

ANNUAL SURVEY CHECKLIST FOR 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 weathertight 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. (Note- Applicable for 500 GT and over, constructed on or after 1st Jan. 2006)</p>
<p>CONSTRUCTION DRAWINGS MAINTAINED ON BOARD Confirmation that structural alterations performed, if any, have been approved by the classification society and reported on the as-built drawings kept on board. (Note- applicable for ship constructed on or after 1st Jan. 2007)</p>
<p>DOCUMENT OF APPROVAL FOR STABILITY INFORMATION Confirmation vessel is provided with DOA for loading instrument.</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.

(Note :Applicable for new vessel keel laid after 01/01/2016 and existing vessel first renewal survey after 01/01/2016)

NATIONAL REQUIREMENTS / CODE

Availability of applicable code

(Note- (IBC-for ships whose keel was laid on or after 01-06-1986 / BCH 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

Verification that vessel has an approved P & A Manual.

EMERGENCY TOWING PROCEDURES

Confirmation that ship specific emergency towing procedures available on board.

COATING TECHNICAL FILE

Confirmation that Coating file is available on board .

(Note – Applicable for Cargo ship > 500 GT Contracted date after 01/07/2008 or Keel laid after 01/01/2009 or Delivery after 01/07/2012.)

SHIP CONSTRUCTION FILE

Confirmation that Ship Construction File is 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.

ALTERNATIVE DESIGN & ARRANGEMENT

Confirmation that where applicable, the approved documentation for alternative design and arrangement is on board.

CARGO RECORD BOOK

Confirmation that Cargo Record Book is on board.

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.

- 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

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NA – Not Applicable.

4) Record of harmonic distortion level measured.
 (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 & 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.

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 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 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.

CARGO TRANSFER ARRANGEMENTS

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

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NA – Not Applicable.

<p>CARGO TANK VENTING ARRANGEMENT</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>EMERGENCY TOWING ARRANGEMENT</p> <p>Verification of ETA for condition and operational readiness.</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</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, ships side plating above waterline.</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, flush deck scuttles, ash shoots & other openings.</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>
<p>SKYLIGHTS AND FIDDLEY OPENINGS</p> <p>Examination and or testing of skylights and fiddle openings including their closing appliances.</p>
<p>EXPOSED CASINGS, DECK HOUSES, COMPANION WAYS AND SUPERSTRUCTURES</p> <p>Examination and / testing of exposed casings, deck houses, companionways and superstructure bulkheads including closing appliances, openings on freeboard & superstructure decks.</p>
<p>GUARD RAILS AND/OR BULWARKS</p> <p>Examination of the condition and arrangement.</p>
<p>WT BULKHEAD OPENINGS</p> <p>Watertight bulkheads penetrations examination as far as practicable for satisfactory condition.</p>

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<p>MASTS AND STANDING RIGGING Masts, Derricks & Crane columns including their standing rigging.</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 and ballast tanks (with cathodic protection) are equipped with flame screens.</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>GANGWAYS, LIFELINES AND ACCOMODATION LADDER Satisfactory examination of various items pertaining to accommodation ladder, gangways, Davits, Winches. Verification of inspection and maintenance records.</p>
<p>TOWING AND MOORING EQUIPMENT Confirmation that the towing and mooring equipment is properly marked with any restriction associated with its safe operation for ships constructed after 01/01/2007</p>
<p>NEW INSTALLATION OF MATERIALS CONTAINING ASBESTOS Confirmation that new equipment containing asbestos was not fitted on board since last survey.</p>
<p>ACCESS TO AND WITHIN SPACES IN AND OF THE FORWARD CARGO AREA Verification of the permanent means of access where appropriate of the internal spaces as far as practicable.</p>
<p>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.</p>
<p>FREEING PORTS Examination of the condition and arrangement including shutters and crew protection bars</p>
<p>MAINTENANCE, REPAIR AND PARTIAL COATING OF DEDICATED BALLAST TANKS Examine the maintenance, repair and partial coating of dedicated ballast tanks, as appropriate, are recorded in the coating technical file and the maintenance of the protective coating is included in the overall ship's maintenance scheme.</p>
<p>LOADING INSTRUMENT Availability of an approved loading instrument together with it's operational manual and verification of test cases.</p>

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NA – Not Applicable.

[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.

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.

Confirm, 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

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NA – Not Applicable.

<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>SEA WATER PIPE EXPANSION JOINTS</p> <p>Examining visually the condition of any expansion joints in sea water system.</p>
<p>BILGE PUMPING ARRANGEMENT</p> <p>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.</p>
<p>FIRST START ARRANGEMENT</p> <p>Operational confirmation of the means provided to bring the machinery into operation from the dead ship condition without external aid.</p>
<p>AUTOMATION</p> <p>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 confirmation of the engineer's alarm that it is clearly audible in the engineer's accommodation</p>
<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>MACHINERY SPACE VENTILLATION</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 style="text-align: center;">ELECTRICAL INSTALLATION</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, verification that all electrical equipments in dangerous zones is suitable for such locations, is in good condition and properly maintained. Emergency lights in good working condition.</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>ELECTRICAL INSTALLATION AND ARRANGEMENT</p> <p>Confirmation that electrical equipment and cables in dangerous spaces and zones are suitable for such</p>

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NA – Not Applicable.

