

**CLASS ANNUAL SURVEY/INTERMEDIATE SURVEY/SPECIAL SURVEY/
GENERAL EXAMINATION* CHECKLIST FOR OTHER SHIP TYPES**

Ship Name: **Report No.:** **I.R. No.:**

Notes:

1. Refer BWM statutory checklist for items related to BWM survey when class & statutory survey for BWM carried out concurrently.

DOCUMENTATION
<p>APPROVED TRIM & STABILITY INFORMATION Confirmation of availability of trim and stability booklet approved by administration.</p>
<p>CARGO SECURING MANUAL Confirmation of availability of approved cargo securing manual.</p>
<p>STATUTORY CERTIFICATES Valid Statutory certificates available on board.</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>LOADING MANUAL Verified that vessel has an approved Loading Manual. (IRS Rules, Part 3, Ch. 5, Cl.1.3)</p>
<p>LOADING INSTRUMENT Availability of an approved loading instrument together with its operational manual and verification of test cases (IRS Rules, Part 3, Ch. 5, Cl. 1.3)</p>
<p>STEERING GEAR ENTRIES REQUIRED BY SOLAS/FLAG Verification of entries made in the ship's log for departure steering checks & Emergency Steering drills.</p>
<p>DAMAGE CONTROL PLANS & BOOKLET Verification that damage control plans & booklet are available. (Note: Applicable to all passenger ships, Dry cargo ships of 500GT and over keel laid on or after 01/02/1992 and All cargo ship of 500GT and over keel laid on or after 01/01/2009)</p>
<p>DAMAGE STABILITY Availability of damage stability information</p>
<p>HULL AND MACHINERY SURVEYS Verification that no CSH/CSM items are overdue.</p>
<p>MANOEUVRING BOOKLET Confirming that the manoeuvring booklet is on board and that the manoeuvring information is displayed on the navigating bridge</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>EMERGENCY TOWING PROCEDURES Confirm that ship specific emergency towing procedures available on board.</p>
<p>COATING TECHNICAL FILE Confirmation that Coating Technical File is available on board and maintained. Confirmation that the maintenance, repair and partial recoating of dedicated ballast tanks, are recorded in the coating technical file and the maintenance of the protective coating is included in the overall ship's maintenance scheme. (Note: Applicable for ships of not less than 500 gross tonnage with dedicated seawater ballast tanks for which the building contract is placed on or after 01/07/2008 or the keels of which are laid on or after 01/01/2009 or which are delivered on or after 01/07/2012.)</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.

<p>OPERATING AND MAINTENANCE MANUAL (OMM) FOR RO-RO SHIPS</p> <p>Verification of the approved copy of operating and maintenance manual on board and possible modifications are included. It is to be verified that documented operating procedures for closing and securing doors are kept on board and posted at an appropriate place. The OMM is to be examined with special attention to the register of inspections and its contents as a basis for survey.</p>
<p>SHIP CONSTRUCTION FILE (SCF)</p> <p>Confirming availability of Ship Construction File. Examining the ship's structure in accordance with the Ship Construction File, taking into account, areas identified for close attention.</p> <p>(Note: Applicable to all ships contracted for construction from 01/07/2016 except the Tankers and Bulk Carriers subject to SOLAS Chapter II-1 Part A-1 Regulation 3-10)</p>
<p>HARMONIC DISTORTION RECORD FOR VESSEL FITTED WITH HARMONIC FILTER.</p> <p>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.)</p>
<p>OPERATIONAL MANUAL FOR EFFECT OF HARMONIC FILTER</p> <p>Verification that following document are available on board.</p> <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. <p>(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.)</p>
<p>ALTERNATIVE DESIGN & ARRANGEMENT</p> <p>Confirm that, where applicable the approved documentation for the alternative design and arrangement is in board.</p>
<p>HULL AND WEATHER DECK</p>
<p>MASTS AND STANDING RIGGING</p> <p>Masts, Derricks & Crane columns including their standing rigging</p>
<p>FIRE DOORS AND CONTROLS</p> <p>a. Examination of manual/automatic fire doors, verification of their satisfactory operation and confirmation that no holding back arrangements exist and arrangements for self-closing & locking are in order.</p> <p>b. Confirmation that fire doors provided between machinery space and steering gear compartment are of gastight, self-closing type and without any hold back arrangements.</p> <p>(Note: applicable where emergency fire pump is in steering gear compartment)</p>
<p>ANCHORING & MOORING EQUIPMENT</p> <p>Examining the anchoring equipment & mooring equipment. At renewal survey, during the examination, anchors are lowered and raised using the windlass.</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 water line.</p>
<p>HULL MARKINGS</p> <p>Verification that hull markings such as freeboard markings, draft markings, vessel name, IMO number, port of registry are legible and in satisfactory condition.</p>
<p>VENTILATORS</p> <p>Examination and or testing of ventilators including efficiency of their closing appliances</p>

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- NA - Not Applicable.

<p>WINDOWS, SIDE SCUTTLES AND DEAD LIGHTS Examination and or testing of windows, side scuttles and dead lights</p>
<p>SCUPPERS, SANITARY DISCHARGES, VALVES AND CONTROLS Examination scuppers and sanitary discharges and valves together with valves and their control gear</p>
<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>GUARD RAILS AND/OR BULWARKS Examination of the condition and arrangement, fittings & appliances for timber deck cargo</p>
<p>COLLISION & WATERTIGHT BULKHEAD OPENINGS Examining the collision and the other watertight bulkheads as far as can be seen. Watertight bulkheads penetrations examination as far as practicable for satisfactory condition, watertight doors in watertight bulkheads</p>
<p>TOWING AND MOORING EQUIPMENT Confirming that the towing and mooring equipment is properly marked with any restriction associated with its safe operation. (Note: Applicable for vessels constructed on or after 1st Jan. 2007)</p>
<p>CARGO HATCH COVERS AND COAMINGS Cargo hatch covers and coamings including their closing appliances, stowage, fit & operation</p>
<p>TIGHTNESS TESTING OF CLOSING APPLIANCES Where tightness testing of closing appliances such as hatches, doors, etc. is carried out with ultrasonic equipment, confirmation that firm engaged in tightness testing is approved. Name of the firm:..... IRS approval certificate Number..... Validity.....</p>
<p>THICKNESS MEASUREMENT Where thickness measurements on structure/plating of the vessel is carried out, confirmation that firm engaged in thickness measurement on vessel is approved. Name of the firm:..... IRS approval certificate Number..... Validity.....</p>
<p>REMOTE INSPECTION TECHNIQUES (RIT) Where remote inspection techniques are used in survey, confirmation that firm engaged for RIT is approved. Name of the firm:..... IRS approval certificate Number..... Validity.....</p>
<p>NON-DESTRUCTIVE TESTING (NDT) Where NDT carried out onboard, confirmation that the firm providing NDT services is approved. Name of the firm:..... Approval certificate Number..... Issuing Authority..... Validity.....</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 and mesh provided are in satisfactory condition..</p>
<p>FREEING PORTS Examination of the condition and arrangement including shutters and crew protection bars</p>
<p>NEW INSTALLATION OF MATERIALS CONTAINING ASBESTOS Confirming that new equipment containing asbestos was not fitted on board since last survey</p>

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<p>CARGO SHIPS EXCEPT TANKERS</p> <p>Confirming, as far as practicable, that no changes have been made in the structural fire protection, examining any manual and automatic fire doors and proving their operation, testing the means of closing the main inlets and outlets of all ventilation systems and testing the means of stopping power ventilation systems from outside the space served</p>
<p>GANGWAY, LIFELINES AND MEANS OF EMBARKATION/DISEMBARKATION</p> <p>a. Satisfactory examination of items pertaining to lifelines, accommodation ladder, gangways, Davits, Winches for their satisfactory condition. Verification of inspection and maintenance records.</p>
<p>b. Confirmation that embarkation ladder and accommodation ladder including safety net are in satisfactory condition and marked with safe working load.</p>
<p>INTERNAL SPACES</p> <p>Verification of the permanent means of access where appropriate of the internal spaces as far as practicable. (IRS Rules Part 1 Ch.2, C1 6.2.2.14)</p>
<p>UPGRADATION/REPAIR TO COATING</p> <p>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.</p> <p>(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>WATERTIGHT CABLE TRANSIT SEAL SYSTEMS</p> <p>(Note: Applicable for all vessels contracted for construction on or after 1st July 2021)</p>
<p>i) Review of the cable transit seal systems register to confirm that it being maintained.</p>
<p>ii) Confirmation that where any disruption to the cable transits or installation of new cable transits carried out onboard from last annual survey, records are reviewed for the satisfactory condition of those transits.</p> <p>(Note: If deemed necessary examination of such transits to be undertaken)</p>
<p>iii) Examination of cable transits as far as practicable for their satisfactory condition.</p>
<p>iv) Confirmation that the results of survey are recorded in the cable transit seal system register.</p>
<p>v) Where the cable transits have been examined by an approved service supplier, review of the cable transit seal system register to confirm that it has been properly maintained by the owner and correctly endorsed by the service supplier.</p>
<p>TOWING WINCH EMERGENCY RELEASE SYSTEMS</p>
<p>i) Verification that the performance capabilities and operating instructions of the emergency release system are documented and available on board the ship on which the winch has been installed.</p>
<p>ii) Verification of winch emergency release system operation under no load condition including alarms associated with the emergency release system.</p> <p>(Note: Where practical, activation of the emergency release system may be confirmed by observation of the winch brake)</p>
<p>iii) Visual examination of the emergency release system for satisfactory condition.</p>
<p>iv) Examination of the means of emergency release of the towline in the event of a blackout.</p> <p>Where additional sources of energy are arranged for this purpose, the sources of energy are visually inspected and operationally tested.</p>
<p style="text-align: center;">ADDITIONAL REQUIREMENTS FOR DRY CARGO SHIPS CARRYING CONTAINERS</p>
<p>STOWAGE AND SECURING ARRANGEMENTS FOR CONTAINERS</p>
<p>i) Confirmation that cargo securing fittings including their weld attachments and supporting structures are in efficient condition.</p>
<p>ii) Confirmation that rod, wire or chain lashings, twist locks, stackers, buttresses, shores, cell guides, other locking devices and container connectors used for securing containers are maintained in efficient condition.</p>
<p>iii) Confirmation that portable cargo securing devices are certified and assigned with a max, securing load.</p>

