



ST. VINCENT AND THE GRENADINES

MARITIME ADMINISTRATION

CIRCULAR N° PSC 032 - Rev.1

ACTIONS TO BE TAKEN ON ST VINCENT AND THE GRENADINES' VESSELS IN VIEW OF PORT STATE CONTROL INSPECTIONS

Instructions to Managing Companies, Superintendents and vessel's Officers

TO: **SHIPOWNERS, SHIPS' OPERATORS AND MANAGERS, MASTERS, OFFICERS FLAG STATE'S INSPECTORS AND RECOGNIZED ORGANIZATIONS**

APPLICABLE TO: All vessels subject to Port State Control Inspections
Pre-Arrival checklist is not applicable for the vessels engaged on voyages in the Caribbean Region.

EFFECTIVE AS FROM: Date of this Circular

07th November 2018

The analysis of the evolution of detentions of ships flying St Vincent and The Grenadines Flag inside the Paris MOU Region show an improving situation from 2005. This complies with this Administration's policy to improve ship's safety and enforce the application of International Conventions. However, the last few months show a certain laxity in the ships' maintenance.

Port State Administrations have undertaken concentrated inspection campaigns. Stricter criteria in order to evaluate and target individual ships and managing companies have been adopted. Assessment of the ship's performance and company's profile has been evaluated by the result of PSC inspections.

The aim of the present Circular is to provide managing companies and ships' officers with a tool intended to keep their ships ready for Port State Control Inspections and avoid an eventual detention together with administrative measures.

The following tools have been developed:

- Record of PSC most common deficiencies;
- Pre-arrival checklist to be filled in prior the arrival in port; and
- A monthly Self-Verification checklist.

This Administration draws the attention of the **Managing Companies, Superintendents and ship's Officers** on the below "*Instructions for use*" of the Pre-arrival checklist and Self-Verification checklist.

Managing Companies may use similar checklists drawn by their own Recognized Organization (recognized by this Administration).

“Instructions for use” of the Pre-arrival checklist.

The on-board personnel should fill in the Pre-arrival Checklist prior the arrival in port. Furthermore, any unsatisfactory item should be immediately rectified by the on-board personnel. If the on-board personnel are unable to rectify an unsatisfactory item, the relevant “N” box in the check list should be crossed. All Pre-arrival checklists and their results should be recorded in the ship’s Log Book. If an item is found defective due to voyage damage, it should be explicitly indicated in the checklist. The Managers should be immediately informed in writing. The correspondence to the Managers and their written instructions relating to the deficiencies should be attached to the checklist.

Instructions for use” of the Self-Verification checklist.

The on-board personnel should fill in the Self-verification Checklist on a monthly basis. All Self-verification checklists and their results should be recorded in the ship’s Log Book. Any unsatisfactory item should be immediately rectified. If the on-board personnel are unable to rectify an unsatisfactory item, the relevant “N” box in the check list should be crossed. For each “N” box crossed, a comment on the relevant action taken should be included in Section 11 of the checklist. If an item is found defective due to voyage damage, it should be explicitly indicated in the checklist. The Managers should be immediately informed in writing. The correspondence to the Managers and their written instructions relating to the deficiencies should be attached to the checklist.

If a vessel is detained by a Port State Control, this Administration will request a copy of the last Self-verification checklist, a copy of the pre-arrival checklist items rectified and, if applicable, the entry in the ship’s logbook.

During the Annual Flag State Inspection, Flag State Inspectors, are required to check the implementation of this Circular on board and to mention it in their Inspection Report.

ROs are required to verify the implementation of this Circular during the ISM audits (DOC and SMC).

Copies of the Pre-arrival checklist and Self-Verification checklists should be kept on board for eighteen (18) months.

Pre-arrival Checklist

for use by on-board personnel

Ref.	Description	Item	Y	N	N/A
1	Documentation	Ship's Certificate valid and properly endorsed.			
		Manuals stamped for approval on behalf of this Administration.			
		Crew certificates and courses, medical examination.			
		ESP File for Oil Tankers, Chemical Tankers and Bulk Carrier.			
		Bunker delivery note for Low Sulfur oil fuel.			
2	Log book entries	Records of drill, maintenance and inspections.			
3	Record book entries	Entries accurate and complete with all data foreseen?			
4	Operating instruction	Firefighting system.			
		Steering gear.			
		Autopilot.			
		Emergency stop and quick closing valves.			
		Emergency generator.			
		Launching appliances.			
5	IMO Symbols posted	Green series: escape routes and lifesaving appliances.			
		Red series: Fire fighting appliances.			
		Blue series: Life saving launching appliances and survival crafts.			
6	Lifeboats	Neat and in order, properly stowed and lashed and ready for use.			
		Full complement of equipment complete and stowed on board.			
		Operational tests (engine, propeller, rudder, bilge pump).			
		Davit falls properly wound on winch's drums.			
7	Life rafts	Duly serviced and properly lashed with hydrostatic unit.			
		Container in good condition and clearly marked.			
8	Embarkation ladder	In good condition, properly connected to ship and ready for use.			
9	Lifebuoys & Lifejackets	Complete, properly stowed and ready for use including oversize and lifejackets for children.			
	Fire Plan	Updated and specific for the ship; displayed inside with copies stowed outside.			
10	Emergency fire pump	Operational test (for at least 30 minutes).			
	Motor driven pump	Exhaust gas piping in good condition and insulated: no leakage, no hot spot.			
		Starting arrangement for motor driven pump.			
11	Main Fire pumps	Working test: adequate delivery pressure, evaluation of vibration, evaluation of leakage from shaft seal.			

Pre-arrival Checklist

Ref.	Description	Item	Y	N	N/A
11	Main Fire pumps (cont'd)	Condition of foundation, pipe connection fully bolted, pressure gauge fitted on suction and delivery pipe.			
12	Fire main	Check the system under pressure (no leakage from pipes and hydrants).			
		Fire hoses and nozzles properly stowed in stowage boxes.			
13	International shore connection	Located in accordance with fire plan and complete with gasket and bolts.			
14	Fire dampers	Structural integrity and air-tightness.			
		Operation of manoeuvring device: Effectiveness of closing flap, disk and hinged.			
		Marking of open and close position.			
15	Quick closing valves	Ready to operate: Connected, neither blocked nor tied.			
		Availability of driving fluid for remote control: Air or hydraulic oil.			
16	Emergency stops	Clearly marked and ready to operate.			
17	Means of escape	Free from obstructions.			
		Lighting from emergency source.			
18	Portable extinguishers	Stowed in accordance with fire plan ready for use.			
		Duly serviced and provided with service card.			
19	Fixed firefighting system	Control station neat, in order.			
		Emergency light in order and working condition.			
		Availability of requested quantity of extinguishing medium.			
20	Fireman's outfit	Complete, properly stowed, ready for use.			
		Fireman lockers neat and in order, location in accordance with fire plan.			
		Fire locker fitted with emergency light.			
21	Inert Gas System	Control panel in order with lamp and buzzer in working condition.			
		IG pressure and O2 content recorder in working condition; paper and ink.			
		Scrubber, deck seal, P/V valve filled at proper level without leakages.			
		Fixed and portable oxygen analyzer in working condition and calibrated.			
22	Load Line Marks	Properly painted and consistent with certificate.			
23	Main deck	Plating, piping and outfitting in order well maintained and painted.			
		Disposed material, drums and garbage properly stowed designated areas.			
		Service area, mooring station, manifold free from obstruction, provided with non-slippery surface.			
		Gangway properly fitted with handrail and light.			
24	Hatch coaming and Hatch cover	Coamings and cover in sound condition and weather tight: no soft patches.			
		Closing device all in place and in good condition.			
		Wheel and roller free to move and properly rigged.			
		Gasket, compression bar and gutter in place and in efficient condition.			

Pre-arrival Checklist

Ref.	Description	Item	Y	N	N/A
25	Air pipes, ventilators	Integrity and effectiveness of means of closure.			
26	Handrails	Integrity and continuity: all courses in place and connected.			
27	Steering gear	Cleanliness of the steering gear room: no oil leakage, no material improperly stowed.			
		Correspondence of bridge and local rudder angle indicator.			
		Means of communication.			
28	Engine room	Space clean and neat, lights in place; no slippery residues on platforms and ladders.			
		Spare part, tool and material stowed and rigged.			
		Bilges dry and clean: no rags no spool pipes.			
		DD.BB and Tanks man holes fully bolted without trace of leakages.			
		No unauthorized connection with flexible hoses.			
		Engines, purifier and boiler burner free from oily traces and leakages.			
		High pressure jacketed pipe for engines fitted in place.			
		Sounding pipe fitted with closing device and cap.			
29	Emergency generator	Automatic start and working test including test of all means of starting.			
		Emergency switchboard in order complete with control instruments: all users labeled.			
		Insulation mat.			
30	Oily water separator	Working test including test of the 15 ppm discharge alarm and stopping device.			
		No unauthorized connection, no flexible hoses in use.			
		Calibration certificate for equipment compliant with Res. MEPC 107(49).			
31	ODME	Control panel in order with lamps and buzzer in working condition.			
		Recorder in working condition: three year record available on board.			
		Self calibration test.			
32	Nautical Publications	Availability of charts and publications for the trading area of ship according to annual catalogue.			
		Charts and publications corrected with latest issue of Notice to Mariner.			
		ECDIS ENC up dated: correction files store, record of correction made available.			
33	Nautical apparatus	Neither power failure nor default alarm displayed on.			
		Display of equipment in proper working condition.			
		Apparatus manual available on board.			
		Supply by emergency source of power in order.			

Pre-arrival Checklist

Ref.	Description	Item	Y	N	N/A
34	Crew accommodation, health and safety	MLC Certificate and DMLC Part I & II in course of validity and properly endorsed.			
		Medical certificates and color vision certificates (if needed) in course of validity.			
		Safety and Security familiarization for all crew properly carried out.			
		Availability of Seafarers Employment Agreement for all crew.			
		Evidence of the payment of the monthly wages.			
		Evidence of the overtime records.			
		Evidence of the PPE provided to the relevant crew.			
		Availability of records of hours of rest and work.			
		Evidence of substantial equivalences/exemptions granted by the Flag (if any).			
		Availability of accommodations inspection records.			
		Evidence of Drinking water analysis.			
		Monitoring of the food storage.			
		Inventory and monitoring of medical supplies.			
		Availability of the latest edition of the Medical guide.			
35	Radio equipment	List of Coast Radio Stations providing medical advice.			
		Copy of the MLC 2006 (hard or electronic copy).			
		Neither power failure nor default alarm displayed on.			
		All apparatus in working condition including those for lifesaving craft.			

Ship's name:	
Date:	
By:	
Signature:	

Instructions for use

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Furthermore, any unsatisfactory item should be immediately rectified by the on-board personnel.

If the on-board personnel are unable to rectify an unsatisfactory item, the relevant "N" box in the check list should be crossed.

All Pre-arrival checklists and their results should be recorded in the ship's Log Book.

If an item is found defective due to voyage damage, it should be explicitly indicated in the checklist.

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The Pre-Arrival Checklist does not in any way replace or cover the scope of class and/or statutory surveys. Its use does not exempt the owner from the application of routine on-board maintenance procedures and operations.

Self-verification Checklist

for use by on-board personnel



Documentation
Lifesaving appliances
Fire-fighting appliances
Load Line appliances
Machinery
Electrical equipment
Pollution prevention
Safety of navigation
Crew accommodation, safety & health
Radio equipment
Comments
Annexes

SHIP'S NAME:	
DATE:	
BY:	
SIGNATURE:	



Instructions for use

The on-board personnel should fill in the Self-verification Checklist on a monthly basis. All Self-verification checklists and their results should be recorded in the ship's Log Book.

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Section 1 – DOCUMENTATION

Ref.	Description	Item	Y	N	N/A
1.1	Ships Certificates List in Annex 1	Valid Class certificate.			
		Valid Statutory certificates.			
		Availability of original and valid certificates.			
		Endorsement for periodical surveys within ranges date.			
		Consistency of data and figures between certificates.			
1.2	Crew Certification	Crew list and Muster List consistent with Minimum Safe Manning Certificate.			
		Availability of original and valid Certificate of Competency (COC) for Officers and OOW.			
		Availability of COC's endorsement for certificate issued by Administration which is not the Flag Administration, or, Three month validity application letter for obtaining such endorsement.			
		General Operator Certificate (GOC) - for GMDSS Operators.			
		Certificate of Proficiency in survival craft, rescue boats and fast rescue boat.			
		Training courses: basic – advanced – specialized.			
1.3	Manuals List in Annex 2	Availability on board as appropriate.			
		Manuals drafted specific for the ship.			
		Valid approval of manuals by current Flag Administration.			
		Consistency of data and figures in different documents, i.e.: Tank capacity and location; Number and type of life - saving appliances; Type and quantity of fixed fire - fighting system.			
		Required copy of manuals available on board and distributed as necessary.			
1.4	Logbook and Record Books entries List in Annex 3	Required entries timely made.			
		Log books/Record Books properly filled in with data in accordance with relevant instruction: log book format in accordance with Administration requirement.			
		Ship working language recorded in the Log Book.			

Section 2 - LIFESAVING APPLIANCES

2.1 LIFEBOATS AND RESCUE BOATS

Ref.	Description	Item	Y	N	N/A
2.1.1	General examination	Number and type in accordance with Record E (SE).			
		Rescue boat included in the number of lifeboats.			
		Lifeboat properly marked: dimension – capacity – name & port of registry – call sign (on top only for partially enclosed and closed type).			
		Hull – drain valves – grab line – handrail - lifeline - skates – hook or suspension eye – rigid cover – painters – thwarts - side benches - crutch holes – gunwales.			
		Stern frame, rudder stock and blade, gudgeons, pins, tiller and associated fittings.			
		Propeller, shafting, gear with clutch.			
		Buoyancy compartments water tight and secured to the boat.			
		Retro-reflective material fitted on top of the gunwale, on the outside of the hull, on the bottom, on top of rigid cover.			
		Lifeboat ready for use, neat with equipment properly stowed.			
		Condition of bilge pump: suitable suction and delivery pipe provided.			
		Thorough examination of support of suspension hook/eye or release mechanism and relevant connection to the hull: wastage, pitting corrosion, loose bolt, thinned or deformed brackets.			
		Release mechanism including relevant remote control system.			
		Release mechanism operating instruction played including on load release activation and interlock.			
		Release mechanism reset properly and ready for use.			
		Availability and maintenance condition of oars.			
		Completeness and good maintenance condition of lifeboat equipment: [List in annex 4].			
		Canopy and relevant stanchion for open type lifeboat.			
		Expiry date of food rations, water and distress signals as follows:			
		Food ration;			
		Water;			
		Parachute flare;			
		Hand flare;			
		Smoke signals;			
		Lifeboat engine and relevant foundation, casing including spare and tool for minor adjustments;			
		Exhaust gas pipe on board and insulated as necessary;			
		Starting device: manual crank/ battery (*). (*) delete as appropriate			

Self-verification Checklist

Ref.	Description	Item	Y	N	N/A
2.1.1	General examination (cont'd)	Fuel tank and supply line.			
		Availability of suitable amount of fuel for the requested autonomy (24h).			
		Breathing air bottles in good condition and charged: pressure gauge indication (for tankers).			
		Water spray system in order: pump condition – pump clutch – sea chest valve – spray piping and nozzles (for tankers only).			
		Operating instruction and IMO Symbols.			
		Fitting for recharging starting and service batteries.			
2.1.2	Operational tests	Engine and propeller operational test ahead/astern.			
		Operational test of the rudder.			
		Operational test of the bilge pump.			
2.1.3	Launching appliances	Review of service chart for last inspection carried out according to Reg. III/20.11 (Annual Thorough Examination and test).			
		Visual examination of davits: foundation and connection to deck – head of arms – greasing point: no wastage of arms' plating especially in the area underneath the pulleys, no wastage on basement and connecting brackets.			
		Visual examination of sheaves and blocks: free movement - no wastage on blocks plate – no crack or fracture on pulleys and sheaves – no loose or worn out pins.			
		Visual examination of davit winches: casing – connection to deck – wire drum - brake lever – self lowering device (if fitted).			
		Falls in good condition and properly wound on the winch drum: broken wirer – oxidation - loose wires – distortion.			
		Period from last fall renewal not exceeding 5 years.			
		Launching instruction displayed.			
2.1.4	Embarkation arrangement	General condition of side ropes and steps.			
		Proper and sound connection to the ship.			
		Adequate length to reach the water. (10°Trim & 20°List)			
		Means to prevent discharge of water onto the embarkation arrangement.			
		Lighting supplied by emergency source of power at Muster station, Embarkation station and areas of water onto which the crafts will be launched.			
		IMO symbols Green and Blue series.			
2.1.5	Inventory List in Annex 4 and List in Annex 5	Lifeboat equipment complete, in good order and properly stowed.			
		Rescue boat equipment complete, in good order and properly stowed.			

2.2 INFLATABLE LIFE RAFTS

Ref.	Description	Item	Y	N	N/A
2.2.1	Visual Examination	Number and type in accordance with Record E (SE).			
		Visual examination of embarkation arrangements: embarkation ladder – emergency lighting.			
		IMO Symbols Green and Blue series.			
		Stowage conditions.			
		Marking of container:			
		Maker's name;			
		Serial number;			
		Approval authority;			
		SOLAS;			
		Type of emergency pack;			
		Date of last service;			
		Length of painter;			
		Mass of the packed life raft, if greater than 185 kg;			
		Max. permitted height of stowage above waterline;			
		Proper lashing and hydrostatic release unit;			
		Weak link properly fitted to ensure inflation and free floating of life raft;			
Stowage area within the reach of the launching appliance (for launchable type only);					
Easy side to side transfer when foreseen: no obstruction.					
2.2.2	Servicing	Last service date and availability of service report chart (12 month with possible max. extension up to 17 months).			
		Expiration date or last service date of hydrostatic release unit.			

2.3 RIGID LIFE RAFTS

Ref.	Description	Item	Y	N	N/A
2.3.1	Visual examination	Number and type in accordance with Record E (SE).			
		Overall condition of life raft (absence of cracks, defects and wear particularly in proximity of cradles).			
		Retro-reflective material fitted.			
		Lashings and fast release hook.			
		Condition of hydrostatic release unit.			
		Stowage conditions.			
		Marking of container:			
		Name and port of registry of the ship;			
		Maker's name;			
		Serial number;			
		Approval authority;			
		Number of persons is permitted to accommodate;			
		SOLAS;			
		Type of emergency pack;			
		Length of painter;			
		Max. permitted height of stowage;			
Launching instruction.					
2.3.2	Servicing	Expiration date or last service date of hydrostatic release unit.			

2.4 LIFEBOOYS

Ref.	Description	Item	Y	N	N/A
2.4.1	Visual examination	Number and type in accordance with Record E (SE).			
		Location and type in accordance with Safety Plan.			
		Marking: Type Approval, MED, name of the vessel.			
		Retro-reflective material fitted.			
		Check and test self-igniting lights.			
		Buoyant line properly attached (30 m length).			
		Man overboard self-activating light and smoke signal in proper order and not expired.			
		Man overboard quick release mechanism from the bridge wings in order and operable.			

2.5 LIFEJACKETS

Ref.	Description	Item	Y	N	N/A
2.5.1	Visual examination	Number and type in accordance with Record E (SE).			
		Marking: Type Approval, MED, name of the vessel.			
		Proper stowage and condition.			
		Retro-reflective material and whistle fitted.			
		Check and test self-igniting lights.			
		Required number of lifejackets for children. (10% of passengers on board).			
		Sufficient number of extra size jackets or devices to adapt the standard ones.			

2.6 IMMERSION SUITS AND THERMAL PROTECTIVE AIDS

Ref.	Description	Item	Y	N	N/A
2.6.1	Visual examination	Number in accordance with Record E (SE).			
		Marking: Type Approval, MED.			
		Retro-reflective material fitted.			
		Proper stowage and condition.			

2.7 OTHER LIFE-SAVING APPLIANCES

Ref.	Description	Item	Y	N	N/A
2.7.1	Parachute rockets	No.12 parachute rockets in addition to those provided in lifeboats; expiration date not overdue.			
2.7.2	Line-throwing appliance	Line-throwing appliance with at least 4 charges and lines: expiration date not overdue.			
2.7.3	Radar transponders	No.2 placed on the bridge.			
		Battery expiration date not overdue.			
		Operational test in accordance with the manual.			
2.7.4	Two-way VHF Apparatus for survival craft	No. 3 sets of portable two-way vhf radiotelephone apparatus compliant with performance standards for survival craft.			
		Operation on Channel 16.			
		Expiry date of battery not overdue, battery charger available.			

