


# PIPE LAGGINGS AND PURIFIER ROOM (continued)

# PIPE LAGGINGS AND PURIFIER ROOM (continued)

# PIPE LAGGINGS AND PURIFIER ROOM (continued)


# PIPE LAGGINGS AND PURIFIER ROOM (continued)





# PIPE LAGGINGS AND PURIFIER ROOM (continued)

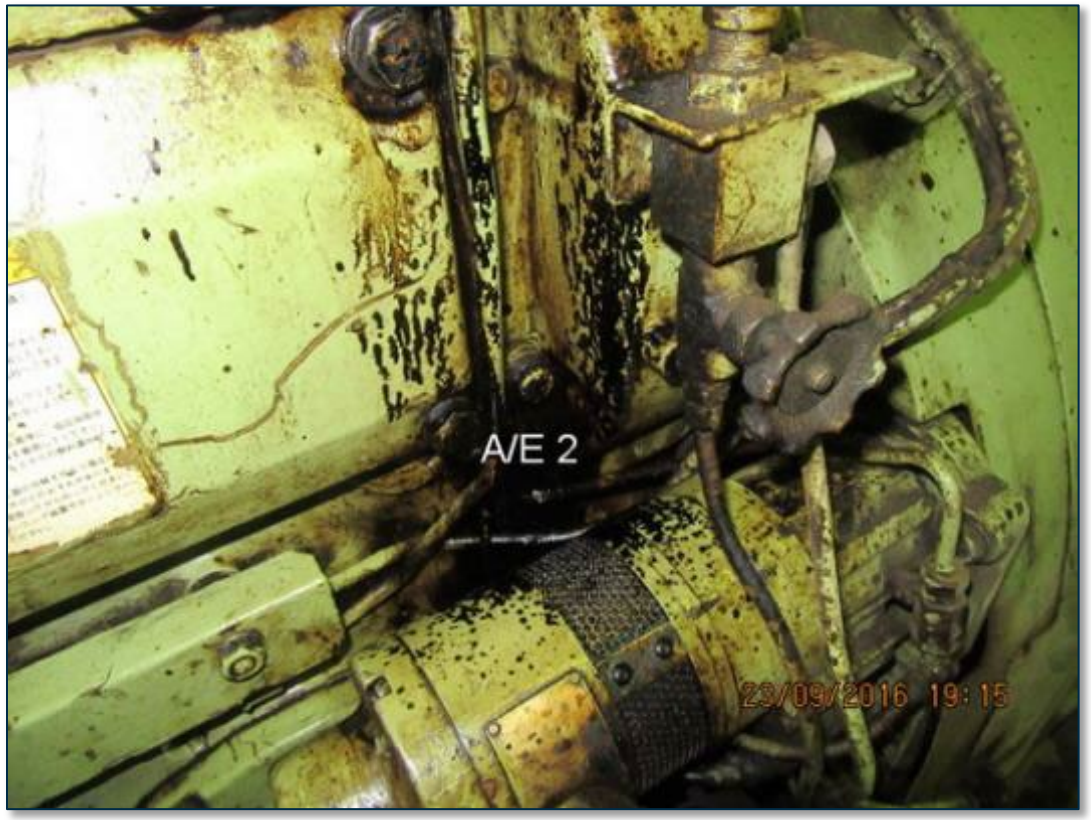





# AUXILIARY ENGINE

- Any obvious leaks?
- Check the condition of Fuel Oil (FO) piping.
- Check the condition of panel / gauges.
- Has the QCV been tested for standby generator?