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<p>OPEN HATCH SHIPS</p> <p>i) Where the vessel is exempted from the requirements of providing hatch covers for cargo holds from the flag administration, verification that necessary documentation to this effect is available onboard.</p> <p>ii) Confirmation that the vessel maintains fully operational hold dewatering systems, including all system redundancies (The operability and condition of the hold dewatering systems and freeing ports if they are fitted should be inspected monthly by the crew and entered in the ship's log book for annual verification). Verification that the vessel is fitted with pumping of hold bilges by at least three bilge pumps and an examination and test of the system carried out to confirm the bilge pumping system is in good order.</p> <p>iii) Examination and test of high bilge level alarms for all open cargo holds to confirm these are in satisfactory condition (The alarms should annunciate in the machinery spaces and the manned control location and be independent of bilge pump controls.)</p> <p>iv) Examination of fixed water spray system for all open cargo holds to confirm these are maintained in good condition and ready for use. (The system shall be capable of spraying water into the cargo hold from deck level downward.)</p> <p>v) Whenever a fire detection system (as part of IMDG Cargo) is fitted in open hold area, verification that the fire detection system is maintained in good condition and ready for use.</p>
<p>NON WEATHER TIGHT HATCHES ABOVE SUPERSTRUCTURE DECK</p> <p>Confirmation that non-weather tight hatch covers, if provided above a level equivalent to second tier superstructure; or above a level equivalent to third tier superstructure in the forward quarter of the ship's length, necessary approval from the flag administration is available on board. An examination and test of the bilge pumping and bilge high level alarm system for these holds to be carried out to confirm these are in good order.</p>
<p>ADDITIONAL SAFETY ASPECTS</p> <p>When oil or dangerous goods are intended to be carried in limited quantities inside the containers, verification that the vessel is in possession of valid statutory certificate to this effect to confirm that additional safety aspects as per relevant code/convention requirements are complied with.</p>
<p>VESSEL AGE BETWEEN 10-15 YEARS (GENERAL DRY CARGO SHIPS)</p>
<p>CARGO HOLDS:</p> <p>Overall survey of one forward and one after cargo hold and their associated tween deck spaces, if necessary TM should be carried out towards suspect and substantial corrosion areas as a consequence of previous special survey.</p>
<p>VESSEL AGE ABOVE 15 YEARS (GENERAL DRY CARGO SHIPS)</p>
<p>CARGO HOLDS:</p> <p>Overall survey of all cargo holds and tween deck spaces.</p> <p>Close up survey of forward cargo hold and one selected cargo hold. (Min. 25% of frames, all piping and penetrations in cargo holds, including overboard piping are to be examined)</p>
<p>RO – RO SHIPS</p>
<p>SHELL AND INNER DOORS</p> <p>Verification as far as practicable that the bow, inner, side shell and stern doors are maintained in a satisfactory condition. Confirm that no unapproved changes have been made to the bow, inner, side, and stern doors since the last survey.</p>
<p>STRUCTURAL EXAMINATION</p> <p>Structural arrangement of doors including plating, secondary stiffeners, primary structure, hinging arms and welding. Shell structure surrounding the opening of the doors and the securing, supporting and locking devices including shell plating, secondary stiffeners, primary structure and welding. Hinges and bearings, thrust bearings, hull and door side supports for securing, supporting and locking devices are to be examined.</p>
<p>CLOSE UP SURVEYS</p> <p>Minimum close up survey as per our rules part 1 ch.2 table 6.2.6.4 is to be carried out at every annual survey. NDT is to be carried out in the surrounding areas and for similar items as considered necessary by the surveyor if the crack is found.</p>
<p>SEALING ARRANGEMENT</p> <p>Satisfactory examination of packing material/rubber gaskets and retaining bars or channels including welding is to be carried out.</p>

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<p>DRAINAGE ARRANGEMENT</p> <p>An examination of drainage arrangement including bilge wells and drain pipes is to be carried out.</p> <p>The drainage facilities are to be examined visually for blockage or other damage and the provision of means to prevent blockage of drainage arrangements are to be confirmed, for closed vehicle and ro-ro spaces and special category spaces where fixed pressure water spraying systems are used</p>
<p>FUNCTION TEST OF DOORS</p> <p>Checking of the satisfactory operation of the bow, inner, side shell and stern doors during a complete opening and closing operation is to be carried out as applicable. Proper working of hinging arms and hinges, proper engagement of the thrust bearings, device for locking the door in the open position, securing supporting and locking devices, mechanical lock of the securing devices, proper locking of hydraulic securing devices in the event of a loss of the hydraulic fluid, according to the procedure provided by the OMM are to be checked satisfactorily. Correct indication of open/closed position of doors and securing/locking devices at navigation bridge and other control stations, isolating of the hydraulic securing/locking devices from other hydraulic systems. Confirmation that the operating panels inaccessible to unauthorized persons, verification of the notice plates on the operating panels, examination of electrical equipments for opening, closing and securing of doors are to be checked.</p>
<p>MEASUREMENT OF CLEARANCES</p> <p>Clearances of hinges, bearings, and thrust bearings are to be taken, where no dismantling is required. If dismantling is carried out, a visual examination of hinge pins and bearings together with NDT of the hinge pin is to be carried out. Clearances of securing, supporting and locking devices are to be measured, where indicated in the OMM.</p>
<p>FUNCTION TEST OF THE INDICATOR SYSTEM</p> <p>Checking of the satisfactory operation of the indicator system is to be carried out by checking alarms, lamp test function on both the panels, verification that it is not possible to turn off the indicator light on both panels, fail safe performance, condition of sensors and protection from water, ice formation and mechanical damage.</p>
<p>TEST OF WATER LEAKAGE DETECTION SYSTEM</p> <p>The system is to be checked including alarm on the navigation bridge and engine control room panel as per OMM. Test of television surveillance system where fitted is to be done satisfactorily.</p>
<p>TIGHTNESS TEST OF SHELL DOORS</p> <p>A hose test or equivalent is to be carried out as deemed necessary by the surveyor.</p>
<p>MACHINERY SPACES</p>
<p>MACHINERY AND BOILER SPACES</p> <p>Confirming that the machinery, boilers and other pressure vessels, associated piping systems and fittings are so installed and protected so as to reduce to a minimum any danger to persons on board, due regard being given to moving parts, hot surfaces and other hazards</p>
<p>FIRE/EXPLOSION HAZARDS</p> <p>a. 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</p> <p>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.</p> <p>iii) Confirmation that floor plates & gratings are secured and found to be in order.</p>
<p>b. Confirmation that lagging material on hot surfaces, anti-splash tapes on joints are in place as required and high-pressure fuel lines are jacketed and spray shields flanged/screwed joints of pipes are in satisfactory condition.</p>
<p>c. Confirmation that arrangement for high pressure fuel oil leak off alarm for propulsion engine, auxiliary engines or any other diesel engines are satisfactory and operational. Drain lines are connected to alarm unit and working satisfactory.</p>
<p>d. Where flexible hoses/pipes are used, examination of hoses/pipes for any signs of material cracking or deterioration to ensure that, there is no damage, cut, kinked, crushed, twisted, hardened, cracked hoses/pipes exists in the oil systems.</p>
<p>e. Confirmation that the supports and retaining devices of low-pressure fuel system provides adequate restraint and are in satisfactory condition.</p>

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<p>STEERING GEAR</p> <p>a. 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</p> <p>b. Confirmation that steering gear compartment is in satisfactory condition and provided with handrail arrangements, grating or non-slip surface.</p>
<p>MEANS OF COMMUNICATION</p> <p>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 are operational</p>
<p>BOILERS AND PRESSURE VESSELS</p> <p>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</p>
<p>REMOTE CONTROLS</p> <p>Examining the 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 (including the control, monitoring, reporting, alert and safety actions) and the arrangements to operate the main and other machinery from a machinery control room.</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. Vessels having single cargo hold and load line length less than 80 m, examination & random test of water ingress detection alarm system should be verified.</p>
<p>NORMAL OPERATION OF PROPULSION MACHINERY</p> <p>Confirming that the normal operation of the propulsion machinery can be sustained or restored even though one of the essential auxiliaries becomes inoperative (IRS Rules Part 1 Ch.2, Cl 6.2.4.4)</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>Sea Water Pipe Expansion Joints</p> <p>Examining visually the condition of any expansion joints in sea water system.</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>

