

## ANNUAL SURVEY CHECKLIST FOR OIL / CHEMICAL TANKER

**Ship Name:**

**Report No.:**

**I.R. No.:**

<b>DOCUMENTATION</b>
<p><b>STATUTORY CERTIFICATES</b></p> <p>Valid Statutory certificates available on board.</p>
<p><b>APPROVED TRIM &amp; STABILITY INFORMATION</b></p> <p>Confirmation of availability of trim and stability booklet approved by administration. IRS Rules, Part 3, Ch.1, Cl. 1.4</p>
<p><b>LOADING INSTRUMENT</b></p> <p>Availability of an approved loading instrument together with it's operational manual and verification of test cases (IRS Rules, Part 3, Ch. 5, Cl. 1.3)</p>
<p><b>MANOEUVRING BOOKLET</b></p> <p>Confirming that the manoeuvring booklet is on board and that the manoeuvring information is displayed on the navigating bridge</p>
<p><b>FIRE CONTROL PLANS</b></p> <p>Verification of proper posting of fire control plans (including duplicate sets permanently stored in a prominently marked weather tight enclosures outside deckhouse</p>
<p><b>STEERING GEAR ENTRIES REQUIRED BY SOLAS/FLAG</b></p> <p>Verification of entries made in the ship's log for departure.</p>
<p><b>DAMAGE STABILITY</b></p> <p>Availability of damage stability information (Cargo vessel &gt; 80 m length after 10/07/08 and length &gt; 100 m from 01/02/1992)</p>
<p><b>LOADING MANUAL</b></p> <p>Verified that vessel has an approved Loading Manual. (IRS Rules, Part 3, Ch. 5, Cl.1.3)</p>
<p><b>I.G. SYSTEM OPERATIONAL MANUAL</b></p> <p>Verification for availability of I.G. Instruction manual(operation, maintenance, safety, health hazard etc.)</p>
<p><b>ESP DOCUMENT</b></p> <p>Availability of ESP documents on board</p>
<p><b>THE SHIP STRUCTURE ACCESS MANUAL</b></p> <p>Checking the Ship Structure Access Manual of oil tankers of 500 G/T and over. (500 GT and over, constructed on or after 1<sup>st</sup> Jan. 2006)</p>
<p><b>CONSTRUCTION DRAWINGS MAINTAINED ON BOARD</b></p> <p>Confirming that structural alterations performed, if any, have been approved by the</p>

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classification society and reported on the as-built drawings kept on board (constructed on or after 1<sup>st</sup> Jan. 2007)

**NATIONAL REQUIREMENTS / CODE**

Availability of applicable code (IBC-for ships whose keel was laid on or after 01-06-1986 / BC Code for ships built before 01-06-1986 but after 31-12-1976) or National requirements and Material Safety Data sheets for the carriage of cargoes.

**P & A MANUAL**

Verified that vessel has an approved P & A Manual.

**EMERGENCY TOWING PROCEDURES**

Confirm that ship specific emergency towing procedures available on board.

**FOR VESSELS SUBJECT TO IMO PSPC**

Confirmation that the maintenance, repair and partial recoating of dedicated ballast tanks and double side skin spaces, as appropriate, are recorded in the coating technical file.

**CLASS CERTIFICATE**

Confirmation that the Class annual/Intermediate/renewal\* survey completed satisfactorily and Class Certificate endorsed/interim certificate issued\* on .....

**WEATHER DECK**

**SUPERSTRUCTURES, DECKHOUSES & WHEELHOUSES**

Verification gas tight condition of wheelhouse doors and windows, fixed type side scuttles and windows in superstructure and deckhouse ends facing the cargo area and gas tight bulkhead penetrations

**CARGO, OILY SLOP & BALLAST TANK OPENINGS**

Openings including gaskets, covers, coamings, flame screens and fasteners examined for condition and signs of leakages

**ACCOMMODATION, SERVICE, MACHINERY SPACES & WHEELHOUSES**

Verification gas tight condition of wheelhouse doors and windows, fixed type side scuttles and windows in superstructure and deckhouse ends facing the cargo area and containing accommodation, service, machinery and control spaces and gas tight bulkhead penetrations.

**CARGO TANK OPENINGS**

Examination of cargo tank openings including gaskets, covers, coamings and flame screens.

**BUNKER TANKS**

Examination of flame screens on vents to all bunker tanks.