Section 3 - FIRE-FIGHTING APPLIANCES

3.1 FIRE MAIN

Ref.	Description	Item	Y	N	N/A
3.1.1	Fire Plan	Up to date fire plan specific for the ship permanently displayed.			
		Availability of plan stowed in weather tight container outside accommodation.			
		Plan filed in language required by Administration: working language with translation in English or French if different.			
		Use of IMO symbols.			
3.1.2	Emergency fire pump	Location in accordance with Fire Plan.			
		Operating instruction displayed.			
		Access and pump room neat and in order: no obstruction and ready for use.			
		Identification of sea chest valve and relevant control: local/remote (*). (*) delete as appropriate			
		Electric power supply: Connection to emergency switchboard – breaker in order and labeled.			
		Motor driven pump.			
		Fuel tank: Level gauge – quick closing valve/remote closing device – fuel distribution – flexible hoses.			
		Fuel availability: 3 hours autonomy plus additional fuel for 15 hours.			
		Starting system by compressed air: Bottles and recharging system and distribution line – air dryer if fitted.			
		Starting system by battery: Record of battery check – battery charger.			
		Exhaust gas pipe tight and properly insulated: no gas leakage, no hot spots.			
		Priming system for low water column head on suction line.			
		Pressure gauges fitted on both suction and delivery pipe and in working condition.			
		Crew familiar with pump operation.			
Test of emergency fire pump.					
3.1.3	Main fire pump(s)	Fire pumps in working condition.			
		Fire pump connections properly bolted and valves identified.			
		Pressure gauges on suction and delivery in working condition.			
		Working test of all pumps designated as fire pump: adequate delivery pressure, evaluation of leakage from shaft seal, evaluation of vibration.			
		Proper operation of dual jet nozzles: Spray and jet mode.			

Self-verification Checklist

Ref.	Description	Item	Y	N	N/A
3.1.4	Fire main	Proper general maintenance and condition.			
		Indication and marking [IMO Symbols].			
		Accessibility: no obstruction – ready for use.			
		Examination of piping and fittings on exposed deck as well as within accommodation, engine room and service spaces.			
		Piping fully bolted: no leakages from pipe and hydrants.			
		Absence of unauthorized temporary repair, i.e. cement boxes – clamps – plaster or metallic filler.			
		Number and location of hydrants and fire hoses as per fire plan and clearly marked with IMO symbols.			
		Insulation valve to engine room in order and clearly marked.			
		Insulation valves on main deck line at each 40m. (Tankers only).			
		Fire hoses size [Diam. and Length] and integrity. [material and end fittings].			
		Nozzles in good condition with proper coupling type. In general only one type of connection is allowed.			
		Fire hose boxes in good condition, well supported, clearly colored and marked, complete with proper set of hose, nozzle and spanner key.			
		Hydrants clearly colored and marked; complete with spindle wheel or handle.			
		Comprehensive working test checking jet from at least two hoses as spread as possible.			
3.1.5	International shore connection	Check fire hydrants, hoses and nozzles under pressure. (no leakage).			
		Availability on board.			
		Location clearly marked and in accordance with fire plan.			
		One gasket packing available.			
		4 bolts (16mm diameter, 50mm in length) and 8 washers available.			

3.2 FIRE DAMPERS

Ref.	Description	Item	Y	N	N/A
3.2.1	General examination	Flap and relevant rod in order – rod properly fit in its support.			
		Flaps, multiple fin flaps and disks free to move and closing properly.			
		Lever, screwed wheel and wire control properly connected and to assure proper working condition.			
		Remote pneumatic or hydraulic control in proper working condition.			
		Position indication clearly marked: Open – Closed.			
		Casing of free standing damper in order and tight: no holes – no wastage – proper connection to deck.			
		Hinged cover type damper: Cover properly fitted with hinges and dogs – Cover free to move and closing properly – no deformation – Gasket in place and in good condition.			
3.2.2	Operational test	Operational test of all disk type and flap type dampers including those fitted on funnel.			
		Operational test of all hinged dampers including those fitted on cargo hold hatch coaming, as applicable.			

3.3 QUICK-CLOSING VALVES REMOTELY OPERATED

Ref.	Description	Item	Y	N	N/A
3.3.1	General examination	Location of remote control in accordance with fire plan.			
		Operating instruction specific for the system and properly displayed including legend for valves identification.			
		Type of remote control: hydraulic/pneumatic/wire (*). (* delete as appropriate)			
		Availability of driving fluid and proper storage: hydraulic oil/compressed air (*). (* delete as appropriate)			
		Wire in sound condition: pulleys greased and free to rotate.			
		Valves properly connected to actuating system: no fluid leakage – no loose wire (*). (* delete as appropriate)			
		Local control fitted in place and in working condition.			
		Valve and closing device are free from obstruction, neither blocked nor tied and ready for use.			
3.3.2	Operational test	Test of closing device and reset mechanism.			

3.4 EMERGENCY STOPS

Ref.	Description	Item	Y	N	N/A
3.4.1	General examination	Location of emergency stops in accordance with fire plan (outside E. R.).			
		Operating instruction specific for the system and properly posted including legend for identification of users:			
		ventilation;			
		supply pump; (*)			
		transfer pump; (*)			
		purifier; (*)			
		draught fan;			
		boiler burner.			
		(*) for oil fuel and, for keel laid \geq 01/07/2002, also for lube & thermal oil.			
3.4.2	Operational test	Test of emergency stops.			

3.5 MEANS OF ESCAPE

Ref.	Description	Item	Y	N	N/A
3.5.1	General examination	Escape routes free from obstructions.			
		Escape route lighted by emergency source of power.			
		Escape routes clearly identified and marked (IMO symbols Green series).			
		Steps and handrails in good condition.			

3.6 PORTABLE FIRE EXTINGUISHERS

Ref.	Description	Item	Y	N	N/A
3.6.1	General examination	Number and type in accordance with fire plan.			
		Location in accordance with fire plan.			
		Location clearly identified and marked with IMO symbols Red series.			
		Extinguisher stowed and rigged in position and ready for use.			
		Verification of the condition of cylinders (no corrosion).			
		Hoses and nozzles in good condition.			
		Cylinders provided with service label.			
		Fire extinguishing medium and or charge in due course of validity.			

3.6 FIXED FIRE PROTECTION SYSTEM(S)

Ref.	Description	Item	Y	N	N/A
3.7.1	General	Location of control station as per fire plan; access free from obstruction.			
		Operating instruction displayed and specific for the system.			
		Control and actuators clearly marked, accessible and ready for use.			
		Mechanical ventilation (exhaust) in working condition, when fitted.			
		Room clean and neat: no stuff stored inside.			
		Lighting, supplied by emergency source of power, in working condition with all bulbs in place.			
		Means of communication.			
3.7.2	CO2 High Pressure system	Condition of cylinders, manifold and discharge line: securely supported, fully bolted, no corrosion.			
		Bottles connected to manifold and secured to the bottle rack.			
		Flexible hoses in order: no superficial crack – no sharp bent.			
		Remote release device: wire or CO2/Nitrogen gas system] (*).			
		Local and remote release device fitted to ensure the proper sequence of activation including interlock between opening of distribution valve and of bottles discharge.			
		Time delay device: mechanical lock (screw) or CO2 Nitrogen gas system (small capacity bottle with rupture disk) (*).			
		Pre discharge alarm.			
		Date of last content check and hydrostatic test not overdue.			
		(*) delete as appropriate			
3.7.3	CO2 Low Pressure system	Insulation of CO2 vessel in order and protected. No cold spot.			
		Level gauge, pressure gauge and thermometer to check CO2 content in working condition.			
		Foundation of vessel not wasted.			
		Deck plating underneath the CO2 vessel dry and not wasted.			
		CO2 compressor in working condition and ready to use.			
		Test of automatic start and stop switch by pressure gauge.			
3.7.4	Low Expansion Foam System:	Container for foam in order fitted with means to check the amount of foam stored inside.			
		Requested quantity of foam liquid stored in the tank.			
		Foam liquid mixer adjusted for the proper percentage of mixture: 3% or 6%.			
3.7.5	High Expansion Foam System	Foam generator in order and properly connected to sea water and foam lines.			
		Dampers on discharge duct in working condition.			
		Remote control panel and switchboard in order and properly labeled.			

3.8 FIREMAN'S OUTFIT

Ref.	Description	Item	Y	N	N/A
3.8.1	General examination	Two sets each consisting of personal equipment and breathing apparatus available. 4 sets available on oil tankers, chemical tankers and gas tankers < 5000 m3. 5 sets available on gas tankers > 5000 m3.			
		Each set stored in accordance with Fire Plan: location as widely separated as possible.			
3.8.2	Personal equipment	Protective clothing available.			
		Boots and gloves available.			
		Rigid helmet available.			
		Electric safety lamp available (minimum burning period 3 hours).			
		One axe available.			
		Fireproof lifeline and snap hook available.			
3.8.3	Breathing apparatus	Self-contained compressed air operated breathing apparatus.			
		Spare charges available and or recharging compressor.			
		Smoke helmet or smoke mask with air pump and air hose available (as an alternative to the self – contained compressed air operated breathing apparatus).			

3.9 PAINT LOCKER

Ref.	Description	Item	Y	N	N/A
3.9.1	Deck area < 4m ²	Portable fire extinguishers (CO2 or dry chemical powder) available near accesses.			
3.9.2	Deck area > 4m ²	Fixed fire extinguishing system operated from outside the locker fitted.			
3.9.3	Electrical equipment	Lighting fittings, fire detector, heating appliances, ventilator motors inside the paint locker of explosion – proof safe type (ships built on or after 1.9.84).			

3.10 INERT GAS SYSTEM (for oil tankers only)

Ref.	Description	Item	Y	N	N/A
3.10.1	General examination E.R.	Up take valves (for flue gas system) – discharge and recirculation valves in order and with remote control (pneumatic) in order: no leakage.			
		I.G. Fans (at least two) in working condition.			
		Scrubber water supply by at least two pumps; sight glass in order and not blinded.			
		Fixed oxygen analyzer provided with span gas for calibration.			
		I.G. generator (if fitted) in good order including built in burner, ventilator and scrubber.			
		Control instrument, including alarm sensor fitted and in working condition.			

Self-verification Checklist

Ref.	Description	Item	Y	N	N/A
3.10.2	General examination Main Deck	I.G. line on main deck in order: no corrosion, no holes, no unauthorized repair (soft patch, clamps).			
		Deck seal in order with no leakage.			
		Mechanical automatic non return valve in place after deck seal.			
		P/V Breaker filled in (glycol) and provided with level indicator.			
		Delivery line to cargo tank fitted with valve provided with suitable means of locking.			
		Shore connection provided with blank flange fully bolted and clearly marked.			
		Portable oxygen analyzers available and in working condition: calibration record.			
3.10.3	Control Room Panel	Synoptic control panel in working condition: lamps, lamp test function, alarm buzzer.			
		I.G. content and I.G. pressure recorder: paper and ink available.			
3.10.4	Working test	Test of system including check of alarm and safety devices: system trip – automatic switch to recirculation mode.			
		Check the proper setting of alarms.			
		Check of proper working condition of recorder.			
		Check proper working condition of automatic control of valves.			

Section 4 - LOAD LINE APPLIANCES

4.1 MAIN DECK

Ref.	Description	Item	Y	N	N/A
4.1.1	Exposed decks	General condition in order: no leakages from piping - no wasted portion of exposed deck and superstructure.			
		Absence of deformation and buckling.			
		Stiffening system, when fitted externally, well connected to plating, free from deformation.			
		Decks properly maintained and painted.			
		Plating free from oily residues.			
		No obstruction in passage ways, no stuff stored on open deck (i.e.: empty drums, disposed machinery parts, pipe and plates) especially in service areas such as mooring station – manifold – fire hydrants – hatch cover manoeuvring control.			

4.2 HATCHES

Ref.	Description	Item	Y	N	N/A
4.2.1	Hatch coamings	Hatch coaming in sound condition: no holes – no wasted areas.			
		Coamings stiffening system and stays in order: no deformation - no wastage – no thinned edges- proper connection to deck.			
		Hatch coaming's top flat bar including compression bar and gutter in good order: no deformation – no wastage I.W.O. cleat/securing device penetration and I.W.O. wheel track – no occlusion of gutter and drain hole – compression bar in place and connected – cover stopper in sound condition.			
		Cargo hold ventilator fitted with weather tight cover: cover not deformed – gasket in place and in good condition – hinges and dogs in working condition and greased.			
4.2.2	Hatch covers	Hatch cover overall condition and weather tightness: no holes on top and side plating – no wasted areas - no buckling – no notch damage – no soft patches.			
		Internal stiffening in order: no detachment/deformation – no thinned edge.			
		Gasket and relevant containment : longitudinal and transversal.			
		Closing and securing device: rod cleats available, fitted in place.			
		Wheels and relevant support: pin and bush in order and greased – wheels neither cracked nor deformed – wheels not loose.			
		Hinges and relevant support between hatch covers' panels.			

Self-verification Checklist

Ref.	Description	Item	Y	N	N/A
4.2.2	Hatch covers (cont'd)	Hatch covers operated by hydraulic pistons: tightness of hydraulic pistons and piping: no leakage; - sound connection of the pistons with both ship structure and hatch cover - no crack – no wastage – no deformation.			
		Hatch covers operated by chain: chain links in good condition: no excessive wear/deformation - connection to hatch cover maintenance and working condition of air/hydraulic capstan.			

4.3 AIR PIPES AND VENTILATORS

Ref.	Description	Item	Y	N	N/A
3.1	Air pipes	Air vent in good condition: connection to deck – no wastage - no holes – heads in order and efficient.			
		Verification of effectiveness of means of closure.			
		Identification of tanks served.			
		Spill containment box and flame net for air vents fitted on tanks intended for flammable liquid.			
		Examination and test of P/V valves fitted on cargo tanks: both pressure and vacuum device not stuck and free to move.			
4.3.2	Ventilators	External examination: no corrosion – no soft patch.			
		Verification of effectiveness of means of closure.			

4.4 OPENINGS

Ref.	Description	Item	Y	N	N/A
4.4.1	Access hatchways	Overall condition and weather tightness of coamings and covers: no corrosion – no deformation – no thinned edge.			
		Gasket in place and efficient: containment in order.			
		Hinges, rods and dogs in place and operational: not seized – free to move.			
4.4.2	Doors and windows	Doors in proper maintenance condition without deformation and weather-tight.			
		All handles, hinges, dogs and wedges in place, in order and greased.			
		Gasket in place and relevant containment in order.			
		Windows in place and weather tight: no cracks – no patches.			
		Availability of shield as requested.			
		Closed type window on superstructure front bulkhead and within three meter from cargo area (for tankers only).			

Self-verification Checklist

Ref.	Description	Item	Y	N	N/A
4.4.3	Manholes and flush scuttles	General examination: no corrosion - no deformation.			
		All bolts and nuts in place.			
		Identification of space served.			

4.5 PROTECTION OF THE CREW

Ref.	Description	Item	Y	N	N/A
4.5.1	Handrails and bulwarks	Bulwark in good condition: no deformation – no stays bracket cracked, detached or wasted.			
		Winches at mooring station fitted with platform and handrail: oil drip trays in place and clean – no oil residues.			
		Fairleads and rollers in order, free to rotate and greased.			
		Ladder with steps and handrail in good condition.			
		Handrails continuous without interruption complete with courses in satisfactory condition: non wastage - no missing stanchions - no deformation jeopardizing efficiency.			
		Access to bow in proper condition: catwalk and lane on main deck with anti-slippery surface.			

Section 5 – MACHINERY

Ref.	Description	Item	Y	N	N/A
5.1	Steering gear	Steering gear room neat and in order: no obstruction - spare, tool, rope properly stowed and rigged as necessary.			
		Floor free from oily residues.			
		No hydraulic oil leakage from steering gear and hydraulic oil storage tank.			
		Low level alarm for hydraulic oil tank.			
		Anti-slippery floor or grating and handrails I.W.O. steering gear.			
		Instruction for emergency and local control displayed.			
		Means of communication with bridge.			
		Heading information (Keel laid \geq 01/02/1992).			
		Test of emergency steering gear including test of communication system.			
		Correspondence of bridge and local rudder angle indicators.			
		Test of loss of power and oil low level alarm with repetition on bridge.			
5.2	E.R. Cleanliness	Bilges dry and clean – no rags – no spool pipes abandoned.			
		Bilge wells and bilge suctions free from obstruction.			
		Bilge alarm sensor in place and operational.			
		Flooring, platform including ladder clean and free from oily and slippery residues.			
5.3	E.R. Outfitting	Engine room neat and in order.			
		No obstruction on passage ways.			
		Spares and tool properly stowed and rigged as necessary.			
		Electrical panel and distribution boxes properly supported and complete with cover and closing devices.			
		Ceiling light in place with bulb and cover.			
		Smoke and fire detector properly fitted with sensor.			
		Ventilation duct with relevant grating.			
		No flexible hoses connected and in use.			
		Hydrants with no leakage.			
		Fire hoses – nozzle and spanner key in place.			
		Poster and symbols displayed: IMO red and green series.			
		Engines' control instrument fitted in place and in working condition: Pressure gauges – thermometer – rpm counter.			
		Pressure gauges fitted on suction and delivery pipe of pumps.			
Boiler's instrument control: steam pressure gauges – fuel oil pressure gauged – steam temperature – water level indicator.					

Self-verification Checklist

Ref.	Description	Item	Y	N	N/A
5.3	E.R. Outfitting (cont'd)	Electrical starter panel with amperometer – voltmeter in working condition.			
		Exhaust gas pipes of internal combustion engines and boilers properly insulated: no gas leakage – no hot spot.			
5.4	Sounding pipes	Indication of tank served.			
		Automatic blanking device: counterweight (oil fuel tanks only) for ship with keel laid \geq 01/02/1992.			
		Small diameter self-closing control cock (oil fuel tanks only) for ship with keel laid \geq 01/02/1992.			
		Closing device: cap.			

Section 6 – Electrical Equipment

6.1 General

Ref.	Description	Item	Y	N	N/A
6.1.1	Switchboard and wire	No unprotected switch panel and junction boxes.			
		No exposed wires.			
		Wires tied on cable trays.			
		No damaged cable trays.			
		No unauthorized/temporary wiring.			
		Electrical cable conduit (particularly on weather deck) in good condition (no cracks, no holes)			
6.1.2	Switchboard	Insulation mats provided in the front and behind at main and emergency switchboards.			
		Indicators, lights and meters in working condition.			
6.1.3	Batteries	Condition, charge status, proper storage.			
		Battery room neat and in order.			
		Ex Type lights – Exhaust vent far from ignition.			

6.2 Emergency source of electrical power

Ref.	Description	Item	Y	N	N/A
6.2.1	General examination	Emergency generator room neat and in order: no obstruction – no storage of equipment and spares.			
		Users' switch labeled.			
		Emergency light within:			
		Escape routes and stairways;			
		Control station including fixed firefighting system control room;			
		Engine room;			
		Steering gear room;			
		Emergency D/G room;			
		Emergency fire pump room;			
		Firemen's outfits;			
		Lockers Navigation;			
		Bridge GMDSS station;			
		Muster and embarkation station;			
		Insulation mat I.W.O. switchboard;			
		Availability and test of telephone/means of communication;			
Portable fire extinguisher: type and number – last service.					
6.2.2	Diesel generator	Fuel supply: tank level gauge – quick closing valve – fuel distribution (flexible hoses).			
		Exhaust gas pipe tight and properly insulated: no gas leakage, no hot spot.			
		Air intake and relevant damper.			
		Fixed firefighting system (if fitted): type – date of last service.			

Self-verification Checklist

Ref.	Description	Item	Y	N	N/A
6.2.3	Starting system by compressed air	Bottles - recharging system - distribution line – air dryer if fitted.			
6.2.4	Starting system by battery	Record of battery check.			
		Batteries properly connected for the requested equipment.			
		Battery charger.			
		Condition, charge status, storage.			
		Battery room neat and in order.			
		Ex Type lights – Exhaust vent far from ignition.			
6.2.5	Test	Working test of emergency source of power including automatic start.			
6.2.6	Second mean for starting	Manual hydraulic or second battery set (*) (*) delete as appropriate			

Section 7 - POLLUTION PREVENTION

7.1 OILY WATER SEPARATOR

Ref.	Description	Item	Y	N	N/A
7.1.1	General	Identification of equipment and approval standard as described in relevant type approval certificate and recorded under item 2.3.1 of Supplement to IOPP Certificate.			
		Identification of oil content meter and approval standard as described in relevant type approval certificate and recorded under item 2.3.3 of Supplement to IOPP Certificate.			
		Capacity of equipment as recorded under item 2.4 of Supplement of IOPP Certificate.			
		Cleanliness and tightness.			
		Absence of unauthorized connection to other system.			
		Piping system and connection thereof including: cross check, if fitted, of bilge tank position and volume towards capacity plan and oil record book - part I absence of physical modifications/alterations absence of signs of corrosions and/or leaks operation of pressure gauges and level switches connection of suction pipe to bilge tank and/or bilge wells only absence of connection to sludge tank sampling line for oil content meter compressed service air piping for pneumatic control discharge line of separated oil to sludge tank.			
7.1.2	Operational test	Operational test including check of ppm alarm and automatic stopping device. Such device could either stop the supply pump of equipment or switch in recirculation mode (return to bilge) the three way valve fitted on discharge line of the equipment.			
		Alarm should be audible by personnel working in engine room or in the engine control room and, in case of unattended machinery spaces, be acknowledged and transferred by automation system.			

7.2 OIL DISCHARGE MONITORING AND CONTROL SYSTEM

Ref.	Description	Item	Y	N	N/A
7.2.1	General	Availability of approved ODME manual.			
		Visual examination of control cabinet including check of synoptic panel with lamp, alarms, key pad for data entry (speed, rate of discharge, ppm).			
		Recorder fitted with paper: three year record shall be kept on board.			
		Visual examination of sampling pump and associated piping including oil content meter and flow meter.			
		Visual examination of overboard discharge valve and recirculation valve including relevant hydraulic control system: no oil leakage, indication of valve status.			
		Visual examination of sampling pump shaft gas tight penetration (E.R. versus Pump Room).			

Ref.	Description	Item	Y	N	N/A
7.2.2	Testing	Run calibration test.			
		Simulation of automatic discharge stop by manual entry of data.			

