

ANNUAL SURVEY CHECKLIST FOR OIL / CHEMICAL TANKER

Ship Name:

Report No.:

I.R. No.:

DOCUMENTATION
<p>STATUTORY CERTIFICATES Valid Statutory certificates available on board.</p>
<p>APPROVED TRIM & STABILITY INFORMATION Confirmation of availability of trim and stability booklet approved by administration.</p>
<p>MANOEUVRING BOOKLET Confirmation that the manoeuvring booklet is on board and that the manoeuvring information is displayed on the navigating bridge.</p>
<p>FIRE CONTROL PLANS Verification of proper posting of fire control plans (including duplicate sets permanently stored in a prominently marked weather tight enclosures outside deckhouse.</p>
<p>STEERING GEAR ENTRIES REQUIRED BY SOLAS/FLAG Verification of entries made in the ship's log for departure.</p>
<p>DAMAGE STABILITY Availability of damage stability information. (Note- Applicable for Cargo vessel > 80 m length after 10/07/08 and length > 100 m from 01/02/1992)</p>
<p>LOADING MANUAL Verification that vessel has an approved Loading Manual.</p>
<p>I.G. SYSTEM OPERATIONAL MANUAL Verification for availability of I.G. Instruction manual. (operation, maintenance, safety, health hazard etc.)</p>
<p>DAMAGE CONTROL PLANS & BOOKLET Verification that damage control plan and booklet are available. (Note- Applicable for above 500 GT regardless of length keel laid on or after 01/01/2009. However not required for tanker keel laid before 01/01/2009)</p>
<p>ESP DOCUMENT Availability of ESP documents on board.</p>
<p>THE SHIP STRUCTURE ACCESS MANUAL Checking the Ship Structure Access Manual of oil tankers of 500 G/T and over. (Note- Applicable for 500 GT and over, constructed on or after 1st Jan. 2006)</p>
<p>CONSTRUCTION DRAWINGS MAINTAINED ON BOARD Confirming that structural alterations performed, if any, have been approved by the classification society and reported on the as-built drawings kept on board (constructed on or after 1st Jan. 2007)</p>
<p>NATIONAL REQUIREMENTS / CODE Availability of applicable code (Note- (IBC-for ships whose keel was laid on or after 01-06-1986 / BC Code for ships built before 01-06-</p>

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.

NA – Not Applicable

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.
CARGO INFORMATION Confirmation that table giving the filling ratio for cargo tank at various densities provided and information related to the chemical and physical properties of the product provided including provision for measure taken in an accident.
CARGO TRANSFER PROCEDURE MANUAL Confirmation that manual covering procedure for cargo transfer, tank, cleaning, gas freeing and also compatibility information as to material of construction, protective lining and coating is provided.
CARGO RECORD BOOK Confirmation that Cargo Record Book is on board.
COATING TECHNICAL FILE: Confirm that Coating Technical File available on board.
SHIP CONSTRUCTION FILE: Confirm that Ship Construction File is onboard. [for Tanker of 150meter and above SOLAS Chapter II-1, Part A-1, Regulation 3.10]
ALTERNATIVE DESIGN & ARRANGEMENTS: Confirm that, where applicable, the approved documentation for the alternative design and arrangement is on board.
DOCUMENT OF APPROVAL FOR STABILITY INFORMATION Confirmation that vessel is provided with DOA for loading Instrument (Note- Applicable for new vessel keel laid after 01/01/2016 and existing vessel first renewal survey after 01/01/2016)
HARMONIC DISTORTION RECORD FOR VESSEL FITTED WITH HARMONIC FILTER. Verification of annual measurement record of harmonic distortion level at bus bar (Applicable for vessel keel laid before 1 July 2017 and for any modification on electrical distribution system on existing vessel, total distortion measured along with equipment running at the time of measurement to be recorded)
OPERATIONAL MANUAL FOR EFFECT OF HARMONIC FILTER Verification that following document are available on board. <ol style="list-style-type: none"> 1) Effect of failure on harmonic filter on electrical distribution system. 2) Permitted modes of operation for maintaining harmonic distortion level within acceptable limit during normal operation and during failure of filter. 3) Approved copy of relaxation on allowable distortion limit, if any 4) Record of harmonic distortion level measured.