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<p>EMERGENCY GENERATOR ROOM VENTILATORS ARRANGEMENT</p> <p>Verification that following requirement of emergency generator room ventilation louvers and its closing appliance examined/tested and found satisfactory.</p> <p>a) Manual or power operation of louvers and its closing appliance.</p> <p>b) Operating instruction, where hand –operated system is in use</p> <p>c) Automatic opening of ventilation louvers whenever emergency generator starting/in operation for power operated system where provided including fail to open operation.</p> <p>d) Manual closing operation from outside the space, where open/closed indication clearly marked.</p> <p>(Note: Applicable for vessel keel laid on or after 01 January 2017)</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>(Note: With effect from 1st July 2018, in case of major repairs to main propulsion machinery or steering gear, the scope of sea trial is to also include a test plan for astern response characteristics based on those required for such an equipment or system when fitted to the new ship. The tests are to be carried out at least over the manoeuvring range of the propulsion system and from all control positions. A test plan is to be provided by the manufacturer and accepted by the surveyor. If specific operational characteristics have been defined by the manufacturer, same is to be included in the test plan and the reversing characteristics of the propulsion plant, including the blade pitch control system of controllable pitch propellers, are to be demonstrated and recorded during trials.)</p>
<p style="text-align: center;">ELECTRICAL INSTALLATION</p>
<p>ELECTRICAL SYSTEM</p> <p>a. 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>b. Confirmation that light covers including emergency lights are in satisfactory condition.</p>
<p>c. Confirmation that 440 V/220 V panels are not showing low insulation resistance.</p>
<p>d. Confirmation that insulation mat is provided around the electrical switch board, panels.</p>
<p>e. Confirmation that the generator breakers, interlocks and generator automatic starting as applicable are in satisfactory operational condition.</p>
<p>f. verification of insulation monitoring devices for all distribution systems. Operation of power management system, where fitted.</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</p> <p>(Note: This to remain independent from the battery source provided for propulsion and/ or main source of power in case battery systems used as main or an additional source of power for propulsion.)</p>
<p>NAVIGATIONAL LIGHT SYSTEM</p> <p>Verification of Navigational light systems for satisfactory operation of lights, audio-visual indications and power supply arrangement for their satisfactory condition.</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 system fitted and found to satisfactory.</p> <p>(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.)</p>

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 4. Opportunity to examine/test was not provided this time. Remains outstanding.
- NA - Not Applicable.

<p>PROTECTION ARRANGEMENT FOR HARMONIC FILTER</p> <p>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.)</p>
<p>MOTOR CONTROLS</p> <p>Confirmation that motor controls including remote control are in satisfactory operational condition, where provided.</p>
<p style="text-align: center;">ADDITIONAL REQUIREMENTS FOR BATTERY PROP NOTATION</p>
<p>DOCUMENTATION AND RECORDS</p> <p>Confirmation that batteries are type tested as per relevant IEC standard. Type of battery used: Nickel Cadmium Battery/Lithium-Ion Battery/Lead Acid Battery/Nickel Metal Hydride Battery*.</p> <p>Verification that operation and maintenance manual for Battery Management System (BMS) & Power Management System (PMS) is available along with all the required details of batteries such as battery chemistry, test certificates, cell voltages, system voltages, number of battery banks, recommended charge and discharge rates, functional test, monitoring, software maintenance and other environmental requirements as applicable.</p> <p>Confirmation that battery manufacturer recommended practices for safety have been documented and implemented satisfactorily.</p> <p>Confirmation that details of schedule as well as records & log towards storage, maintenance, replacement of batteries is available and maintained.</p> <p>Confirmation from the records that state of health and state of charge of battery system is maintained satisfactorily.</p> <p>Confirmation that risk assessment towards possible potential hazards associated with type of battery chemistry, system design and its incorporation is available.</p> <p>Confirmation from the records that the software updates including verification or testing after updates are being carried out.</p>
<p>SYSTEM ARRANGEMENT AND TESTING</p> <p>Examination of arrangement for battery installation, battery spaces and equipment as far as practicable for satisfactory condition.</p> <p>Confirmation of satisfactory operational testing of battery room//spaces ventilation systems and cooling systems as applicable.</p> <p>Examination of firefighting systems in battery spaces.</p> <p>Testing of all smoke, gas and fire detectors for their satisfactory condition.</p> <p>Verification of all emergency shutdown arrangements to confirm their satisfactory operation.</p> <p>Verification of operation of UPS for their satisfactory performance.</p> <p>Verification and testing of safety systems arrangements towards overcharging, undercharging, high temperature, gas leakage etc. for satisfactory condition.</p> <p>Testing of audio-visual alarms and controls for system power supply failure, cell temperature high, battery space high temperature, cell voltage etc.</p>
<p style="text-align: center;">ADDITIONAL REQUIREMENTS FOR PERFORMANCE MANAGEMENT SYSTEM</p> <p>Confirmation that arrangement of performance management system including associated cabling, sensors and interconnections maintained as per approved plan.</p> <p>Verification that on loss of hardware, functions of the systems does not get affected. (Applicable where the system is provided with dedicated operator stations and servers)</p> <p>Confirmation from the records that hardware & software inventory maintained and changes if any, have been verified and found in order.</p>

Condition to be reported using number code as follows:

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 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.

ADDITIONAL REQUIREMENTS FOR IMPRESSED CURRENT CATHODIC PROTECTION (ICCP) SYSTEMS

DOCUMENTATION AND RECORDS

1. Confirmation that ICCP Manual is available onboard and attachments details of anodes and reference electrodes along with specification of connecting cables are available for reference.
2. Confirmation that record of system operation is maintained and downtime if any is recorded. Confirmation that all anode current outputs and potentials monitored are similar to those settled during previous assessment.
3. Confirmation from records that ICCP system is maintained and adjusted by the supplier on regular basis as per manufacturer's instructions.

SYSTEM OPERATION

Confirmation that system is in operation and working satisfactory. Confirmation that operation of indicators and control on the panel including auto/manual switch are found to be satisfactory.

PROTECTION ARRANGEMENT FOR ANODE CABLES

Confirmation that protection arrangement for ICCP anode cables is in satisfactory condition.

ALTERNATIVE DESIGN AND ARRANGEMENT

Where applicable, examination of alternative design and arrangement for machinery or electrical installations, low-flashpoint fuel storage and distribution systems, 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

SERVICING OF FIREFIGHTING APPLIANCES

Verification of evidences for proper maintenance and servicing of firefighting appliances.

No.	Item	Inspection Type	Date Last Done
1	Breathing apparatus	Examination	
		Testing	
2	Portable/Semi-portable Fire Extinguishers	Examination	
		Testing	
3	Fixed Fire Extinguishing System (CO ₂ /Halon/Foam/DCP/Other* (specify)		
	CO ₂	Weighment	
		5 Yearly servicing	
		10 Yearly servicing	
		Testing	
	Halon	Examination	
		Container Content Verified	
		Servicing	
		Container Pressure Testing	
	Foam	Examination	
		Sample Testing	
	DCP	Testing	
		Examination	
	Other (Specify).....	Testing	
Examination			

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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.

4	Fireman's outfit	Examination	
5	International Shore Coupling	Examination	
MAIN AND EMERGENCY FIRE PUMP			
a. Verification that each main fire pump (including starting and/or priming arrangements) is capable of producing the required two jets of water produced simultaneous from different hydrants at any part of the ship whilst the required pressure is maintained in the fire main			
b. Confirmation that emergency fire pump including prime mover and priming arrangements, gauges are in satisfactory condition and pump is building required water pressure and two jets of water simultaneously. Tested pressure :.....bar			
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			
a. Examine for proper functioning of fire detection and alarm system and sample extraction smoke detection system;			
b. Confirmation that maintenance as recommended by manufacturer has been undertaken and spares available as per manufacturer's instructions for the system.			
REMOTE STOPPING OF FANS, OIL PUMPS, VALVES ETC			
a. Verify that the remote controls for stopping fans and machinery are in working order. Examination of the arrangements for oil fuel, lubricating oil and other flammable oils and testing the remote closing of valves for oil fuel, lubricating oil and other flammable oils and, the operation of the remote means of closing the valves on the tanks that contain oil fuel, lubricating oil and other flammable oils.			
b. Confirmation that quick closing valves are in satisfactory condition and no valve is isolated/disconnected and operating instructions are displayed.			
FIREMAN'S OUTFITS & EEBDS			
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			
FIXED FIRE FIGHTING SYSTEM			
i) Examination of fixed fire fighting system (including fixed fire fighting system of the machinery, cargo vehicle, special category and ro-ro spaces, including the fire safety arrangements for vehicle carriers carrying motor vehicles with compressed hydrogen or natural gas in their tanks for their own propulsion as cargo as appropriate) 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.			
iii) Examination of the fixed carbon dioxide extinguishing systems, 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.			
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			

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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.