7.3 SLUDGE TANK

Ref.	Description	Item	Y	N	N/A
7.3.1	General examination (for oil tankers only)	Review of capacity plan/stability booklet for location and capacity of the sludge tank(s).			
		Correspondence of location and capacity of sludge tank(s) as recorded under item 3.1 of IOPP certificate.			
		Correspondence of location of sludge tank(s) as recorded in the Oil Record Book.			
		Identification of sludge tank(s).			
		Sounding pipe with relevant closing device.			
		Absence of discharge connection to overboard.			
		Absence of discharge connections to the bilge system, oily bilge water holding tank(s), tank top or oily water separators.			
		Fitting of dedicated pump and relevant piping arrangement to: 1. ashore discharge line leading on main deck and fitted to accommodate the international shore connection flange; 2. mixing tank(s) for auxiliary boilers or incinerators if any.			
		Absence of unauthorized connection.			

Section 8 - SAFETY OF NAVIGATION

Ref.	Description	Item	Y	N	N/A
8.1	Nautical publication	Availability of latest edition of annual catalogue of chart and publication(i.e.: Catalogue of Admiralty Chart and Publications): list and detail of nautical publication to be provided on board depending on the trading area of the ship.			
		Availability of latest revision of publication as detailed in the catalogue:			
		Charts;			
		Sailing directions;			
		List of lights and fog signals;			
		List of radio signals;			
		Tides table;			
		Availability of Notice to Mariners: weekly publication containing updates to nautical charts and publications;			
		Availability of 6 month publication " Cumulative list of Notice to Mariners";			
		Availability of yearly publication "Annual Summary of Admiralty Notices to Mariners";			
		Correction and update of charts and publications duly and timely done and properly recorded in the correction logbook. Corrections are recorded both on the charts and in the dedicated logbook. Correction to be made in accordance with notice to mariners instruction.			
		Electronic charts and publications: suitability for ECDIS system and relevant electronic back-up system.			
		Availability of adequate selection of ENC – Electronic Navigational Charts – for the intended voyage.			
		Officers in charge of navigational watch using ECDIS system provided with certificate of training and for apparatus different from that one used to obtain the certificate, record of familiarization with apparatus fitted on board.			
Availability of charts' updates issued by organizations recognized by Flag. Administration, including separate storage – automatic application – record of updates applied - date of application.					
8.2	Navigational records	Number and date of last Notice to Mariner corrections applied.			
		Voyage plan filled in properly: way points – chart numbers – sailing restriction and warning.			
		Charts and publications for the intended voyage updated with the latest release of Notice to Mariners.			
		Position Fixes and separation zone traced on the charts.			
8.3	GNSS	GPS with relevant interface to other navigational apparatus.			
8.4	Echo-sounder	Echo sounder operational.			

Ref.	Description	Item	Y	N	N/A
8.5	Radar(s)	Radar(s) operational.			
		Plotting facilities available.			
		Blind sectors displayed.			
8.6	ARPA	Automatic Radar Plotting Aid (ARPA) operational.			
8.7	ECDIS	Apparatus and back-up system updated with latest correction.			
8.8	BNWAS	Setting of dormant time and reset system Alarm transfer system in working condition. Acknowledge and reset system.			
8.9	LRIT	Conformance test report issued by Flag Administration available on board.			
8.10	AIS	Annual test report available on board.			
8.11	VDR	Interface and input from other navigational equipment, location and proper fitting of recording microphones, annual performance report available on board.			
8.12	Echo-sounder	Echo sounder operational.			
8.13	Heading and track control	Operating and switch over instruction displayed.			
8.14	Daylight signaling lamp	Lamp available and in working condition.			
		Test on both emergency circuit and battery.			
8.15	Magnetic compass(es)	Liquid level satisfactory: no air bubbles.			
		Voice pipe between standard compass position and main steering position in good condition.			
		Light for binnacle and reflection tube.			
		Table/curve of residual deviation available and deviation record maintained.			
		Compass correction logbook.			
8.16	Gyrocompass	Gyrocompass and repeaters in operational condition.			
8.17	Indicators	Speed and distance indicators in working condition.			
		Rudder angle indicator operational.			
		Propeller(s) rate of revolution indicators operational.			
		Variable pitch propeller/operational mode indicator operational.			
		Rate of turn indicator operational.			

Ref.	Description	Item	Y	N	N/A
8.18	Navigation lights and signals	Fore & aft masthead lights, side lights, stern light, anchor lights, not-under-command lights in working condition.			
		Distribution panel and relevant alarms in working condition.			
		Test on main and emergency source of power.			
		Three (3) sets of black ball shapes and one (1) diamond shape available.			
		Alarm for faulty lamp.			
		Whistle, bell and gong available.			
8.19	Miscellaneous	Fault alarm and power alarm not displayed on the apparatus display.			
		Lamp test and self-test device, when fitted, in working condition.			
		Light and buzzer in working condition.			
		Supply from emergency power supply.			
		Consistency of data displayed in different apparatus.			

Section 9 - CREW ACCOMMODATION, SAFETY & HEALTH

Ref.	Description	Item	Y	N	N/A
9.1	Minimum age	Persons below the age of 16 shall not be employed or engaged or work on a ship.			
		Seafarers under the age of 18 shall not be employed or engaged or work where the work is likely to jeopardize their health or safety.			
		Special attention should be paid to the safety and health of seafarers under the age of 18, in accordance with national laws and regulations.			
		Night work* for seafarers under the age of 18 is prohibited, except to the extent that an exemption has been made by the competent authority under Standard A1.1, paragraph 3, in the case of training programs (exemption to be made available on board).			
9.2	Medical certification	Seafarers are not allowed to work on a ship unless they are certified as medically fit to perform their duties.			
		For seafarers working on ships ordinarily engaged on international voyages the certificate should be provided at least in English.			
		The medical certificate should have been issued by a duly qualified medical practitioner recognized by the relevant Competent Authority.			
		The period of validity for a certificate is determined under the national law of the flag State in accordance with the following: <ul style="list-style-type: none"> • two-year maximum for medical certificates except for seafarers under 18; then it is one year; • six-year maximum for a color vision certificate (Standard). 			
9.3	Training & Qualification	All seafarers should be trained or certified* as competent or otherwise qualified to perform their duties in accordance with flag State requirements (*STCW training & certification is accepted to meet the requirements).			
		All seafarers should have successfully completed training for personal safety on board ship.			
9.4	Seafarers Employment Agreement (SEA)	All seafarers should have a copy of their seafarers' employment agreement (SEA) signed by both the seafarer and the shipowner or shipowner's representative (evidence of contractual or similar arrangements is to be made available).			
		A SEA should, at least, contain the matters set out in Standard A2.1, paragraph 4(a)–(k) of the MLC, 2006 which are:			
		- Seafarer's full name, date of birth or age and place of birth;			

Ref.	Description	Item	Y	N	N/A
		- Shipowner's name and address;			
		- The place where and date when the SEA is entered into;			
		- The capacity in which the seafarer is employed;			
		- The amount of the seafarer's wages or, where applicable, the formula used for calculating it;			
		- The termination of the agreement and the condition thereof;			
		- The health and social security protection benefits to be provided to the seafarer by the shipowner;			
		- The seafarer's entitlement to repatriation;			
		- Reference to collective bargaining agreement, if applicable.			
		Seafarers should also be given a document containing a record of their employment on the ship.			
		A copy of the SEA is to be made available on board.			
		Where a collective bargaining agreement forms all or part of the SEA, the agreement should be on board the ship with relevant provisions in English.			
9.5	Recruitment and placement services	Where a shipowner has used a private seafarer recruitment and placement service it should be licensed or certified or regulated in accordance with the MLC, 2006.			
		Seafarers shall not be charged for the use of these services.			
		Shipowners using services based in States not party to the MLC, 2006, should ensure, as far as practicable, that these services meet the requirements of the MLC, 2006 (evidence of compliance to be made available).			
9.6	Hours of work or rest	The minimum hours of rest* should not be less than ten hours in any 24-hour period, and 77 hours in any seven-day period, if the relevant national law relates to hours of rest, or, if the relevant national law relates to hours of work, the maximum hours of work** should not exceed 14 hours in any 24-hour period and 72 hours in any seven-day period (* "Hours of rest" means time outside hours of work; this term does not include short breaks; ** "Hours of work" means time during which seafarers are required to do work on account of the ship; ***With respect to the national standards implementing Standard A2.3).			
		Hours of rest may be divided into no more than two periods, one of which must be at least six hours; the interval between consecutive periods of rest should not exceed 14 hours.			
		Muster, firefighting and lifeboat drills or trainings shall be conducted in a manner that minimizes the disturbance of the rest period of the seafarers and does not induce fatigue.			

Ref.	Description	Item	Y	N	N/A
		When a seafarer is on call, such as when a machinery space is unattended, the seafarer shall have an adequate compensatory rest period if the normal period of rest is disturbed by call-outs to work.			
		Shipboard working arrangement to be posted in an easily accessible place and for every position shall be written at least in English language and contain, as a minimum: <ul style="list-style-type: none"> - The schedule of service in port and at sea; - The maximum hours of work or the minimum hours of rest prescribed by the relevant flag. 			
		The Master has the right to suspend the schedule of the hours of rest of the seafarers due to safety reasons until the situation has been restored and to ensure that involved seafarers are provided with an adequate period of rest.			
9.7	Manning levels	Ships should have a sufficient number of seafarers employed on board to ensure that ships are operated safely, efficiently and with due regard to security under all conditions, taking into account concerns about fatigue and the particular nature and conditions of voyage.			
		Ships at least should comply with the manning levels as stated in the SMD or equivalent issued by the competent authority.			
9.8	Accommodation	Ships should be in compliance with the minimum standards established by the MLC, 2006, providing and maintaining decent accommodation and recreational facilities for seafarers working or living on ships, or both, consistent with promoting seafarers' health and well-being.			
		New ships: to be applied the requirements related to construction and layout stated in MLC 2006 Reg.3.1 as implemented by relevant national legislation (if any).			
		Existing ships: Ships that were in existence before entry into force of the MLC, 2006, should maintain decent accommodation and recreational facilities for seafarers working or living on board, or both, consistent with promoting the seafarers' health and well-being.			

Ref.	Description	Item	Y	N	N/A
		Protecting guards for rotating parts fitted and in good condition.			
		Warning signs adequately posted.			
		Ear protection available in excessively noisy spaces.			
		Heating, lighting, drainage and ventilation in good working condition.			
		Accommodation: - in clean and habitable condition; - free from infestation; - not stored for stowing equipment or cargo.			
		Toilettes: - neat and clean; - flushing working properly; - floor tiles in good conditions; - Doors can properly close and lock; - Floor drainage in good condition.			
		Showers and laundries working properly.			
		Hospital/infirmary: - Number of beds as prescribed by the national law; - neat and clean; - dedicated toilet can properly close and lock; - rooms/beds not to be used as crew cabin.			
		For all ships to be checked:			
		Frequent documented inspections to be carried out for demonstrating the ongoing compliance of the accommodation (condition of the equipment and cleanness of the accommodation).			
		Evidence that measures are being taken on the ship to monitor noise and vibration levels in seafarers' working and living areas.			
9.9	Recreational facilities	Appropriate recreational facilities as adapted to meet the needs of seafarers who have to live and work on the ship, shall be provided on board for the benefit of the seafarers.			
9.10	Food and catering	Food to be provided free of charge to seafarers during the period of engagement.			
		Seafarers employed as ship's cooks* with responsibility for preparing food should be trained and qualified for their positions (* "Ship's cook" means a seafarer with responsibility for food preparation) (dispensation/exemption to have the ship's cook provided by relevant Competent Authority, if any, is to be made available on board).			
		Seafarers working as ships' cooks should not be under the age of 18.			
		Frequent and documented inspections of food, water and catering facilities should be carried out by the master or a designate person.			
		Visual observation of catering facilities, including galleys and storerooms, to check that they are hygienic and fit for purpose.			

Ref.	Description	Item	Y	N	N/A
		Evidence concerning how drinking water quality is monitored and the results of such monitoring.			
		Menu plans together with visual observation of food supplies and storage areas to ensure that the food supplied is of an appropriate quality (for example, not out of date) and quantity and nutritional value and is varied in nature.			
9.11	Health and safety and accident prevention	The working, living and training environment on ships should be safe and hygienic and conform to national laws and regulations and other measures for occupational safety and health protection and accident prevention on board ship. Reasonable precautions are to be taken on the ships to prevent occupational accidents, injuries and diseases including risk of exposure to harmful levels of ambient factors and chemicals as well as the risk of injury or disease that may result from the use of equipment and machinery on the ship.			
		Ships should have an occupational safety and health policy program to prevent occupational accident injuries and diseases, with a particular concern for the safety and health of seafarers under the age of 18.			
		A documented ship safety committee, that includes participation by the seafarer safety representative, is required (for ships with five or more seafarers).			
		Risk evaluation is required for on-board occupational safety and health management (taking into account relevant statistical data).			
9.12	Medical care on board and ashore	Seafarers should be covered by adequate measures for the protection of their health and have access to prompt and adequate medical care, including essential dental care, whilst working on board.			
		Health protection and care are to be provided at no cost to the seafarer, in accordance with national law and practice.			
		Shipowners are to allow seafarers the right to visit a qualified medical doctor or dentist without delay in ports of call, where practicable.			
		Documents (such as the SMD and crew list) to confirm that: - a qualified medical doctor is working on board (in the case of ships that carry 100 or more people and that are ordinarily engaged in voyages of more than three days' duration); Or: -where ships are not required to carry a medical doctor, they have at least one seafarer on board (who is trained and qualified to the requirements of STCW) to be in charge of medical care or is competent to provide medical first aid as part of their regular duties.			

Ref.	Description	Item	Y	N	N/A
		Evidence that medical report forms are carried on board the ship.			
		Evidence that procedures are in place for radio or satellite communications for medical assistance.			
		Latest edition of the Medical Guide available on board.			
		Inventories of the required medicines and medical equipment to be made available on board.			
9.13	On board complaint procedures	Availability of an on-board procedures for the fair, effective and expeditious handling of seafarer complaints alleging breaches of the requirements of the MLC, 2006 (including seafarers' rights).			
		All seafarers to be provided with a copy of the on-board complaint procedures applicable on the ship (Standard A5.1.5, paragraph 4), in the working language of the ship.			
		The procedure shall contain: - the path to be followed in order to fill a complaint; - the on board reference person; - contact details of the shipowner's reference person; - contact details of the Competent Authority reference person/office; - contact details of the reference person in the Country of residence of each seafarer.			
		Evidence that victimization of seafarers for filing complaints under the MLC, 2006, is prohibited.			
9.14	Payment of wages	Seafarers should be paid at no greater than monthly intervals and in full for their work in accordance with their employment agreements.			
		Seafarers are entitled to an account each month indicating their monthly wages and any authorized deductions such as allotments.			
		No unauthorized deductions, such as payments for ship.			
		Charges for remittances/allotment* transmission services should be reasonable and exchange rates in accordance with national requirements (* An allotment is an arrangement whereby a proportion of seafarers' earnings are regularly remitted, on their request, to their families or dependents or legal beneficiaries whilst the seafarers are at sea).			

Ref.	Description	Item	Y	N	N/A
9.15	Compliance and enforcement	A copy of the MLC 2006 to be present on board (hard copy or electronic) and made available for consultation to all seafarers.			
		For those ships subject to inspection and certification process the following documents are to be made available and in course of validity: - Maritime Labour Certificate (MLC) (maximum 5 years validity subject to intermediate inspection between 2nd and 3rd anniversary date); - Declaration of Maritime Labour Compliance (DMLC) Part I issued by the relevant competent authority; - Declaration of Maritime Labour Compliance (DMLC) Part II prepared by the shipowner identifying the measures adopted to satisfy the requirements stated in DMLC Part I.			
		For those ships subject to inspection process only the following document is to be made available and in course of validity: - report of inspection (maximum 3 years validity).			
		Copy of MLC Certificate, DMLC Part I and II for inspected and certified ships or copy of report of inspection for inspected ships to be posted in the conspicuous places on board the ship for easy consultation by all seafarers.			
		Availability of any exemptions/substantial equivalences, if any, granted by the relevant Competent Authority.			
		Availability on board of the result of the inspections and related deficiencies found (if any) together with the date when the deficiencies were found to be remedied.			

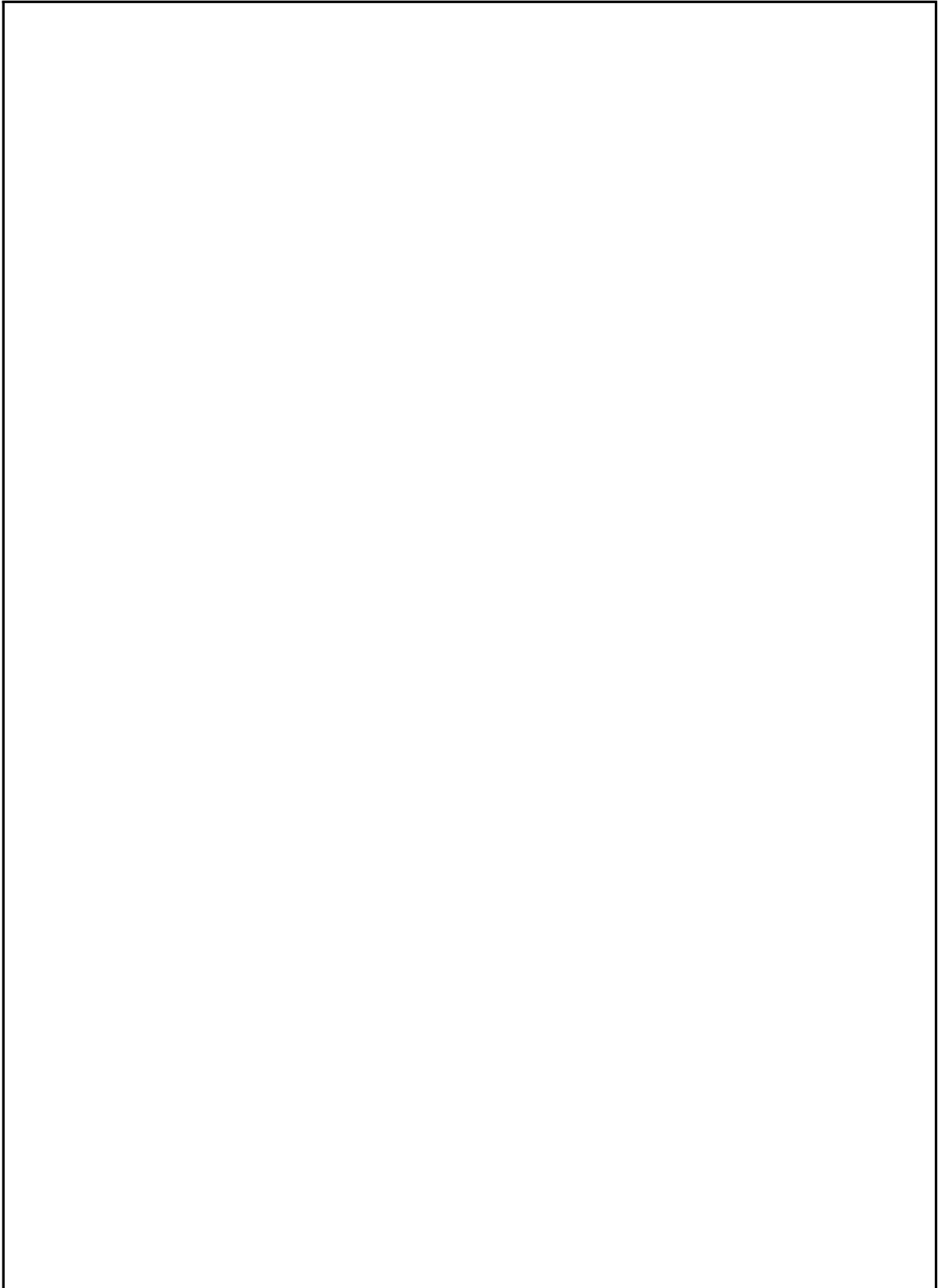
Section 10 - RADIO EQUIPMENT

10.1 GMDSS INSTALLATIONS [SOLAS 74/88]

For ships whose keel was laid on or after 01/02/1995 and, starting from
01/02/1999, for those whose keel was laid before 01/02/1995.
(Equipment fitted depending on sea areas)

Ref.	Description	Item	Y	N	N/A
10.1.1	General examination	Test lighting.			
		Call sign, station identity and other required codes clearly marked.			
		Charge of batteries.			
10.1.2	VHF radio installation	Check VHF DSC operation, (channel 70).			
		Check VHF T+R operation, (channels 6,13,16).			
		Check VHF DSC operation, (channel 70) watch receiver.			
10.1.3	MF radio installation	Check MF DSC operation, (frequency 2187.5 KHz).			
		Check MF T+R operation, (frequency 2182 KHz).			
10.1.4	MF/HF radio installation	Check MF/HF DSC operation, (4207.5-6312- 8414.5-12577-16804.5 KHz).			
		Check MF/HF T+R operation, (2 174.5 – 4 177.5 – 6 268 – 8 376.5 – 12 520 – 16 695 KHz).			
10.1.5	NAVTEX	NAVTEX receiver: run self-test program.			
10.1.6	INMARSAT	EGC facility: run self-test program.			
		Ship earth station: run self-test program.			
10.1.7	Satellite EPIRB	Position and mounting for float free operation.			
		Ship's identification number clearly marked.			
		Batteries valid. (To be serviced every 4 years).			
		Hydrostatic release mechanism valid. (To be serviced every 2 years)			
		Transmitter test according to the manufacturer instruction.			
10.1.8	Radio Log Book	Entries and test properly recorded in the radio logbook.			
10.1.9	Shore base Maintenance	Up dated shore based maintenance contract in course of validity.			