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(Note- Applicable for vessel keel laid on or after 01 July 2017 and on exiting ship retrofitted with harmonic filter on or after 01 July 2017.)

CLASS CERTIFICATE

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

WEATHER DECK

ACCOMMODATION, SERVICE, MACHINERY SPACES, 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 containing accommodation, service, machinery, control spaces and gas tight bulkhead penetrations.

SEPERATION FROM ACCOMODATION, SERVICE SPACE

Confirmation that tanks containing cargo or residues of cargo are suitably segregated from accommodation, service and machinery spaces and from drinking water and stores for human consumption, that cargo piping does not pass through any accommodation, service or machinery space other than cargo pump rooms or pump rooms and cargoes are not carried in either the fore or the aft peak tank.

SPACE NOT NORMALLY ENTERED

Confirmation that double bottoms, cofferdams, duct keels, pipe tunnels, hold spaces and other spaces where cargo may accumulate are capable of being efficiently ventilated to ensure a safe environment when entry into the space is necessary and that, when appropriate, permanent ducting is provided and any ventilation fans comply with non-sparking construction in hazardous locations.

VENTILATION OF SPACE IN THE CARGO AREA NORMALLY ENTERED DURING CARGO OPERATION

Examination of arrangement of mechanical ventilation of space for satisfactory condition and verification that it is controlled from outside space, Warning notice placed, if it is the extraction type, with extraction from below the floor plates, unless the space houses electrical motor driving cargo pumps when it should be of the positive pressure type. The ducting does not pass through accommodation, machinery and service space and that exhaust duct are clear of the ventilation inlet and opening to such space.

CARGO, OILY SLOP & BALLAST TANK OPENINGS

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

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 devices to prevent the passage of flame on vents to all bunker, oily-ballast and oily-slop tanks and void spaces, as far as practicable. Examination of 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 necessary for cargo operation.

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<p>CARGO TRANSFER ARRANGEMENTS</p> <p>Examination of the cargo transfer arrangements and confirmation that any hoses are suitable for their intended purpose and, where appropriate, type-approved or marked with date of testing.</p>
<p>CARGO TANK VENTING ARRANGEMENTS</p> <p>Verification of cargo tank venting arrangements. Where controlled tank venting system is employed such verification to include pressure / vacuum valves, mast raisers, devices to prevent passage of flames into the cargo tanks and cargo tanks gas freeing arrangements (on ships constructed on or after 01-07-2002 the controlled venting system should consist of a primary and a secondary means). Confirmation that suitable provision is made for drainage of vent lines and that no shut-off valves or other means of stoppage, including spectacle or blank flanges, are fitted either to the individual vents or to the header, if the vents are combined or either above or below pressure/vacuum relief valves with closed vent systems.</p>
<p>CARGO, COW, OILY SLOP & BALLAST TANK PIPING SYSTEMS</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>EMERGENCY TOWING ARRANGEMENT</p> <p>Verification of ETA for condition and operational readiness. (vessel more than 20,000 DWT.)</p>
<p>WATER TIGHT DOORS AND CONTROLS</p> <p>Watertight doors in Water Tight bulkheads surveyed and local/remote controls including indicating lights and alarms.</p>
<p>FIRE DOORS AND CONTROLS</p> <p>Operation of manual/automatic fire doors, no holding back arrangements exist.</p>
<p>ANCHORING & MOORING EQUIPMENT</p> <p>Anchoring equipment & mooring equipment.</p>
<p>SOUNDING PIPES</p> <p>Sounding pipes, including self-closing devices on short sounding pipes.</p>
<p>HATCHWAYS, COAMING AND COVERS</p> <p>Examination and testing of hatchways on freeboard and superstructure decks including efficient condition of closing appliances.</p>
<p>WEATHER DECKS</p> <p>Examination of weather decks.</p>
<p>FREEBOARD MARKS</p> <p>Verification of freeboard marks.</p>
<p>VENTILATORS</p> <p>Examination and or testing of ventilators including efficiency of their closing appliances.</p>
<p>WINDOWS, SIDE SCUTTLES AND DEAD LIGHTS</p> <p>Examination and or testing of windows, side scuttles and dead lights.</p>
<p>SCUPPERS, SANITARY DISCHARGES, VALVES AND CONTROLS</p> <p>Examination scuppers and sanitary discharges and valves together with valves and their control gear.</p>

