

## CLASS CHECKLIST FOR LIVESTOCK CARRIERS

**Type of Survey: Annual Survey/Intermediate Survey/Special Survey/General Examination\***

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

| <b>NOTES:</b> |  |
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| 1             | Use "Y" for Yes/Satisfactory, "N" for Not Satisfactory, "NO" for No, "NA" for Not Applicable, "P" for Remains outstanding.   |
| 2             | Refer BWM statutory checklist for items related to BWM survey when class & statutory survey for BWM carried out concurrently.  |
| 3             | Where the services of an approved firm is utilized, details of approval and personnel qualification is to be provided under remarks. Alternatively, copy of approval page may be uploaded with the report. |

| Sr. No. | Item  | Y/N/NO/NA/P |
|---------|---|-------------|
| A       | <b>DOCUMENTATION</b>  |             |
| 1       | <b>APPROVED TRIM &amp; STABILITY INFORMATION</b><br>Confirmation of availability of trim and stability booklet approved by administration.  |             |
| 2       | <b>CARGO SECURING MANUAL</b><br>Confirmation of availability of approved cargo securing manual.<br>(Applicable in combination carrier where other type of cargo is also carried along with livestock)   |             |
| 3       | <b>STATUTORY CERTIFICATES</b><br>Verification that all statutory certificates and class certificate are available and valid.  |             |
| 4       | <b>FIRE CONTROL PLANS</b><br>Confirming that the fire control plans are permanently exhibited or, alternatively, emergency booklets have been provided and that a duplicate of the plans or the emergency booklet are available in a prominently marked enclosure external to the ship's deck house.  |             |
| 5       | <b>LOADING MANUAL</b><br>Verified that vessel has an approved Loading Manual.   |             |
| 6       | <b>STEERING GEAR ENTRIES REQUIRED BY SOLAS/FLAG</b><br>Verification of entries made in the ship's log for departure steering checks & Emergency Steering drills.  |             |
| 7       | <b>DAMAGE CONTROL PLANS &amp; BOOKLET</b><br>Verification that damage control plans & booklet are available.<br>(Note: Applicable to 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)  |             |
| 8       | <b>DAMAGE STABILITY</b><br>Availability of damage stability information.<br>(Note: cargo ships having load line length of 80 m and above)   |             |
| 9       | <b>HULL AND MACHINERY SURVEYS</b><br>Verification that no CSH/CSM items are overdue.  |             |
| 10      | <b>MANOEUVRING BOOKLET</b><br>Confirming that the manoeuvring booklet is on board and that the manoeuvring information is displayed on the navigating bridge.   |             |
| 11      | <b>CONSTRUCTION DRAWINGS MAINTAINED ON BOARD</b><br>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)   |             |
| 12      | <b>EMERGENCY TOWING PROCEDURES</b><br>Confirm that ship specific emergency towing procedures available on board.  |             |
| 13      | <b>COATING TECHNICAL FILE</b><br>Confirmation that Coating Technical File is available on board and maintained.<br>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.<br>(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) |             |