Section 11 – COMMENTS

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Annex 1

LIST OF SHIP CERTIFICATES AND DOCUMENTS

No.	Document	all	bca	oil	che	gas	gen
1	Class.	X					
2	International Load Line Certificate.	X					
3	International Load Line Exemption Certificate.	X					
4	Cargo Ship Safety Construction Certificate.	X					
5	Cargo Ship Safety Equipment Certificate.	X					
6	Cargo Ship Safety Radio Certificate.	X					
7	Safety Management Certificate (ISM Code).	X					
8	International Ship Security Certificate. (ISSC – ISPS Code).	X					
9	Copy of Document of Compliance (ISM Code) updated with endorsement for last Company audit.	X					
10	International Oil Pollution Prevention Certificate. (IOPPC- MARPOL Annex I).	X					
11	International Pollution Prevention Certificate. (NLS/IPPC- MARPOL Annex II).			X (*)		X (**)	
12	International Sewage Prevention Pollution. (ISPPC – MARPOL Annex IV).	X					
13	International Air Pollution Prevention Certificate.	X					
14	Engine International Air Pollution Prevention Certificate. (EIAPP – MARPOL Annex VI) (1).	X					
15	International Energy efficiency Certificate. (IEEC – MARPOL Annex VI) (2).	X					
16	International Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk. (ICOF Chem - IBC Code).				X		
17	International Certificate of Fitness for the Carriage of Liquified Gases in Bulk. (ICOF Gas - IGC Code (3)).					X	
18	Certificate of Fitness for the Carriage of Liquified Gases in Bulk. (COF Gas - GC Code) (4.)					X	
19	International Tonnage Measurement Certificate.	X					
20	Cargo Gear Register Book and Certificate. (ILO 152).	X					
21	Document of Compliance for the Carriage of Grain.		X				X
22	Document of Compliance for ships carrying Dangerous Goods. (5).		X				X
23	Statement of the carriage in bulk of cargo listed in IMSBC Code. (6).		X				X
24	International Anti Fouling system certificate. (IAFSC – AFC Convention).	X					
25	Safe Manning Document. (SOLAS Ch.V).	X					
26	Certificates for Master, Chief Mate, Watch Officers and Ratings.	X					
27	Rating certificates of proficiency in survival craft.	X					

No.	Document	all	bca	oil	che	gas	gen
28	Certificates for Chief Engineer, 2nd Engineer, Watch.	X					
29	Endorsements for tankers.			X	X	X	
30	Radio Officers/Operators certificates of competency.	X					
31	Medical examination certificates for all crew.	X					

(*) when the oil tanker is carrying products that are listed in the Ch. 18 of the IBC Code.

(**) when the gas carrier is carrying products that are listed also in the Ch. 17 of the IBC Code.

(1) For internal combustion engines of 130 kW power and above not intended for emergency services and lifeboats and rescue boats.

(2) For ships:

- a. Which the building contract is placed on or after 01/01/2013 or,
- b. The keel of which is laid on or after 01/07/2013 or,
- c. Delivered on or after 01/07/2015 and,
- d. For existing ship not included in the above at the first intermediate or renewal survey, whichever is first, on or after 01/01/2013.

(3) For ships whose keel was laid on or after 01/07/1986.

(4) For ships whose construction contract has been signed after 31/10/1976 and whose keel has been laid before 01/07/1986.

(5) Carriage in compliance with SOLAS 74/88 Reg. II-2/54 or SOLAS 74/00 Reg. II-2/19 for ships whose keel was laid on or after 01/07/1986.

(6) Carriage in compliance with IMSBC Code of cargo listed in this Code:

- a. All cargoes including dangerous ones for ships whose keel was laid before 01/07/1986.
- b. Cargo other than dangerous goods for ships whose keel was laid on or after 01/07/1986.

all = all ships
bca = bulk carriers
oil = oil tankers

che = chemical tankers
gas = gas tankers
gen = general cargo

Annex 2

LIST OF MANUALS BOOKLETS AND PUBLICATIONS

No.	Document	all	bca	oil	che	gas	gen
1	Loading manual.	X					
2	Approved trim and stability booklet.	X					
3	Approved damage stability booklet.		X	X	X	X	
4	Approved grain loading stability booklet.		X				X
5	Approved SOPE Plan.	X					
6	Approved SMPEP.				X		
7	Approved SEEMP. (Ship Energy Efficiency Management Plan).	X					
8	Approved Oil Discharge Monitoring and Control System (ODMS) manual.			X			
9	Approved Dedicated Clean Ballast Tank (CBT) operational manual.			X			
10	Approved Crude Oil Washing (COW) operation and equipment manual.			X			
11	Approved P&A Manual.				X	X(*)	
12	Approved Cargo Securing Manual. (if cargo units are carried).		X				X
13	Approved NOx technical file for internal combustion engines.	X					
14	Safety Management Manual.	X					
15	Oil Record Book Part I. (machinery spaces operation).	X					
16	Oil Record Book Part II. (cargo-ballast operation).			X			
17	Cargo Record Book.				X		
18	Inert Gas System (IGS) instruction manual.			X			
19	Cargo information/operation.				X		
20	Operational procedures for special ballast arrangements.			X			
21	International Bulk Chemical (IBC) Code (for ships built on or after 1.7.86).				X		
22	International Gas Carrier (IGC) Code (for ships built on or after 1.7.86).					X	
23	Manoeuvring booklet and information. (for ships built on or after 01.09.84).	X					

Annex 2

Ref.	Document	all	bca	oil	che	gas	gen
24	General catalogue for the nautical publications.	X					
25	Charts and publications for the intended voyage.	X					
26	Notices to Mariner and chart correction logbook.	X					
27	International Code of Signals.	X					
28	Radio license.	X					
29	Radio logbook.	X					
30	Operating manuals for radio equipment.	X					
31	ITU publications.	X					
32	Enhanced Survey Program Report File.		X	X	X		
33	Bunker delivery notes for Low Sulfur oil fuel.	X					
34	Deck logbook.	X					
35	Engine room logbook.	X					
36	Fire plans.	X					
37	Muster lists.	X					
38	IMO Posters/Signs: Red (Fire and Lifesaving); Green (Escape); Blue (Survival crafts and launching appliances).	X					
39	Lifesaving appliances training manual.	X					
40	Instructions for on board maintenance of lifesaving appliances.	X					
41	Instructions for on board maintenance of fire-fighting appliances.	X					
42	Operational instructions for emergency steering change-over procedure.	X					
43	Operational instruction for fixed firefighting system.	X					

(*) when the gas carrier is carrying products that are listed also in the Ch. 17 of the IBC Code.

all = all ships che = chemical tankers
bca = bulk carriers gas = gas tankers
oil = oil tankers gen = general cargo

Annex 3

LOGBOOK ENTRIES

No.	Item	Frequency	
1	Working Language		
2	Steering gear	Operational test and change-over procedures.	12 hours before departure
		Emergency steering gear test. (direct control from steering gear compartment, communication, alternative power supply).	Three-monthly
3	Lifesaving appliances	Inspection of lifesaving appliances and lifeboat equipment using the checklist given in the "Instructions for On-board Maintenance". (see Appendix 2, item 6).	Monthly
		On-board training in the use of lifesaving and fire-fighting appliances.	2 weeks after embarkation
4	Lifeboats and rescue boats	Operation of lifeboat and rescue boat engines ahead and astern (for at least 3 minutes).	Weekly
		Launching of each lifeboat and rescue boat.	Three-monthly
		Launching of free-fall lifeboat. (if fitted).	Six-monthly
		On-board training in the use of davit launched life rafts.	Interval of 4 months
5	Launching appliances starting from 1.7.98	Annual thorough examination.	Annual
		Dynamic test with load of the winch brake upon completion of the annual thorough examination.	Annually
		Dynamic test with 1.1 overload of the winch brake upon completion of the annual thorough examination.	Quinquennial
6	Lifeboat on-load release gear starting from 1.7.98	Annual thorough examination and test.	Annual
		Operational test with 1.1 overload of the release gear upon completion of the annual thorough examination and whenever the release gear is overhauled.	Quinquennial
7	General alarm	Test of general emergency alarm.	Weekly
8	Drills	Abandon ship drill.	Monthly
		Fire drill.	Monthly
9	Fire-fighting appliances	Inspection of breathing apparatus.	Monthly
		Renewal of liquid foam.	At each renewal

NOTE:

Additional entry may be specifically requested as per Flag Administration requirement.

Annex 4

LIFEBOAT INVENTORY ^(a)

	Item	Date ship's keel laid			
		before 26.5.65	between 26.5.65 and 25.5.80	between 25.5.80 and 1.7.86	after 1.7.86
		Required number			
1	Boarding ladder.	1	1	1	1
2	Buoyant oars, thole pins and crutches.	^(b)	^(b)	^(b)	sufficient
3	Boat hooks.	1	1	1	2
4	Bailer (buoyant if keel laid after 1.7.86).	1	1	1	1
5	Buckets.	2	2	2	2
6	Survival manual.	-	-	-	1
7	Efficient compass in binnacle provided with means of illumination.	1	1	1	1
8	Sea-anchor (with shock-resistant hawser and tripping line if keel laid after 1.7.86).	1	1	1	1
9	Painters of 15m/twice distance stowed lifeboat/waterline. (not free-fall lifeboats).	2	2	2	2
10	Hatchets.	2	2	2	2
11	Fresh water in watertight receptacles (liters per person).	3	3	3	3
12	Rustproof dipper with lanyard.	-	-	-	1
13	Rustproof graduated drinking vessel.	-	-	-	1
14	Food ration in airtight packaging (ration per person).	1	1	1	1
15	Rocket parachute flares.	2	4	4	4
16	Hand flares.	6	6	6	6
17	Buoyant smoke signals.	2	2	2	2
18	Waterproof Morse electric torch with spare batteries and bulb.	1	1	1	1
19	Daylight signaling mirror with instructions.	1	1	1	1
20	Copy of life-saving signals (on waterproof card/in waterproof container if keel laid after 1.7.86).	-	1	1	1
21	Whistle.	-	1	1	1
22	First-aid outfit in waterproof case.	1	1	1	1
23	Anti-seasickness medicine (doses per person).	-	-	-	6
24	Seasickness bag (per person).	-	-	-	1
25	Jack-knife with lanyard. (with tin-opener if keel laid after 1.7.86).	1	1	1	1
26	Tin-openers.	-	-	-	3
27	Buoyant rescue quoits with 30m buoyant line.	-	-	-	2
28	Manual pump.	1	1	1	1
29	Set of fishing tackle.	-	1	1	1
30	Tools for minor adjustment to the engine and its accessories.	-	-	-	sufficient
31	Portable fire extinguisher (only motor lifeboats if keel laid between 25.5.80 and 1.9.84).	1	1	1	1
32	Searchlight.	-	-	-	1
33	Radar reflector or radar transponder stowed in lifeboat.	-	-	-	1
34	Thermal protective aids (percentage of persons) but not less than 2.	-	-	-	10
35	Efficient 15m painters suitable for towing (free-fall lifeboats).	-	-	-	2
36	Lamp with oil for 12 hours.	1	1	1	-
37	Mast with galvanized wire stays and orange sails.	1	1	1	-
38	Vessel with 4,5 l oil attachable to the sea anchor.	1	1	1	-
39	Buoyant heaving lines.	2	2	2	-
40	Cover of a highly visible colour for protection against exposure	-	1	1	-

^(a) When a lifeboat and its launching appliance are replaced after 1.7.98 on ships constructed before 1.7.98, such lifeboat shall comply with the relevant requirements in force after 1.7.98. If the launching appliance is not replaced, the lifeboat may be of the same type as the one replaced.

^(b) A single banked complement of buoyant oars, two spare buoyant oars and a buoyant steering oar; one set and a half of pins or crutches attached to the lifeboat by lanyard or chain, a boat hook.

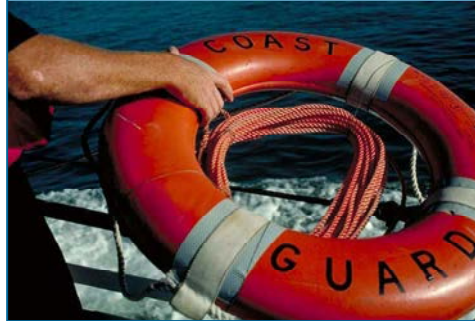
RESCUE BOAT INVENTORY ^(a)

	Item	Date ship's keel laid
		after 1.7.86 (no specific requirements for ships whose keel was laid before)
		Required number
1	Automatic draining valve with cap or plug attached with lanyard.	1
2	Rudder and tiller.	1
3	Buoyant lifeline around the rescue boat.	1
4	Handholds underside the hull.	2
5	Release mechanism for hooks.	1
6	Release device for forward painter.	1
7	Watertight lockers for storage of small items.	1
8	Arrangement for towing life rafts.	sufficient
9	Buoyant oars or paddles to make headway in calm seas.	sufficient
10	Thole pins and crutches attached with lanyard or equivalent arrangements.	for each oar
11	Buoyant bailer.	1
12	Efficient compass in binnacle provided with means of illumination.	1
13	Sea-anchor and tripping line with hawser of adequate strength (10m length).	1
14	Painter of sufficient length and strength attached to the release device.	1
15	Buoyant line for towing life rafts (50m length).	1
16	Waterproof Morse electric torch with spare batteries and bulb.	1
17	Whistle.	1
18	First-aid outfit in waterproof case.	1
19	Buoyant rescue quoits with 30m buoyant line.	2
20	Searchlight.	1
21	Efficient radar reflector.	1
22	Thermal protective aids.	10% persons / 2 (the greater)
23	Boat-hook (rigid rescue boats).	1
24	Bucket (rigid rescue boats).	1
25	Knife or hatchet (rigid rescue boats).	1
26	Buoyant safety knife (inflated rescue boats).	1
27	Sponges (inflated rescue boats).	2
28	Efficient manually operated bellows or pump. (inflated rescue boats).	1
29	Punctures repair kit in suitable container. (inflated rescue boats).	1
30	Safety boat-hook (inflated rescue boats).	1

^(a) When a rescue boat and its launching appliance are replaced after 1.7.98 on ships constructed before 1.7.98, such rescue boat shall comply with the relevant requirements in force after 1.7.98. If the launching appliance is not replaced, the rescue boat may be of the same type as the one replaced.



RECORD OF PSC MOST COMMON DEFICIENCIES



A COLLECTION OF THE MOST COMMON DEFICIENCIES FOUND DURING PORT STATE CONTROL INSPECTIONS

Each card, which includes some photographic material, contains a short description of the relevant equipment and applicable rules and regulations, together with some suggested tests and checks which, in the Classification Society view, could, if regularly applied, help maintain the efficiency and effectiveness of the equipment.

AN EASY AND USER-FRIENDLY TOOL TO ASSIST OWNERS TO REGULARLY CHECK THE MAINTENANCE CONDITION OF THE SHIP IN THE LIGHT OF A POSSIBLE PORT STATE CONTROL INSPECTION

- 1 FIRE DAMPERS (ENGINE ROOM)
- 2 MAIN FIRE PUMPS
- 3 EMERGENCY FIRE PUMP
- 4 FIRE MAIN
- 5 QUICK CLOSING DEVICES
- 6 EMERGENCY STOPS
- 7 EMERGENCY SOURCE OF ELECTRICAL POWER
- 8 OIL FILTERING EQUIPMENT
- 9 SLUDGE TANK (ILLEGAL OVERBOARD CONNECTIONS)
- 10 LIFEBOATS
- 11 LIFE RAFTS
- 12 LAUNCHING APPLIANCES
- 13 LOAD LINE APPLIANCES
- 14 OUTFITTING AND CLEANLINESS OF ENGINE ROOM AND STEERING GEAR ROOM
- 15 NAUTICAL CHARTS AND PUBLICATIONS
- 16 LEAKAGE FROM SLOPING PLATE OF TOPSIDE BALLAST TANKS
- 17 MAIN DECK, EXPOSED DECKS AND SUPERSTRUCTURES
- 18 ON-LOAD/OFF-LOAD LIFEBOAT RELEASE GEAR
- 19 SHIP CERTIFICATES AND DOCUMENTS; OFFICERS AND RATINGS CERTIFICATION
- 20 STERN DOORS
- 21 FIXED PRESSURE WATER SPRAY SYSTEM FOR SPECIAL CATEGORY SPACE

Release 1.5 – February 2014

Each card, which includes some photographic material, contains a short description of the relevant equipment and applicable rules and regulations, together with some suggested tests and checks which, in the view of this Administration, could, if regularly applied, help maintain the efficiency and effectiveness of the equipment. Each card which includes some photographic material, contains a short description of the relevant equipment and applicable rules and regulations, together with some suggested tests and checks which, in the Administration view, could, if regularly applied, help maintain the efficiency and effectiveness of the equipment.



1. GENERAL

In the event of an engine room fire, it is obviously important to be able to shut off both air and fuel. The air is shut off by means of dampers located in engine room ventilators.

Ventilators may either be (Fig. 1):
free-standing on the deck/superstructure, or,
an integral part of the ship's superstructure.



Fig. 1

Fire dampers may consist of a:

- **fire flap** inside the ventilator, which may be either manually operated locally by means of a lever (Fig. 1, Fig. 2), or remotely operated (Fig. 3);
- **multiple fin flap** on the air inlet, which may be either manually operated locally by means of a lever or remotely operated;
- manual **hinged cover** with sealing gasket and dogs. (Fig. 1, Fig. 4)

2. CHECKS AND TESTS

2.1 Hinged covers

Check the condition of the cover and gasket (wastage and damage).

Check the condition of hinges (free to rotate) and dogs (all available and well lubricated).

2.2 Fire flaps and multiple fin flaps

Check that the "Open" and "Closed" positions are clearly marked.

Check the condition of the flaps and their capability to provide the required seal.

Operate the closing device and move the damper to the "Closed" position.



Fig. 2



Fig. 3



Fig. 4



1. GENERAL

Ships are provided with main and emergency fire pumps and they are essential for the safety of the ship. Defective fire pumps, either main or emergency, are considered a major deficiency. All necessary repairs must be carried out before the ship sails.

At least two **independently driven fire pumps** (SOLAS 74/88 Reg. II-2/4 SOLAS 74/00 Reg. II-2/10.2.2) are provided, located in the engine room (Fig. 1, Fig. 2).

The second fire pump will often be the general service (GS) pump.



Fig. 1

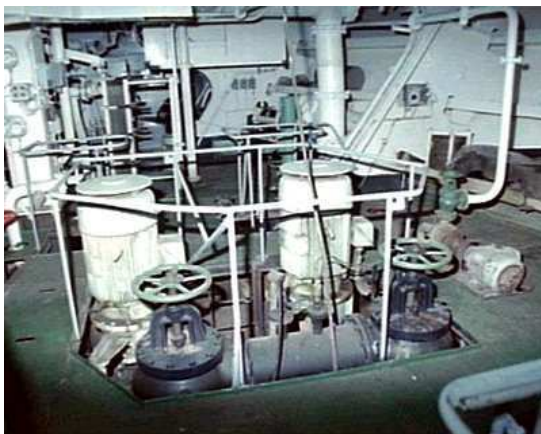


Fig. 2

2. CHECKS AND TESTS

Make an external visual examination of the pumps, motors, pipes, valves and pressure gauges, looking for damage, corrosion, leakage or malfunctioning. Check that fire pump connections are properly bolted and valves identified.

Check that pressure gauges on suction and delivery are in place and in working condition.

Carry out a working test of both pumps separately: adequate delivery pressure, evaluation of leakage from shaft seal, evaluation of vibration of pump.

Connect the foremost and the highest hydrants with the relevant fire hoses and nozzles and open them (all other hydrants remain closed).

Check that the system is capable of producing the required pressure (1) and that the two jets of water reach a sufficient horizontal distance (Fig. 3).

During the test, the line for anchor chain washing should be kept closed.

Check proper operation of dual jet nozzle: spray and jet mode.



Fig. 3

- (1) Although the SOLAS Convention requires the following minimum pressures:

For cargo ships:

- 0,27 N/mm² for ships with GT \geq 6000; and;
- 0,25 N/mm² for ships with 1000<GT<6000 for passenger ships;
- 0,40 N/mm² for ships with GT \geq 4000;
- 0,30 N/mm² for ships with 1000 < GT < 4000; to be reached with both pumps working, usually modern systems can achieve the required pressure with only one pump working.



1. GENERAL

Ships are provided with main and emergency fire pumps and they are essential for the safety of the ship. Defective fire pumps, either main or emergency, are considered a major deficiency. All necessary repairs must be carried out before the ship sails.

The emergency fire pump (**SOLAS 74/88 Reg. II-2/4 & SOLAS 74/00 II-2/10.2**) must always be located in a compartment separated from the engine room: this is often in the forecabin or aft in the steering flat.

The emergency fire pump may be either driven by an electric motor (*Fig. 1*), fed from the emergency switchboard, or by a small auxiliary diesel engine (*Fig. 2*).