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<p>SKYLIGHTS AND FIDDLEY OPENINGS Examination and or testing of skylights and fiddley openings including their closing appliances.</p>
<p>EXPOSED CASINGS, DECK HOUSES, COMPANION WAYS AND SUPERSTRUCTURES Examination and / testing of exposed casings, deck houses, companionways and superstructure bulkheads including closing appliances.</p>
<p>REFUSE CHUTES etc., AND OTHER OPENINGS Examination and / or testing including their closing appliances.</p>
<p>GUARD RAILS AND/OR BULWARKS Examination of the condition and arrangement.</p>
<p>FITTINGS FOR TIMBER DECK CARGOES Examination of the condition and arrangement.</p>
<p>WT BULKHEAD OPENINGS Watertight bulkheads penetrations examination as far as practicable for satisfactory condition.</p>
<p>TUNNEL Tunnel closing arrangements, lighting and notices.</p>
<p>MASTS AND STANDING RIGGING Masts, Derricks & Crane columns including their standing rigging.</p>
<p>FLUSH DECK SCUTTLES Flush Deck scuttles including their closing appliances.</p>
<p>SAFE ACCESS TO BOW Verification of arrangements of safe access to bow including trends, side stringer cross members, decking, deck plate, stanchion, rigid hand rails, hand ropes, support points, shelter and confirmation that it is constructed of fire resistant and non slip material.</p>
<p>BOW AND STERN LOADING Confirmation, when applicable Bow or Stern loading and unloading arrangement in order and testing of means of communication and remote shut down for cargo pump in satisfactory condition.</p>
<p>AIR PIPES Examination and or testing of air pipes including efficiency of their closing appliances, weld connection between Air pipes and deck plating. Confirmation that vents from bunker tanks, oily ballast, oily slop tank, void space and ballast tanks (with cathodic protection) are equipped with flame screens.</p>
<p>FREEING PORTS Examination of the condition and arrangement including shutters and crew protection bars</p>
<p>GANGWAYS, LIFELINES AND ACCOMMODATION LADDER Satisfactory examination of various items pertaining to lifelines, accommodation ladder, gangways, Davits, Winches. Verification of inspection and maintenance records.</p>

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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.

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.

Confirmation that in service maintenance and repair activities of coating of cargo oil tank / ballast are recorded in the Coating Technical File.

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

LOADING INSTRUMENT

Availability of an approved loading instrument together with it's operational manual and verification of test cases.

[Capable of verifying compliance with intact and damage stability requirement, for new vessel keel laid after 01/01/2016 and existing vessel first renewal survey after 01/01/2016]

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.

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.

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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.

Confirmation that the required arrangement to regain steering capability in the event of the prescribed single failure is maintained.

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.

FIRST START ARRANGEMENT

Operational confirmation of the means provided to bring the machinery into operation from the dead ship condition without external aid.

SEA WATER PIPE EXPANSION JOINTS

Examining visually the condition of any expansion joints in sea water system.

AUTOMATION

General Examination of automation equipment. Operation of safety devices, bilge level detection and alarm systems and control systems. Examination and testing of the general emergency alarm system and Operational confirmation of the engineer's alarm that it is clearly audible in the engineer's accommodation.