**CARGO & PROCESS PIPING AND FITTINGS**

Verification for condition of cargo, bunker, ballast and vent piping system including vent masts and headers and protective screens along with associated expansion arrangements and identification / markings on cargo and process piping and valves. The verification to include condition of removable pipe lengths/other approved equipment

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necessary for cargo operation
<p><b>CARGO TANK VENTING ARRANGEMENTS</b></p> <p>Pressure / Vacuum valves and mast risers including secondary means of venting (could be cargo tank pressure monitoring system, P/V valves or IG system P/V breaker) examined for proper operation, absence of oil carry over, flame screens, condition and maintenance records</p>
<p><b>CARGO, COW, OILY SLOP &amp; BALLAST TANK PIPING SYSTEMS</b></p> <p>Cargo, crude oil washing, bunker, ballast and vent piping systems including COW deck machines, valves, vent masts and headers visually examined and records of testing verified (no soft patches allowed)</p>
<p><b>EMERGENCY TOWING ARRANGEMENT</b></p> <p>Verification of ETA for condition and operational readiness (vessel more than 20,000 DWT.)</p>
<p><b>WATER TIGHT DOORS AND CONTROLS</b></p> <p>Watertight doors in Water Tight bulkheads surveyed and local/remote controls including indicating lights and alarms</p>
<p><b>FIRE DOORS AND CONTROLS</b></p> <p>Operation of manual/automatic fire doors, no holding back arrangements exist</p>
<p><b>ANCHORING &amp; MOORING EQUIPMENT</b></p> <p>Anchoring equipment &amp; mooring equipment</p>
<p><b>SOUNDING PIPES</b></p> <p>Sounding pipes, including self-closing devices on short sounding pipes</p>
<p><b>HATCHWAYS, COAMING AND COVERS</b></p> <p>Examination and testing of hatchways on freeboard and superstructure decks including efficient condition of closing appliances</p>
<p><b>WEATHER DECKS</b></p> <p>Examination of weather decks</p>
<p><b>FREEBOARD MARKS</b></p> <p>Verification of freeboard marks</p>
<p><b>VENTILATORS</b></p> <p>Examination and or testing of ventilators including efficiency of their closing appliances</p>
<p><b>WINDOWS, SIDE SCUTTLES AND DEAD LIGHTS</b></p> <p>Examination and or testing of windows, side scuttles and dead lights</p>
<p><b>SCUPPERS, SANITARY DISCHARGES, VALVES AND CONTROLS</b></p> <p>Examination scuppers and sanitary discharges and valves together with valves and their control gear</p>

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<p><b>SKYLIGHTS AND FIDDLEY OPENINGS</b></p> <p>Examination and or testing of skylights and fiddle openings including their closing appliances</p>
<p><b>EXPOSED CASINGS, DECK HOUSES, COMPANION WAYS AND SUPERSTRUCTURES</b></p> <p>Examination and / testing of exposed casings, deck houses, companionways and superstructure bulkheads including closing appliances</p>
<p><b>REFUSE CHUTES etc., AND OTHER OPENINGS</b></p> <p>Examination and / or testing including their closing appliances</p>
<p><b>GUARD RAILS AND/OR BULWARKS</b></p> <p>Examination of the condition and arrangement</p>
<p><b>FITTINGS FOR TIMBER DECK CARGOES</b></p> <p>Examination of the condition and arrangement</p>
<p><b>WT BULKHEAD OPENINGS</b></p> <p>Watertight bulkheads penetrations examination as far as practicable for satisfactory condition</p>
<p><b>TUNNEL</b></p> <p>Tunnel closing arrangements, lighting and notices</p>
<p><b>MASTS AND STANDING RIGGING</b></p> <p>Masts, Derricks &amp; Crane columns including their standing rigging</p>
<p><b>FLUSH DECK SCUTTLES</b></p> <p>Flush Deck scuttles including their closing appliances</p>
<p><b>SAFE ACCESS TO BOW</b></p> <p>Verification of arrangements of safe access to bow and the paint applied should be of anti-slip type.</p>
<p><b>COMPANIONWAYS</b></p> <p>Verification of Companionways and posting of appropriate notices.</p>
<p><b>AIR PIPES</b></p> <p>Examination and or testing of air pipes including efficiency of their closing appliances, weld connection between Air pipes and deck plating.</p> <p>Confirmation that vents from bunker tanks and ballast tanks (with cathodic protection) are equipped with flame screens.</p>
<p><b>FREEING PORTS</b></p> <p>Examination of the condition and arrangement including shutters and crew protection bars</p>