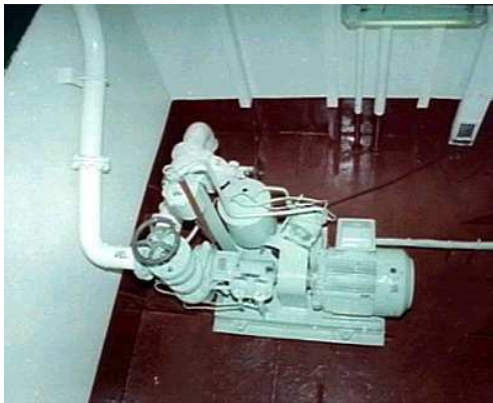


Fig. 1



Fig. 2

2. CHECKS AND TESTS

Check that location of emergency fire pump is in accordance with the fire plan.

Make an external visual examination of the pumps, prime movers, pipes, valves and pressure gauges, looking for damage, corrosion, leakage or malfunctioning.

Check that operating instructions are displayed.

Check that access and pump room are neat and in order; no obstruction and ready to use.

Check identification of sea chest valve and relevant control: local/remote pump driven by electric motor:

Check connection to emergency switchboard including relevant breaker is in order and labeled.

Check the proper condition of starter panel Motor driven pump.

Check the fuel supply system: tank level gauge – quick closing valve /remote closing device – fuel distribution.

Check availability of adequate amount of fuel for the requested autonomy of three hour: additional fuel for 15h should be available on board.

Check the starting system by compressed air: bottles, recharging system and distribution line – air dryer if fitted.

Or, check the starting system by battery: record of battery check – battery charger – battery stowage.

Check that exhaust gas pipe is tight and properly insulated: no gas leakage, no hot spots.

Check that the priming system for low water column head on suction line is properly fitted and in working condition.



PSC DEFICIENCY CARDS (CARGO SHIPS)

EMERGENCY FIRE PUMPS

Card n. 03

Test the pump including priming system connecting the foremost and the highest hydrants with the relevant fire hoses and nozzles.

Open the two hydrants mentioned above, check that the system is capable of producing the required pressure ⁽¹⁾ and that both jets reach a sufficient horizontal distance (Fig. 3).

Keep the pump functioning for at least 30 minutes.



Fig. 3

During the test of the emergency fire pump, the isolating valve from the engine room is to be closed, both to test its operation and to avoid pumps in the engine room being used to raise the pressure.

During the test, the line for anchor chain washing should be kept closed.

The emergency fire pump must be able to operate satisfactorily regardless of the draft or trim of the ship.



Fig. 4

When assessing the performance of an emergency fire pump in full load condition, consider that it could be tested in lightship condition during a port State control inspection.

- (1) The SOLAS Convention requires the following minimum pressures to be reached:
- 0.27 N/mm² for ships with GT>6000; and;
 - 0.25 N/mm² for ships with 1000<GT<6000.



1. GENERAL

Integrity of the **fire main** (SOLAS 74/83 Reg.II-2/4 74/09 Reg. II-2/10) is essential for the ship's safety.

A leaking or excessively corroded fire main is a major deficiency and all necessary repairs are to be carried out before the ship leaves the port.

The test is to be carried out in conjunction with the test of the main fire pump(s) and of the emergency fire pump.

2. CHECKS AND TESTS

Visually inspect the **fire main**: examination of piping and fittings on exposed deck as well as within accommodation, engine room and service spaces:

Cement boxes (*Fig. 1*) and other varieties of temporary repair, clamps – plaster or metallic filler - are not acceptable, except as emergency repairs at sea and only until the next port of call.

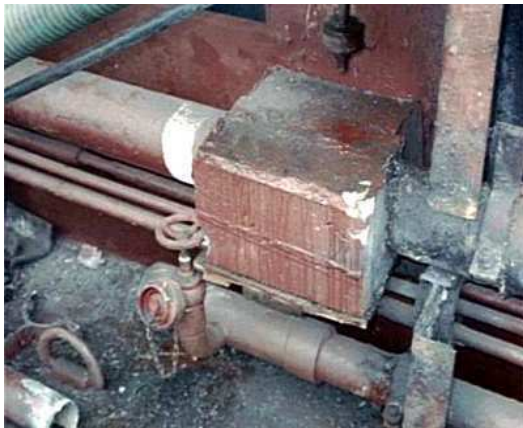


Fig. 1

Check and hammer test the **fire main** and **hydrants** under pressure and ask for any leak to be immediately and permanently repaired (*Fig. 2*).

Check that the piping is fully bolted. No leakages from pipe and hydrants.

Check that Insulation valve to engine room is in order and clearly marked.

Check that insulation valves on main deck line are fitted at each 40 m intervals. (Tankers only)



Fig. 2

The **hydrants** must be complete and operational (*Fig. 3*). Missing or damaged hand-wheels, valves, etc. must be renewed.



Fig. 3



All the **fire boxes** (or “red boxes”) are to be marked on the ship’s fire control plan and are normally positioned in the proximity of hydrants (*Fig. 4*).

Fire hose boxes shall be in good condition, well supported, clearly coloured and marked, complete with proper set of hose, nozzle and spanner key.



Fig. 4

They should be painted red for easy identification and be able to protect their content from the marine environment.

Check the integrity of the box. If the doors are roped shut or hanging off, ask for them to be repaired.

Check that the arrangement of the boxes is the same as on the plan and for each box. Each box should contain a **hose**, a **nozzle** (of “dual type” where required) and a **spanner** (*Fig. 5*).

Check that the inventory is complete.



Fig. 5

Check the condition of the **hoses**, which can easily deteriorate, particularly in the engine room, in the presence of heat and oil. Deteriorated or damaged hoses must be replaced.

Check the proper fire hoses size [Diam. and Length] and integrity [material and end fittings]. In general only one type of connection is allowed. Check nozzle for proper type and condition.

Make sure that the **international shore connection** flange (**SOLAS Reg. II-2/19**) is available on board, complete with bolts and gaskets: location is to be clearly marked and in accordance with fire plan.

Number and location of hydrants and fire hoses shall be in accordance with fire plan and are to be clearly marked with IMO signs.

Check that IMO signs are properly posted and hydrants and hoses are promptly accessible and ready for use.

Check that hydrants are clearly coloured and marked; complete with spindle wheel or handle.

Carry out a comprehensive working test checking jet from at least two hoses as spread as possible.

Further examples of typical deficiencies are attached with the following cards.
a) Fire Main.



1. GENERAL

In the event of an engine room fire, it is obviously important to be able to shut off both air.

The oil fuel and lubricating oil are shut off by means of quick closing valves fitted directly on the tanks (SOLAS 74/88 Reg. II-2/15.2 & Reg. II- 2/15.3 and SOLAS 74/00 Reg. II-2/4.2), capable of being closed from a control station located outside the engine room. (Fig. 1)

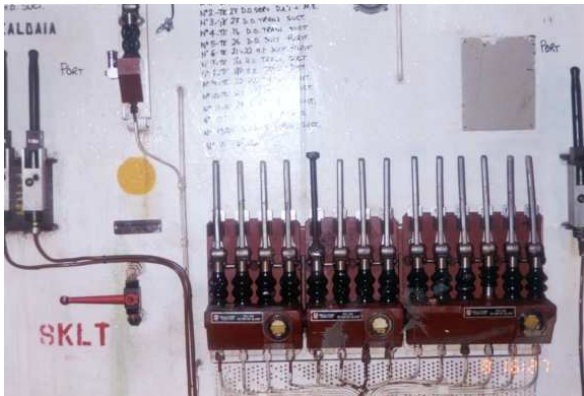


Fig. 1

Quick closing valves can be remotely operated by means of three different systems which are:

- Mechanical, using steel wires and pulleys to route the wires to the control station;
- Pneumatic, using compressed air to activate a small piston to trip the valve (Fig. 2);
- Hydraulic, as for pneumatic but using hydraulic fluid (Fig. 1, Fig. 3, Fig. 4).



Fig. 2



Fig. 3

2. CHECKS AND TESTS

2.1 General checks applicable to all types.

Check that location of remote control is in accordance with fire plan.

Check that the proper and prompt access to the release control station is assured, free from obstruction.

Check that operating instructions are specific for the system and properly posted including legend for identification of each valve.

Check that local control is fitted in place and in working condition.

Check that valve and closing device are free from obstruction, neither blocked nor tied and ready for use.

2.2 Additional checks applicable to the mechanical type.

Check that the wires are satisfactorily maintained without deterioration and properly adjusted.

Check that relevant pulleys are free to rotate.

Test proper closing of each valve, where possible, by actuating the relevant handle, including the reset mechanism.



2.3 Additional checks applicable to the pneumatic type.

Check that the system is satisfactorily maintained without leakages.

Check the proper availability and indication of air pressure.

Check that valves are properly connected to actuating system: no air leakage.

Test proper closing of each valve (where possible), by actuating the relevant actuator, including the reset mechanism.

2.4 Additional checks applicable to the hydraulic type.

Check that the system is properly filled with oil and without leakages.

Check that valves are properly connected to actuating system: no oil leakage.

Test proper closing of each valve (where possible), by actuating the relevant actuator, including the reset mechanism.



Fig. 4

Further examples of typical deficiencies are attached with the following cards.

- a) Remote operated quick closing valve for fuel lines.



1. GENERAL

In the event of an engine room fire, the power is to be cut to the ventilation fans, to the draught fans, to the oil fuel pumps and purifiers, to the lubricating oil pumps and purifiers (for ships whose keel has been laid on or after 1 July 2002).

For this purpose, remote emergency stops are provided. (SOLAS 74/00 reg.II-2/5.2) (SOLAS 74/88 regs.II-2/ 11)

The emergency switches are usually contained in a red painted cabinet close to that of the quick closing valves (Fig. 1).



Fig; 1

2 CHECKS AND TESTS

Check that location of emergency stops is in accordance with fire plan. (outside E. R.)

Check that prompt and clear access to the release control box is assured: in case stops are inside a locked cabinet, check availability of key or broken glass.

Check that the cabinet is conspicuously marked and that switches are labeled in the working language indicating the equipment concerned:

Ventilation;

supply pump (*)

transfer pump (*)

purifier (*)

draught fan boiler burner

Test that the power is cut to each piece of equipment by operating the relevant switch.

(*) for oil fuel and, for keel laid > 01/07/2002, also for lube & thermal oil



1. GENERAL

In the event of main electrical power failure, ships are fitted with an emergency source of electrical power, (SOLAS 74/88 regs.II-1/43 and 44), in order to supply all those services that are essential for safety in an emergency, such as:

1. lighting at muster and embarkation station;
2. lighting in service spaces, escape route, stairways, machinery spaces, control stations, steering gear;
3. lighting at firemen's outfits lockers;
4. lighting at the emergency fire pump room;
5. lighting at navigation bridge;
6. navigation lights;
7. internal communication system;
8. fire detection and fire alarm system;
9. all internal signals that are required in an emergency;
10. radio installations;
11. the shipborne navigational equipment as required by SOLAS Reg. V/12;
12. the emergency fire pump (if driven by an electric motor);
13. the steering gear, where applicable;
14. Emergency generator room;
15. GMDSS station.

The emergency source of electrical power may be:

- a **generator driven by a diesel engine** (Fig. 1) or,
- a set of **accumulator batteries** .



Fig. 1

2. DIESEL GENERATOR

2.1 Compartment where the generator is located:

- Check that the compartment is marked and access doors are in good working order;
- Check that Emergency generator room neat and in order: no obstruction – no storage of equipment and spares;
- Check the cleanliness of the compartment (absence of oil, fuel or water on the floor);
- Check that lighting, ventilation and relevant means of closure are in good order;
- Check that instructions for emergency generator operation and testing are duly posted;
- Check that the required fire extinguishers are fitted and duly serviced;
- Check availability and test of telephone/means of communication;
- Check that the fixed firefighting system, if fitted, has been serviced regularly, is ready for use and provided with operating instruction.

2.2 Fuel tank and fuel line

- Check that the tank is filled with adequate quantity of fuel to grant the required operation,
- Check that the fuel tank is fitted with well-maintained means to check the level content. (sight level to be fitted with automatic self-closing device)
- Check that the man hole is fully bolted without trace of leakage.
- Check the proper working condition of the fuel supply valve fitted on the tank. (if a quick closing valve is required, check remote control proper functioning)
- Check the good condition of the fuel line. (no clamps, no leakage)
- Check that the flexible hoses, if any, are suitable for the use and are in good condition.



2.3 Emergency switchboard

- Check the good condition of maintenance and cleanliness with instrumentation and switches in working condition.
- Check that users' switch are labeled.
- Check the presence of a suitable insulating mat in front of the switchboard.
- Check the proper working of lighting in front of the switchboard.

2.4 Diesel engine

- Check the absence of leakage (oil, fuel and water).
- Check proper insulation and tightness of the exhaust gas pipe: no leakage – no hot spot.
- Check the good condition and proper maintenance of means for starting the generator:
Y starting by batteries – check that they are properly secured in a containment box, check record of inspection and control, check battery charger operation
Y starting by compressed air - Check bottles, recharging system, distribution line, air dryer if fitted.
- Check the second means of starting when fitted: manual or hydraulic or battery.
- Check air intake and relevant damper.

3. BATTERIES

3.1 Batteries compartment

- Check that access to the compartment is marked and appropriate warning sign is posted.
- Check that access doors are in good working order.
- Check the cleanliness of the compartment and that batteries are properly stowed and fixed.
- Check the proper maintenance and working condition of lighting and ventilation.
- Check that instructions for maintenance and testing are duly posted.
- Check that lights and electrical apparatus fitted inside the room are of suitable type and well maintained: explosion proof, complete and tight. (cover and cable penetration)
- Check that exhaust vent is far from ignition source.

3.2 Batteries

- Check that batteries are properly maintained and connected: condition – charge status – storage of batteries.
- Check that cables are properly secured. (no loose or adrift wires)
- Check the proper maintenance and good working condition of charging device.
- Test the proper working condition of batteries according to the instruction procedures.

4. RUNNING TEST

- Check record of routine inspection, maintenance and running test by ship personnel.
- Carry out the starting of diesel engine with all means provided.
- Check automatic starting.
- Check automatic connection to the bus bar and automatic feeding of above users listed under items 1 to 9.
- Carry out prolonged running test according to the instruction procedures, checking in particular that the above mentioned users are properly fed.





1. GENERAL

Bilge oily water separators (MARPOL Annex I Reg. 14 and Reg. 15) use a variety of different methods to separate the oil residues from the water so that the latter can be discharged overboard.

They all rely on two fundamental principles:

- the tendency of oil to “coalesce”, that is to say droplets of oil are mutually attracted,
- the lower density of oil with respect to either fresh or salt water. (hence oil will float on water)

For vessels with $400 \leq GT < 10000$, the minimum required equipment consists of a filtering unit (Fig. 1), which reduces the oil content of the bilge water to below 15 ppm.

The filter unit draws the oily-water mixture either directly from the bilge or from a holding tank by means of a designated pump.

The filter unit discharges the separated (“coalesced”) oil into the sludge tanks meanwhile the clean water can be discharged overboard only when the ship is outside special areas.



Fig. 1

The oil sludge collected in the sludge tank may be discharged to ashore reception facilities through the standard discharge connection or disposed by other acceptable means such as auxiliary boiler, incinerator, etc...

For vessels with $GT \geq 10000$, as well as vessels with $400 \leq GT < 10000$ that intend to discharge cleaned water in special areas, the above mentioned equipment (Fig.2, Fig.3) shall be mandatorily fitted with an **oil content meter** (Fig. 4), with a **15 ppm alarm**, and an **automatic stopping device** (Fig. 5).

The water effluent passes through a sampling apparatus, which measures the ppm of oil in the water. If the ppm of oil rises to 15 or more, the alarm sounds and the system automatically and immediately stops the discharge overboard; this action can be achieved either by means of stopping the pump or, more commonly, with the automatic operation of a three way valve fitted on discharge line that switches in recirculation mode, making the water return in the bilge.



Fig. 2



Fig. 3



2. CHECKS AND TESTS

- Identify the equipment and check approval standard as described in relevant Type Approval/MED certificate and recorded under item 2.3.1 of Supplement to IOPP Certificate.
 - Identify the oil content meter and approval standard as described in relevant Type Approval/MED certificate and recorded under item 2.3.3 of Supplement to IOPP Certificate.
 - Check that calibration certificate since the last IOPP renewal survey is available on board. (for equipment installed after 01/01/2005 in accordance with Res. MEPC 107(49))
 - Check capacity of equipment as recorded under item 2.4 of Supplement of IOPP Certificate.
 - Visually inspect the oily water separator. (Cleanliness and tightness, outer casing, instrumentation, etc.)
 - Check piping system and connection thereof including:
 - Y cross check, if fitted, of bilge tank position and volume towards capacity plan and oil record book - part I;
 - Y absence of physical modifications/alterations;
 - Y absence of signs of corrosions and/or leaks;
 - Y operation of pressure gauges and level switches;
 - Y connection of suction pipe to bilge tank and/or bilge wells only;
 - Y absence of connection to sludge tank;
 - Y sampling line for oil content meter;
 - Y compressed service air piping for pneumatic control;
 - Y discharge line of separated oil to sludge tank;
 - Y no flexible hoses in place.
 - Check absence of unauthorized connection both on suction and discharge side.
 - Run a test of the oily water separator and check the operating condition of valves and pressure gauges.
- Working test of the automatic stopping device (where fitted) and relevant alarm through simulation of oil content in excess of 15 ppm.
 - Check that the alarm can be heard by personnel working in engine room or in the engine control room and, in case of unattended machinery spaces, that it is acknowledged and transferred by automation system.
 - Check that the present quantity of sludge and oily water in tanks is consistent with the amount indicated in the Oil Record Book Part I.
 - Check that the Oil Record Book is correctly filled in. Particular attention is to be paid to the code (letter) and item (number) to be included in the Table of Part I.



Fig. 4



Fig. 5



PSC DEFICIENCY CARDS (CARGO SHIPS)

SLUDGE TANK (ILLEGAL OVERBOARD CONNECTIONS)

Card n. 09

1. GENERAL

Every ship of 400 GT and above must have a tank or tanks of adequate capacity for the oil residues (sludge) (MARPOL Annex I Reg.12) generated by the fuel or lubricating oil purifiers and the engine room bilge separator.

The required capacity of the tank is calculated according to the type of machinery, the fuel used and the likely length of any voyage.

Most ships retain the sludge in the tanks and discharge it via the **standard discharge connection** (MARPOL Annex I Reg.13) to reception facilities ashore.

The capacity of the sludge tank can be calculated taking in account other acceptable means of disposal such as auxiliary boiler, incinerator.

The sludge tank(s) shall have no discharge connections to the bilge system, oily bilge water holding tank(s), tank top or oily water separators except that the tank(s) may be fitted with drains, with manually operated self-closing valves and arrangements for subsequent visual monitoring of the settled water, that lead to an oily bilge water holding tank or bilge well, or an alternative arrangement, provided such arrangement does not connect directly to the bilge piping system.

2 CHECKS AND TESTS

- Review of capacity plan/stability booklet and check location and capacity of the sludge tank(s).
- Check correspondence of location and capacity of sludge tank(s) as recorded under item 3.1 of IOPP certificate.
- Check correspondence of location of sludge tank(s) as recorded in the Oil Record Book.
- Identify and check general condition of sludge tank(s) and associated piping: man hole in place and fully bolted.
- Check sounding pipe with relevant closing device.
- Check absence of unauthorized connection and penetration from and to the tank: no flexible hoses in use.
- Check absence of discharge connection to overboard.
- Check absence of discharge connections to the bilge system, oily bilge water holding tank(s), tank top or oily water separators.
- Fitting of dedicated pump and relevant piping arrangement to:
 - Y ashore discharge line leading to main deck and fitted to accommodate the international shore connection flange;
 - Y mixing tank(s) for auxiliary boilers or incinerators if any.
- Check that discharge line to shore is provided with international flange connection.

Two typical illegal arrangements providing direct sludge connection overboard found during port State control inspections are shown in Fig. 1 and Fig. 2.

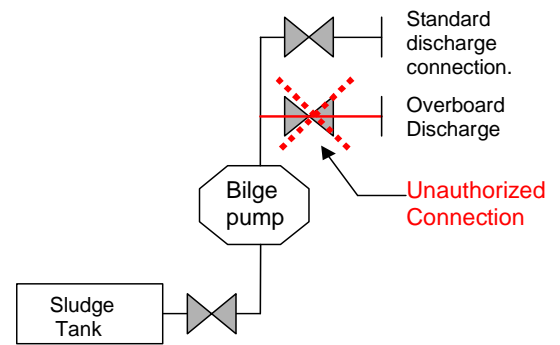


Fig. 1

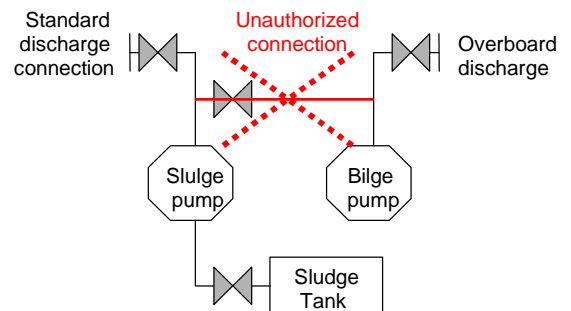


Fig. 2





PSC DEFICIENCY CARDS (CARGO SHIPS)
SLUDGE TANK
(ILLEGAL OVERBOARD CONNECTIONS)

Card n. 09





1. GENERAL

Lifeboats (SOLAS 74/97 Reg. 26.1.1.1 - SOLAS74/98 Reg. III/31.1 and LSA Code) may be:

- **Open** boats: motor or oar propelled. (Fig. 1)
- **Partially enclosed** boats: only for ship whose keel was laid before 1 July 1988 and only under permission of Administration.
- **Totally enclosed** boats: motor propelled. They may also be fire protected. (Fig. 3 and Fig. 4)



Fig. 1



Fig. 2



Fig.3



Fig. 4

The construction material for the lifeboats may be:

- **Wood:** only for ships whose keel was laid before 1 July 1986.
- **Steel or aluminium alloy.**
- **Glass reinforced plastic (GRP).** GRP boats are normally made of single skin construction, with the exception of some of the larger sizes of free fall boats, which may use sandwich construction, i.e. 2 smaller layers of GRP separated by a core of foam or balsa wood.