# AUXILIARY ENGINE (continued)




# AUXILIARY ENGINE (continued)



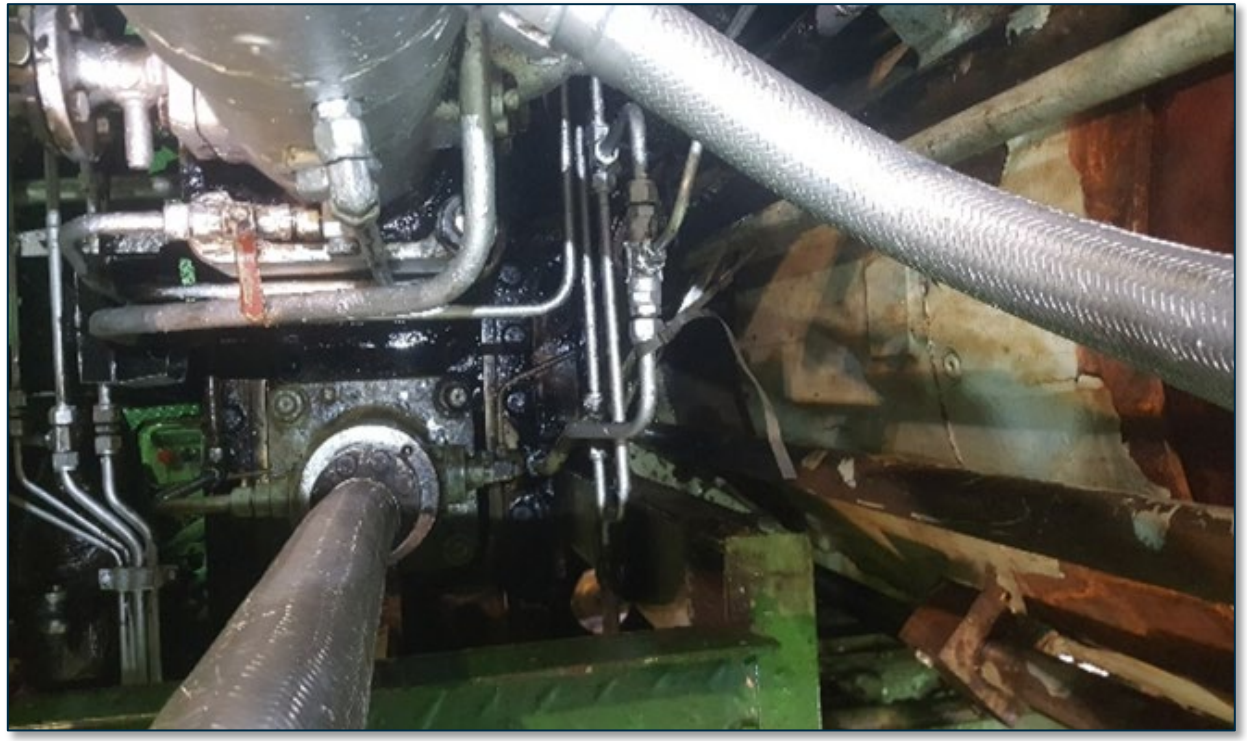
# AUXILIARY ENGINE (continued)


# MAIN ENGINE



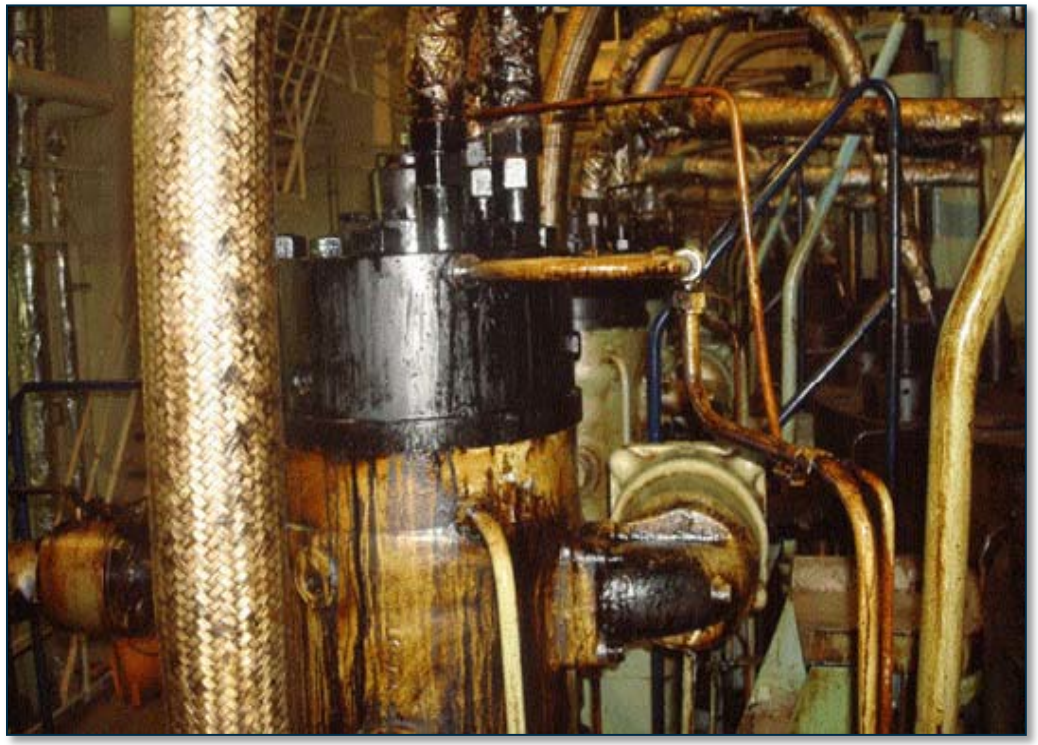
- Any obvious leaks?
- Area around the fuel pump inspected