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**GANGWAYS, LIFELINES AND ACCOMMODATION LADDER**

Satisfactory examination of various items pertaining to lifelines, accommodation ladder, gangways, Davits, Winches. Verification of inspection and maintenance records. (IRS Rules Part 1 Ch.2, Cl.3.2.2.9 to 3.2.2.13)

**CORROSION PREVENTION OF SEAWATER BALLAST TANKS**

Confirming that the corrosion prevention system fitted to dedicated ballast water tanks of oil tankers and bulk carriers is maintained (constructed on or after 1<sup>st</sup> July 1998)

**ACCESS TO AND WITHIN SPACES IN, AND FORWARD OF, THE CARGO AREA OF OIL TANKERS AND BULK CARRIERS**

Confirming, when appropriate and as far as is practicable when examining internal spaces on oil tankers of 500G/T and over that the means of access to cargo and other spaces remain in good condition.

Checking, when appropriate, the provision of means of access to cargo and other spaces in accordance with the arrangements in the Ship Structures Access Manual of oil tankers of 500 G/T and over.

**NEW INSTALLATION OF MATERIALS CONTAINING ASBESTOS**

Confirming that new equipment containing asbestos was not fitted on board since last survey.

**TOWING AND MOORING EQUIPMENT**

Confirming that the towing and mooring equipment is properly marked with any restriction associated with its safe operation for ships constructed after 01/01/2007

**INTERNAL SPACES**

Verification of the permanent means of access where appropriate of the internal spaces as far as practicable. (IRS Rules Part 1 Ch.2, Cl 3.2.2.14)

**UPGRADATION / REPAIR TO COATING**

Confirmation that maintenance, repair and partial recoating had been done as per manufacturer's specification using acceptable coating system, suitable surface preparation and adequate film thickness under the supervision of coating manufacturer's representative/coating inspector. These had been verified through stage/patrol inspection during survey and considered acceptable.

Note: Ballast tank for which coating condition was upgraded to "GOOD" this time during survey are to be listed in the "Remark" section.

**PRESSURE GAUGES, PUMPS**

Verification that installed pressure gauges on cargo discharge lines including those fitted outside the cargo pump room & level indicating systems are operational. Verification that pumps, valves and pipelines are identified and distinctively marked

**MACHINERY SPACES****MACHINERY AND BOILER SPACES**

Machinery, boilers and other pressure vessels, associated piping systems and fittings are so installed and protected as to reduce to a minimum any danger to persons on board, due regard being given to moving parts, hot surfaces and other hazards

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**FIRE/EXPLOSION HAZARDS**

i) Propulsion system and auxiliary machinery, boilers, all pressurized systems (steam, pneumatic, hydraulic) and their associated fittings were examined to see whether they are being properly maintained and with particular attention to the fire and explosion hazards

ii) Verification that oil / water leakages, accumulation of oil, with potential source of ignition does not exist in the machinery spaces. Leakages if any have been dealt and source of leakages rectified.

iii) Confirmation that floor plates & gratings are secured and found to be in order.

**STEERING GEAR**

All main and auxiliary steering arrangements and their associated equipment and control systems were examined and tested. Steering chains are verified for wear and tear and it was ensured wear is within 12% of the original rule diameter. Confirmation that various alarms required for hydraulic power operated, electric and electro-hydraulic steering gears are, operating satisfactorily and that the recharging arrangements for hydraulic power operated steering gears are being maintained. Log entries made in accordance with statutory requirements were verified where applicable. Confirm the requisite arrangements to regain steering capability in the event of the prescribed single failure are being maintained. Floor to be anti skid and guard rails.