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<p>SCHEDULE OF BATTERIES</p> <p>Schedule of batteries for essential and emergency services available on board and maintenance being done as per this schedule.</p>
<p>PROPULSION MACHINERY</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>MACHINERY SPACE VENTILATION</p> <p>Confirmation that machinery space ventilation is in good working condition.</p>
<p>MACHINERY VERIFICATION RUNS</p> <p>Towards completion of Special/Continuous Survey of Machinery, trial of main & auxiliary machinery including the steering gear & controls carried out to confirm satisfactory operation (In afloat condition).</p>
<p>SEA TRIAL</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 all respects.</p>
<p>ELECTRICAL INSTALLATION</p>
<p>ELECTRICAL SYSTEM</p> <p>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.</p>
<p>EMERGENCY SOURCE OF POWER</p> <p>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. Verify that Emergency light operational.</p>
<p>ELECTRICAL INSTALLATION AND ARRANGEMENT</p> <p>Confirmation that electrical equipment and cables in dangerous spaces and zones are suitable for such locations and in satisfactory condition and properly maintained. The electric motors driving ventilation fans are positioned outside ventilation duct when carriage of flammable product is intended and the ducts, in way of fans only, are of non sparking construction in dangerous zone.</p>
<p>INSULATION RESISTANCE AND EARTHING</p> <p>Verification of insulation resistance of electrical equipment and cables in the dangerous zones and space (immediate past records may be accepted when the ship is not in a gas free state) where applicable, the Pipelines and Independent cargo tanks are Electrically bonded to Hull.</p>
<p>INTRINSICALLY SAFE SYSTEMS AND CIRCUITS</p> <p>Confirmation that intrinsically safe systems and circuits used for measurement, monitoring, control and communication purpose in all hazardous location are properly maintained.</p>
<p>MONITORING OF HARMONIC DISTORTATION</p> <p>Confirmation that equipment for continuous monitoring of harmonic distortion level is in good order, alarm tested , logging of measured value verified in engine log book or electronically in case where automation</p>

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NA – Not Applicable

system fitted and found to to satisfactory.
(Note -Applicable for vessel keel laid on or after 01 July 2017 and on exiting ship retrofitted with harmonic filter on or after 01 July 2017.)

PROTECTION ARRANGEMENT FOR HARMONIC FILTER

Confirmation that protection for harmonic filter, including alarm tested and found satisfactory.
(Note- Applicable for vessel keel laid on or after 01 July 2017 and on exiting ship retrofitted with harmonic filter on or after 01 July 2017.)

ALTERNATIVE DESIGN AND ARRANGEMENT

Where applicable, examination of alternative design and arrangement for machinery or electrical installations or fire safety, in accordance with the test inspection and maintenance requirements if any specified in the approved documentation is to be carried out.

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) whilst the required pressure is maintained in fire main.

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. Any fire detection and alarm system and any sample extraction system.

DECK FOAM SYSTEM & CARGO PUMPROOM PROTECTION

Verification that fixed fire fighting system for cargo pump room, that the deck foam system and deck sprinkler system are in good operating condition and means of operation marked. check for adequate supply of Foam concentrate, testing that minimum number of jets of water at the required pressure in the fire main is obtained when the system is in operation. Examination of deck foam system for cargo area.

FIXED FIRE FIGHTING SYSTEM

i) Examination of fire fighting system for cargo pump room including fixed fire fighting system for the

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machinery spaces controls, piping, instructions and marking. Checking for evidence of proper maintenance and servicing including date of last systems tests.

ii) Examination of the fixed CO2 system control, where applicable, are provided with two separate controls, one for opening of the gas piping and one for discharging the gas from the storage container, each of them located in a release box clearly identified for the particular space.

iii) 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

Verification that the remote controls for stopping fans and machinery in machinery spaces are in working order. Examination of the arrangements for remote closing of valves for oil fuel, lubricating oil and other flammable oils and confirming, as far as practicable and as appropriate, the operation of the valves on the tanks that contain oil fuel, lubricating oil and other flammable oils.