# MAIN ENGINE (continued)



# MAIN ENGINE (continued)

# MAIN ENGINE (continued)



# FIRE ALARM SYSTEM

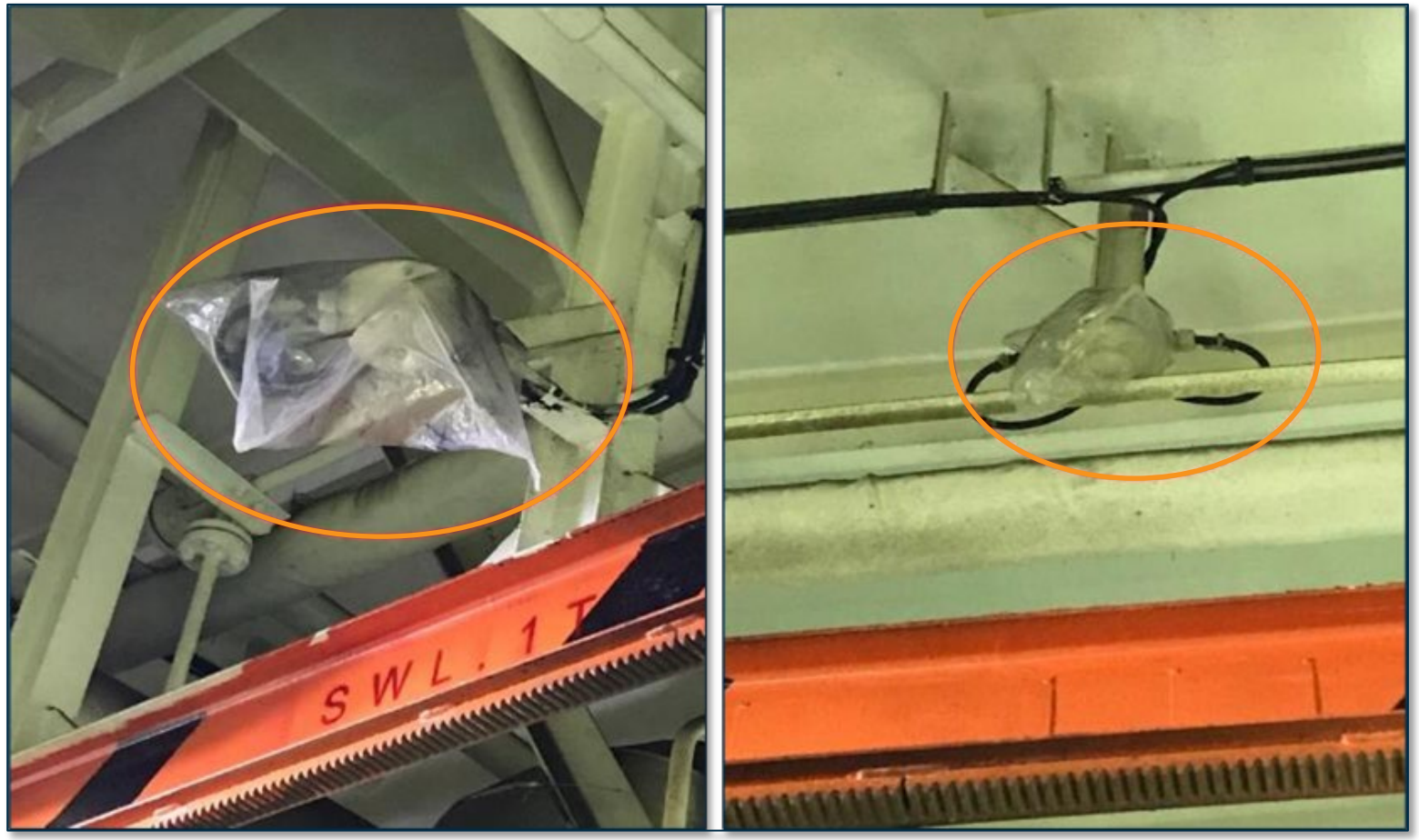
- Any active alarm on the panel?
- Any disablements?
- Any of the fire sensors covered?
- Correct approved equipment available on board for testing?

# FIRE ALARM SYSTEM (continued)


# FIRE DETECTORS


Sensors covered with tapes

# FIRE DETECTORS (continued)




Typical fire smoke detector wrapped in plastic throughout the engine room

# FIRE DETECTORS –TESTING EQUIPMENT

Heat detector inappropriate testing material

# FIRE DETECTORS – TESTING EQUIPMENT (continued)


Lighters used as tester for sensors

# FIRE DETECTORS – TESTING EQUIPMENT (continued)

# SMOKE DETECTION SYSTEM

- System on if fitted?
- Turned off due to cargo operations?
- Tested by disconnecting the pipes if required.
- Any alarms?