<p>MEANS OF ESCAPE</p> <p>a. Confirmation that the means of escape from accommodation, machinery and other spaces are satisfactory</p> <p>b. Confirmation that opening of escape doors are in the way of direction of escape, handrails are provided in the corridors that are being used as escape routes and none of the doors along any designated escape routes require keys to unlock them when moving in the direction of escape.</p>
<p>GASEOUS FUEL FOR DOMESTIC PURPOSE</p> <p>Examining the arrangements for gaseous fuel for domestic purposes.</p>
<p>PORTABLE GAS DETECTORS</p> <p>Examination and testing the portable gas detectors suitable for the detection of the gas fuel. (Note: Applicable for vehicle carriers carrying motor vehicles with compressed hydrogen or natural gas in their tanks for their own propulsion as cargo)</p>
<p>WATER MIST LANCE</p> <p>Examining the water mist lance and as appropriate, the mobile water monitors and all necessary hoses, fittings and required fixing hardware. (Note: Applicable for ships designed to carry containers on or above weather deck, as applicable.)</p>
<p>GENERAL</p>
<p>HOUSE KEEPING</p> <p>i) Verification that general housekeeping/cleanliness in engine room, on 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>FLAG SPECIFIC REQUIREMENTS</p> <p>Confirmation that flag specific requirements/instructions, if any are complied with. Please Provide details in Remark section.</p>
<p>H.O. INSTRUCTIONS</p> <p>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>SURVEY UNDERTAKEN ON BEHALF OF OTHER SOCIETY</p> <p>For surveys on behalf of other society, confirmation that authorization, survey status and additional survey requirements if any are available and requirement related to reporting, endorsement of certificate, communication have been followed.</p>
<p>OVERDUE SURVEY</p> <p>Confirmation that H.O. authorization is available for dealing with overdue surveys. (Note: For dealing with overdue statutory surveys held together with Class surveys, Flag Administration authorization is required, details are to be provided in "Remarks")</p>
<p>REINSTATEMENT OF CLASS</p> <p>Where the vessel was attended during suspension period, reference of relevant marine miscellaneous reports are provided in "Remarks" section which have been taken into account towards reinstatement of class.</p>
<p>SURVEY HELD BY OTHER SOCIETY ON BEHALF OF IRS</p> <p>Confirmation that on board records verified for any survey held by other society on behalf of IRS (details to be included in "Remarks").</p> <p>Where survey undertaken by other society on behalf of IRS, survey status updated with relevant information and a confirmatory survey carried out and found to be satisfactory.</p>
<p>REVIEW OF PORT STATE AND FLAG STATE INSPECTION REPORTS</p> <p>Confirmation that reports of inspection by port state and flag state since last survey reviewed. Repairs/corrective action taken towards the deficiencies examined. Repairs to outstanding reported using Form "Cert-PSC".</p> <p>Where the vessel was detained, a general examination was carried out as per Flag instruction and as required by survey procedure D-01 in consultation with H.O.</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.

<p>SURVEY ARRANGEMENTS Verification of preparation for survey, means of access, safety arrangements for the safe and efficient conduct of the survey.</p>
<p>CALLIBRATION STATUS OF MEASURING AND TESTING EQUIPMENT Verification of calibration status of measuring and testing equipment used for survey.</p>
<p>REMOTE INSPECTION TECHNIQUES</p> <p>Confirmation that an inspection plan for the use of remote inspection techniques including any confirmatory survey/close-up survey/thickness measurements is submitted to H.O. and reviewed for acceptance prior commencement of survey.</p> <p>Confirmation that risk assessment undertaken to identify any hazards, to assess the likelihood of an incident occurring and to establish control measures to minimize the risk so that mitigating measures as required are put in place for safe conduct of survey using the remote inspection technique.</p> <p>Confirmation that a pre-meeting held between all parties i.e. surveyor, service supplier, ship owner’s representatives in order to confirm planned arrangements as per inspection plan are in place so as to ensure safe and efficient conduct of the inspection. The equipment, procedure for observing, two-way communication between surveyor and RIT operator, data presentation including pictorial representation and reporting the surveys using RIT discussed and agreed with the parties prior to the RIT survey, and equipment set-up , calibrated prior the inspection.</p> <p>When the remote inspection technique is used for a close-up survey, confirmation that such remote inspection technique is also able to carry out the required thickness measurements.</p> <p>Where remote inspection technique is not able to carry out the required thickness measurements, confirmation that means of access for the corresponding thickness measurements provided. Confirmatory surveys/close up surveys including thickness measurement carried out as required at selected locations to verify the results of the remote inspection technique.</p> <p>If the RIT reveals damage or deterioration that requires attention, confirmation that traditional survey undertaken without the use of a RIT. (Details to be provided in “Remarks”)</p>
<p>CHANGES TO EQUIPMENT/SHIP PARTICULARS/LIST OF SURVEYABLE ITEMS Changes to equipment/ship particulars/list of surveyable items reported using corresponding FE forms.</p>
<p>ADDITION/SUSPENSION/DELETION OF CLASS NOTATION For any request for additional class notation where plan approval is required, Head Office authorization has been received. Separate reporting done using relevant checklists for class notations assigned to the vessel. Class certificate has been amended to reflect the amended class notation. (Note: Details regarding addition/suspension/deletion of class notation is to be included under “Remarks”)</p>
<p>PLAN APPROVAL COMMENTS Relevant plan approval comments if any closed out in E-Plan arena.</p>
<p align="center">ADDITIONAL REQUIREMENTS TOWARDS CLASS INTERMEDIATE SURVEY</p>
<p>SURVEY PLANNING MEETING Confirmation that survey planning meeting held between the attending surveyor(s), the owner’s representative in attendance and where involved, the thickness measurement company representative and the Master of the ship or an appropriately qualified representative appointed by the Master or Company for the purpose to ascertain that all the arrangements envisaged in the survey programme are in place, so as to ensure the safe and efficient conduct of the survey work to be carried out.</p>
<p>SURVEY PREPARATION Confirm that survey preparation has been undertaken to ensure that survey can be conducted in safe and efficient manner considering specific requirements for age and ship type in accordance with the Rules Pt.1, Ch. 2 Table 6.4.2 such as cleaning of spaces for examination, removal of portions of wood sheathing or other covering on steel decks, lifting or removal of ceiling in the holds, tank tops etc. as applicable.</p>
<p>PIPING SYSTEM (This section is applicable to general dry cargo vessels and where the intermediate survey is equivalent to the previous special survey) Examination of all bilge and ballast piping systems incl. operational testing to working pressure to confirm that the tightness and condition are satisfactory. Above to include all piping in the ballast tanks, cargo holds, pipe tunnels,</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.

cofferdams and void spaces bounding cargo holds.
CLOSE-UP/OVERALL EXAMINATION OF CARGO HATCH COVERS AND COAMINGS INCL. OPERATION OF HATCH COVERS, AS APPLICABLE (This section is applicable to general dry cargo vessels and where the intermediate survey is equivalent to the previous special survey) i) Examination of cargo hatch covers and coamings including their closing appliances, stowage, fit & operation.(IRS Rules) ii) Confirmation that all mechanically operated hatch covers have been checked for operation and effectiveness of sealing arrangement and found to be satisfactory. (Drainage channels and non return valves for cargo hatch to be specially examined.)
EXAMINATION OF TANKS, SPACES AND THICKNESS MEASUREMENT Confirmation that internal examination of tanks, spaces including testing and thickness measurements are carried out satisfactorily as per the rule requirements and reported separately.
Examination of ballast tanks included examination of the condition of the corrosion prevention system in these spaces and found to be satisfactory.
Where special consideration is allowed as per the survey procedure and/or Main Rules Part 1, Chapter 2, the extent of thickness measurements is reduced, the special consideration is reported under "Remarks".
In case examination of tanks, spaces and thickness measurements are partly carried out, the extent of examination, thickness measurement carried out or pending is reflected in the survey status.
Confirmation that diminution criteria of other class society (under the special survey of which the vessel was built) is adopted for thickness measurement. (Details to be provided in "Remarks" section)
ADDITIONAL REQUIREMENTS TOWARDS SPECIAL SURVEYS
SURVEY PLANNING MEETING Confirmation that survey planning meeting held between the attending surveyor(s), the owner's representative in attendance and where involved, the thickness measurement company representative and the Master of the ship or an appropriately qualified representative appointed by the Master or Company for the purpose to ascertain that all the arrangements envisaged in the survey programme are in place, so as to ensure the safe and efficient conduct of the survey work to be carried out.
SURVEY PREPARATION Confirm that survey preparation has been undertaken to ensure that survey can be conducted in safe and efficient manner considering specific requirements for age and ship type in accordance with the Rules Pt.1, Ch. 2 Table 6.4.2 such as cleaning of spaces for examination, removal of portions of wood sheathing or other covering on steel decks, lifting or removal of ceiling in the holds, tank tops etc. as applicable
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In case examination of tanks, spaces and thickness measurements are partly carried out, the extent of examination, thickness measurement carried out or pending is reflected in the survey status.
Confirmation that diminution criteria of other class society (under the special survey of which the vessel was built) is adopted for thickness measurement. (Details to be provided in "Remarks" section)