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.

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.

FIRE EXTINGUISHER FOR PAINT STORE/ FLAMMABLE LOCKER

Examination of the fire extinguishing systems for spaces containing paint and/or flammable liquids and deep fat cooking equipment in accommodation and service spaces, examination of fire safety requirements of any helicopter facilities.

FIREMAN'S OUTFITS

Confirmation that the fire fighters' outfits including its self-contained compressed air breathing apparatus and emergency escape breathing devices (EEBDs) are complete and in good condition and that the cylinders, including the spare cylinders, of any required self-contained breathing apparatus are suitably charged, and that on board means of recharging breathing apparatus cylinders used during drills or a suitable number of spare cylinders to replace those used are provided, and provision of two-way portable radiotelephone apparatus of an explosion-proof type or intrinsically safe.

SAMPLING POINTS OR DETECTOR HEADS

Confirmation that sampling points or detector heads are located in suitable positions in order that potentially dangerous leakages are readily detected.

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SAFETY ARRANGEMENTS RELATED TO CARGO
<p>CARGO SYSTEM</p> <p>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 and mark with date of testing.</p>
<p>CARGO ARRANGEMENT</p> <p>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.</p>
<p>PERSONAL EQUIPMENT</p> <p>Confirmation that the protective clothing for crew engaged in loading and discharging operations and its stowage is in a satisfactory condition.</p>
SAFETY EQUIPMENT & BREATHING APPARATUS
<p>Confirmation that safety equipment and associated breathing apparatus and associated air supplies and, when appropriate, emergency-escape respiratory and eye protection, are in a satisfactory condition and are properly stowed.</p>
PORTABLE GAS DETECTION INSTRUMENTS
<p>Verify that at least two for toxic & flammable, fixed or portable type gas detection instruments are on board and arrangements have been made for the supply of the appropriate vapour detection tubes.</p>
FIRST AID EQUIPMENT
<p>Confirmation that medical first-aid equipment, including stretchers and oxygen resuscitation equipment are in a satisfactory condition.</p>
<p>Confirmation that arrangements have been made for the antidotes for the cargoes actually carried to be on board.</p>
DECONTAMINATION AND EYE WASH ARRANGEMENT
<p>Functional verification of decontamination and eye wash arrangements including arrangements against freezing</p>
<p>CARGO SAMPLE</p> <p>Confirmation that stowage of cargo sample is in satisfactory condition</p>
INERT GAS (NV) SYSTEM
<p>IG SYSTEM COMPONENTS AND PIPING</p> <p>External examination of the condition of all components and piping for signs of corrosion and gas / effluent leakage including inert gas plant overboard discharges.</p>

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<p>SCRUBBER ROOM VENTILATION SYSTEM Verification of the operation of scrubber room ventilation arrangement.</p>
<p>DECK WATER SEAL Verification of deck water seal for automatic filling/drainage and absence of water carry over and condition of non-return valve</p>
<p>INERT GAS BLOWERS 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 regulating valve when the IG blowers are stopped.</p>
<p>IG SYSTEM VALVES Verification of the operation of all remotely or automatically controlled valves, (in particular the flue gas isolating valve/s)</p>
<p>IG SYSTEM INSTRUMENTATION, AUTOMATION & ALARMS 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.</p>
<p style="text-align: center;">CARGO PUMP / CONTROL ROOM/ CARGO TANK</p>
<p>CARGO TANK GAUGING SYSTEM Verification of cargo tank level gauges, high level alarms and automatic high-liquid-level shut-off system.</p>
<p>LOCATION OF VENTING Examining the location of the vent outlets in respect of the height above the weather deck or the fore and aft gangway, from the nearest air intakes or openings to accommodation, service and machinery spaces and ignition sources are in satisfactory condition.</p>
<p>CARGO PUMP ROOM DRAINAGE ARRANGEMENT/ GAS DETECTION/ BILGE LEVEL Verification of cargo pump room / other cargo handling spaces bilge system operable from outside the cargo pump rooms. Examinations of the monitoring & alarm system for concentration of hydrocarbon gasses and bilge level in cargo pump rooms.</p>
<p>ACCESS LADDERS AND RESCUE ARRANGEMENTS Verification of cargo pump room / other cargo handling spaces access ladders, railings and permanent rescue arrangements</p>
<p>PUMP ROOM BULKHEAD AND PIPE TUNNEL IF FITTED 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.</p>
<p>PIPING IN CARGO PUMP ROOMS, VALVES, GAUGES, 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</p>