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| 14 | <b>SHIP CONSTRUCTION FILE (SCF)</b><br>Confirmation that ship construction file (SCF) is available and maintained onboard.  |  |
| 15 | <b>HARMONIC DISTORTION RECORD FOR VESSEL FITTED WITH HARMONIC FILTER.</b><br>Verification of annual measurement record of harmonic distortion level at bus bar.<br>(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.)  |  |
| 16 | <b>OPERATIONAL MANUAL FOR EFFECT OF HARMONIC FILTER</b><br>Verification that following document are available on board.<br>a. Effect of failure on harmonic filter on electrical distribution system.<br>b. Permitted modes of operation for maintaining harmonic distortion level within acceptable limit during normal operation and during failure of filter.<br>c. Approved copy of relaxation on allowable distortion limit, if any<br>d. Record of harmonic distortion level measured.<br>(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.) |  |
| 17 | <b>ALTERNATIVE DESIGN &amp; ARRANGEMENT</b><br>Confirm that, where applicable the approved documentation for the alternative design and arrangement is in board.  |  |
| B  | <b>HULL AND WEATHER DECK</b>  |  |
| 1  | <b>MASTS AND STANDING RIGGING</b><br>Masts, Derricks & Crane columns including their standing rigging.  |  |
| 2  | <b>FIRE DOORS AND CONTROLS</b><br>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.<br><br>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.<br>(Note: applicable where emergency fire pump is in steering gear compartment)   |  |
| 3  | <b>ANCHORING &amp; MOORING EQUIPMENT</b><br>Examining the anchoring equipment & mooring equipment. At renewal survey, during the examination, anchors are lowered and raised using the windlass.  |  |
| 4  | <b>SOUNDING PIPES</b><br>Sounding pipes, including self closing devices on short sounding pipes.  |  |
| 5  | <b>HATCHWAYS</b><br>Examination and testing of hatchways on freeboard and superstructure decks including efficient condition of closing appliances.   |  |
| 6  | <b>WEATHER DECKS</b><br>Examination of weather decks, ships side plating above water line.  |  |
| 7  | <b>HULL MARKINGS</b><br>Verification that hull markings such as freeboard markings, draft markings, vessel name, IMO number, port of registry are legible and in satisfactory condition.  |  |
| 8  | <b>VENTILATORS</b><br>Examination and or testing of ventilators including efficiency of their closing appliances.   |  |
| 9  | <b>WINDOWS, SIDE SCUTTLES AND DEAD LIGHTS</b><br>Examination and or testing of windows, side scuttles and dead lights.  |  |
| 10 | <b>SCUPPERS, SANITARY DISCHARGES, VALVES AND CONTROLS</b><br>Examination scuppers and sanitary discharges and valves together with valves and their control gear.   |  |
| 11 | <b>SKYLIGHTS AND FIDDLEY OPENINGS</b><br>Examination and or testing of skylights and fiddley openings including their closing appliances.   |  |
| 12 | <b>EXPOSED CASINGS, DECK HOUSES, COMPANION WAYS AND SUPERSTRUCTURES</b><br>Examination and/testing of exposed casings, deck houses, companionways and superstructure bulkheads including closing appliances.  |  |
| 13 | <b>GUARD RAILS AND/OR BULWARKS</b><br>Examination of arrangement of guardrails, bulwarks for satisfactory condition.  |  |

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| 14 | <b>COLLISION &amp; WATERTIGHT BULKHEAD OPENINGS</b><br>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.  |  |
| 15 | <b>TOWING AND MOORING EQUIPMENT</b><br>Confirming that towing and mooring equipment are maintained in good condition and are properly marked with any restrictions associated with its safe operation. Relevant plans/procedures/certificates and record of inspection/maintenance are available on board.  |  |
| 16 | <b>HATCH COVERS AND COAMINGS</b><br>Hatch covers and coamings including their closing appliances, stowage, fit & operation.   |  |
| 17 | <b>AIR PIPES</b><br>Examination and or testing of air pipes including efficiency of their closing appliances, weld connection between Air pipes and deck plating.<br>Confirmation that vents from bunker tanks and ballast tanks (with cathodic protection) are equipped with flame screens and mesh provided are in satisfactory condition.  |  |
| 18 | <b>FREEING PORTS</b><br>Examination of the condition and arrangement including shutters and crew protection bars.   |  |
| 19 | <b>TIGHTNESS TESTING OF CLOSING APPLIANCES</b><br>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.   |  |
| 20 | <b>THICKNESS MEASUREMENT</b><br>Where thickness measurements on structure/plating of the vessel is carried out, confirmation that firm engaged in thickness measurement on vessel is approved.  |  |
| 21 | <b>REMOTE INSPECTION TECHNIQUES (RIT)</b><br>Where remote inspection techniques are used in survey, confirmation that firm engaged for RIT is approved.   |  |
| 22 | <b>NON-DESTRUCTIVE TESTING (NDT)</b><br>Where NDT carried out onboard, confirmation that the firm providing NDT services is approved.   |  |
| 23 | <b>NEW INSTALLATION OF MATERIALS CONTAINING ASBESTOS</b><br>Confirming that new equipment containing asbestos was not fitted on board since last survey.  |  |
| 24 | <b>STRUCTURAL FIRE PROTECTION</b><br>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.   |  |
| 25 | <b>GANGWAY, LIFELINES AND MEANS OF EMARKATION/DISEMARKATION</b><br>a. Satisfactory examination of items pertaining to lifelines, accommodation ladder, gangways, Davits, Winches. Verification of inspection and maintenance records.<br>b. Confirmation that embarkation ladder and accommodation ladder including safety net are in satisfactory condition and marked with safe working load.   |  |
| 26 | <b>INTERNAL SPACES</b><br>Verification of the permanent means of access where appropriate of the internal spaces as far as practicable.   |  |
| 27 | <b>UPGRADATION/REPAIR TO COATING</b><br>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.<br>(Note: Ballast tank for which coating condition was upgraded to "GOOD" this time during survey are to be listed in the "Remark" section.) |  |
| 28 | <b>WATERTIGHT CABLE TRANSIT SEAL SYSTEMS</b><br>(Note: Applicable for all vessels contracted for construction on or after 1 <sup>st</sup> July 2021)  |  |
|    | a. Review of the cable transit seal systems register to confirm that it being maintained.   |  |
|    | b. 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.<br>(Note: If deemed necessary examination of such transits to be undertaken)  |  |
|    | c. Examination of cable transits as far as practicable for their satisfactory condition.  |  |
|    | d. Confirmation that the results of survey are recorded in the cable transit seal system register.  |  |