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 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>MOORING ROPES AND TOW LINES</p> <p>Confirmation that sufficient mooring ropes and tow lines as required by rules are provided onboard.</p>
<p>AIR PIPES</p> <p>For vessels other than passenger vessels, internal examination of automatic air pipe heads at special survey as required by IRS Rules, to confirm these are maintained in satisfactory condition.</p>
<p>CHAIN LOCKER</p> <p>Examination of chain locker, hold fast, hawse pipes and chain stoppers and pumping arrangement of the chain locker.</p>
<p>MEANS OF EMBARKATION AND DISEMBARKATION</p> <p>Confirmation that accommodation ladders, gangways and its winches incl. brake system operationally tested with specified maximum operation load in accordance with IRS Rules Part 1 and found to be satisfactory.</p>
<p>PIPING SYSTEM</p> <p>For general dry cargo ships, examination of all bilge and ballast piping systems incl. operational testing to working pressure to confirm that the tightness and condition are satisfactory. Above to include all piping in the ballast tanks, cargo holds, pipe tunnels, cofferdams and void spaces bounding cargo holds including plating and framing, bilge and drain wells soundings, venting, pumping and drainage arrangements.</p>
<p>WATERTIGHT CABLE TRANSIT SEAL SYSTEMS</p> <p>(Note: Applicable for all vessels contracted for construction on or after 1st July 2021)</p>
<p>i) Examination of all cable transit seal systems for their satisfactory condition and review of the cable transit seal systems register to confirm that it being maintained.</p>
<p>ii) Confirmation that where any disruption to the cable transits or installation of new cable transits carried out onboard from last special survey, records are reviewed and examination carried out for the satisfactory condition of those transits.</p> <p>Confirmation that the results are recorded in the Register against each of those cable transits.</p> <p>(Note: Entries that were reviewed and examined during previous annual survey may be excluded)</p>
<p>iii) Confirmation that the Special Survey is recorded in the Register.</p> <p>(Note: A single record entry will be sufficient to record the survey of all transits.)</p>
<p>iv) Where the cable transits have been examined by an approved service supplier, review of the cable transit seal system register to confirm that it has been properly maintained by the owner and correctly endorsed by the service supplier.</p>
<p>TOWING WINCH EMERGENCY RELEASE SYSTEMS</p>
<p>i) Testing of the full functionality of the emergency release system</p>
<p>ii) Testing of the towline load for the emergency release system in both a normal power condition and power blackout condition.</p>
<p style="text-align: center;">ADDITIONAL REQUIREMENTS FOR RO-RO SHIP FOR SPECIAL SURVEYS</p>
<p>STRUCTURAL EXAMINATION</p> <p>Confirmation that the examination of the door incl. thickness measurement and testing carried out satisfactorily for compliance with applicable requirements, so that the structural and weather tight integrity remain effective.</p>
<p>CLOSE-UP, THICKNESS MEASUREMENT AND NDT</p> <p>i) Confirmation that close-up survey of securing, supporting and locking devices including welding as required by IRS Rules Part 1, Ch.2, Table 6.2.6.4 have been carried out satisfactorily</p> <p>ii) Confirmation that non-destructive testing and thickness measurements are carried out satisfactorily on securing, supporting and locking devices, including welding, to the extent considered necessary.</p>
<p>TIGHTNESS TEST</p> <p>Confirmation that the effectiveness of sealing arrangements have been verified by hose testing or equivalent.</p>
<p>MEASUREMENT OF CLEARANCES</p> <p>Confirmation that the clearances of hinges, bearings and thrust bearings have been taken and found to be satisfactory. Where dismantling is carried out, confirmation that a visual examination of hinge pins and bearings together with NDT of the hinge pin carried out satisfactorily.</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.

DRAINAGE ARRANGEMENTS
Confirmation that the non return valves of the drainage system examined in dismantled condition and found to be satisfactory.
ADDITIONAL ANNUAL SURVEY REQUIREMENTS FOR PASSENGER/RO-RO FERRY/FERRY
GENERAL EMERGENCY ALARM AND PUBLIC ADDRESS SYSTEM
Verification that general alarm and public address system is operational throughout the accommodation and service spaces and control stations and open decks, as applicable.
MEANS OF ESCAPE FOR PASSENGERS
Confirmation that the means of escape provided for passengers are so arranged that the persons onboard can safely and swiftly escape to the lifeboat and life raft embarkation deck; and escape routes are maintained in a safe condition, clear of obstacles and additional aids for escape shall be provided as necessary to ensure accessibility, clear marking, and adequate design for emergency situations.
SIDE SCUTTLES
Confirmation that the side scuttles if fitted below bulkhead deck are of fixed type & provided with deadlight; and if fitted with openable type, time of opening such side scuttles in port and of closing and locking them before the ship leaves port are entered in log-book.
MOVABLE CAR DECKS
Examination of pontoon racks including lashing arrangements, stowing arrangements and drainage arrangements in pontoon storage area to confirm these are in efficient condition.
ARRANGEMENT FOR CARRIAGE OF MOTOR VEHICLES WITH FUEL IN THEIR TANKS
1) Checking for evidence of proper maintenance, testing and inspection including verification to confirm that following are maintained in good condition. i) automatic fire alarm system in cargo holds. ii) fixed fire extinguishing system in cargo holds. iii) portable fire extinguishers in cargo holds and at cargo hold entrances. iv) ventilation system in cargo holds including remote indicators on bridge. v) electrical equipment in cargo holds, if fitted. 2) Confirmation that required signboards are posted.
LOG ENTRIES
i) Confirmation that log entries with respect to closing/opening of the hinged doors, portable plates, side scuttles, gangway, cargo and bunkering ports and other openings, which are required to be kept closed during navigation have been made. ii) Confirmation that periodical operation and inspection/drills for operating watertight doors, side scuttles, valves and closing mechanisms of scuppers, ash-chutes and rubbish-chutes in passenger ships have been done weekly and entered in the log books available onboard for satisfactory operation/condition (Note: In ships in which the voyage exceeds one week in duration a complete drill shall be held before leaving port, and others thereafter at least once a week during the voyage). iii) Confirmation that the periodic testing of complete emergency system incl. the testing of automatic starting arrangements carried out and recorded.
SUBDIVISION LOADLINE MARKING
Verification that subdivision loadline marking is as per Passenger ship safety certificate.
WATERTIGHT DOORS
i) Verification that means of indication for all power-operated sliding watertight doors at all remote operating positions (i.e. navigation bridge and at the location where hand operation is provided (above the bulkhead deck)), including audible alarm for indicating the doors being closed from remote positions are working satisfactorily. ii) Confirmation that electrical power required for power-operated sliding watertight doors, associated control, indications and alarm circuits is supplied from the emergency switchboard either directly or by a dedicated distribution board situated above the bulkhead deck and also automatically supplied by the transitional source of emergency electrical power (for controls, indications and alarms) in the event of failure of either the main or emergency source of electrical power, as applicable.

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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.

FIRE GROWTH POTENTIAL
<p>i) Confirmation that for passenger ships carrying more than 36 passengers, power ventilation, except machinery space and cargo space ventilation and any alternative system, fitted with controls so grouped that all fans can be stopped from either of two separate positions (Note: Fans serving power ventilation systems to cargo spaces is capable of being stopped from a safe position outside such spaces).</p> <p>ii) For passenger ships, confirmation of satisfactory operational condition of controls required for opening and closure of skylights, closure of openings in funnels which normally allow exhaust ventilation and closure of ventilator dampers, stopping forced and induced draught fans, oil fuel transfer pumps, oil fuel unit pumps, lubricating oil service pumps, thermal oil circulating pumps and oil separators (purifiers) and the controls for any required fire-extinguishing system.</p>
SMOKE GENERATION POTENTIAL AND TOXICITY
<p>Verification that satisfactory records are available on passenger ships (constructed on or after 1 July 2008) to ensure paints, varnishes and other finishes including primary deck coverings used on exposed surfaces of cabin balconies (excluding natural hard wood decking systems) are of type which is not capable of producing excessive quantities of smoke and toxic products at elevated temperatures (in accordance with fire test procedures code).</p>
FIRE PATROL
<p>Confirmation from records for ships carrying more than 36 passengers, an efficient patrol system is maintained so that an outbreak of fire may be promptly detected.</p>
SPRINKLER AND WATER SPRAY SYSTEM
<p>Verification that controls, piping, instructions, notices and markings are in order. Checking for evidence of proper maintenance, testing and inspection. Verification that system is in good order, maintained ready for use and visual/audible alarms are operational. Checking by means of simulation for automatic starting of sprinkler pump/s, when there is a drop in pressure in the line.</p>
FIRE EXTINGUISHING ARRANGEMENTS IN CARGO SPACE
<p>Verification that controls, piping, instructions, notices and markings are in order. Checking for evidence of proper maintenance, testing and inspection. Verification that system is in good order, maintained ready for use.</p> <p>(Note: All cargo spaces of passenger ships of 1,000 gross tonnage and upwards are to be protected by a fixed carbon dioxide or inert gas fire-extinguishing system complying with the provisions of the Fire Safety Systems Code or by a fixed high-expansion foam fire- extinguishing system which gives equivalent protection).</p>
FIRE & SMOKE DETECTION SYSTEMS
FIRE DETECTION AND ALARM SYSTEM
<p>Examination and testing, where applicable, of any fire detection and fire alarm arrangement on cabin balconies.</p>
SMOKE DETECTION AND ALARM SYSTEM
<p>For passenger ships constructed on or after 1 July 2010, confirming the smoke detectors in cabins, when activated, are emitting, or cause to emit, an audible alarm within the space where they are located.</p>
<p>For passenger ships constructed on or after 1 July 2010, confirming detectors and manually operated call points of a fixed fire detection and fire alarm system can be remotely and individually identified.</p>
SUPPLEMENTARY LIGHTING SYSTEM
<p>i) Verification that supplementary lighting in cabins to indicate the exit (so that occupants will be able to find their way to the door) are in good order. Also verification that such lighting is connected to an emergency source of power or have a self contained source of electrical power in each cabin and automatically illuminated (Applicable for passenger ship constructed on or after 01/07/2010).</p> <p>ii) Verification that the vessel is provided with supplementary emergency lighting system of adequate illumination in all passenger public spaces and alleyways. Also verification that the source of power for the supplementary lighting is an accumulator battery located within the lighting units and is being continuously charged. Confirmation that all crew space alleyways, recreational space and every working space that is normally occupied are provided with portable rechargeable battery operated lamps unless they are fitted with the supplementary emergency lighting mentioned earlier (Applicable to every passenger ship with ro-ro cargo spaces).</p>
FLOODING DETECTION SYSTEM
<p>Confirmation that the operation of the flooding detection system for watertight spaces below the bulkhead deck on passenger ships carrying 36 or more persons (constructed on or after 01 July 2010) are in efficient condition.</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.