2. HULL

2.1 Structural condition of the hull

Check that the structure, inboard and outboard, has not suffered any damage or deterioration. If damage has occurred, immediate repair is to be requested.

2.2 Support Foundation

Lifeboats launched by gravity are suspended to the davit fall blocks by means of device which could be either a:

Y hook for ship whose keel was laid before 1 July 1986 or,

Y release mechanism for ship whose keel was laid on or after 1 July 1986.

A difficult area to inspect and often neglected during maintenance is the foundation of the suspension which generally consists of steel flat bars bolted to a reinforced plate included in the keel construction. (Figs. 5 and 6)

This area is to be thoroughly checked with particular regard to:

Y wasted or thinned flat bars and connecting brackets, if any,

Y corroded or loose.



Fig. 5



Fig. 6

2.3 Release mechanism

Lifeboat fitted on board of ships whose keel has been laid on or after 1 July 1986 shall be equipped with a release mechanism so arranged that:

Y all the hooks are realized simultaneously;

Y the mechanism will release the lifeboat once she will be waterborne (Off-Load);

Y the mechanism is capable to release the lifeboat also when she is still suspended (On-Load).

(Fig. 7)

The On-Load release capability shall be adequately protected against accidental or premature use: this is achieved by means of mechanical protection. (Interlock)

Operating instruction and suitably warning notice shall be provided. (Fig. 8)

Pursuant Reg. III/20.11 SOLAS 74 as amended, such release mechanism shall be thoroughly examined and tested without load at each annual survey: load test is requested at five year interval.

The annual thorough examination is to be conducted by Company authorized by the Flag Administration.

Reference is made also to PSC Deficiency Card no. 18.



Fig. 7



Fig. 8

2.4 Drain valves

Lifeboat fitted on board of ships whose keel has been laid on or after 1 July 1986 shall be fitted with at least one drain valve capable to automatically drain water out of the hull when the lifeboat is not waterborne and prevent the ingress of the water when the lifeboat is floating. The valve is to be provided with cap or plug to close it. Other lifeboat shall be provided with at least two plugs or cap for any drain.

2.5 Handholds

Handholds on the underside of the hull are to be fitted and adequately fastened in the area of bilge turn.

The wooden ones look like small bilge keels (Fig.9). They can also consist of galvanized steel tubes, fixed at intervals with pipe clips or similar.



Fig. 9

2.6 Lifeline

All lifeboats should have buoyant lifeline, becketed around the outside of the hull except in the area of the propeller (Fig. 10).

2.7 Retro-reflective tapes

Retro-reflective tapes shall be fitted on the outer shell and canopy (Fig. 10).

2.8 Marking

Lifeboat shall be clearly marked on each side with:

- name and port of registry of the ship to which the lifeboat belongs on each side of the lifeboat's bow;
- name of the ship and number of the lifeboat to be visible from above;
- dimensions of the boat;
- maximum number of persons accommodated.



Fig. 10

3 PROPULSION AND STEERING

3.1 Engine

The engines are usually hand started, except in totally enclosed lifeboats whose engine is started by battery.

Engine started manually are provided with device to open the cylinder valve and reduce internal pressure to make the cranking softer.

The engine is to be protected by means of fire-retardant casing (Fig.11).



Fig. 11

Exhaust gas pipe that can be of detachable type for open type lifeboat, shall be properly insulated to prevent hot spot and tight.



Engine cooling system could be either by air or by water: in the latter case sea chest valve and discharge valve with relevant piping shall be properly connected.

Engine and Gear Box (Fig. 12) properly bolted the boat structure



Fig. 12

Fuel tank is to be of adequate capacity in order to grant the requested autonomy. Fuel distribution line shall be provided with valve; possible flexible hoses shall be of approved type.

3.2 Steering gear

The steering mechanism may consist either of a simple rudder and tiller arrangement (open boat) (Fig. 1) or a system with a wheel. (Enclosed boat Emergency steering will consist of a steering oar for open type lifeboat and emergency manual tiller for other type of steering)



Fig. 14

3.3 Propeller and stern tube

The shaft is to be tightly connected and fully bolted to the Gear Box. (Fig. 5)

4 EQUIPMENT AND INVENTORY

4.1 Equipment inventory

Lifeboat equipments are listed in the Record of Approved Cargo Ship Safety Equipment depending on the type of lifeboat.

Equipment shall be stowed on board at any time: most of the equipments are kept inside water tight container to prevent their deterioration: Food & Water ratio – Distress signal – User and maintenance manual etc.

4.2 Bilge pump

Bilge pump shall be type approved: it may either be fixed to the boat or portable (Fig. 15).

It can be hand operated – open type lifeboat – or electric fed by battery.

It shall be fitted with suitable suction and discharge pipes of adequate length

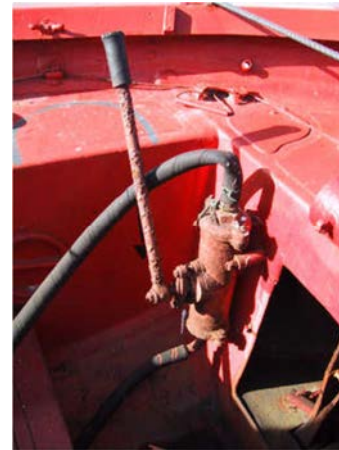


Fig. 15

4.3 Canvas cover

In open lifeboats, the occupants are protected from the elements by a canvas cover, supported by a structure of steel tubes.

4.4 Skates/fenders

At least two **skates** or **fenders** are fitted to prevent damage during launching and recovery.

WARNING

Possible deficiencies are to be dealt without undue delay before the ship departure.

In the cases where this is not possible due to not available repair facilities or spare parts, the Head of the Office is to be consulted and Flag Administration advice and authorization is to be received



5 CHECK AND TESTS

The following is to be checked and confirmed:

- 5.1 Availability of instruction for on board manual and training manual specific for the type of crafts fitted on board.
- 5.2 Number and type in accordance to Record E (SE).
- 5.3 Number of rescue boats included in the number of lifeboats.
- 5.4 Lifeboats properly stowed, lashed and in neat order.
- 5.5 Lifeboats properly marked: dimension – capacity – name & port of registry – call sign. (on top only for partially enclosed and closed type)
- 5.6 General external examination: hull –drain valves – grab line – handrail lifeline - skates – propeller – rudder – hook or suspension eye –rigid cover – painters
- 5.7 Condition and test of bilge pump: suction and delivery pipe connected.
- 5.8 Thorough examination of support of suspension hook/eye or release mechanism and relevant connection to the hull: wastage, corroded or loose bolt, thinned or deformed brackets.
- 5.9 Release mechanism including relevant remote control system: Offload/On Load Type.
- 5.10 Release mechanism operating instruction and warning notice posted including on load release activation and interlock.
- 5.11 Release mechanism reset properly and ready for use.
- 5.12 Availability and maintenance condition of oars and crutches including spare ones.
- 5.13 Completeness and good maintenance condition of lifeboat equipment.
- 5.14 Canopy and relevant stanchion for open type lifeboat.
- 5.15 Date of food rations, water and distress signals as follows:
Food ration Water;
Parachute flare Hand;
Flare Smoke signals.
- 5.16 Lifeboat engine and relevant casing including spare and tool for minor adjustments.
- 5.17 Starting device: manual crank or battery.
- 5.18 Fuel tank and supply line.
- 5.19 Availability of suitable amount of fuel for the requested autonomy (24h)
- 5.20 Test of engine and transmission ahead and astern.

- 5.21 Exhaust gas pipe on board and insulated as necessary.
- 5.22 Steering gear and relevant control transmission, including emergency steering oar or emergency tiller as applicable.
- 5.23 Breathing air bottles in good condition and charged: pressure gauge indication. (for tankers only)
- 5.24 Water spray system in order: pump condition – pump clutch – sea chest valve – spray piping and nozzles. (for tankers only)
- 5.25 Operating instruction and signs.
- 5.26 Battery charger for starting and service batteries.



RECORDING OF DRILLS, ON-BOARD INSPECTIONS AND MAINTENANCE

Ensure that abandon ship drills, drills of life-saving appliances and on-board training are properly recorded in the log-book.

Ensure that the reports of the prescribed monthly inspections of life-saving appliances are recorded in the log-book.

Up to date service report for annual thorough examination pursuant Reg. III/20.11 shall be available on board: test foreseen by the a.m. rule shall be witnessed by Classification Society Surveyor.

On the occasion of abandon ship drills requested by SOLAS during which lifeboats are to be lowered to the water (at least once every three months for davit launched lifeboats) the lifeboat is to be released from the lifting hooks and manoeuvred in the water.

Further examples of typical deficiencies are attached with the following cards.

- a) Lifeboats equipment.



1. GENERAL

Life rafts (SOLAS 74/83 Reg. III/26.1, SOLAS 74/98 Reg. III/31.1 and LSA Code) can be subdivided into two basic types, i.e. **rigid** and **inflatable**.

The rigid type is very rare nowadays. Both rigid and inflatable life rafts are either **manually** or **davit launched**.

Ships, where the bow or stern is more than 100 meters from the survival craft, lifeboats and life rafts, must carry an additional 6-man life raft, forward or aft as required, in case there are crew working in that area.

With the exception of the additional 6-man life raft, if fitted, all life rafts must be secured with a **hydrostatic release unit** (SOLAS 74/83 Reg. III/29, SOLAS 74/98 Reg. III/13) that will automatically release if the ship sinks (Fig. 1).



Fig. 1

Inflatable life rafts and hydrostatic release units must be serviced every 12 months by a servicing station approved in compliance with the "Classification Society Rules for the certification of Service Suppliers".

Disposable hydrostatic release units in lieu of servicing are to be replaced every 2 years (Fig.2).



Fig. 2

2. CHECKS AND TESTS

- Check the validity of the certificates issued by the last approved servicing station (SOLAS Reg. III/20.8.1).
- Check the general condition of the containers (Fig. 3), particularly in the area where the containers lean on the supports.
- Check expiration date or last service date of hydrostatic release unit.
- Check marking of container:
 - Maker's name;
 - Serial number;
 - Approval authority;
 - SOLAS;
 - Type of emergency pack;
 - Date of last service;
 - Length of painter;
 - Max. permitted height of stowage.



Fig. 3



- Check the condition of the stowage and securing arrangements (*Fig. 4*)



Fig. 4

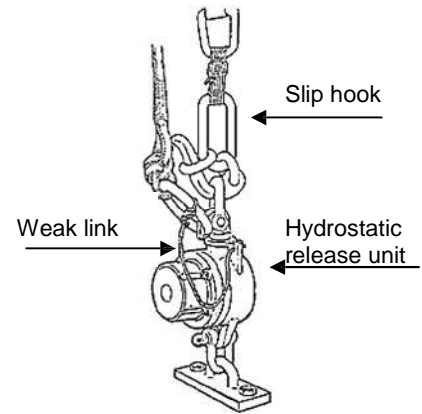


Fig. 5

- Check the condition and connection of the hydrostatic release unit.
- Check the condition and connection of the **slip hook** (*Fig. 5*).
- Check that the life raft painter is attached to the ship by means of a **weak link** (*Fig. 5*).
- Check that launching instructions are displayed
- Check that nothing prevents the life raft from floating free if the ship sinks.
- Check that stowage area is within the reach of the launching appliance.
- Check that embarkation ladder is placed and ready to use close to the launching station.
- Check that light at launching station, fed by emergency source, is in working condition.



1. GENERAL

Launching arrangements for survival crafts (SOLAS 74/83 Reg. III/48, SOLAS 74/98 Reg.16 and LSA Code) may be:

- twin arms davit systems for side launched lifeboats (Fig. 1)
- single davit systems for rescue boats or davit launched life rafts (Fig. 2)
- the "structure" required for launching a free-fall lifeboat.



Fig. 1



Fig. 2

The primary requirement of all these systems is to provide a safe means of launching the survival craft in all conditions; the secondary requirement is to provide a means of recovery, when they are used for drills.

2. CHECKS AND TESTS

2.1 Davit structure and foundations

Check the davit structure, its foundations and relevant connection to deck, the arms (Fig. 3), the pivoting system to swing the boat outboard from the stowage position (Fig. 4): visual examination, hammer testing and, if deemed necessary, ultrasonic gauging.



Fig. 3

Check that there is no wastage of arms' plating especially in the area underneath the pulleys, no wastage on basement and connecting brackets and no deformation.



Fig. 4

Particular attention is to be paid to the area of the davit behind the sheaves (Fig. 5).



Fig. 5

2.2 Sheaves

Check that the sheaves are well-maintained, greased, free to rotate (Fig. 6) and not worn out or cracked.



Fig. 6



The falls of any survival craft must be changed every 5 years, or sooner if they show signs of deterioration. Check the date of the last renewal.

Check that the falls are satisfactorily maintained and without deterioration: broken wire – oxidation - loose wires – distortion.

Check that wire is properly wound on the winch drum.

2.3 Blocks

Ensure that all blocks, pad eyes, links and fastenings are maintained in good condition (Figs. 7 and 8).

Check that plates of block are not corroded or thinned (Fig. 9).

Check that pin and bush are not worn out or loose.

(Fig. 10)

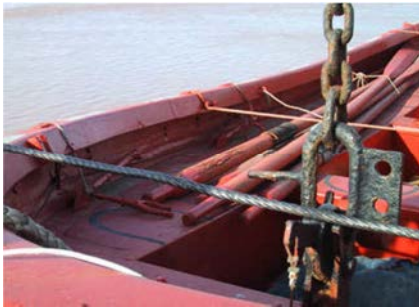


Fig. 7



Fig. 8



Fig. 9



Fig. 10

2.4 Winches and brakes

The launching and recovery of davit-launched survival craft is controlled through a winch (Fig. 11) and a manual brake (Fig. 12) operated from the deck and/or from the survival craft.



Fig. 11

Check the condition of the winch: casing – connection to deck – wire drum- brake lever – self lowering device (if fitted).

Check that the dock for air motor is in order. Check that handle for manual operation is available.

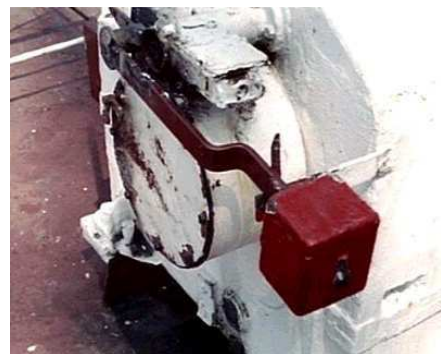


Fig. 12

Check that annual thorough examination has been duly and timely carried out: service report shall be available on board.

NOTE: test foreseen by Reg III/20.11 for annual thorough examination and quinquennial overload test are to be witnessed by Classification Society surveyor.



Overhauling of winches and brakes is foreseen with the scope of annual thorough examination.



Fig. 13



Fig. 14



Fig. 15



Fig. 16

2.5 Recovery arrangement

In addition to lowering the survival craft the launching devices must incorporate a means of recovery. On older ships this may be a manually operated winch, but more modern installations incorporate a powered winch. The power may be supplied either by an electric motor or an air motor. The system must incorporate **limit switches**, which cut-off the power supply to the motor before the davit arms reach the stops, in order to avoid overstressing falls or davits: recovery to stowage position is then completed by hand cranking the recovery winch.

Test proper working of the limit switches.

2.6 Miscellaneous

- **Fall preventer devices:**

All ships which are fitted with on-load release systems for lifeboats are equipped with fall preventer devices. The use of FPDs should be considered as an interim risk mitigation measure, only to be used in connection with existing on-load release hooks, at the discretion of the master, pending the wide implementation of improved hook designs with enhanced safety features.

- Tracing in blocks:
- Suitable tracing in blocks shall be fitted between davit arms and lifeboat hooks or release mechanism in order to keep the lifeboat close to the side shell while it is swung out ready to be boarded. The length of blocks is to be such that the boat remains tied to the ship side at the level of embarkation station.
- Embarkation ladders:
- Check the overall condition of the ladders (Fig. 17), their connection to the deck and that they are long enough to reach the water when the ship is in light condition, with 10° trim and 20° list. Particular attention is to be paid to the condition of the side ropes and ladder.



Fig. 17

- Check the maintenance condition and functioning of the emergency lighting for the stowage and launching positions of survival craft.
- Check availability of launching instructions for Recovery arrangement.
- Lifeboats and life rafts, usually in the form of posters affixed near the stowage positions and under the emergency lighting.
- Check that proper working condition of means to prevent discharge of water onto the crafts.
- Check that launching instruction posted.
- Check that IMO Posters and Signs Green and Blue series are displayed.
- Check that lighting is supplied by emergency source of power at Muster station, Embarkation station and areas of water onto which the crafts will be launched and that is in working condition: no missing bulbs – no missing caps – light enclosure red coloured.



1. GENERAL

The following load line appliances are considered:

- Load line marks;
- Cargo hatch coamings and hatch covers;
- Hatchways;
- Air pipes;
- Ventilators;
- Bulwarks and guardrails;
- Doors;
- Windows.

2. LOAD LINE MARKS

Check that the load line marks are permanently marked, duly painted and plainly visible on both sides of the ship. (Fig.1).



Fig. 1

Check general condition of side shell plating from the pier. (Fig. 2)

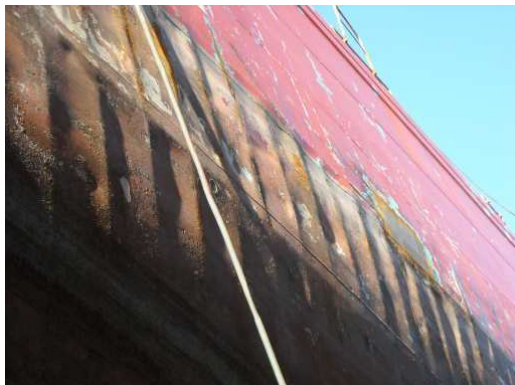


Fig. 2

3. CARGO HATCH COAMINGS & COVERS

Check hatch cover overall condition and weather tightness: no holes on top and side plating – no wasted areas - no buckling – no notch damage- no pitting. ((Fig. 3).



Fig. 3

Check the structural condition of Internal: no detachment/deformation – no thinned edge. (Fig. 4)



Fig. 4

Check structural condition of hatch coamings with relevant stays: neither deformed nor thinned plating, stays tip not detached or cracked. (Fig 5 and Fig.6)



Fig. 5



Fig.6

Check the condition of compression bars, gaskets and relevant retaining channels both longitudinal and transversal.

Check that all closing and securing device (cleats) are in place and in order. (Fig. 7).

Check wheels and relevant support: pin and bush in order and greased – wheels neither cracked nor deformed – wheels not loose. (Fig. 8).

Check for hatch covers operated by hydraulic pistons (Fig. 9):

- tightness of hydraulic pistons and piping: no leakage.
- sound connection of the pistons with both ship structure and hatch cover: no crack – no wastage – no deformation.
- connection to hatch cover.



Fig. 7



Fig. 8

Check hinges and relevant support between hatch covers' panels.

Check, for hatch covers operated by chain:

- chain links in good condition: no excessive wear/deformation.
- air/hydraulic capstan.

Test the opening/closing system. For the hydraulic system particular attention is to be paid to oil leakages. (Fig. 9).



Fig. 9

Check that cargo hold ventilators are fitted with weather tight cover: cover not deformed – gasket in place and in good condition – hinges and dogs in working condition and greased.



4. AIR PIPES

Check the structural condition of air pipes (corrosion, wastage or damage).

Check the condition of closing devices which may consist of:

- plug (rubber or wood) attached to the pipe by chain;
- flaps with seals and dogs (Fig. 10);



Fig. 10

- float ball type (Fig. 11 and Fig. 12). For this type, dismantling may be necessary to check both the float ball and the condition of the float chamber.



Fig. 11



Fig. 12

Check that each air pipe is properly labeled with the indication of the tank it serves (Fig. 13).

Check the condition of the flame screen (corrosion, damage, obstructions) where required to be fitted.



Fig. 13

Check identification of tanks served. (Fig. 13)

Check spill containment box and flame net for air vents fitted on tanks intended for flammable liquid. (Fig. 14).



Fig. 14

Check and test of P/V valves fitted on cargo tanks: check both pressure and vacuum device not stuck and free to move. (Fig. 15).





5. VENTILATORS

Check the structural condition of coamings (corrosion, wastage or damage). Check the condition of closing devices (covers, hinges, gaskets and dogs) (Fig. 16 and Fig. 17).



Fig. 16



Fig. 17

6. BULWARK AND GUARDRAILS

Check the structural condition of bulwarks and relevant stanchions (corrosion, wastage, damage, deformation) (Fig. 18).

Check that fairleads and rollers fitted therein are in order, free to rotate and greased.



Fig. 18

Check the condition of guardrails (corrosion, wastage, damage) (Fig. 19), (Fig. 20).