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|          | e. 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.  |  |
| <b>C</b> | <b>LIVESTOCK PENS, PASSAGEWAYS AND ARRANGMENTS</b>   |  |
| <b>1</b> | <b>ARRANGEMENTS OF LIVESTOCK SPACE</b>   |  |
| 1.1      | Confirming that arrangements of livestock space for carriage of livestock including fittings, fitments, protection for livestock and means of access/escape for livestock are in satisfactory condition and no unauthorized alteration has been done. (Note: This also includes accessways, ramps between decks and vessel/shore livestock accesses)<br>Confirming that arrangements are maintained in such a way that it protects the livestock from injury, avoidable suffering and exposure to weather, sea or hot parts.   |  |
| 1.2      | Examining the insulation of livestock spaces for satisfactory condition where applicable. (Note: Applicable where casing, tank top or bulkhead of engine room/boiler room or heated fuel tank forms a boundary with livestock spaces)  |  |
| <b>2</b> | <b>ARRANGEMENTS IN PEN AREAS</b>   |  |
| 2.1      | Confirming that pens, stalls for cattle and of adjacent passageways arrangements are maintained and in satisfactory condition.<br>Confirming that condition of pen floor or stall floor provides non slippery foothold surface for cattle.   |  |
| 2.2      | Confirming that railings in the pen areas are in satisfactory condition.   |  |
| 2.3      | Examining the means of access for persons to pens, stalls and confirming that the means of egress are clearly marked.  |  |
| <b>3</b> | <b>RAMPS AND BATTENS</b>   |  |
| 3.1      | Examination of ramps including its stowage and securing arrangement for satisfactory condition and confirming that ramps are clearly marked with loading capacity.   |  |
| 3.2      | Confirming the satisfactory condition of protective fencing and railings used between livestock ramp and the access for person to livestock spaces where applicable.   |  |
| 3.3      | Examining the battens in the cargo spaces of livestock carriers for satisfactory condition.  |  |
| <b>D</b> | <b>FODDER AND DRINKING WATER SUPPLY SYSTEM</b>   |  |
| <b>1</b> | <b>ARRANGEMENT AND TESTING OF SYSTEM</b><br>Confirming that arrangements for fodder and drinking water supply, fresh water supply system of livestock spaces are in good condition.  |  |
| 2        | Confirming that the equipment, including pumps, used for drinking water to livestock are maintained in proper working order and water stowage tanks are maintained so as to avoid any water contamination.   |  |
| 3        | Performance testing of fodder system, drinking water supply system.  |  |
| <b>1</b> | <b>PROTECTION OF FODDER AND WATER ARRANGEMENT</b><br>Confirming that the screening of fodder and watering arrangements for pens and stalls situated on unenclosed decks is maintained for protection from sea spray and weather.   |  |
| <b>E</b> | <b>WATER WASHING SYSTEM</b>  |  |
| 1        | Confirming that water washing system and connections to wash the livestock spaces are in satisfactory condition.   |  |
| <b>F</b> | <b>SEWAGE DRAINAGE AND DISCHARGE SYSTEM</b>  |  |
| 1        | Examining the sewage drainage and discharge arrangement for livestock spaces including drainage gutters, drainage pipelines, pumps and ejectors are in satisfactory condition.   |  |
| <b>G</b> | <b>MACHINERY SPACES</b>  |  |
| <b>1</b> | <b>MACHINERY AND BOILER SPACES</b><br>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.  |  |
| <b>2</b> | <b>FIRE/EXPLOSION HAZARDS</b><br>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<br>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.<br>iii) Confirmation that floor plates & gratings are secured and found to be in order. |  |