REFUSE CHUTES AND ASH SHOOTS
i) Confirmation that the inboard openings of ash and rubbish chutes, etc. where fitted, are provided with efficient covers. If the inboard opening is situated below the bulkhead deck, confirmation that the cover is watertight and, in addition screw down non-return valve fitted in the chutes above the deepest subdivision load line is satisfactory. ii) Confirmation that the control of valve is from a position above the bulkhead deck and provided with open/shut indicators.
WATER TIGHT INTEGRITY ABOVE BULKHEAD DECK
i) Confirmation that, provisions for efficient drainage of enclosed cargo spaces above the bulkhead deck is provided. ii) Confirmation that the space between the bow door/visor and inner door/ramp is adequately drained, either by a bilge suction or by scuppers (both port and starboard) and arrangement found to be in satisfactory condition.
ADDITIONAL ANNUAL SURVEY REQUIREMENTS FOR TUG/ANCHOR HANDLING TUG
FENDERING ARRANGEMENT
Confirmation that the fenders provided from pushing operation and all around on the ship's side are in efficient condition
TOWING HOOK
i) Examination of towing hook incl. remote operation from navigation bridge to confirm these are maintained in efficient condition. ii) Confirmation that wire rope for mechanical releasing used for remote operation is in satisfactory condition. iii) Confirmation that for pneumatic releasing device, mechanical slip device is in good order.
TOWING WINCH
i) Verification of the operation of the disconnection coupling of the towing winch from the navigation bridge. ii) Verifying that the brake liner for towing winch is satisfactory. iii) Confirmation that, possible arrangement to carry out the emergency release sequence (emergency release/application of brakes) even during a black-out is in satisfactory condition. iv) Confirmation that the arrangement for quick release of the winch drum brake from all control stands is satisfactory.
PERIODICAL TESTING OF TOWING GEARS
Confirmation that the towing gears and quick release devices (upon initial testing) has been thoroughly examined every two years and subjected to load test at an approved testing facility (Note: Functional safety of towing gear and quick release devices are to be tested by ship staff every month).
ADDITIONAL ANNUAL SURVEY REQUIREMENTS FOR SUPPLY VESSELS
FENDERING ARRANGEMENT
Confirmation that the longitudinal fenders incl. sloping fenders in between are fitted on ship sides at upper deck and forecastle deck are in efficient condition.
WINDOWS
Confirmation that no modification has been done from the initial arrangement with respect to windows and its deadlight used in deck houses and these are maintained in efficient condition. (- On aft ends: in second tier above the freeboard deck and higher – Hinged deadlights are required for second tier. - On sides: in second tier above the freeboard deck and higher – Hinged deadlights are required for second and third tiers. - on fronts: in third tier above the freeboard deck and higher - Hinged deadlights are required for third tier; for fourth and fifth tiers, portable deadlights stowed adjacent to the windows for quick mounting may be accepted. Deadlights for at least two wheelhouse front windows are to have means for providing clear view).
EQUIPMENT AND CARGO HANDLING ARRANGEMENT
Confirmation that where cement and dry mud tanks are situated in way of engine room, suitable signboards for access doors between the two spaces are posted to indicate that these doors to be kept closed while the system is under pressure. Also verification that, no modification with respect to the upper parts of the tanks with hatches, pipe connections and other fittings and tanks are segregated from the engine room by steel deck and bulkhead. (Note: Exemption letter for allowing cement tanks/Mud Tanks in way of engine room from the flag is to be available on board).

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.

ADDITIONAL ANNUAL SURVEY REQUIREMENTS FOR TRAWLERS AND FISHING VESSELS
SKYLIGHTS
Confirmation that the skylights leading to accommodation and machinery space below freeboard deck are capable of being closed weather tight from both sides and in efficient condition (Also to be positioned clear of deck working areas). (Note: Scuttles may be fitted on skylights for accommodation spaces only).
STERN TRAWLERS
Confirmation that stern trawlers, if not provided with suitable protection such as doors, gates or nets at the top of the stern ramp up to the same height as the adjacent bulwark or guard rail, a chain or other means of protection are fitted across the ramp and is in satisfactory condition.
WEATHER DECK IN WAY OF WORKING AREA OF NETS
Examination of weather deck in way of the working area of the nets, connection to hull structure of masts, gantries, winches and trawl gallows(for side trawlers) to confirm satisfactory condition.
CREW PROTECTION
Verification to confirm the condition of storm rails etc. for the protection of the crew against falling overboard.
GARBAGE CHUTES
Examination of the weather tight arrangement of the inboard end of garbage chutes and the operation of screw down non-return valve fitted on outboard end (1.5 m above deck) is in satisfactory condition.
REFRIGERATED FISH HOLD
Where the refrigerated fish hold spaces are provided, verification that the insulation arrangement is in satisfactory condition. For ships assigned with HY notation, additional requirements of refrigerated spaces are to be verified and reported in relevant checklist.
ADDITIONAL ANNUAL SURVEY REQUIREMENTS FOR DREDGERS
SCUPPERS, SANITARY DISCHARGES AND SIDE SCUTTLES
i) Confirmation that, all areas where mechanical damage is likely (due to barges coming alongside), all side scuttles, scuppers and discharges including their valves, controls and their indicators are well protected and are in efficient condition.
ii) Verification that the scuppers are free from obstructions (Possibility of scuppers becoming blocked by sand and other spoil that may spill on to the deck) and are maintained in efficient condition.
iii) Examination as far as practicable, of superstructure hinges and blocks, deck hinges, hydraulic jacks and associated piping systems and alarms to confirm these are maintained in efficient condition.
iv) Examination, as far as practicable, of attachments of suction piping and lifting systems to the structure and external examination of piping in dredging machinery spaces for absence of corrosion and leakage.
v) Verification of the condition of the dredging machinery space and related equipment to confirm these are free from hazards with regard to electrical shocks, rotating machinery, fire and explosion.
ADDITIONAL SURVEY REQUIREMENTS FOR FLOATING DRY DOCKS
DECKS, STRUCTURE, KEEL, SHELL PLATING, ETC.
a. Examination of pontoon, safety & top decks, steel structures externally above the light waterline, keel and side blocks including their foundation, swing bridges as applicable for their satisfactory condition.
b. Examination of pontoon and wing wall tanks internally including hydraulic testing. (Note: 1. Applicable for Special Surveys.)
c. Internal examination of oil fuel tanks forming part of main structure (Note: Applicable for special surveys of floating docks over 15 years of age)
d. Internal examination of spaces above safety deck by removing linings, where considered necessary (Note: Applicable for Special Surveys.)
e. Examination of plating by removing cover where surface is covered with cement, composition or wood sheathing (Note: Applicable for Special Surveys)

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.

f. Examination of shell plating below the light waterline. (Note: Applicable for Special Surveys)
CRANE Examination of crane including their foundation and other supporting structures for satisfactory condition.
DEFLECTION AND STRESS MONITORING SYSTEM Examination of deflection and stress monitoring system for satisfactory condition.
OPERATING AND BALLASTING MANUAL Confirmation that the vessel is provided with approved operating and ballasting manual.
BALLAST PUMPS Confirmation that the dock is provided with at least two water ballast pumps for deballasting (The arrangements for deballasting are to be such that in case of failure to one pump an alternative pumping is available for each ballast tank) and the operation found to be satisfactory.
POWER OPERATED BALLAST VALVES i) Verification that the power operated ballast valves are provided with arrangements for manual operation or a failsafe device and these are in satisfactory condition. ii) Where manual operation of ballast valves is provided or where power operated valves are capable of manual operation in case of power failure, confirmation that suitable instructions are provided in the operating manual of the dock, that the sea inlet, discharge and distribution valves, in the ballast systems are to be immediately closed in the event of power failure during ballasting/deballasting.
DEFLECTION CONTROL SYSTEM i) Confirmation that two completely independent deflection meters are fitted and these are in good order with valid calibration. (Meters are for outputting deflections over the length of the dock. One of the two deflection monitoring systems is required to be of hydraulic type. Means are provided for readings of one of the system to be displayed on an indicator board in the control room of the dock.) ii) Confirmation that the arrangements for visual and audible warning and for automatically stopping the ballast pumps before the maximum allowable deflection is reached are satisfactory. (Note: One deflection control system may be accepted for docks designed to operate without using differential ballasting. Such a system should then be of optical type).
PROTECTION TO OPENINGS Examination of condition of means of protection to openings. (Applicable for Special Surveys)
ADDITIONAL REQUIREMENTS FOR WELL STIMULATION VESSELS
DOCUMENTATION
INTACT AND DAMAGE STABILITY Availability of intact and damage stability information when the vessel is permitted to carry more than the maximum aggregate quantity (800 m ³ or a vol. in cubic meters equal to 40% of the vessel's deadweight calculated at a cargo density of 1.0, whichever is lesser) of hazardous and noxious liquids confirming compliance with Res. MSC 235(82).
OPERATION MANUAL Verification that the approved copy of operation manual is available onboard with instructions and information on safety aspects related to well stimulation processing.
WELL STIMULATION EQUIPMENT AND SYSTEMS
GENERAL Examination of the well stimulation equipment and systems taking into account the operational safety arrangement to prevent any danger to person or any hazards to marine environment.
TANKS AND PIPING ARRANGEMENT (i) Verification that no alteration has been done to the tanks, piping & pumping arrangement for acids, liquefied nitrogen, cargoes that react with other cargo in hazardous manner and chemicals other than acids where provided for well stimulation processing plant. (ii) Internal Examination and testing of tank/s at each renewal survey