# SMOKE DETECTION SYSTEM (continued)


# LOCAL FIRE FIGHTING SYSTEM IN MANUAL MODE

- Local / remote / auto.
- Any section valve manually kept off?
- Tank suction valve open?
- Crew aware of the testing?

# LOCAL FIRE FIGHTING SYSTEM IN MANUAL MODE (continued)


# LOCAL FIRE FIGHTING SYSTEM IN MANUAL MODE (continued)

- Hypermist main valve (steering gear room).
- Hypermist main panel.

# LOCAL FIRE FIGHTING SYSTEM IN MANUAL MODE (continued)


# LOCAL FIRE FIGHTING SYSTEM IN MANUAL MODE (continued)

# LOCAL FIRE FIGHTING SYSTEM IN MANUAL MODE (continued)

Hypermist nozzles wrapped in plastic

# BOILER AND STEAM EQUIPMENT

- Any steam leaks?
- Any oil leaks around the oil-fired burner?
- Any damage to the boiler casing insulation?
- Any alarms on the panel?
- Boiler working in auto / manual?
- Alarms tested?

# BOILER AND STEAM EQUIPMENT (continued)


# BOILER AND STEAM EQUIPMENT (continued)

# BOILER AND STEAM EQUIPMENT (continued)

# BOILER AND STEAM EQUIPMENT (continued)

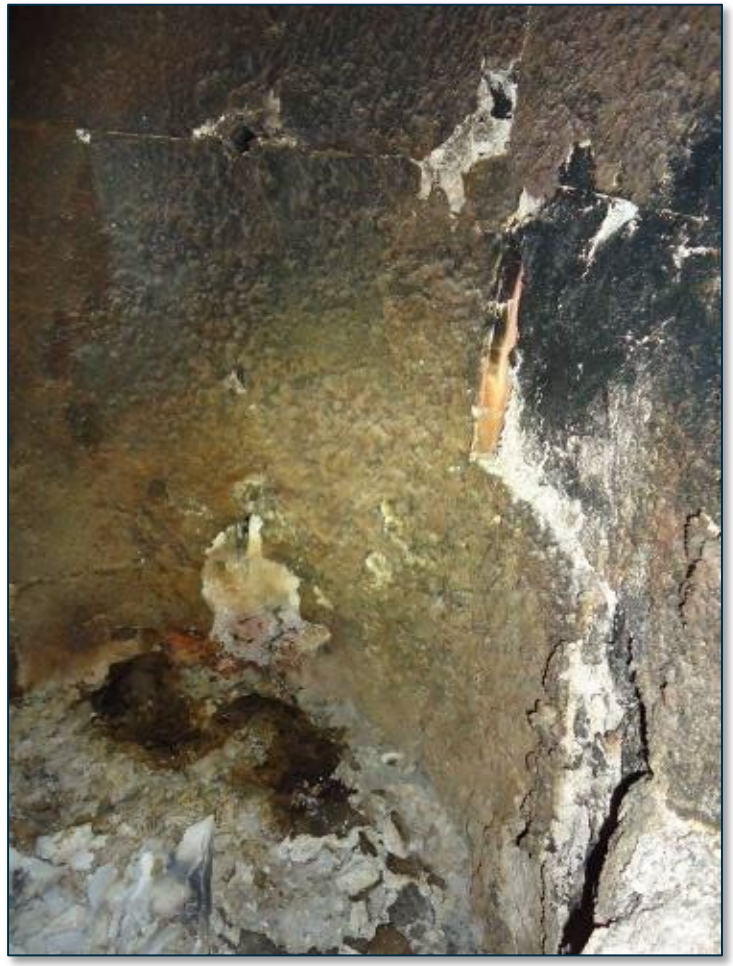

# BOILER AND STEAM EQUIPMENT (continued)

# INCINERATOR

- Condition of Refractory.
- Test run on diesel oil satisfactory?
- Oil Record Book entries can confirm if the incinerator is being used regularly.