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|    | 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.   |  |
|    | 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.  |  |
|    | 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.   |  |
|    | e. Confirmation that the supports and retaining devices of low-pressure fuel system provides adequate restraint and are in satisfactory condition.   |  |
| 3  | <b>STEERING GEAR</b><br>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. |  |
|    | b. Confirmation that steering gear compartment is in satisfactory condition and provided with handrail arrangements, grating or non-slip surface.  |  |
| 4  | <b>MEANS OF COMMUNICATION</b><br>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.  |  |
| 5  | <b>BOILERS AND PRESSURE VESSELS</b><br>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 its 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.  |  |
| 6  | <b>REMOTE CONTROLS</b><br>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.   |  |
| 7  | <b>BILGE PUMPING ARRANGEMENT</b><br>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.  |  |
| 8  | <b>NORMAL OPERATION OF PROPULSION MACHINERY</b><br>Confirming that the normal operation of the propulsion machinery can be sustained or restored even though one of the essential auxiliaries becomes inoperative.   |  |
| 9  | <b>FIRST START ARRANGEMENT</b><br>Operational confirmation of the means provided to bring the machinery into operation from the dead ship condition without external aid.  |  |
| 10 | <b>SEA WATER PIPE EXPANSION JOINTS</b><br>Examining visually the condition of non-metallic expansion joints where fitted in piping systems which penetrate the ship's side, with both the penetration and the expansion joint located below the deepest load waterline, and checking the service record  |  |
| 11 | <b>AUTOMATION</b><br>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.   |  |

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| 12  | <b>SCHEDULE OF BATTERIES</b><br>Schedule of batteries for essential and emergency services available on board and maintenance being done as per this schedule.   |  |
| 13  | <b>MACHINERY SPACE VENTILLATION</b><br>Confirmation that machinery space ventilation is in good working condition.   |  |
| 14  | <b>VENTILLATION OF SPACE FOR SECONDARY SOURCE OF POWER</b><br>Confirmation that ventilation is in good working condition. Ventilation louvers and its closing appliance for the space examined/tested and found satisfactory.  |  |
| 15  | <b>EMERGENCY GENERATOR ROOM VENTILATORS ARRANGEMENT</b><br>Verification that following requirement of emergency generator room ventilation louvers and its closing appliance examined/tested and found satisfactory.<br><ul style="list-style-type: none"> <li>a. Manual or power operation of louvers and its closing appliance.</li> <li>b. Operating instruction, where hand –operated system is in use</li> <li>c. Automatic opening of ventilation louvers whenever emergency generator starting/in operation for power operated system where provided including fail to open operation.</li> <li>d. Manual closing operation from outside the space, where open/closed indication clearly marked.</li> </ul> (Note: Applicable for vessel keel laid on or after 01 January 2017)   |  |
| 16  | <b>MACHINERY VERIFICATION RUNS</b><br>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)<br>For Controllable Pitch Propeller, confirmation that pitch position indicators are working satisfactorily from remote and emergency position, onboard record of hydraulic oil analysis is available and servo oil low pressure and high temperature alarms are operational and oil level in the tank is maintained.  |  |
| 17  | <b>SEA TRIAL</b><br>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.<br>(Note: 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) |  |
| <b>H VENTILATION ARRANGEMENT IN LIVESTOCK SPACE</b> |  |  |
| 1   | Confirming that ventilation arrangement in livestock space is in good working condition.<br>Confirming that the operation of fans including fan starters, failure indicators and alarms at different positions is in normal condition.<br>(Note: Where only one fan is provided, it is to be confirmed that adequate spare parts are available onboard)  |  |
| <b>I ELECTRICAL INSTALLATION</b>                    |  |  |
| 1   | <b>ELECTRICAL SYSTEM</b><br>a. General examination visually and in operation, as feasible, of the main electrical machinery, the secondary source of power, the emergency sources of electrical power, the switch gear, other electrical equipment for satisfactory condition. The precautions provided against shock, fire and other hazards of electrical origin for proper maintenance.   |  |
|   | b. Confirmation that light covers including emergency lights are in satisfactory condition.  |  |
|   | c. Confirmation that 440 V/220 V panels are not showing low insulation resistance.   |  |
|   | d. Confirmation that insulation mat is provided around the electrical switch board, panels.  |  |
|   | e. Confirmation that the generator breakers, interlocks and generator automatic starting as applicable are in satisfactory operational condition.  |  |
|   | f. verification of insulation monitoring devices for all distribution systems. Operation of power management system, where fitted.   |  |
| 2   | <b>EMERGENCY SOURCE OF POWER</b><br>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.   |  |