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 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>TANK VENTING</p> <p>Verification of outlet from safety valve of Nitrogen tank and vent outlet from acid tanks to open deck including pressure/vacuum valves and flame screens and confirmation that thermal isolation from cold pipes is maintained in good order.</p>
<p>ACCESS OPENINGS</p> <p>Examination of the access for enclosed spaces containing tanks, piping, pumps and blenders for uninhibited acid and where provided verification of air locks including independent mechanical ventilation.</p>
<p>VENTILATION</p> <p>Verification with respect to satisfactory operation and effectiveness of ventilation system for spaces used for acid storage and handling, other spaces containing equipment for well stimulation and spaces for additive storage and handling</p>
<p>SPILL PROTECTION</p> <p>Examination of lining of corrosion resistant material on surrounding bulkhead and coaming for protection of floors or decks under acid storage tanks, pumps and piping of uninhibited acid. Examination of lining or acid resistant coating on water tight coaming for hatches and other openings.</p> <p>Examination of the drip trays under loading manifold provided with acid resistant material if handling acids and resistant to cryogenic temperature where liquefied gases are transferred.</p>
<p>DRAINAGE ARRANGEMENT</p> <p>Examination of provision for separate drain arrangement of acid resistant material for spaces housing acid tanks, including drain arrangement for void spaces, double bottom tanks and ballast tanks which are not separated from tanks containing well stimulation substances or by double bulkhead.</p>
<p>ELECTRICAL INSTALLATION</p>
<p>ELECTRICAL EQUIPMENT</p> <p>Examination of electrical equipment and cables in spaces containing acetic acid, enclosed spaces containing acid tanks and acid pumping arrangement in order to confirm that these are safe and explosion proof type and maintained in good order.</p>
<p>OIL RECOVERY EQUIPMENT</p>
<p>OIL RECOVERY EQUIPMENT</p> <p>(i) Examination of oil recovery equipment including its support</p>
<p>(ii) Testing of proper operation of the recovery equipment at each renewal survey.</p>
<p>OIL RECOVERY TANK, PUMPING AND PIPING SYSTEM</p>
<p>OIL RECOVERY TANK</p> <p>(i) External examination of tank/s, piping.</p>
<p>(ii) Internal examination and verification of coating condition, pressure testing of tanks where the tank is adjacent to engine room without cofferdam at each renewal survey.</p>
<p>VENT PIPES</p> <p>Examination of vent pipes, flameproof wire gauze, closing appliance. Verification of portable vent pipes where applicable.</p>
<p>LEVEL GAUGING AND OVERFILLING CONTROL OF OIL RECOVERY TANKS</p> <p>Examination of sounding pipes or other level gauging devices and testing of high level audio & visual alarms or overflow control system.</p>
<p>OIL RECOVERY PUMPS</p> <p>External examination of oil recovery pumps, foundations and testing of remote operation/shut down devices</p>
<p>BILGE PUMPING ARRANGEMENT</p> <p>Examination of bilge pumping arrangement and its remote operation from outside the oil recovery pump room.</p>
<p>FIRE DETECTION, PROTECTION AND FIGHTING</p>
<p>FIXED FIRE FIGHTING</p> <p>Examination of fixed fire extinguishing system for pump rooms of oil recovery operations.</p>

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 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>FIRE FIGHTING Verification of provision of fire extinguishers and foam applicator as per approved plan for oil recovery area.</p>
<p>FIXED WATER SPRAYING SYSTEM FOR WINDOWS/SIDE SCUTTLES (not applicable to vessels with class notation FP 60C) Examination of a fixed water spraying system for windows and side scuttles cover where provided.</p>
<p>VAPOUR DETECTOR Confirmation that vessel is provided with gas detection instrument or system and oil flash point measurement equipment with valid calibration records.</p>
<p>ACCESS OPENING BETWEEN HAZARDOUS AND NON-HAZARDOUS AREA Examination of arrangement of self closing gastight doors, airlock & provision of signboards as applicable</p>
<p style="text-align: center;">VENTILATION SYSTEMS</p>
<p>VENTILATION SYSTEM Verification of ventilation system including dampers for operation and effectiveness. Examination of protection screens at intake and outlets of ducts. Verification that warning notices are posted outside compartment. Confirmation that ventilation system can be controlled from outside the oil recovery pump-room.</p>
<p>SPARK ARRESTERS IN EXHAUST LINES Verification of spark arrester in exhaust lines from engines, gas turbines, boilers and incinerator etc.</p>
<p style="text-align: center;">ELECTRICAL INSTALLATIONS</p>
<p>ELECTRICAL INSTALLATION Examination of intrinsically safe type electrical installation in hazardous area. Testing of insulation level monitoring device including audio and visual alarm for abnormal low level insulation.</p>
<p>POWER SUPPLY Verification of the adequate power supply available for the equipment used during oil recovery operations.</p>
<p style="text-align: center;">ADDITIONAL REQUIREMENTS FOR PIPE LAYING VESSELS</p>
<p>APPROVAL OF ADDITIONAL PLANS Confirmation that additional plans related to hull structural details, equipment for station-keeping/maneuvering during pipe laying, electrical systems, piping schematics and calculations for piping system supplying pipe laying systems, communication systems etc. are approved and available.</p>
<p>SUPPORT ARRANGEMENTS Examination of pipe support arrangements on pipe ramp, pipe lay towers, skid frames rest or other stowage for their satisfactory condition.</p>
<p>PIPE LAYING EQUIPMENT AND SYSTEMS Examination of pipe laying equipment and systems such as control system, communication system, alarm systems for their satisfactory condition and operation as far as practicable.</p>
<p>PIPE TENSIONER Examination of arrangement of tensioners including power-controlled system, foundation and supporting structures for their satisfactory condition.</p>
<p>ARRANGEMENT OF PIPE RACKS, REELS AND SUPPORT STRUCTURE Examination of arrangement of pipe racks, pipe reels and their support structure for satisfactory condition</p>
<p>ARRANGEMENT FOR ANTI-HEELING AND/OR BALLAST SYSTEMS Examination of arrangement for anti-heeling and/or ballast systems for their condition.</p>
<p>PIPE LAYING MOON POOL Where pipe laying moon pool is provided, examination of same including its openings, side structure and means provided to prevent personnel from falling into the moon pool for their satisfactory condition.</p>
<p>CLAMPING SYSTEM AND A & R WINCH SYSTEM Examination of clamping systems and Abandonment & Recovery(A&R) winch system arrangement for their condition and satisfactory operation.</p>

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 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>CRANES</p> <p>Where applicable examination of deck cranes including their supporting structures for satisfactory condition.</p>
<p>DYNAMIC POSITIONING SYSTEMS</p> <p>Confirmation that the vessel maintains class notation in respect of dynamic positioning system (DP (2) or DP (3)).</p> <p>Where applicable, confirmation that DP FMEA addresses the potential effects of pipe tensioner on DP station keeping capability and system survey has been carried out satisfactorily.</p>
<p>MOORING WITH ANCHORS, CABLES, WINCHES</p> <p>Where anchors, cables and mooring winches are being used for position keeping, examination of same for their satisfactory condition.</p>
<p>FUNCTIONAL TESTING</p> <p>Functional integration testing of pipe laying systems and position mooring equipment to the extent as per method agreed to confirm that laying equipment and systems are maintained satisfactorily.</p>
<p align="center">ADDITIONAL REQUIREMENTS FOR CABLE LAYING VESSELS</p>
<p>APPROVAL OF ADDITIONAL PLANS</p> <p>Confirmation that additional plans related to hull structural details, equipment for station-keeping/maneuvering during cable laying, electrical systems, piping schematics and calculations for piping system supplying cable laying systems, communication systems etc. are approved and available.</p>
<p>SUPPORT ARRANGEMENTS</p> <p>Examination of pipe support arrangements for equipment used in cable lying operation such as cable drum, cable reels including structures for cable stowed on racks in holds and/or deck to confirm their satisfactory condition.</p>
<p>CABLE LAYING EQUIPMENT AND SYSTEMS</p> <p>Examination of cable laying equipment and systems such as control system, communication system, alarm systems for their satisfactory condition and operation as far as practicable.</p>
<p>ARRANGEMENT OF CABLE DRUMS, REELS, DEPLOYMENT SHEAVE</p> <p>Examination of arrangement of cable drums, reels, deployment sheaves and their support structure for satisfactory condition.</p>
<p>FUNCTIONAL TESTING</p> <p>Functional integration testing of cable laying systems and position mooring equipment to the extent as per method agreed to confirm that laying equipment and systems are maintained satisfactorily.</p>
<p align="center">ADDITIONAL REQUIREMENTS FOR CLASS ENTRY (EXISTING SHIP)</p>
<p>GENERAL</p> <p>Authorization for undertaking the class entry survey including scope of survey, class notation to be assigned is available.</p> <p>For transfer of class and dual classification cases confirmation that current classification survey status of the losing society/first society is available.</p> <p>For any request for additional class notation where plan approval is required, Same has been undertaken in consultation of HOD (classification & certification). Include details under "Remarks".</p> <p>Separate reporting done using relevant checklists for class notations assigned to the vessel.</p>
<p>GENERAL EXAMINATION OF ESSENTIAL MACHINERIES</p> <p>Examination of oil fuel burning equipment of boiler, economizers and steam/steam generators under working conditions. The adjustment of safety valves of this equipment verified.</p> <p>External examination of all pressure vessels including their associated piping and protective devices. Internal examination and hydraulic testing carried out satisfactorily as considered necessary. (Note: Provide details under remark section where tests carried out.)</p> <p>Examination of generator circuit breakers, preference tripping relays and generator prime mover governors including verification of insulation resistance, paralleling and load sharing for their satisfactory condition.</p> <p>Examination of navigating lights and indicators for their working condition including verification of alternative sources of power.</p>

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 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.