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marked.
<p>CARGO PUMPS</p> <p>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</p>
<p>CARGO HANDLING SYSTEM CONTROLS, INSTRUMENTATION & ALARMS</p> <p>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</p>
<p>CARGO PUMP ROOM VENTILATION, CLEANLINESS Etc</p> <p>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 .</p> <p>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.</p> <p>Examining the cargo tank venting, cargo tank purging and gas-freeing and other ventilation systems.</p> <p>Confirmation that potential sources of ignition in or near the cargo pump room are eliminated, such as loose gear, combustible materials, etc., that there are no signs of undue leakage of cargo and that access ladders are in good condition</p>
<p>MONITORING OF GAS IN CARGO AREA</p> <p>Examining, as far as possible, and testing the fixed hydrocarbon gas detection system examining the arrangement for gas measurement in double hull spaces and double bottom spaces including fitting of permanent gas sampling line.</p>
<p>CRUDE OIL WASHING ARRANGEMENTS</p>
<p>TANK CLEANING MACHINES DRIVE UNITS</p> <p>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</p>
<p>ISOLATION OF STEAM HEATERS FOR WATER WASHING</p> <p>Verification of isolation arrangements of steam heaters for water washing of tanks, either by means of double shut off valves or clearly identifiable blanks</p>
<p>FLEXIBLE HOSES FOR SUPPLY OF OIL TO THE WASHING MACHINES</p> <p>Verification of condition and storage of flexible hoses for supply of oil to the washing machines including records of pressure testing.</p>
<p>CRUDE OIL WASHING MACHINES</p> <p>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.</p>
<p>DEDICATED CLEAN BALLAST TANKS</p> <p>Examination of tanks containing arrival / departure ballast water for effectiveness of crude oil washing and</p>

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stripping.
CARGO TANK STRIPPING SYSTEM Verification of the cargo tank stripping system by observing the tank level gauging system, hand dipping or other approved means
COMBINATION CARRIERS
GAS DETECTION ARRANGEMENTS Verification of Gas detection arrangement in cofferdams.
ISOLATION ARRANGEMENTS Verification of blanking arrangement for IG main, oil cargo and slop tank pipes, when carrying cargo other than oil.
OPERATIONAL NOTICES Verification of posting of required signboards and instruction manuals
ADDITIONAL CLASS NOTATION REQUIREMENT
ADDITIONAL CLASS NOTATIONS E.G. SPM, VCS etc. ‘SPM’ NOTATION 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.
GENERAL
HOUSE KEEPING i) Verification that general housekeeping / cleanliness in engine room, pump room, on deck, accommodation, hospital, galley, wash basins and toilets are satisfactory. ii) Confirmation that no loose drums and no heavy items without securing/lashing on deck. iii) Confirmation that Spare anchor where provided, its lashing bracket in good condition.
FLAG SPECIFIC REQUIREMENTS Confirmation that flag specific requirements/instructions, if any are complied with. Please Provide details in Remark section.
H.O. INSTRUCTIONS Confirmation that H.O. Instructions pertaining to this survey if any communicated separately, have been compiled with. Please Provide details in Remark section.
ADDITIONAL REQUIREMENTS TOWARDS CLASS INTERMEDIATE SURVEY
CARGO, COW, BUNKER, BALLAST, STEAM AND VENT PIPING SYSTEMS i) Verification that the cargo, crude oil washing, bunker, ballast, steam and vent piping systems as well as vent masts and headers are maintained in satisfactory and efficient condition (Note: If upon examination there is any doubt as to the condition of the piping, the piping may be required to be pressure tested, thickness measured or both). ii) Where the scope of intermediate survey is to the same extent as the previous special survey, examination