**MEANS OF COMMUNICATION**

All means of communication between the navigating bridge and the machinery control positions including engine room telegraph, as well as the bridge and the main / alternative steering position, if fitted, are tested. Where ships having emergency steering positions there are means of relaying heading information and, when appropriate, supplying visual compass readings to the emergency steering positions. Confirmation that means of indicating the angular position of the rudder is operational

**BOILERS AND PRESSURE VESSELS**

Periodical Surveys of boilers and other pressure vessels have been carried out as required by the Rules and the safety devices have been tested. External visual examination. External examination of boilers including test of safety & protective devices and test of safety valve using it's relieving gear. For exhaust gas economisers, review of engine log book to verify that Chief Engineer has tested the safety valves at sea within the window period of Annual Survey

**REMOTE CONTROLS**

Means for the operation of the main and auxiliary machinery essential for propulsion and the safety of the ship, including when applicable, the means of remotely controlling the propulsion machinery from the navigating bridge and the arrangements to operate the main and other machinery from a machinery control room

**BILGE PUMPING ARRANGEMENT**

Examination of the bilge pumping systems and bilge wells including operation of each bilge pump (including hand pumps and eductors), extended spindles and level alarms, where fitted. Operational confirmation of emergency bilge suction and bilge-pumping system for each watertight compartment and drainage from enclosed cargo spaces situated on freeboard deck.

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<p><b>FIRST START ARRANGEMENT</b></p> <p>Operational confirmation of the means provided to bring the machinery into operation from the dead ship condition without external aid</p>
<p><b>SEA WATER PIPE EXPANSION JOINTS</b></p> <p>Examining visually the condition of any expansion joints in sea water system.</p>
<p><b>AUTOMATION</b></p> <p>General Examination of automation equipment. Operation of safety devices, bilge level detection and alarm systems and control systems. Operational confirmation of the engineer's alarm that it is clearly audible in the engineer's accommodation</p>
<p><b>SCHEDULE OF BATTERIES</b></p> <p>Schedule of batteries for essential and emergency services available on board and maintenance being done as per this schedule.</p>
<p><b>PROPULSION MACHINERY</b></p> <p>Confirmation that normal operation of the propulsion machinery can be sustained or restored even though one of the essential auxiliaries becomes inoperative.</p>
<p><b>SEA WATER PIPE EXPANSION JOINTS</b></p> <p><i>Examining visually the condition of any expansion joints in sea water system.</i></p>
<p><b>CARGO PUMPS, PRESSURE GAUGES, VALVES</b></p> <p>Examination of cargo, bilge, ballast, stripping pumps for excessive gland seal leakage. Verification that installed pressure gauges on cargo discharge lines including those fitted outside the cargo pump room and level indicating systems are operational, verification that pumps, valves and pipelines are identified and distinctively marked</p>
<p><b>MACHINERY SPACE VENTILATION</b></p> <p>Confirmation that machinery space ventilation is in good working condition.</p>
<p><b>EXAMINATION</b></p> <p>Examination of cargo, bilge, ballast and stripping pumps for excessive gland seal leakage, verification of proper operation of electrical and mechanical remote operating and shutdown devices and remote operation of pump room bilge system, and checking that pump foundations are intact.</p>
<p><b>CARGO DISCHARGE LINES</b></p> <p>Verification that installed pressure gauges on cargo discharge lines including those fitted outside the cargo pump room and level indicating systems are operational, verification that pumps, valves and pipelines are identified and distinctively marked.</p>
<p><b>MACHINERY VERIFICATION RUNS</b></p> <p>Towards completion of Special/Continuous Survey of Machinery, trial of main &amp; auxiliary machinery including the steering gear &amp; controls carried out to confirm satisfactory operation (In afloat condition).</p>
<p><b>SEA TRIAL</b></p> <p>In case of major repairs to main propulsion machinery or steering gear, confirmation that a sea trial has been carried out satisfactorily to confirm proper operation of the relevant machinery in</p>

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all respects.

## ELECTRICAL INSTALLATION

### ELECTRICAL EQUIPMENT IN DANGEROUS ZONES

Electrical equipment and cables in dangerous zones examined visually for condition and maintenance records verified for last insulation readings

### EARTHING AND BONDING OF CARGO TANKS AND PIPING SYSTEM

Confirmation that independent cargo tanks and cargo piping systems intended for cargo with flash point not exceeding 60°C and not permanently connected to the hull of the ship are provided with bonding straps and these are maintained in good condition and not affected by high resistivity contamination e.g. corrosive products or paint.