Check that handrails are continuous without interruption, complete with courses and in satisfactory condition: non wastage - no missing stanchions - no deformation jeopardizing efficiency.



Fig. 19



Fig. 20

7. DOORS

Check the condition of doors and relevant sills (corrosion, damage): doors closing properly, not deformed and weather tight.

Check the condition of gaskets and relevant retaining channels.

Check the condition of closing devices (toggles, dogs, hinges, wedges), all in place and well-greased. (Fig. 21), (Fig. 22).



Fig. 21



Fig. 22

8. WINDOWS

Check that all windows in place and weather tight:
no cracks – no patches.
Check availability of shield as requested.
Check the closed type window on superstructure
front bulkhead and within three meter from cargo
area (for tankers only) (Fig. 33).



Fig. 23



Fig. 24



Fig. 25

Further examples of typical deficiencies are attached with the following cards:

- a) Funnel;
- b) Cargo holds hatch coamings face plate corroded/holed;
- c) Hatch cover and coaming;
- d) Air vent valves;
- e) Bulwarks and handrails;
- f) Machinery space casing.



PSC DEFICIENCY CARDS (CARGO SHIPS)

OUTFITTING AND CLEANLINESS OF ENGINE ROOM AND STEERING GEAR ROOM

Card n. 14

1. GENERAL

Poor cleanliness of machinery spaces and relevant bilge (Fig. 1 and Fig. 2, Fig. 3, Fig. 4, Fig. 5) is associated by port State control officers to fire hazards and in some serious cases it can lead to ship detention.



Fig. 1



Fig. 2

2.1 ENGINE ROOM CLEANLINESS

- Check that engine room is neat and in order: no obstruction on passage ways, spares and tool properly stowed and rigged as necessary.
- Check that flooring, platforms and ladders thereto are clean and free from oily and slippery residues.
- Check absence of oil leakages (combustible and lubricating oil) and oily traces from machinery and piping with particular regard to fitting under flooring.
- Check the condition of the bilge: dry and clean, no rags – no spool pipes abandoned.
- Check that drip trays in way of fuel oil tanks: dry and clean.

- Check that main & auxiliary engines free from leakages: casing ports – cylinder heads – injectors – fuel oil supply pipe – lube oil supply pipe – scavenging air box – oil distributor – fuel oil/lube oil driven pump – filters).
- Check that the jacketed pipe for high pressure fuel injector/fuel pump in place and tight.
- Check that viscometer and F.O. supply module including heat exchangers are neat and without leakages.
- Check that Boiler/Aux boiler burner, purifiers and drip trays are in order clean and without leakages:
- Check that insulation mat (Fire and/or thermal) is properly wrapped, is not soaked and is free from oil residues.



Fig. 3



Fig. 4



Fig. 5



PSC DEFICIENCY CARDS (CARGO SHIPS)

OUTFITTING AND CLEANLINESS OF ENGINE ROOM AND STEERING GEAR ROOM

Card n. 14

2.2 ENGINE ROOM FITTING

- Check that bilge well and bilge suction are free from obstruction.
- Check that bilge alarm sensors are in place and operational.
- Check that fuel oil and lube oil tanks are fitted with level indicator with non-cylindrical glass and guard, automatic spill valve.
- Check that electrical panels and distribution boxes are properly supported and complete with cover and closing devices.
- Check that ceiling lights are in place with bulb and cover.
- Check that ventilation ducts are in order and fitted with relevant grating and flap.
- Check that non authorized flexible hoses are connected and in use.
- Check that hydrants are in proper condition with no leakage and free from obstruction.
- Check that fire hoses with nozzle and spanner key are in place
- Check that poster and signs IMO series Red and Green are displayed.
- Check that quick closing valves are neither blocked (wood chock) nor tied.
- Check that tanks' access man holes are fully bolted with gasket and tight – no trace of leakage.
- Check that control instruments of engines are fitted in place and in working condition: pressure gauges, thermometer, rpm counter.
- Check that boiler is fitted with control instrument in working condition: steam pressure gauges – fuel oil pressure gauged – steam temperature – water level indicator.
- Check that pressure gauges are fitted on suction and delivery pipe of pumps.
- Check that electrical starter panels are fitted with amperometer – voltmeter in working condition.



Fig. 7

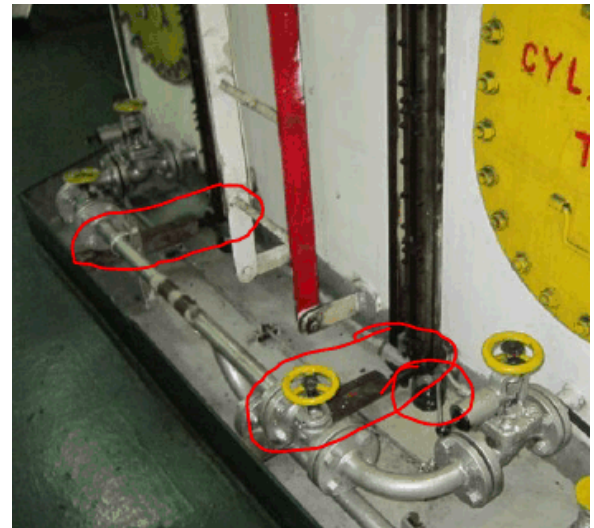


Fig. 8



Fig. 6



Fig. 9



PSC DEFICIENCY CARDS (CARGO SHIPS)

OUTFITTING AND CLEANLINESS OF ENGINE ROOM AND STEERING GEAR ROOM

Card n. 14

2.3 ENGINE ROOM STRUCTURE

Structure in engine room can deteriorate due to a combination of causes such as: water accumulated in the bilges, residues from aggressive cleaning solvent, vibration from propulsion shaft and machinery foundation, heat stress due to temperature gradient, condensation etc...

- Check that bottom plating or double bottom plating is free from pitting corrosion.
- Check that foundation of engines, boilers and pumps are properly connected and that structure is not wasted or deformed.
- Check that side shell frames are in order, not wasted, not holed and properly connected to plating: special attention is to be paid to the frame edges and the area in way of flooring.
- Check that structural ventilation ducts are in order and free from wastage, taking in consideration that the hidden portion of side shell could suffer even worse deterioration.



Fig. 10



Fig. 11



Fig. 12

3. STEERING GEAR ROOM

- Check that steering gear room neat and in order: no obstruction – spare, tool, rope properly stowed and rigged as necessary.
- Check that floor free from oily residues.
- Check that there is no hydraulic oil leakage from steering gear and hydraulic oil storage from the tank.
- Check that hydraulic oil tank is fitted with low level alarm.
- Check that anti-slippery floors or gratings and handrails are fitted I.W.O. steering gear.
- Check that instructions for emergency and local control are displayed.
- Check means of communication with bridge.
- Check availability of heading information. (Keel laid > 01/02/1992)
- Test of emergency steering gear including test of communication system.



Fig. 13



4. SOUNDING PIPES

Sounding pipes are to be fitted with closing devices: Sounding pipe for oil fuel has more stringent design and requirement than those for lubricating oil tank in particular for ship whose keel has been laid on or after 1 February 1992. (SOLAS 74/83 Reg. 15 and SOLAS 74/00 Reg. 4.2)

- Check that sounding pipe is identified with indication of tank served and;
- Check that the sounding pipe is fitted with automatic blanking device: counterweight (oil fuel tanks only) (Fig. 13); for ship with keel laid > 01/02/1992 threaded plug for sounding pipes outside the engine room.
- Check that the sounding pipe is fitted with small diameter self-closing control cock (oil fuel tanks only) for ship with keel laid > 01/02/1992;
- Check that the sounding pipe is fitted with closing device: cap;
- Check that self-closing devices are fitted and properly working (not seized) and that plugs are in place.



Fig. 14

Further examples of typical deficiencies are attached with the following cards:

- a) Cleaning of E.R under flooring.
- b) Leakages from manholes of fuel tanks.
- c) Undue connections on flammable oil pumps delivery.
- d) Missing valve lids on high pressure fuel lines.
- e) Missing bolting and spray shields on fuel oil pipes flanges (with associated leakages).
- f) Leakages of fuel from the high pressure (more than 0,18 N/mm²) fuel lines under flooring.
- g) Undue repairs (doublers) on high pressure fuel oil lines (more than 0,18 N/mm²).
- h) Heavy leakages from engine fuel oil filters (pressure more than 0,18 N/mm²).
- i) Heavy leakages from fuel oil lines in way of interception valves (pressure more than 0,18 N/mm²).
- j) Heavy leakages for sludge pumps.
- k) Fuel oil drains collected in a open tub (normally used for the food).
- l) Lamp fixtures damaged in way of fuel oil booster groups.
- m) Remote operated quick closing valve for fuel lines.
- n) Missing spray shields in way of the fuel oil/lubricating oil lines facing hot surfaces (e.g. engine gas exhaust manifold or turbocharger inlets).
- o) Missing spray shields in way of the fuel oil/lubricating oil lines facing hot surfaces (e.g. engine gas exhaust manifold or turbocharger inlets).
- p) Missing spray shields in way of the fuel oil/lubricating oil lines facing hot surfaces (e.g. engine gas exhaust manifold or turbocharger inlets).



1. NAUTICAL PUBLICATIONS

Nautical publications (Fig.1) are intended to provide up-to-date navigational information. According to [SOLAS74/00 Reg. V/20 and SOLAS 74/09 Reg. V/19](#),

All ships are to carry adequate and updated:

- Charts;
- sailing directions;
- lists of lights and fog signal;
- list of radio signals;
- tide tables;
- notices to mariners;

and all other nautical publications necessary for the intended voyage, such as lists of radio signals, nautical almanac and sight reduction tables.

Ensure that the required/necessary nautical publications carried on board are adequate for the intended voyage and updated/renewed as appropriate.

The publications that are required to be available on board depending on the trading area of the vessel are listed in the annual catalogue, i.e. "Catalogue of Admiralty Chart and Publication".



Fig: 1

2. NAUTICAL PUBLICATIONS

All ships must carry updated charts necessary for the intended voyage (Fig.2). As alternative method, an Electronic Chart Display and Information System (ECDIS) is also accepted as meeting the chart carriage requirements.

Starting from 1 July 2012 the ECDIS has become mandatory for new ship as well as for existing ship with retroactive requirement to be applied depending on the type and gross tonnage of the ship not later than 1 July 2018.

A back-up system is to be provided for the equipment.



Fig. 2

Revisions and corrections are contained in the "Notices to Mariners", published weekly (Fig.3).

The "Cumulative list of Notices to Mariners" published every six months and "Annual Summary of Admiralty Notices to Mariners" published annually, provides the summation of corrections for each chart, the relevant date of issue and subsequent amendments (Fig.4).

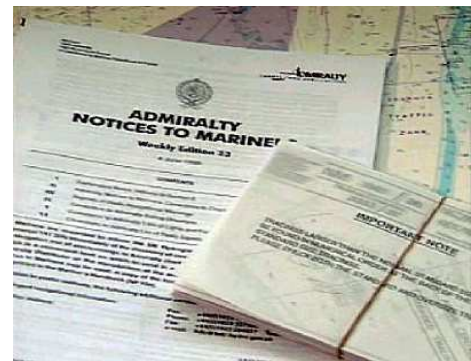


Fig. 3



Fig. 4



Corrections of paper charts and publications are made by hand or through the use of small "tracings" in accordance with the instructions contained in the "Notices to Mariners".

For ECDIS system the corrections are made through electronic files which are elaborated and distributed by hydrograph office, authorized by Flag Administration.

The electronic system shall be able to download the corrections, to apply them automatically, to store the files of corrections and to log the corrections applied.

3. CONTROL AND VERIFICATION

- Check that latest edition of annual catalogue of charts and publications is available on board.
 - Check that requested charts and publications as detailed in the catalogue are available on board:
 - Charts;
 - Sailing directions;
 - List of lights and fog signals;
 - List of radio signals;
 - Tides table.
 - Check that Notice to Mariners are available on board.
 - Check that 6 month publication "Cumulative list of Notice to Mariners" is available on board.
 - Check that the yearly publication "Annual Summary of Admiralty Notices to Mariners" is available on board.
- Check that corrections and updates of charts and publications are duly and timely done and properly recorded in the correction logbook.
 - Check that corrections are made in accordance with notice to mariners instructions for electronic chart intended for ECDIS Equipment.
 - Check that electronic charts and publications are from authorized hydrographic office and are suitable for ECDIS system and for relevant electronic back-up system.
 - Check that adequate selection of ENC – Electronic Navigational Charts – for the intended voyage are installed or stored on board.
 - Check that officers in charge of navigational watch OOW using ECDIS system, are provided with certificate of training and, for apparatus different from that one used to obtain the certificate, with familiarization records.
 - Check that charts' updates are issued by authorized hydrographic office and are:
 - stored separately;
 - applied automatically;
 - recorded and logged with date of application.
 - Voyage plan filled in properly: way points – chart numbers – sailing restrictions and warning.
 - Charts and publication for the intended voyage updated with the latest release of Notice to Mariners.
 - Position Fixes and separation zone traced on the charts.
- ***



PSC DEFICIENCY CARDS (CARGO SHIPS)

LEAKAGE FROM SLOPING PLATE OF TOPSIDE BALLAST TANKS

1. GENERAL

Bulk carriers are fitted with topside ballast tanks which are prone to corrosion, in the course of the ship's life.

A corrosion prevention system is normally considered either:

- a full hard coating, or,
- a full hard coating supplemented by anodes.

Protective coating is usually epoxy coating or equivalent.

Coating condition is defined as follows:

- **Good** condition: with only minor spot rusting. (Fig.1)



Fig. 1

- **Fair** condition: with local breakdown at edges of stiffeners and weld connections and/or light rusting over 20% or more of areas under consideration, but less than as defined for poor condition. (Fig.2)



Fig. 2

- **Poor** condition: with general breakdown of coating over 20% or more of areas or hard scale over 10% or more of areas under consideration. (Fig.3)



Fig. 3

According to Classification Society Rules, the requirements for surveys of topside ballast tanks depend on the age of the ship and the relevant survey interval depends on the recorded coating condition.

When the coating condition is recorded as being **good** or **fair**, topside ballast tanks are to be internally inspected at class intermediate and renewal surveys.

When the coating condition is recorded as being **poor**, topside ballast tanks are to be internally examined at class annual surveys.

Pressure test of topside ballast tanks is normally required at class renewal surveys. It may be required at other surveys, should the attending surveyor deem it necessary.

2. CHECKS AND TESTS

At annual and intermediate surveys, during the overall survey of cargo holds, particular attention is to be paid to the sloping plate of topside ballast tanks in order to identify signs of leakage (i.e. rusty marks, dripping, etc.) (Fig.4 and Fig. 5)

This check is to be carried out independently of the recorded condition of the internal coating (i.e. even in those cases where the recorded condition is "good" and "fair") and may also help to identify local defects difficult to detect from the inside (e.g. small cracks developed in way of welded seams of the sloping plate). In cases where marks/signs are detected which in the opinion of the attending surveyor may question the condition of the sloping plate, an internal examination and a pressure test should be required and carried out.



Fig. 4

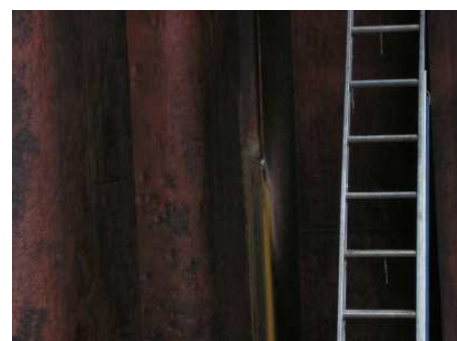


Fig. 5



PSC DEFICIENCY CARDS (CARGO SHIPS)

MAIN DECK, EXPOSED DECK, AND SUPERSTRUCTURE

Card n. 17

1. GENERAL

At the time of annual surveys, the ship is to be generally examined.

The survey is to include a visual inspection of the hull, equipment and machinery of the ship and some test thereof, as far as necessary and practicable in order to verify that the ship is in a satisfactory and efficient general condition and is properly maintained.

The hull annual survey is to include a general external examination and testing, where appropriate, verifying the efficient condition of several items, as applicable.

The freeboard deck and exposed decks are among these items.

2. CHECKS AND TESTS

The main and exposed decks are to be completely inspected by visual examination. If some areas are not examinable because hidden by material laid on deck plating (i.e. mooring ropes, garbage containers, oil drums, spare steel plating, etc.), the removal of the material is to be requested and the area is to be carefully investigated. (Fig.1, Fig.2 and Fig.3).

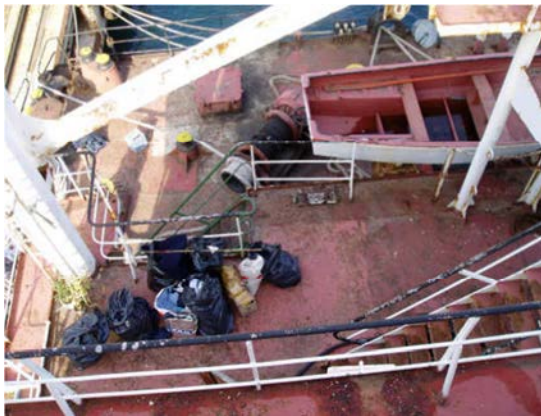


Fig. 1



Fig. 2



Fig. 3

Particular attention is to be paid to areas where cement boxes are found (structures, pipes, etc.): removal is to be requested in all cases to carefully inspect the area concerned (from both sides where possible).



PSC DEFICIENCY CARDS (CARGO SHIPS)

MAIN DECK, EXPOSED DECK, AND SUPERSTRUCTURE

Card n. 17

Sometimes, thin cement layers rather than boxes are found on deck, appearing as a protective "coating" but often hiding structural defects.

The corresponding area is to be investigated from the under deck side (thickness measurements may be required).

In cases where the investigation may cause doubts about the good condition of the deck plating, the removal of the concrete layer is to be required to carry out a careful inspection from both sides. (Fig.4 and Fig.5).

The removal of the concrete layer is to be required in those cases where the under deck side is not accessible.



Fig. 4



Fig. 5

Main deck and superstructure deck are to be kept neat and in order: piping and accessories shall be found in good state of maintenance, free from leakages: relevant support are to be in good condition and properly connected to deck.

Deck plating and ladders are to be free from slippery and oily residues.

Ladders are to be with all steps and handrail in order.

No material shall be stowed on passage ways as well as in way of control station, service areas, mooring station, firefighting system and equipment.

* * *

Further examples of typical deficiencies are attached with the following cards:

- a) Stowage of garbage/material
- b) Forecastle spaces
- c) Defective antennas
- d) Windlass/mooring winches and platforms
- e) Cable ducts and electric switchboards
- f) Maintenance – Main Deck



1. GENERAL

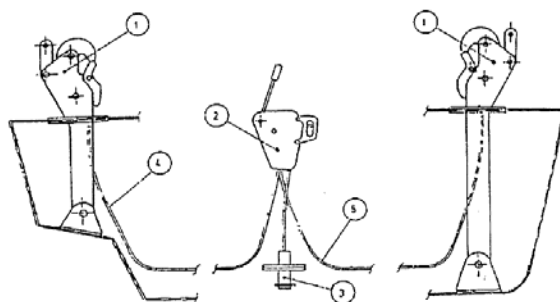
The on-load/off-load release arrangement was introduced by 1983 SOLAS amendments which entered into force on 1st July 1986. This device allows the lifeboat or the rescue boat it serves to be released in both conditions: floating (off-load) or suspended on falls (on-load).

In order to prevent accidental or premature release, the on-load capability shall be adequately protected, including a special mechanical protection not normally required for off-load release. In other words, the on-load release is only activated by means of a deliberate action.

The protection against accidental release commonly used by the manufacturers of this device is a hydrostatic lock which does not permit the activation of the release handle until the boat is fully floating. To release the boat when suspended, this hydrostatic lock has to be by-passed by breaking a protection and freeing the lock, but this operation must be intentional.

In recent years a certain number of accidents occurred, in which crew were injured, sometimes fatally, whilst participating in lifeboat drills and/or inspections. The main causes of these accidents seem to be associated with the failure of the on-load release mechanism due to lack of maintenance, insufficient training of the crew, improper reset or inadvertent operation.

A typical on-load/off-load release system is illustrated in the diagrams of Fig. 1 and Fig. 2, while Fig. 3 is a picture of a typical hook.



1. HOOK ASSEMBLY
2. RELEASE HANDLE UNIT
3. HYDROSTATIC UNIT AND CABLE
4. AFT OPERATING CABLE
5. FORWARD OPERATING CABLE

Fig. 1

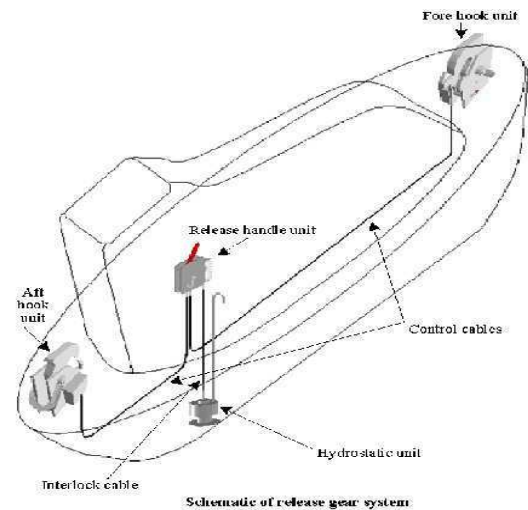


Fig. 2



Fig. 3

2. CHECKS AND TESTS

According to SOLAS Reg. III/20.11.2 as amended, on-load/off-load release gear shall be:

1. Serviced at recommended intervals in accordance with instructions for on board maintenance;
2. Subjected to a thorough examination and test during the annual surveys by "properly trained personnel familiar with the system" (see Note 1);
3. Operationally tested under a load of 1.1 times the total mass of the boat when loaded with its full complement of persons and equipment whenever the release gear is overhauled. Such overhauling and test shall be carried out at least once every five years.