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|     | (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)   |  |
| 3   | <b>NAVIGATIONAL LIGHT SYSTEM</b><br>Verification of Navigational light systems for satisfactory operation of lights, audio-visual indications and power supply arrangement for their satisfactory condition.   |  |
| 4   | <b>SECONDARY SOURCE OF POWER</b><br>The operation of the secondary source(s) of electrical power, including their starting arrangement, the systems supplied, and when appropriate, their automatic operation as far as practicable. Verifying that instructions for changeover between main and secondary source of power and vice-versa are available and confirming satisfactory functioning of same.   |  |
| 5   | <b>MONITORING OF HARMONIC DISTORTION</b><br>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.<br>(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) |  |
| 6   | <b>PROTECTION ARRANGEMENT FOR HARMONIC FILTER</b><br>Confirmation that protection for harmonic filter, including alarm tested and found satisfactory.<br>(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)  |  |
| 7   | <b>MOTOR CONTROLS</b><br>Confirmation that motor controls including remote control are in satisfactory operational condition, where provided.  |  |
| 8   | <b>LIGHTING IN LIVESTOCK SPACES</b><br>Examining the lighting system and lamp casing on light fittings for the livestock space and confirming that adequate lighting is available in livestock spaces.   |  |
| J   | <b>ADDITIONAL REQUIREMENTS FOR BATTERY PROP NOTATION</b>   |  |
| 1   | <b>DOCUMENTATION AND RECORDS</b>   |  |
| 1.1 | Confirmation that batteries are type tested as per relevant IEC standard.<br>Type of battery used: Nickel Cadmium Battery/Lithium-Ion Battery/ Lead Acid Battery/Nickel Metal Hydride Battery*.  |  |
| 1.2 | 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.                  |  |
| 1.3 | Confirmation that battery manufacturer recommended practices for safety have been documented and implemented satisfactorily.   |  |
| 1.4 | Confirmation that details of schedule as well as records & log towards storage, maintenance, replacement of batteries is available and maintained.   |  |
| 1.5 | Confirmation from the records that state of health and state of charge of battery system is maintained satisfactorily.   |  |
| 1.6 | Confirmation that risk assessment towards possible potential hazards associated with type of battery chemistry, system design and its incorporation is available.  |  |
| 1.7 | Confirmation from the records that the software updates including verification or testing after updates are being carried out.   |  |
| 2   | <b>SYSTEM ARRANGEMENT AND TESTING</b>  |  |
| 2.1 | Examination of arrangement for battery installation, battery spaces and equipment as far as practicable for satisfactory condition.  |  |
| 2.2 | Confirmation of satisfactory operational testing of battery room//spaces ventilation systems and cooling systems as applicable.  |  |
| 2.3 | Examination of firefighting systems in battery spaces.   |  |
| 2.4 | Testing of all smoke, gas and fire detectors for their satisfactory condition.   |  |
| 2.5 | Verification of all emergency shutdown arrangements to confirm their satisfactory operation.   |  |
| 2.6 | Verification of operation of UPS for their satisfactory performance.   |  |
| 2.7 | Verification and testing of safety systems arrangements towards overcharging, undercharging, high temperature, gas leakage etc. for satisfactory condition.  |  |
| 2.8 | Testing of audio-visual alarms and controls for system power supply failure, cell temperature high, battery space high temperature, cell voltage etc.  |  |