# INCINERATOR (continued)

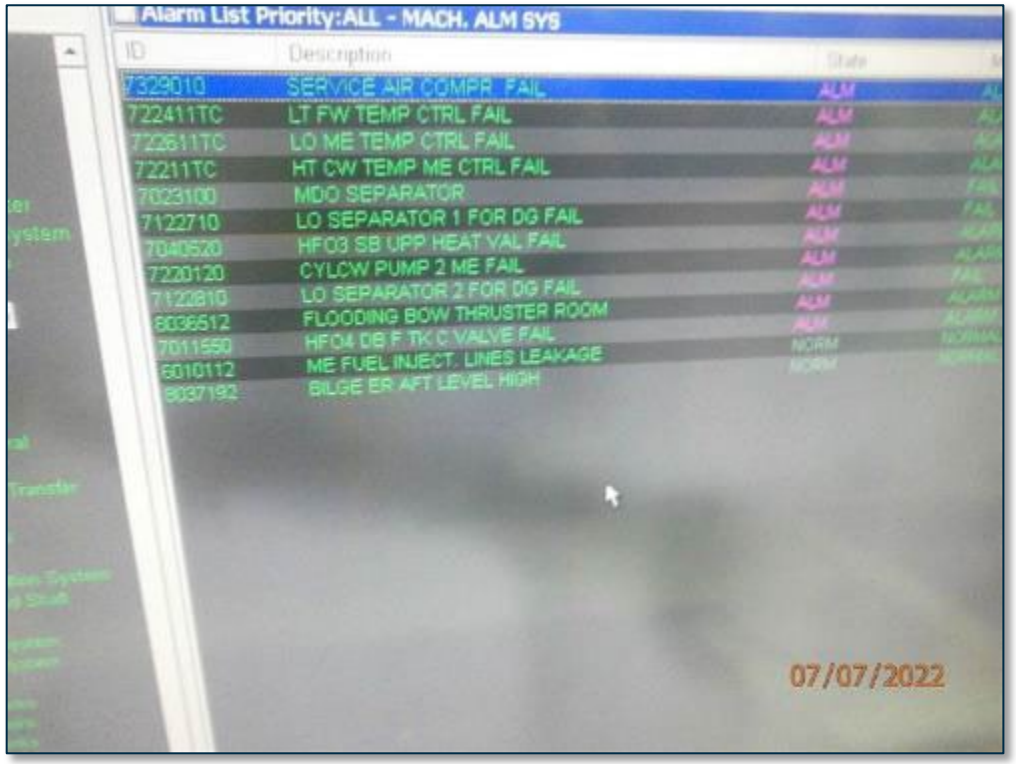

# INCINERATOR (continued)

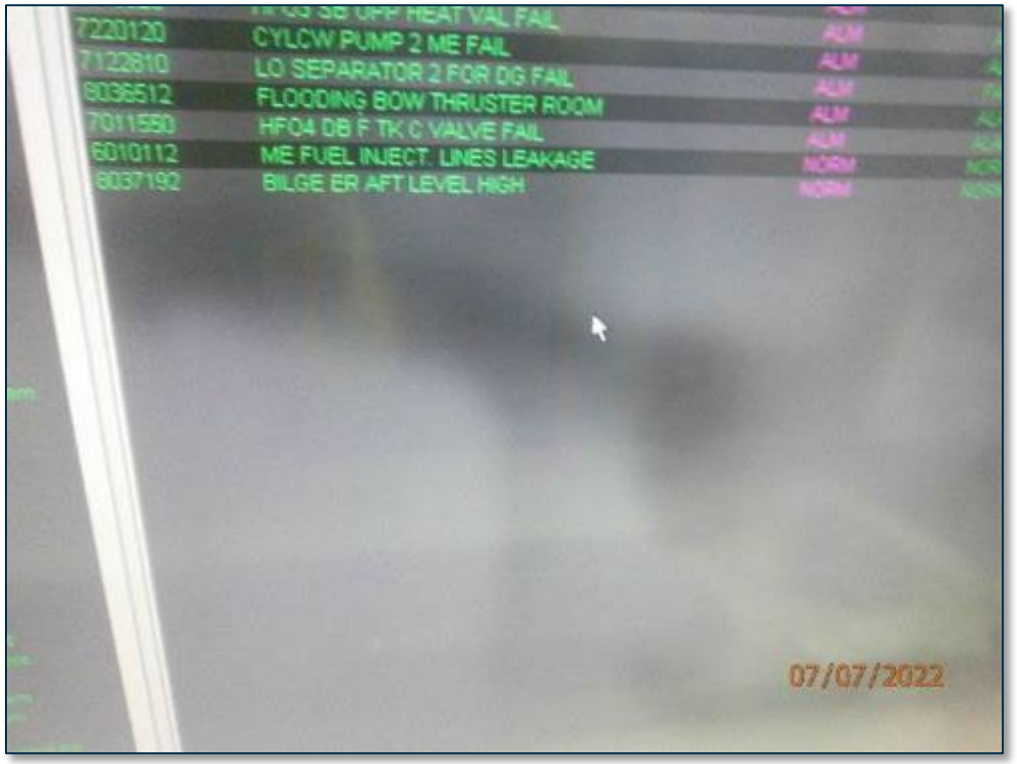


# ALARM MONITORING PANEL

- Is the system operational?
- Any major alarms active on the panel?
- Ship staff manually reposed or off scanned alarms?