PSC DEFICIENCY CARDS (CARGO SHIPS)
ON LOAD/OFF LOAD LIFEBOAT
RELEASE GEAR

Card n. 18

Note 1:

“Properly trained personnel familiar with the system” shall be intended as:

- a) Manufacturer’s representatives;
- b) Persons or Company certified by the manufacturer;
- c) Persons or Company approved by the Flag Administration for the specific purpose.

The following checks and examinations are to be performed by the attending Surveyor:

1. Check of ship’s records of inspection and maintenance, which is part of “instructions for on-board maintenance” required by Reg. III/36 of SOLAS 74 as amended. A report for the following inspections shall be entered in the log-book:

- a) For all ships, a visual inspection of the hooks, their attachment to the lifeboat and the setting of the on-load release gear shall be made on a weekly basis (Reg. III/20.6.1).
- b) In addition, for cargo ships, all lifeboats except free-fall lifeboats shall be moved from stowed to outboard position on a weekly basis if weather and sea conditions so allow (Reg. III/20.6.3).
- c) For all ships, all lifeboats, except free-fall lifeboats, shall be turned out from their stowed position, without any persons on board on a monthly basis, if weather and sea conditions so allow (Reg. III/20.7.2).

2. Examination of records and checklists filled out by “properly trained personnel” previously defined, and signed by the ship’s master or Company’s representative.

3. Visual inspection of each on-load release arrangement shall be carried out paying particular attention to:

- a. The operating cables shall be properly adjusted for a simultaneous release of the lifeboat; therefore, they shall appear in good condition and evenly tensioned in the release handle unit.
- b. The hydrostatic lock lever, when the boat is in stowed position shall be in the safe position, according to the instruction given by the manufacturer in the operating manual.
- c. The protection for access to the on-load release capability shall be in place.
- d. The connection between the hook’s side plates to the keel shall be free of significant signs of corrosion.
- e. The instructions for operating the system shall be posted nearby the operating lever and clearly visible.
- f. A clear indication showing that the hook is properly reset, shall be provided on each hook side plate, together with proper instructions on how to reset it.

The instructions, if any, issued on the matter by the concerned Flag Administration, which can be found in the “Instruction to Surveyors” are also to be taken

* * *



PSC DEFICIENCY CARDS (CARGO SHIPS)

SHIP CERTIFICATES AND DOCUMENTS OFFICERS AND RATING CERTIFICATION

Card n. 19

1. SHIPS CERTIFICATES AND DOCUMENT

In order to demonstrate their compliance with International convention mandatorily applicable to ships depending on their type, size, tonnage deadweight, service and navigation, ships shall be provided with Certificates, Manuals and Record Books.

As guidance, the following Annexes are enclosed with the list of certificates and documents:

Annex 1 - Ship Certificates and Documents;
Annex 2 – Manuals, Booklets and Publications;
Annex 3 - Logbook Entries.

1.1 VERIFICATION AND CONTROL

- Check that original and valid certificates are available on board;
- Check that Copy of DOC updated with endorsement for annual audit is available on board;
- Check that certificates are endorsed for periodical surveys within ranges date;
- Check consistency of data and figure between certificates;
- Check that Manual and instruction book are specific for the ship;
- Check that Log books/Record Books are properly filled in with data in accordance with relevant instructions;
- Check that log book format is in accordance with Administration requirement;
- Check that, when required, manuals are approved on behalf of the current Flag Administration;
- Check consistency of data and figure in different documents, i.e. tank capacity and location [capacity plan / stability booklet / Certificates' supplement / record books];
- Check that required copy of manuals are available on board and distributed as necessary (i.e. training manuals in crew mess room or recreation room);
- Check that ship working language is recorded in the Log Book;
- Check that mandatory entry are regularly made:

Steering gear Drill;
Fire Drill;
Man Overboard Drill;
Onboard training;
Oil Record book Part I;
Oil Record Book Part II;
Cargo Record book.

2 OFFICERS AND RATINGS CERTIFICATION

The crew has to carry valid certificate of competency issued according to the STCW convention depending upon the type of ship, the ranking and function assigned; in order to receive such certification, crew has, in alias, to undergo training courses which should be documented with pertinent certificate or attestation.

The Flag Administration will determine the minimum safe manning criteria for each vessel and will issue the relevant certificate in which is detailed the minimum crew composition and certification required.

The muster list, prepared on specific format approved by the Flag Administration, is detailing the assignment of duty to each seafarer in case of emergency.

2.1 VERIFICATION AND CONTROL

- Check that Minimum Safe Manning Certificate and Muster List are available on board.
- Check that Muster List is displayed in accommodation areas.
- Check that original and valid Certificate of Competency COC for Officers and OOW is available on board.
- Check that COC's endorsement for certificate issued by Administration which is not the Flag Administration or a three month validity application letter for obtaining such endorsement is available on board.
- Check the General Operator Certificate – GOC - for GMDSS Operators.
- Check Certificate of Proficiency in survival craft, rescue boats and fast rescue boat for officers and ratings.
- Check certificate or attestation for Training courses: basic – advanced – specialized.
 - Basic: personal survival techniques, fire protection and fire-fighting, elementary first aid, personal safety and social responsibility.
 - Advanced: Advanced fire-fighting for tankers.
 - Specialized (depending on the type of ship).
 - Tanker -Tanker familiarization.
 - Ro-Ro Pax - Crowd management, Familiarization & Safety Familiarization, Passenger safety, Cargo safety and hull integrity, Crisis Management.
 - Passenger: Crowd management, Familiarization & Safety Familiarization, Passenger safety, Crisis Management.
- Check Medical examination.



PSC DEFICIENCY CARDS (CARGO SHIPS)

SHIP CERTIFICATES AND DOCUMENTS

Annex 1 to
Card n. 19

No.	Document	all	bca	oil	che	gas	gen
1	Class	X					
2	International Load Line Certificate	X					
3	International Load Line Exemption Certificate	X					
4	Cargo Ship Safety Construction Certificate	X					
5	Cargo Ship Safety Equipment Certificate	X					
6	Cargo Ship Safety Radio Certificate	X					
7	Safety Management Certificate (ISM Code)	X					
8	International Ship Security Certificate (ISSC – ISPS Code)	X					
9	Copy of Document of Compliance (ISM Code) updated with endorsement for last Company audit	X					
10	International Oil Pollution Prevention Certificate (IOPPC- MARPOL Annex I)	X					
11	International Pollution Prevention Certificate (NLS/IPPC- MARPOL Annex II)			X (*)		X (**)	
12	International Sewage Prevention Pollution (ISPPC – MARPOL Annex IV)	X					
13	International Air Pollution Prevention Certificate	X					
14	Engine International Air Pollution Prevention Certificate (EIAPP – MARPOL Annex VI) (1)	X					
15	International Energy efficiency Certificate (IEEC – MARPOL Annex VI) (2)	X					
16	International Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk (ICOF Chem - IBC)				X		
17	International Certificate of Fitness for the Carriage of Liquefied Gases in Bulk (ICOF Gas - IGC Code (3)					X	
18	Certificate of Fitness for the Carriage of Liquefied Gases in Bulk (COF Gas - GC Code) (4)					X	
19	International Tonnage Measurement Certificate	X					
20	Cargo Gear Register Book and Certificate (ILO 152)	X					
21	Document of Compliance for the Carriage of Grain		X				X
22	Document of Compliance for ships carrying Dangerous Goods (5)		X				X
23	Statement of the carriage in bulk of cargo listed in		X				X
24	International Anti Fouling system certificate (IAFSC – AFC Convention)	X					
25	Safe Manning Document (SOLAS Ch.V)	X					
26	Certificates for Master, Chief Mate, Watch Officers and Ratings	X					
27	Rating certificates of proficiency in survival craft	X					



PSC DEFICIENCY CARDS (CARGO SHIPS)

SHIP CERTIFICATES AND DOCUMENTS

Annex 1 to
Card n. 19

No.	Document	all	bca	oil	che	gas	gen
28	Certificates for Chief Engineer, 2nd Engineer, Watch	X					
29	Endorsements for tankers			X	X	X	
30	Radio Officers/Operators certificates of competency	X					
31	Medical examination certificates for all crew	X					

NOTES:

(*) when the oil tanker is carrying products that are listed in the Ch. 18 of the IBC Code.

(**) when the gas carrier is carrying products that are listed also in the Ch. 17 of the IBC Code.

- (1) For internal combustion engines of 130 kW power and above not intended for emergency services and lifeboats and rescue boats.
- (2) For ships:
 - a. Which the building contract is placed on or after 01/01/2013 or;
 - b. The keel of which is laid on or after 01/07/2013 or;
 - c. Delivered on or after 01/07/2015 and;
 - d. For existing ship not included in the above at the first intermediate or renewal survey, whichever is first, on or after 01/01/2013.
- (3) For ships whose keel was laid on or after 01/07/1986.
- (4) For ships whose construction contract has been signed after 31/10/1976 and whose keel has been laid before 01/07/1986.
- (5) Carriage in compliance with SOLAS 74/88 Reg. II-2/54 or SOLAS 74/00 Reg. II-2/19 for ships whose keel was laid on or after 01/07/1986.
- (6) Carriage in compliance with IMSBC Code of cargo listed in this Code:
 - a. All cargoes including dangerous ones for ships whose keel was laid before 01/07/1986.
 - b. Cargo other than dangerous goods for ships whose keel was laid on or after 01/07/1986.

all	=	all ships	che	=	chemical tankers
bca	=	bulk carriers	gas	=	gas tankers
oil	=	oil tankers	gen	=	general cargo



PSC DEFICIENCY CARDS (CARGO SHIPS)

MANUALS, BOOKLETS AND PUBLICATIONS

Annex 2 to
Card n. 19

No.	Document	all	bca	oil	che	gas	gen
1	Loading manual.	X					
2	Approved trim and stability booklet.	X					
3	Approved damage stability booklet.		X	X	X	X	
4	Approved grain loading stability booklet.		X				X
5	Approved SOPE Plan.	X					
6	Approved SMPEP.				X		
7	Approved SEEMP (Ship Energy Efficiency Management Plan).	X					
8	Approved Oil Discharge Monitoring and Control System (ODMS).			X			
9	Approved Dedicated Clean Ballast Tank (CBT) operational manual.			X			
10	Approved Crude Oil Washing (COW) operation and equipment manual.			X			
11	Approved P&A Manual.				X	X(*)	
12	Approved Cargo Securing Manual (if cargo units are carried).		X				X
13	Approved NOx technical file for internal combustion engines.	X					
14	Safety Management Manual.	X					
15	Oil Record Book Part I (machinery spaces operation).	X					
16	Oil Record Book Part II (cargo-ballast operation).			X			
17	Cargo Record Book.				X		
18	Inert Gas System (IGS) instruction manual.			X			
19	Cargo information/operation.				X		
20	Operational procedures for special ballast arrangements.			X			
21	International Bulk Chemical (IBC) Code (for ships built on or after 1.7.86).				X		
22	International Gas Carrier (IGC) Code (for ships built on or after 1.7.86).					X	
23	Manoeuvring booklet and information (for ships built on or after 01.09.84).	X					



PSC DEFICIENCY CARDS (CARGO SHIPS)
MANUALS, BOOKLETS AND PUBLICATIONS

Annex 2 to
Card n. 19

No.	Document	all	bca	oil	che	gas	gen
24	General catalogue for the nautical publications.	X					
25	Charts and publications for the intended voyage.	X					
26	Notices to Mariner and chart correction logbook.	X					
27	International Code of Signals.	X					
28	Radio license.	X					
29	Radio logbook.	X					
30	Operating manuals for radio equipment.	X					
31	ITU publications.	X					
32	Enhanced Survey Program Report File.		X	X	X		
33	Bunker delivery note for Low Sulfur oil fuel.						
34	Deck logbook.	X					
35	Engine room logbook.	X					
36	Fire plans.	X					
37	Muster lists.	X					
38	IMO Posters/Signs: Red (Fire and Lifesaving) – Green (Escape) – Blue (Survival crafts and launching appliances).	X					
39	Lifesaving appliances training manual.	X					
40	Instructions for on board maintenance of lifesaving appliances.	X					
41	Instructions for on board maintenance of fire-fighting appliances.	X					
42	Operational instructions for emergency steering change-over procedure.	X					
43	Operational instruction for fixed firefighting system.	X					

NOTES:

(*) when the gas carrier is carrying products that are listed also in the Ch. 17 of the IBC Code:

all = all ships che = chemical tankers
bc = bulk carriers gas = gas tankers
oil = oil tankers gen = general cargo



PSC DEFICIENCY CARDS (CARGO SHIPS)

LOGBOOK ENTRIES

Annex 3 to
Card n. 19

No.	Item	Frequency	
1	Working Language		
2	Steering gear	Operational test and change-over procedures.	12 hours before
		Emergency steering gear test (direct control from steering gear compartment, communication, alternative power supply).	Three-monthly
3	Lifesaving appliances	Inspection of lifesaving appliances and lifeboat equipment using the checklist given in the "Instructions for On-board Maintenance" (see Appendix 2, item 6).	Monthly
		On-board training in the use of lifesaving and fire-fighting appliances.	2 weeks after embarkation
4	Lifeboats and rescue boats	Operation of lifeboat and rescue boat engines ahead and astern (for at least 3 minutes).	Weekly
		Launching of each lifeboat and rescue boat.	Three-monthly
		Launching of free-fall lifeboat (if fitted).	Six-monthly
		On-board training in the use of davit launched life rafts.	Interval of 4 months
5	Launching appliances	Annual thorough examination.	Annual
		Dynamic test with load of the winch rake upon completion of the annual thorough examination.	Annually
		Dynamic test with 1.1 overload of the winch brake upon completion of the annual thorough examination.	Quinquennial
6	Lifeboat on-load release gear	Annual thorough examination and test.	Annual
		Operational test with 1.1 overload of the release gear upon completion of the annual thorough examination and whenever the release gear is overhauled.	Quinquennial
7	General alarm	Test of general emergency alarm.	Weekly
8	Drills	Abandon ship drill.	Monthly
		Fire drill.	Monthly
9	Fire-fighting appliances	Inspection of breathing apparatus.	Monthly
		Renewal of liquid foam.	At each renewal

NOTE:

Additional entry may be specifically requested as per Flag Administration requirement.



1. GENERAL

Stern door is the typical outfitting of RO-RO cargo ship in order to allow cargo to be loaded and discharged in horizontal direction.

Stern door protects the main garage, which is generally the bulkhead deck, from entry of water and therefore its capability to remain weather tight is of paramount importance.

Furthermore the stern door is part of the aft end structure of the ship and its structural condition shall be maintained to ensure proper strength.

Depending on the size and the service needs of the vessel the stern opening can be protected by one or two doors: however also the size of a single door can be quite big in term of both dimension and weight.

Therefore the condition of the door with its accessories as well as that one of the stern frame, door supporting devices, door closing and securing devices shall remain adequate.

Stern doors are operated by means of wire or hydraulic piston or combined systems: not appropriate manoeuvring of the door causes uneven distribution and transmission of stress causing door deformation as well as depletion of supporting structure of the ship (winch foundation pulley support, pistons' eye pads).



2. CHECKS AND TESTS

- Check that Operational and Maintenance Manual (OMM) is available on board, specific for the ship and approved (Keel Laid \geq 01/01/1997);
- Check that operating instruction displayed;
- Check general structural condition of the stern door and stern frame: no deformation – stiffening system in sound condition – flap in place;
- Check structural condition of the support and the pad eyes of pulleys for lifting wire are in order: pulleys aligned – pin not deformed, not loose and greased – pin lock in place;

- Check that wire in good condition: no wire broken – no distortion;
- Check condition of rubber packing and relevant containment: gasket in place and continuous in particular in way of door edges and corners;
- Check condition of supporting devices: slots to accommodate securing devices, hinges and stopper to transmit load from the door to the ship structure. No cracks – no deformation – welding to ship structure in order – gap between securing device and supporting device – hinges clearance – connection of hinges' pad eyes to ship structure;
- Check condition of securing device to prevent movement and hold in closed position: wedge and pins all in place, greased and free to move;
- Check condition of locking device to block the securing device: hydraulic actuators all in place and connected – hydraulic system tight with no leakage;
- Check that interlock for operating, securing and locking the door is working in order to ensure proper sequence (Keel Laid $>$ 01/01/1997);
- Check the door in closed position to ensure weather tightness: proper fitting within the structure frame with securing and locking devices in place – no gap – no deformation;
- Carry out leak test by hose test if deemed necessary;
- Carry out the working test of the door in opening and closing mode;
- Check that the system for indication and monitoring the position of the door, of the securing and locking devices at the remote control station, where fitted, is in working condition;
- Check that warning notice displayed at each operating panel.



Stern door in closed position: no weather tight due to possible deformation.

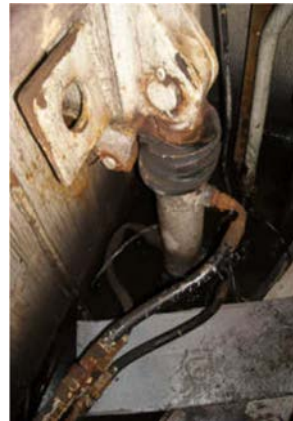


PSC DEFICIENCY CARDS (CARGO SHIPS)

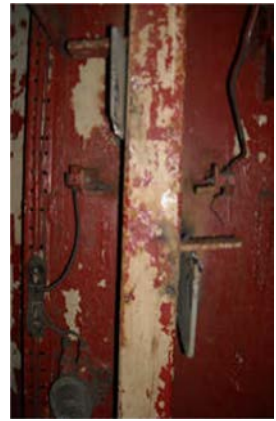
STERN DOOR



Condition and clearance of supporting hinges



Hydraulic piston for locking device



Missing sensor for indication and monitoring



Hinge



Securing device in place
Hydraulic operated wedge



Top portion of door structure wasted and holed



Pin worn out



Pin renewed



Hose test to confirm weather tightness



PSC DEFICIENCY CARDS (CARGO SHIPS)

FIXED PRESSURE WATER SPRAY SYSTEM FOR SPECIAL CATEGORY SPACE

Card n. 21

1. GENERAL

Special category such as enclosed vehicle spaces above and below the bulkhead deck, into and from which vehicles can be driven and to which passengers have access, shall be fitted with an approved fixed pressure water-spraying system (commonly called Drenching System) for manual operation which shall protect all parts of any deck and vehicle platform in such spaces. (SOLAS 74/81 Reg. II-2/37 and SOLAS 74/09 Re. II-2/20)

The system is divided in sections along the length of the space and each section is controlled by manual operated valve: the control station is located outside the protected space and above the bulkhead deck. The system is to be capable to operate with at least two contiguous sections simultaneously.

Water supply to the system should be provided by a pump or pumps other than the ship's required fire pumps which should additionally be connected to the system by a lockable non-return valve which will prevent a back-flow from the system into the fire main.

The water nozzles are equally distributed in such a manner to cover the protected area and are connected by galvanized steel pipe: stainless steel or corrosion resistant alloys are rarely used.



As special category spaces may be accommodated on more than one deck, provided that the total overall clear height for vehicles does not exceed 10m, portion of piping between platform or movable deck are realized by means of steel armoured flexible hoses

The most recurrent malfunctioning and deficiency of the system results in partial supply of water to all nozzles with reduced pressure so that the result spray is not adequate.

The nozzles as well as the piping itself become obstructed by rust clogs which form inside the pipe:

Even if not required, it would be recommended to blow the piping after any test by means of air compressed or fresh water, but few systems are designed with this feature.



Based on the result of the test of all the sections, the inspection is aimed to assure that all nozzles are fed with the proper water pressure and to maintain those that are not spraying as required.

The maintenance is not to be limited to the cleaning and freeing of the defective nozzle but it shall be extended also to the portion of piping that serves it:

Therefore dismounting of ceiling, where fitted, is recommended to check the condition of the pipes.

Furthermore in many cases contiguous portion of piping become inoperative as a consequence of the maintenance carried out (rust clogs detached).

Therefore after any repair and maintenance the working test is to be repeated.



PSC DEFICIENCY CARDS (CARGO SHIPS)
FIXED PRESSURE WATER SPRAY SYSTEM
FOR SPECIAL CATEGORY SPACE

Card n. 21

2. CHECKS AND TESTS



Also the flexible hoses represent a weak point of the system and have to be thoroughly examined.

- Check that location of control station is in compliance with fire plan.
- Check the access to the control station is free from obstruction and clearly identified.
- Check that the control station is neat and in order: no spare part or stuff stowed inside.
- Check that operating instructions are displayed together with legend for identification of section.
- Check that section valves are clearly and properly labeled.
- Check emergency light.
- Check that all nozzles are in place.
- Check condition of all flexible hoses, if fitted: integrity of external surface – end fitting – connection flanges fully bolted – non obstruction/free movement between ship structure.
- Remove portion of ceiling, if fitted, to check the condition of pipe and relevant supports.
- Carry out the working test of all the sections and confirm that the coverage of water spray is adequate.
- Carry out a confirmatory working test after any maintenance and or repair carried out.

* * *