### ELECTRICAL SYSTEM

General examination visually and in operation, as feasible, of the main electrical machinery, the emergency sources of electrical power, the switch gear, other electrical equipment including the lighting system. The precautions provided against shock, fire and other hazards of electrical origin for proper maintenance

### EMERGENCY SOURCE OF POWER

The operation of the emergency source(s) of electrical power, including their starting arrangement, the systems supplied, and when appropriate, their automatic operation as far as practicable

## FIREFIGHTING ARRANGEMENTS

### MAIN AND EMERGENCY FIRE PUMP

Verification that each Fire pump (including starting and priming arrangements) is capable of producing the required two jets of water (whilst also permitting the simultaneous operation of foam system on tankers)

### FIREMAINS, HYDRANTS, HOSES, NOZZLES AND APPLICATORS

Condition of fire main (no soft patches or doublers) together with flanges and valves, hydrants, hoses, nozzles, applicators, spanners, relief valves and international shore connection

### READINESS OF FIRE HYDRANTS, HOSES

Each hose complete with couplings, nozzle (dual-purpose nozzles where applicable) and tools kept ready for use

### PORTABLE EXTINGUISHERS AND FOAM APPLICATORS

Confirmation that portable fire extinguishers correspond to the fire control plan w.r.t. number, type and location and that when examined were in good condition, fully charged and ready for use

### SPARE CHARGES

Availability of spare charge/s for each portable extinguisher or additional portable extinguishers of the same type

### FIRE AND/OR SMOKE DETECTION SYSTEM

Examine for proper functioning and possible testing.

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**FIXED FIRE FIGHTING SYSTEM**

i) Examination of fixed fire fighting system controls, piping, instructions and marking. Checking for evidence of proper maintenance and servicing including date of last systems tests

ii) Verification with regard to correct positioning (for in service condition) of safety pins where used on cylinder head discharge valves for fixed fire fighting CO2 system are in accordance with manufacture's instruction manual.

**REMOTE STOPPING OF FANS, OIL PUMPS, ETC**

Verify that the remote controls for stopping fans and machinery and shutting off fuel supplies in machinery spaces are in working order

**CLOSING ARRANGEMENTS FOR SKYLIGHTS, FLAPS ETC**

Examination of closing arrangements of ventilators, funnel annular spaces, skylights, doorways and tunnel where applicable, including condition of operating mechanism e.g.: wire ropes, hydraulic piping etc

**FIREMAN'S OUTFITS**

Verify that Fireman's outfits are complete and in good condition and 200% spare maintained.

**FIRE DOORS**

Examination of any manual and automatic fire doors and proving their operations

**MEANS OF ESCAPE**

Confirmation that the means of escape from accommodation, machinery and other spaces are free from any obstruction.

**GASEOUS FUEL FOR DOMESTIC PURPOSE**

Arrangements found in satisfactory condition.

**PUMP ROOM VENTILATION**

Verification that the pump room ventilation system is operational, ducting intact, dampers operational and screens clear

**EXTERNAL EXAMINATION OF PIPING AND CUT-OUTS**

Examine for satisfactory condition of piping and cut out valves of cargo tank and cargo pump room fixed fire fighting systems

**DECK FOAM SYSTEM**

Verify that the deck foam system and deck sprinkler system was in good operating condition, check for adequate supply of Foam concentrate and periodic lab analysis of the sample.

**SYSTEMS AND CIRCUITS**

Confirm that the intrinsically safe systems and circuits used for measurement, monitoring, control and communication purposes in all hazardous locations are being properly maintained.