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| <b>K</b> | <b>ADDITIONAL REQUIREMENTS FOR PERFORMANCE MANAGEMENT SYSTEM</b>   |  |
| 1        | Confirmation that arrangement of performance management system including associated cabling, sensors and interconnections maintained as per approved plan.   |  |
| 2        | Verification that on loss of hardware, functions of the systems does not get affected.<br>(Applicable where the system is provided with dedicated operator stations and servers)   |  |
| 3        | Confirmation from the records that hardware & software inventory maintained and changes if any, have been verified and found in order.   |  |
| <b>L</b> | <b>ADDITIONAL REQUIREMENTS FOR SHIPS USING BIO-FUEL BLEND AS FUEL</b>  |  |
| 1        | Confirmation of following towards use of bio-fuel blend onboard as fuel oil:   |  |
|          | a. Availability of documented permission from the Flag Administration for use of bio-fuel blend.   |  |
|          | b. Vessel is in possession of required documents issued by the bunker suppliers to show that the bio-fuel blend meets the relevant specification requirements including Test analysis report as per ISO 8217:2017, BDN, Safety Data Sheet, Proof of Sustainability (PoS) for Biofuels).  |  |
|          | c. The percentage of bio-fuel in the fuel oil blend supplied to the ship is clearly reflected in the bunker delivery note and that the blend proportion conforms to the limit permitted by Flag Administration.  |  |
|          | d. Measures are in place in respect of shelf life of the bio-fuel blend used onboard as declared by the bunker supplier.   |  |
|          | e. Ship specific risk analysis for use of bio-fuel blend is available. Any redundancy requirements onboard as per risk analysis is taken care for the operational safety and emergency contingency measures.<br>(Note: Bio-fuel blend is not to be used for emergency equipment e.g. emergency generator, emergency fire pump, etc.)   |  |
|          | f. Confirmation by manufacturers of engines and equipment (e.g. purifiers) on suitability for use of bio-fuel blend onboard.   |  |
|          | g. Shipboard operational procedures for use/ handling of bio-fuel blend including procedures for procurement, availability test result, storage of biofuel blend, frequency of cleaning of fuel filters, inspection of storage tanks, monitoring of transfer lines and associated piping & fittings and any other requirements specified by the manufacturers of engines/equipment is available.   |  |
|          | h. Crew members onboard are familiarized with the shipboard procedures regarding the handling and use of bio-fuel blend including contingency measures and records are maintained.   |  |
|          | i. Maintenance and inspection of fuel oil system including storage tanks, filters, fuel transfer hoses and connectors is undertaken as specified in the shipboard operational procedure and records maintained.  |  |
|          | j. Logging/ monitoring of all relevant engine parameters, maintenance and checks as specified by the manufacturer is undertaken and records maintained.  |  |
| <b>M</b> | <b>ADDITIONAL REQUIREMENTS FOR IMPRESSED CURRENT CATHODIC PROTECTION (ICCP) SYSTEMS</b>  |  |
| 1        | <b>DOCUMENTATION AND RECORDS</b><br>a. 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.<br>b. 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.<br>c. Confirmation from records that ICCP system is maintained and adjusted by the supplier on regular basis as per manufacturer's instructions. |  |
| 2        | <b>SYSTEM OPERATION</b><br>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.  |  |
| 3        | <b>PROTECTION ARRANGEMENT FOR ANODE CABLES</b><br>Confirmation that protection arrangement for ICCP anode cables is in satisfactory condition.   |  |
| <b>N</b> | <b>ALTERNATIVE DESIGN AND ARRANGEMENT</b>  |  |
| 1        | 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.  |  |
| <b>O</b> | <b>FIREFIGHTING ARRANGEMENTS</b>   |  |
| 1        | <b>MAIN AND EMERGENCY FIRE PUMP</b><br>Examining the fire pumps, fire main, hydrants, hoses and nozzles and the international shore connection and checking that each fire pump, including the emergency fire pump, can be operated separately so that two jets of water are produced simultaneously from different hydrants at any  |  |