# ALARM MONITORING PANEL (continued)



# CABLE PENETRATIONS

- Sealed after installation of additional cables?
- If sealed, are they correctly from top and bottom?
- Sealed with the correct material or only with putty?

# CABLE PENETRATIONS (continued)


# CABLE PENETRATIONS (continued)



# CABLE PENETRATIONS (continued)

# CABLE PENETRATIONS (continued)



Fire integrity of bulkheads being destroyed

# DECK LIGHTS

- Functional?
- Damage to the light fittings?
- Ageing / translucent?

# DECK LIGHTS (continued)


# DECK LIGHTS (continued)

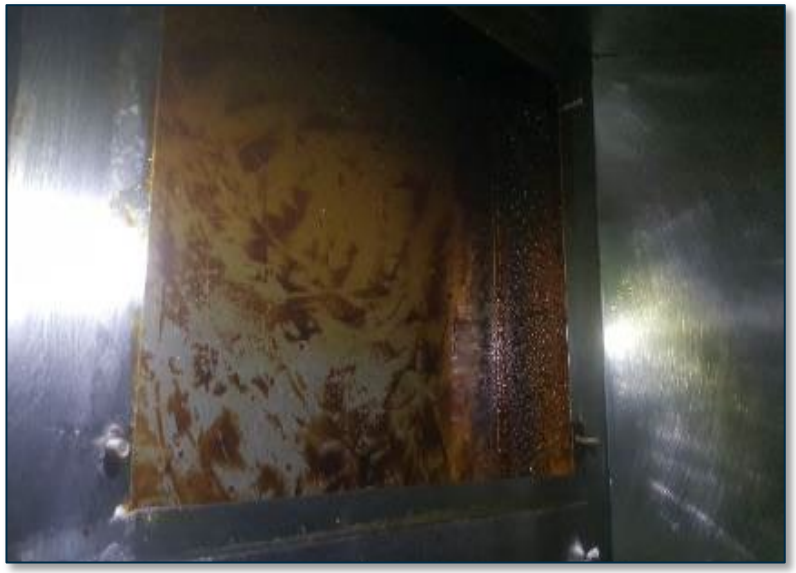


# GALLEY

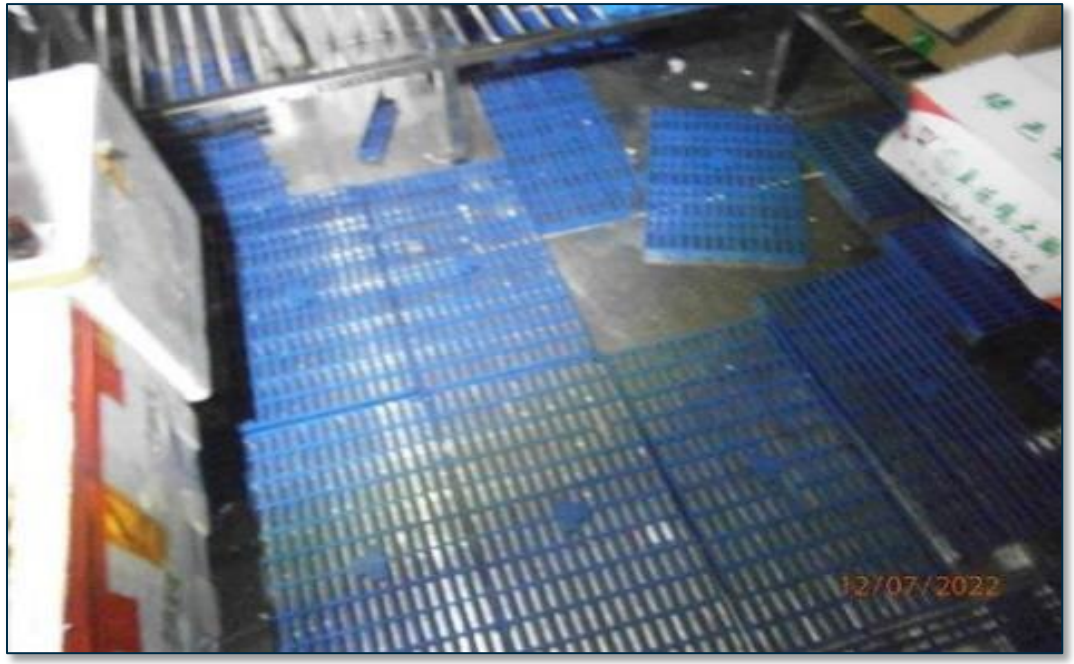
- Condition, visual appearance.
- Flame hood / wire mesh condition satisfactory?
- Tiles condition?