**EXAMINATION**

Examination of the fire extinguishing systems for spaces containing paint and/or

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flammable liquids and deep fat cooking equipment in accommodation and service spaces, examination of fire safety requirements of any helicopter facilities
<b>GASEOUS FUEL FOR DOMESTIC PURPOSE</b> Arrangements found in satisfactory condition.
<b>CONTINUOUS MONITORING</b> Confirming that the system for continuous monitoring of the concentration of flammable vapours is satisfactory. (IRS Rules Part 1 Ch.2, Cl 4.2.4.1 u)
<b>SAMPLING POINTS OR DETECTOR HEADS</b> Confirming that sampling points or detector heads are located in suitable positions in order that potentially dangerous leakages are readily detected. (IRS Rules Part 1 Ch.2, Cl 4.2.4.1 v)
<b>CARGO HANDLING / CARGO CONTROL ROOMS</b>
<b>CARGO TANK GAUGING SYSTEM</b> Verification of cargo tank level gauges, high level alarms and automatic high-liquid-level shut-off system
<b>SAFETY ARRANGEMENTS RELATED TO CARGO</b>
<b>EXAMINATION</b> Examinations of gauging devices, high level alarms, valves associated with overflow control. Examination of cargo heating/cooling system sampling arrangements where fitted. Examination of the cargo transfer arrangements and confirming that any hoses are suitable for their intended purpose
<b>VERIFICATION</b> Verification of temperature devices and alarms, removable pipe lengths or other approved equipment necessary for cargo separation. Verification that the ventilation system including portable equipment is operational. Verification that arrangements are made for sufficient inert/padding/drying gas to be carried to compensate for normal losses and that means are provided for monitoring of ullage spaces. Verification that arrangements are made for sufficient medium to be carried where drying agents are used on air inlets to cargo tanks
<b>INERT GAS (NV) SYSTEM</b>
<b>IG SYSTEM COMPONENTS AND PIPING</b> External examination of the condition of all components and piping for signs of corrosion and gas / effluent leakage including inert gas plant overboard discharges
<b>SCRUBBER ROOM VENTILATION SYSTEM</b> Verification of the operation of scrubber room ventilation arrangement
<b>DECK WATER SEAL</b> Verification of deck water seal for automatic filling/draining and absence of water carry over and condition of non-return valve
<b>INERT GAS BLOWERS</b> Verification of the proper operation of both inert gas blowers including test of interlocking feature of the soot blowers and automatic closure of gas pressure

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regulating valve when the IG blowers are stopped.
<b>IG SYSTEM VALVES</b> Verification of the operation of all remotely or automatically controlled valves, (in particular the flue gas isolating valve/s)
<b>IG SYSTEM INSTRUMENTATION, AUTOMATION &amp; ALARMS</b> Verification of the function of alarms and safety devices of the inert gas system (using simulated conditions, where necessary): Low water pressure to the scrubber, High gas temperature in inert gas main, High water level in the scrubber, Failure of inert gas blower, High oxygen content of gas in inert gas main, Low water level in deck water seal, Failure of power supply to gas regulating valve/IG main pressure and oxygen content indicators, Low gas pressure in inert gas main, High gas pressure in inert gas main. check for the operational test of the inert gas system after performing the above checks satisfactorily.
<b>CARGO PUMP / CONTROL ROOM</b>
<b>CARGO PUMP ROOM VENTILATION, CLEANLINESS Etc</b> Examination of cargo pump room(s) spaces for freeness from potential sources of ignition, access ladders and cargo pump room drainage arrangements; operation of the ventilation system(damper operation and flame screens) including interlocking arrangement to lighting  Verification that no oil leakages and no accumulation of oil in the cargo pump room. Leakages if any have been dealt and source of leakages rectified.
<b>CARGO PUMP ROOM DRAINAGE ARRANGEMENT</b> Verification of cargo pump room / other cargo handling spaces bilge system operable from outside the cargo pump rooms
<b>ACCESS LADDERS AND RESCUE ARRANGEMENTS</b> Verification of cargo pump room / other cargo handling spaces access ladders, railings and permanent rescue arrangements
<b>PUMP ROOM BULKHEAD AND PIPE TUNNEL IF FITTED</b> Examinations of all pump room / other cargo handling spaces bulkheads for signs of chemical leakage or fractures, the sealing arrangements of all penetrations of pump room bulkheads, Temp. sensing devices for bulkhead glands and alarm. Examination of condition of all piping systems.
<b>PIPING IN CARGO PUMP ROOMS</b> Examination of the condition of cargo, bilge, ballast and stripping systems
<b>CARGO PUMPS</b> Examination of Cargo pump/s bulkhead / deck glands, remote operation/shut down devices, pressure relief devices, pump foundations and temperature monitoring of glands, bearings & casings and associated alarm systems including stand-by means of pumping
<b>CARGO HANDLING SYSTEM CONTROLS, INSTRUMENTATION &amp; ALARMS</b> General examination of pressure gauges and relief devices on cargo pumps and discharge lines, local / remote controls of valves on cargo piping and cargo tank level indicator / alarm systems
<b>CARGO PUMP ROOM GAS DETECTION/BILGE LEVEL MONITORING SYSTEM</b> Examinations of the monitoring & alarm system for concentration of hydrocarbon gasses