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|    | part of the ship while the required pressure is maintained in the fire main.  |  |
| 2  | <b>READINESS OF FIRE HYDRANTS, HOSES</b><br>Each hose is complete with couplings, nozzle (dual-purpose nozzles where applicable) and tools kept ready for use.  |  |
| 3  | <b>PORTABLE EXTINGUISHERS AND FOAM APPLICATORS</b><br>Checking the provision and randomly examining the condition of the portable and non-portable fire extinguishers.  |  |
| 4  | <b>SPARE CHARGES</b><br>Availability of spare charge/s for each portable extinguisher or additional portable extinguishers of the same type.  |  |
| 5  | <b>FIRE AND/OR SMOKE DETECTION SYSTEM</b><br>a. Examining, as far as possible, and testing, as feasible, any fire detection and alarm system and any 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.   |  |
| 6  | <b>REMOTE STOPPING OF VALVES</b><br>a. Examining 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.   |  |
| 7  | <b>FIREMAN'S OUTFITS &amp; EEBDS</b><br>Confirming that the fire-fighters' outfits including their self-contained compressed air breathing apparatus and emergency escape breathing devices (EEBDs) are complete and in good condition, that the cylinders, including the spare cylinders, of any required self-contained breathing apparatus are suitably charged, and that onboard 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.  |  |
| 8  | <b>FIXED FIRE FIGHTING SYSTEM (MACHINERY,CARGO, PAINT LOCKER, DEEP FAT COOKING ETC.)</b><br>a. Examining the fixed fire-fighting system and confirming that the installation tests have been satisfactorily completed and that its means of operation is clearly marked<br>b. 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.<br>c. Checking that fixed carbon dioxide fire-extinguishing systems for the protection of machinery spaces 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.<br>d. Examining the fire-extinguishing system for spaces containing paint and/or flammable liquids and deep-fat cooking equipment in accommodation and service spaces. |  |
| 9  | <b>STRUCTURAL FIRE PROTECTION AND FIRE DAMPERS</b><br>Confirming, as far as practicable, that no changes have been made in the structural fire protection, Testing the fire dampers of ventilation ducts and 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.   |  |
| 10 | <b>REMOTE STOPPING OF FANS, OIL PUMPS, ETC</b><br>Verify that the remote controls for stopping fans and machinery and shutting off fuel supplies in machinery spaces are in working order.  |  |
| 11 | <b>ADDITIONAL FIREFIGHTING ARRANGEMENTS IN LIVESTOCK SPACES</b><br>Examination of fixed water firefighting system for satisfactory condition.<br>Confirming, where applicable, that appropriate warnings are put in placed and no naked lights are used.<br>(Note: Applicable where a hay or straw is carried or used in livestock space)   |  |
| 12 | <b>FIREFIGHTING ARRANGEMENT FOR SPACE HOUSING SECONDARY SOURCE OF POWER</b><br>Examination firefighting arrangement for space housing secondary source of power is in satisfactory condition.   |  |