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.

INSULATION RESISTANCE

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.

INTRINSICALLY SAFE SYSTEMS AND CIRCUITS

Confirmation that intrinsically safe systems and circuits used for measurement, monitoring, control and communication purpose in all hazardous location are properly maintained.

MONITORING OF HARMONIC DISTORTION

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 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/PROTECTION 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 the fire main.

FIXED CARBON DIOXIDE FIRE-EXTINGUISHING SYSTEMS

Examination of the fixed carbon dioxide fire-extinguishing systems for the protection of machinery spaces, cargo pump-rooms, 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.

FIRE PROTECTION ARRANGEMENTS

Examination of the fire protection arrangements in cargo spaces and confirming, as far as practicable and as appropriate, the operation of the means of control provided for closing the various openings.

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.

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NA – Not Applicable.

<p>READINESS OF FIRE HYDRANTS, HOSES</p> <p>Each hose complete with couplings, nozzle (dual-purpose nozzles where applicable) and tools kept ready for use.</p>
<p>PORTABLE EXTINGUISHERS AND FOAM APPLICATORS</p> <p>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, confirming the condition of portable fire fighting equipment for the cargoes to be carried in the cargo area is satisfactory.</p>
<p>SPARE CHARGES</p> <p>Availability of spare charge/s for each portable extinguisher or additional portable extinguishers of the same type</p>
<p>FIRE AND/OR SMOKE DETECTION SYSTEM</p> <p>Examine for proper functioning and possible testing, any fire detection and alarm system and any sample extraction smoke detection system</p>
<p>DECK FOAM SYSTEM & CARGO PUMPROOM PROTECTION</p> <p>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.</p>
<p>FIXED FIRE FIGHTING SYSTEM</p> <p>i) Examination of fire fighting system (including fixed fire fighting system for the machinery spaces) controls, piping, instructions and marking. Checking for evidence of proper maintenance and servicing including date of last systems tests, Fixed fire fighting system for cargo pump room.</p> <p>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.</p>
<p>REMOTE STOPPING OF FANS, OIL PUMPS, ETC</p> <p>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.</p>
<p>CLOSING ARRANGEMENTS FOR SKYLIGHTS, FLAPS ETC</p> <p>Examination of closing arrangements of ventilators, funnel annular spaces, skylights, doorways and tunnel where applicable, including condition of operating mechanism eg: wire ropes, hydraulic piping etc.</p>
<p>FIRE EXTINGUISHER FOR PAINT STAGE/ FLAMMABLE LOCKES</p> <p>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.</p>
<p>GASEOUS FUEL FOR DOMESTIC PURPOSE</p> <p>Arrangements found in satisfactory condition.</p>
<p>FIREMAN'S OUTFITS</p> <p>Confirmation that the fire fighters' outfits including its self-contained compressed air breathing apparatus and</p>

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NA – Not Applicable.

<p>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.</p>
<p>FIRE DOORS Examination of any manual and automatic fire doors and proving their operations.</p>
<p>MEANS OF ESCAPE Confirmation that the means of escape from accommodation, machinery and other spaces are satisfactory.</p>
<p>POTENTIAL SOURCES OF IGNITION Confirmation that potential sources of ignition in or near the cargo pump room are eliminated, such as loose gear, combustible materials etc, there are no signs of undue leakage and access ladders are in satisfactory condition.</p>
<p>CONTINUOUS MONITORING Confirmation that the system for continuous monitoring of the concentration of flammable vapours is satisfactory.</p>
<p>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.</p>
<p style="text-align: center;">CARGO PUMP ROOM / OTHER CARGO HANDLING SPACES</p>
<p>ACCESS LADDERS AND RESCUE ARRANGEMENTS Verification of cargo pump room access ladders, railings and permanent rescue arrangements.</p>
<p>CARGO PUMP ROOM VENTILATION, CLEANLINESS Etc Examination of cargo pump room(s) spaces for freeness from potential sources of ignition; 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.</p>
<p>CARGO PUMP ROOM DRAINAGE ARRANGEMENT Verification of cargo pump room bilge system operable from outside the cargo pump rooms.</p>
<p>PUMP ROOM BULKHEAD AND PIPE TUNNEL IF FITTED Examinations of all pump room bulkheads for signs of chemical leakage or fractures, the sealing arrangements of all penetrations of pump room bulkheads. Examination of condition of all piping systems.</p>
<p>CARGO PUMPS, PRESSURE GAUGES, VALVES 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>

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NA – Not Applicable.