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and operational testing to working pressure of cargo piping on deck including crude oil washing (COW) piping, and cargo and ballast piping systems within the tanks and spaces, bunker, steam and vent piping to ensure that tightness and condition are satisfactory (Note: Special attention is to be given to ballast piping in cargo tanks and cargo piping in ballast tanks and void spaces and when the piping, including valves and fittings are open during repair periods, same to be examined internally).

ELECTRICAL EQUIPMENT IN DANGEROUS ZONES

General Examination and testing of insulation resistance of electrical circuits in dangerous zones to confirm these are maintained in satisfactory condition (Note: i) In cases where a proper record of testing is maintained, consideration should be given for accepting recent readings. ii) These measurements are taken when the ship is in a gas free condition and to be carried out within an acceptable time period).

ADDITIONAL REQUIREMENTS TOWARDS SPECIAL SURVEYS

AIR PIPES

Internal Examination of Automatic air pipe heads at special survey as required by IRS Rules

MOORING ROPES AND TOW LINES

Confirmation that sufficient mooring ropes and tow lines as required by rules are provided onboard.

MEANS OF EMBARKATION AND DISEMBARKATION

Accommodation ladders, gangways and its winches incl. brake system are to be operationally tested with specified maximum operation load in accordance with IRS Rules

CARGO, COW, BUNKER, STEAM AND BALLAST PIPING SYSTEM

Examination of cargo piping on deck including crude oil washing (COW) piping, and cargo and ballast piping systems within the tanks and spaces, bunker, steam and vent piping and operational testing to working pressure, as applicable to ensure that tightness and condition remain satisfactory (Note: Special attention is to be given to ballast piping in cargo tanks and cargo piping in ballast tanks and void spaces and when the piping, including valves and fittings are open during repair periods, same to be examined internally).

LONGITUDINAL STRENGTH EVALUATION

Confirmation that for oil tankers of 130 [m] in length and upwards (as defined in ILLC), the ship's longitudinal strength has been evaluated and found to be satisfactory (applicable during the renewal survey after the ship reached 10 years of age).

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GUIDANCE NOTES

APPROVED TRIM & STABILITY INFORMATION: - SOLAS 88 Amend / II-1 / Reg. 22.

FIRE CONTROL PLANS: - SOLAS Ch. II-2, Reg. 15, part E, Cl. 2.4

STEERING GEAR ENTRIES REQUIRED BY SOLAS: - SOLAS 99/00 Amend / V / Reg. 26

DAMAGE STABILITY: - SOLAS Ch. II Part B-1 reg 25.1

MANOEUVRING BOOKLET: - SOLAS 81 Amend / II-1 / Reg. 28

THE SHIP STRUCTURE ACCESS MANUAL: - SOLAS 05 Amend / II-1 / Reg. 3-6

CONSTRUCTION DRAWINGS MAINTAINED ON BOARD: - SOLAS 05 Amend / II-1 / Reg. 3-7

LOADING/UNLOADING BOOKLET: - SOLAS 96-98 Amend / XII / Reg. 8

TOWING AND MOORING EQUIPMENT : - SOLAS 05 Amend / II-1 / Reg. 3-8

CORROSION PREVENTION OF SEAWATER BALLAST TANKS: - SOLAS 05 Amend / II-1 / Reg. 3-2

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