# GALLEY (continued)


# GALLEY (continued)

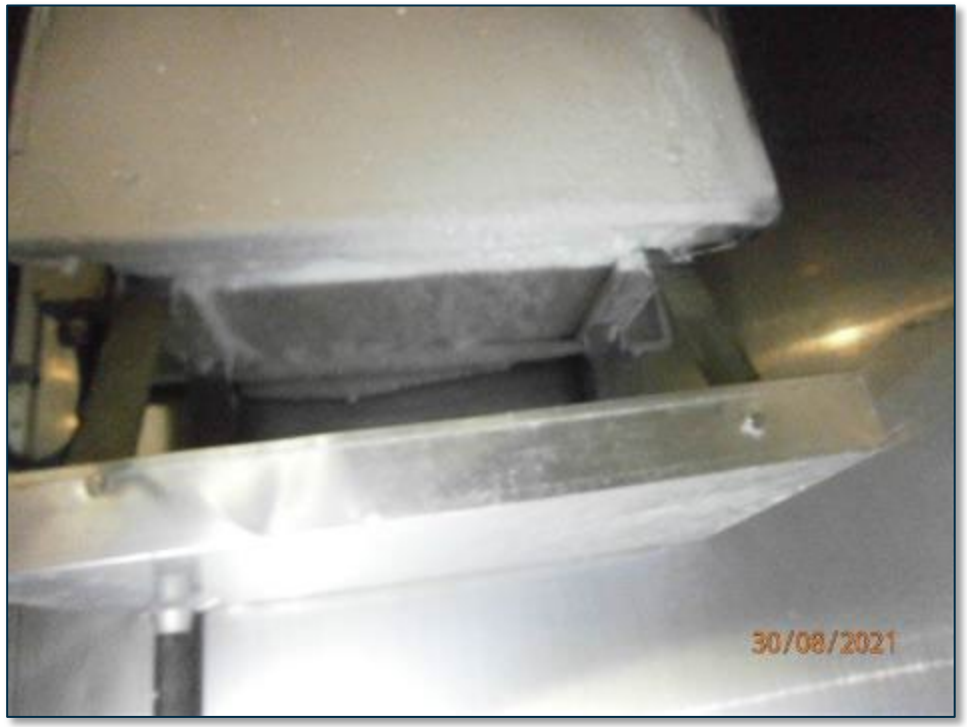


# PROVISION SPACE




- Visual inspection of the condition.
- Alarm and light working?

# PROVISION SPACE (continued)

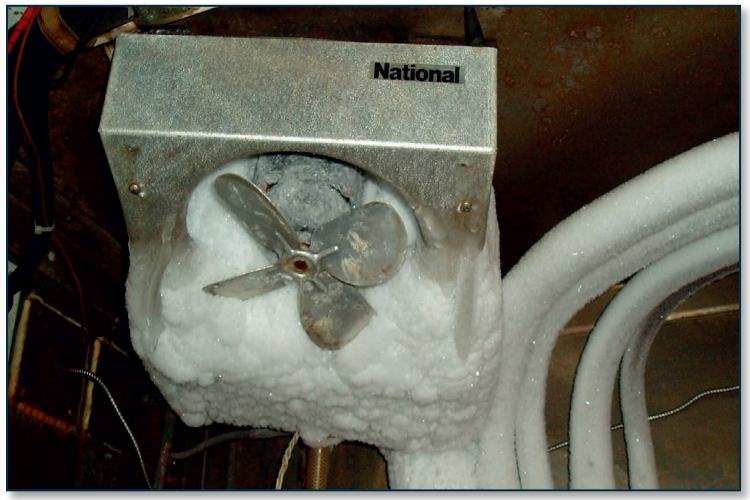




Any icing on the panel / door frame

# PROVISION SPACE (continued)

# PROVISION SPACE (continued)



# CARBON DIOXIDE ($CO_2$) ROOM

- Bottles secured correctly?
- Any pilot lines disconnected?
- Any hoses touching / rubbing the metal frame?
- Depending on design Type A or Type B; pins in / out?

# $CO_2$ ROOM (continued)


# $CO_2$ ROOM (continued)

# $CO_2$ ROOM (continued)

- New build bulk carrier detained on maiden voyage by Australian Maritime Safety Authority (AMSA) for fixed $CO_2$ system not readily available for operation.
- Three manifold rows had flexible hoses fitted but not connected to $CO_2$ cylinders (caps were on).
- The ship's staff were misinformed at the yard that they were spare cylinders.
- These 28 cylinders covered the cargo holds.
- All cylinders aligned and three loose hoses connected.
- There was a Total Organic Carbon Analysis at delivery.