CARGO HANDLING / CARGO CONTROL ROOMS
CARGO TANK GAUGING SYSTEM Verification of cargo tank level gauges, high level alarms and automatic high-liquid-level shut-off system.
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.
SAFETY ARRANGEMENTS RELATED TO CARGO
EXAMINATION 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.
VERIFICATION 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 or generated 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.
PERSONAL EQUIPMENT Confirmation that the protective clothing for crew engaged in loading and discharging operations and its stowage is in a satisfactory condition.
SAFETY EQUIPMENT & BREATHING APPARATUS
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.
PORTABLE GAS DETECTION INSTRUMENTS
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.
FIRST AID EQUIPMENT
Confirmation that medical first-aid equipment, including stretchers and oxygen resuscitation equipment are in a satisfactory condition.
Confirmation that arrangements have been made for the antidotes for the cargoes actually carried to be on board.
DECONTAMINATION AND EYE WASH ARRANGEMENT Functional verification of decontamination and eye wash arrangements including arrangements against freezing

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.

<p>CARGO SAMPLE Confirmation that stowage of cargo sample is in satisfactory condition</p>
<p style="text-align: center;">GENERAL</p>
<p>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.</p>
<p>FLAG SPECIFIC REQUIREMENTS Confirmation that flag specific requirements/instructions, if any are complied with. Please Provide details in Remark section.</p>
<p>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.</p>
<p style="text-align: center;">ADDITIONAL REQUIREMENTS TOWARDS CLASS INTERMEDIATE SURVEY</p>
<p>CARGO, CARGO WASHING, BUNKER, BALLAST, STEAM AND VENT PIPING i) Examination of cargo, cargo washing, bunker, ballast, steam and vent piping on weather decks as well as vent masts and headers to confirm their satisfactory condition. (If upon examination there is any doubt as to the condition of the piping, the pipe is to be pressure tested, thickness gauged or both) ii) Where the scope of the intermediate survey is to the same extent as previous special survey, examination of cargo piping on deck, cargo and ballast piping systems within the tanks and spaces and operational testing to working pressure to confirm these are in satisfactory condition. (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).</p>
<p>ELECTRICAL EQUIPMENT IN DANGEROUS ZONES Confirmation that general Examination and testing of insulation resistance of electrical circuits in dangerous zones 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).</p>
<p>SAFETY ARRANGEMENTS RELATED TO CARGO 1) Verification that vent line drainage arrangements, cargo heating/cooling system and ship's cargo hoses are (approved) and maintained in efficient condition. 2) Verification that where applicable, pipelines and independent cargo tanks are electrically bonded to the hull and maintained in efficient condition. 3) Confirmation that spares are provided for cargo area mechanical ventilation fans and are in satisfactory condition. 4) Verification that equipment for personal protection is maintained satisfactorily. 5) External examination and confirmation that the pumping and piping systems, including stripping system</p>

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 3. Repairs now recommended and remain outstanding.
 4. Opportunity to examine/test was not provided this time. Remains outstanding.
- NA – Not Applicable.

- (if fitted) and associated equipment remain as approved and maintained satisfactorily.
- 6) Externally examination of the tank wash piping and confirming that the type, capacity, number and arrangement of the tank washing machines are as approved and maintained satisfactorily.
 - 7) Externally examination of the wash water heating system, underwater discharge arrangement and heating system required for solidifying and high viscosity substances(as far as practicable) for satisfactory condition.
 - 8) Confirming that the means of controlling the rate of discharge of the residue, flow rate indicating device and ventilation equipment for residue removal is as approved and satisfactory.
 - 9) Confirming that cargo tank high level alarms and discharge outlets(if possible) are satisfactory.
 - 10) Confirmation from the cargo record book, that the pumping and stripping arrangements have been emptying the tanks efficiently and all are in working order.
 - 11) Confirming the satisfactory operation of the recording device, as fitted and verifying by an actual flow test that it has an accuracy of $\pm 15\%$ or better.

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 operationally tested with specified maximum operation load in accordance with IRS Rules.

CARGO AND BALLAST PIPING SYSTEM

- 1) Examination of cargo piping on deck, cargo and ballast piping systems within the tanks and spaces and operational testing to working pressure to confirm these are in satisfactory condition. (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)
- 2) For chemical tankers exceeding 10 years of age, confirmation that selected steel cargo pipes outside cargo tanks and ballast pipes passing through cargo tanks are thickness measured/internally examined and pressure tested to the maximum working pressure with satisfactory results (Note: Special attention is to be given to cargo/slop discharge piping through ballast tanks and void spaces).

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3. Repairs now recommended and remain outstanding.
4. Opportunity to examine/test was not provided this time. Remains outstanding.

NA – Not Applicable.

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
11. **ACCESS TO AND WITHIN SPACES IN, AND FORWARD OF, THE CARGO AREA OF OIL TANKERS AND BULK CARRIERS:** - SOLAS 05 Amend / II-1 / Reg. 3-6
12. **NEW INSTALLATION OF MATERIALS CONTAINING ASBESTOS:-** SOLAS 05 Amend / II-1 / Reg. 3-5

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 3. Repairs now recommended and remain outstanding.
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