Confirmation that following machinery and items have been dismantled and inspected for satisfactory condition.
(Note: Details of items inspected undertaken are to be provided in below table.)

Machinery/Items	Details
a. Main Engine	
b. Auxiliary Engine(s)	
c. Pumps	
d. Pressure Vessels (Air bottles)	
e. Compressors	
f. Any other machinery/item (please specify the same under "Details")	

Examination of following items under working conditions:

a. Bilge Pumps

b. Emergency Fire Pumps

c. Remote control for oil valves, oil fuel pumps, lubricating oil pumps, forced draught fans

Examination of recirculating and ice clearing arrangements, if any for satisfactory condition.

Examination of main and all auxiliary machinery necessary for operation of the vessel at sea together with their essential controls to confirm satisfactory working condition.

Examination and testing of steering gear under working condition including testing of alternate means of steering for satisfactory working.

Verification of initial start arrangements for satisfactory condition.

Confirmation that a short sea trial held satisfactorily.
(Note: 1. Mandatory where the vessel was laid up for a long period.
2. For class entry of non-compliant vessel subject to IACS PR 1D, sea trial to be undertaken in accordance with approved protocol as per survey procedure B-03)

Any class notation included in H. O. authorization but not assigned.
(Note: Include explanation included in "Remarks".)

AVAILABILITY OF PLANS/DOCUMENTS

All relevant plans/documents are available. If not appropriate actions initiated in consultation with Head Office
(Note: (i) For class entry involving IACS PR 1D, plans/documents listed in Part 1, Chapter 1 Section 3.2.1 to 3.2.5 of the IRS Rules are to be appraised.
(ii) Plans/documents as listed in survey procedure B-03 Annexure 2 are to be submitted to head office)

Shipboard arrangement verified against plans/documents and confirmation that no alteration/modification is done to the vessel.

Where plans/documents not available, confirmation that technical data collected in lieu of specific plan/document and sent to Head Office (HOD (PAC-Existing Ships) and HOD (Classification & Certification)).

THICKNESS MEASUREMENTS

Where class entry survey is to be credited as a periodical survey for maintenance of class thickness measurements undertaken by the losing society carried out within the applicable survey window of the periodical survey being credited and accepted based on satisfactory review for compliance with the applicable survey requirements, and confirmatory gauging now undertaken as reported.
(Note: Copy of TM to be uploaded)

Where class entry survey is not to be credited as a periodical survey for maintenance of class thickness measurements undertaken by the losing society carried out within 15 months prior to completion of class entry survey (when it is in the scope of a Special Survey)/within 18 months prior to completion of class entry survey (when it is in the scope of an Intermediate Survey)* and accepted based on satisfactory review for compliance with the applicable survey requirements, and confirmatory gauging now undertaken as reported.
(Note: Copy of TM to be uploaded)

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.

EXAMINATION OF BALLAST TANKS AND CARGO SPACES
Examination of ballast tanks and cargo spaces undertaken and are reported separately.
TANKS TESTING
Testing of ballast tanks undertaken as reported separately.
ANCHORS AND ANCHOR CHAIN CABLES
Confirmation that anchors examined and chain cables ranged and gauged and found to be satisfactory.
OVERDUE SURVEY AND CONDITIONS OF CLASS
Confirmation that (i) all overdue surveys and (ii) all overdue conditions of class previously issued against the vessel as specified to the Owner by the losing Society, have been dealt with satisfactorily. (Note: Applicable for vessels less than 15years of age)
Confirmation that (i) all overdue surveys and (ii) all overdue conditions of class previously issued against the vessel have been dealt with satisfactorily by the losing society. (Note: Applicable for vessels of 15years of age and over)
OUTSTANDING CONDITION OF CLASS
Confirmation that all outstanding conditions of class issued by the losing society which have not been dealt with during class entry have been reflected in the survey status. (Note: Details of outstanding conditions of class dealt with at the time of class entry are to be reported separately)
MATERIAL TESTING
Confirmation that material used for construction of the vessel meet Rule requirements and confirmed through material testing as required by survey procedure B-03. (Note: (i)Material testing is required to be carried out at accredited laboratory (accredited to ISO 17025 or equivalent) or at a laboratory approved by the respective Flag Administration. (ii) Applicable to class entry of non-compliant vessel subject to IACS PR 1D)
NON-DESTRUCTIVE TESTING
Confirmation that NDT of weld joints undertaken as required by survey procedure B-03. (Note: Applicable to class entry of non-compliant vessel subject to IACS PR 1D)
HYDRAULIC TEST
Confirmation that hydraulic testing of pressure vessel and piping system carried out in accordance with applicable class rules as per survey procedure B-03. (Note: Applicable to class entry of non-compliant vessel subject to IACS PR 1D)
INCLINING EXPERIMENT
Confirmation that an inclining experiment carried out and compliance to intact and damage stability verified. (Note: Applicable to class entry of non-compliant passenger vessel/Ro-Ro vessel/Inland ferry subject to IACS PR 1D)
COMPLIANCE TO RETROACTIVE RULE REQUIREMENTS
Confirmation that vessel is in compliance with retroactive Rule requirements which are applicable to the vessel at the time of class entry. (Note: Applicable to class entry of non-compliant vessel subject to IACS PR 1D)
INSTRUCTION FROM FLAG ADMINISTRATION
Confirmation that specific instruction from flag if any is taken into account.
CHANGE OF FLAG/CHANGE OF CERTIFICATION SURVEY (EXISTING SHIP)
Valid Permanent/Provisional Registry certificate is available as issued by gaining flag/flag for which certification is being done.
IRS has authorization to carry out surveys on behalf of the flag. HO authorization including scope of survey, requirement for approval of statutory documents on behalf of the flag has been received.
Statutory certificates, supplements & documents issued on behalf of previous flag/RO are available.
Exemptions, where applicable, have been issued by the gaining flag/flag for which certification is being done.
Information on additional flag requirements, if any are taken into account.
All relevant drawings, documents etc. are available. If not, appropriate actions initiated.

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.

Plans and documents requiring approval on behalf of gaining flag have been approved.
Confirmation that mandatory certificate, documents required to be carried on board are available. (Note: Refer Instruction to Surveyors (Statutory) D-05 and Flag instruction)
Confirmation that statutory documents/plans onboard are in the language as required by applicable conventions, codes and confirming flag specific requirements.
Confirmation that marking and carving as required by flag has been done on the vessel.
Confirmation that new flag, port of registry and ship's name are indicated, as applicable, on life boats, life rafts, life buoys, statutory documents as applicable.
Confirmation that vessel is in compliance with new statutory requirements due to changes to statutory regulations as applicable to the vessel on the date of survey.
STATUS OF SURVEY AND CERTIFICATE
Confirmation that the Annual Survey/Intermediate Survey/Special Survey* completed satisfactorily.
General examination of the vessel carried out satisfactorily towards [postponement of special survey/for granting voyage permission/towards class entry/towards condition improvement program/(specify)]* with the scope of Annual survey/Intermediate Survey/Special Survey* relevant to the age and type of the vessel as per Rules. (Note: (i) Authorisation reference received from head office/flag Administration are to be provided under "Remarks" (ii) Further survey scope covered for postponement survey are to be confirmed by indicating under "Remarks")
On satisfactory completion of the survey/examination* Full-Term Certificate issued/endorsed/extended/interim certificate issued/short term certificate issued* (Note: Validity of the short-term certificates and other conditions based on which the certificate is issued are to be included in the "Remarks" section)
Confirmation that the Annual Survey/Intermediate Survey/Special survey* carried out partly as reported. Extent of survey/examination* carried out/pending* is reflected in the survey status. (Note: Explanation for carrying out surveys partly may be included under "Remarks")
Annual Survey/Intermediate Survey/Special survey/General examination* could not be completed due to reason as provided under "Remarks" and the survey window having been expired it is recommended that the class of the vessel may be suspended. Extent of survey/examination carried out /pending is reflected in the survey status as additional information and pending repairs to deficiencies have been reflected in the survey status as condition of class.
The special survey has been preponed in consultation with the Flag Administration for alignment with statutory renewal surveys. A fresh date for special survey is recommended to be assigned.
The Annual/Intermediate* survey has been completed before the survey window at the request of the owner and the anniversary date is amended in the class certificate accordingly.

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.