# $CO_2$ ROOM (continued)




# FIRE LINE ISOLATION VALVES

- Functional / frozen / hard to operate?
- Randomly tested for operation?
- Hydrants opened to confirm if sealing after isolating?

# FIRE LINE ISOLATION VALVES (continued)


# FIRE LINE ISOLATION VALVES (continued)

- Fire line main isolating valve frozen (foam room).
- Fire line main leak on deck.
- Lifeboat sprinkler line holed.

# FIRE LINE ISOLATION VALVES (continued)


# FIRE LINE

# FIRE LINE (continued)

- Fire hose couplings rusty?
- Check the fixed HI-FOG nozzle.
- Fire line soft patch?

# FIRE LINE (continued)

# FIRE HOSE CONDITION

# STEERING GEAR

- Rudder packing worn and leaking?
- Hydraulic leak with makeshift container and drain line.
- Well maintained and in good condition?

# STEERING GEAR (continued)

# LIFE JACKETS


Life jackets poor condition

# LIFE JACKETS (continued)


Life jacket – original design

Life jacket flap without light

Life jacket as observed by PSC

# IMMERSION SUITS

# IMMERSION SUITS (continued)

# FIREFIGHTER'S OUTFIT


Damaged firefighter's outfit

# EXHAUST LEAKS

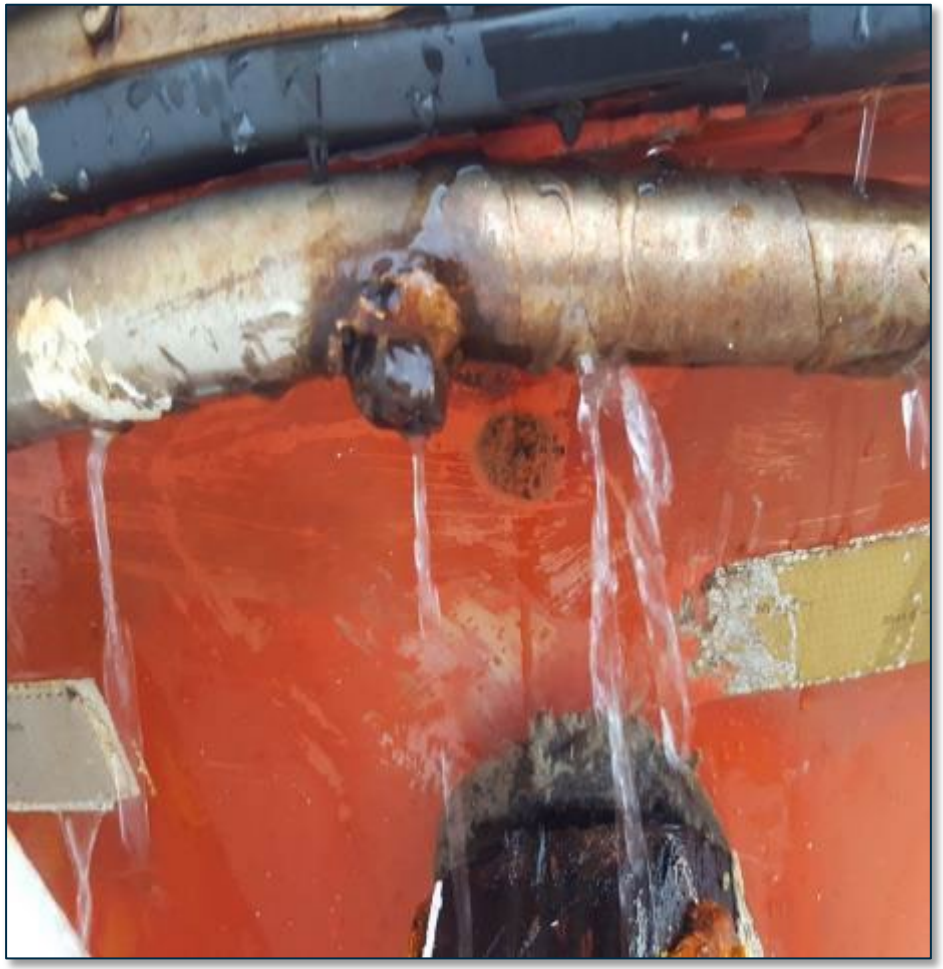
# MISSING VALVE HANDLE

# MANHOLE

Leaking manhole cover (diesel oil tank).

# SELF-CLOSING SOUNDING PIPES

# LIFEBOAT SPRINKLER



# CONTAINER SOCKETS

# PRESSURE VACUUM (PV) VALVE CONDITION

PV valves


THANK YOU