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and bilge level in cargo pump rooms
<b>CRUDE OIL WASHING ARRANGEMENTS</b>
<b>TANK CLEANING MACHINES DRIVE UNITS</b> Verification of number of operational drive units available is as specified in COW operational manual, where the drive units are not integral with the tank cleaning machines
<b>ISOLATION OF STEAM HEATERS FOR WATER WASHING</b> Verification of isolation arrangements of steam heaters for water washing of tanks, either by means of double shut off valves or clearly identifiable blanks
<b>FLEXIBLE HOSES FOR SUPPLY OF OIL TO THE WASHING MACHINES</b> Verification of condition and storage of flexible hoses for supply of oil to the washing machines including records of pressure testing.
<b>CRUDE OIL WASHING MACHINES</b> Confirmation that crude oil washing machines are operable by verification of the movement indicators and/or sound patterns or other approved means. In case the survey is held when crude oil washing is not being carried out this may be confirmed based on visual external examination of the machines and review of cargo operations log.
<b>DEDICATED CLEAN BALLAST TANKS</b> Examination of tanks containing arrival / departure ballast water for effectiveness of crude oil washing and stripping.
<b>CARGO TANK STRIPPING SYSTEM</b> Verification of the cargo tank stripping system by observing the tank level gauging system, hand dipping or other approved means
<b>COMBINATION CARRIERS</b>
<b>GAS DETECTION ARRANGEMENTS</b> Verification of Gas detection arrangement in cofferdams.
<b>ISOLATION ARRANGEMENTS</b> Verification of blanking arrangement for IG main, oil cargo and slop tank pipes, when carrying cargo other than oil.
<b>OPERATIONAL NOTICES</b> Verification of posting of required signboards and instruction manuals
<b>ADDITIONAL CLASS NOTATION REQUIREMENT</b>
<b>ADDITIONAL CLASS NOTATIONS E.G. SPM, VCS etc.</b> <b>'SPM' NOTATION</b> Components of the single point mooring system (bow chain stoppers, bow fairleads, winches and capstans), to verify their satisfactory condition, Hull structures supporting and adjacent to the components to the single point mooring system, to verify that there is no deformation or fracture.
<b>GENERAL</b>
<b>HOUSE KEEPING</b> i)Verification that general housekeeping / cleanliness in engine room, pump room, on

Condition to be reported using number code as follows:

1. When examined found to be satisfactory and/or examined/tested satisfactory and/or confirmed arrangements exist in satisfactory condition. No repairs considered necessary this time.
2. Repairs now recommended and were carried out satisfactorily. After repairs found to be satisfactory and/or examined / tested satisfactorily and/or confirmed arrangements exist in satisfactory condition.
3. Repairs now recommended and remain outstanding.
4. Opportunity to examine/test was not provided this time. Remains outstanding.

<p>deck, accommodation, hospital, galley, wash basins and toilets are satisfactory.</p> <p>ii)Confirmation that no loose drums and no heavy items without securing/lashing on deck.</p> <p>iii)Confirmation that Spare anchor where provided, its lashing bracket in good condition.</p>
<p><b>FLAG SPECIFIC REQUIREMENTS</b></p> <p>Confirmation that flag specific requirements/instructions, if any are complied with.</p> <p>Please Provide details in Remark section.</p>
<p><b>H.O. INSTRUCTIONS</b></p> <p>Confirmation that H.O. Instructions pertaining to this survey if any communicated separately, have been compiled with.</p> <p>Please Provide details in Remark section.</p>

## *GUIDANCE NOTES*

1. **APPROVED TRIM & STABILITY INFORMATION:** - SOLAS 88 Amend / II-1 / Reg. 22.
2. **FIRE CONTROL PLANS:** - SOLAS Ch. II-2, Reg. 15, part E, Cl. 2.4
3. **STEERING GEAR ENTRIES REQUIRED BY SOLAS:** - SOLAS 99/00 Amend / V / Reg. 26
4. **DAMAGE STABILITY:** - SOLAS Ch. II Part B-1 reg 25.1
5. **Manoeuvring Booklet:** - SOLAS 81 Amend / II-1 / Reg. 28
6. **The Ship Structure Access Manual:** - SOLAS 05 Amend / II-1 / Reg. 3-6
7. **Construction drawings maintained on board:** - SOLAS 05 Amend / II-1 / Reg. 3-7
8. **Loading/unloading booklet:** - SOLAS 96-98 Amend / XII / Reg. 8
9. **Towing and mooring equipment :** - SOLAS 05 Amend / II-1 / Reg. 3-8
10. **Corrosion prevention of seawater ballast tanks:** - SOLAS 05 Amend / II-1 / Reg. 3-2

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