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| 13   | <b>CLOSING ARRANGEMENTS FOR SKYLIGHTS, FLAPS ETC</b><br>Examining the fire-extinguishing and special arrangements in the machinery spaces and confirming, as far as practicable and as appropriate, the operation of the remote means of control provided for the opening and closing of the skylights, the release of smoke, the closure of the funnel and ventilation openings, the closure of power-operated and other doors, the stopping of ventilation and boiler forced and induced draught fans and the stopping of oil fuel and other pumps that discharge flammable liquids. |  |
| 14   | <b>MEANS OF ESCAPE</b><br>a. Confirmation that the means of escape from accommodation, machinery and other spaces are satisfactory.<br>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.   |  |
| 15   | <b>GASEOUS FUEL FOR DOMESTIC PURPOSE</b><br>Examining the arrangements for gaseous fuel for domestic purposes.   |  |
| P    | <b>GENERAL</b>   |  |
| 1    | <b>HOUSE KEEPING</b><br>a. Verification that general housekeeping /cleanliness in engine room, on deck, accommodation, hospital, galley, wash basins and toilets are satisfactory.<br>b. Confirmation that no loose drums and no heavy items without securing/lashing on deck.<br>c. Confirmation that Spare anchor where provided, its lashing bracket in good condition.   |  |
| 2    | <b>FLAG SPECIFIC REQUIREMENTS</b><br>Confirmation that flag specific requirements/instructions, if any are complied with.<br>Please Provide details in Remark section.   |  |
| 3    | <b>H.O. INSTRUCTIONS</b><br>Confirmation that H.O. Instructions pertaining to this survey if any communicated separately, have been compiled with. Please Provide details in Remark section.   |  |
| 4    | <b>SURVEY UNDERTAKEN ON BEHALF OF OTHER SOCIETY</b><br>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.  |  |
| 5    | <b>OVERDUE SURVEY</b><br>Confirmation that H.O. authorization is available for dealing with overdue surveys.<br>(Note: For dealing with overdue statutory surveys held together with Class surveys, Flag Administration authorization is required, details are to be provided in "Remarks")  |  |
| 6    | <b>REINSTATEMENT OF CLASS</b><br>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.   |  |
| 7    | <b>SURVEY HELD BY OTHER SOCIETY ON BEHALF OF IRS</b>   |  |
| 7.1  | Confirmation that on board records verified for any survey held by other society on behalf of IRS. (details to be included in "Remarks")   |  |
| 7.2  | 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.   |  |
| 8    | <b>REVIEW OF PORT STATE AND FLAG STATE INSPECTION REPORTS</b>  |  |
| 8.1  | 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".   |  |
| 8.2  | 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.  |  |
| 9    | <b>SURVEY ARRANGEMENTS</b><br>Verification of preparation for survey, means of access, safety arrangements for the safe and efficient conduct of the survey.   |  |
| 10   | <b>CALLIBRATION STATUS OF MEASURING AND TESTING EQUIPMENT</b><br>Verification of calibration status of measuring and testing equipment used for survey.  |  |
| 11   | <b>REMOTE INSPECTION TECHNIQUES</b>  |  |
| 11.1 | 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.   |  |

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| 11.2 | 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.   |  |
| 11.3 | 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. |  |
| 11.4 | 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.   |  |
| 11.5 | 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.  |  |
| 11.6 | If the RIT reveals damage or deterioration that requires attention, confirmation that traditional survey undertaken.<br>without the use of a RIT. (Details to be provided in "Remarks")   |  |
| 12   | <b>CHANGES TO EQUIPMENT/SHIP PARTICULARS/LIST OF SURVEYABLE ITEMS</b><br>Changes to equipment/ship particulars/list of surveyable items reported using corresponding FE forms.  |  |
| 13   | <b>ADDITION/SUSPENSION/DELETION OF CLASS NOTATION</b><br>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.<br>(Note: Details regarding addition/suspension/deletion of class notation is to be included under "Remarks")  |  |
| 14   | <b>PLAN APPROVAL COMMENTS</b><br>Relevant plan approval comments if any closed out in E-Plan arena.   |  |
| Q    | <b>ADDITIONAL REQUIREMENTS TOWARDS CLASS INTERMEDIATE SURVEY</b>  |  |
| 1    | <b>PIPING SYSTEM</b><br>(This section is applicable where the intermediate survey is equivalent to the previous special survey)<br>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, pipe tunnels, cofferdams and void spaces as applicable including plating and framing, bilge and drain wells soundings, venting, pumping and drainage arrangements.   |  |
| 2    | <b>EXAMINATION OF TANKS, SPACES &amp; THICKNESS MEASUREMENT</b>   |  |
| 2.1  | Confirmation that examination of tanks, spaces including testing and thickness measurements are carried out satisfactorily as per the rule requirements and reported separately.  |  |
| 2.2  | Examination of ballast tanks included examination of the condition of the corrosion prevention system in these spaces and found to be satisfactory.   |  |
| 2.3  | 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".   |  |
| 2.4  | 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.  |  |
| 2.5  | 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)   |  |
| R    | <b>ADDITIONAL REQUIREMENTS TOWARDS SPECIAL SURVEYS</b>  |  |
| 1    | <b>MOORING ROPES AND TOW LINES</b><br>Confirmation that sufficient mooring ropes and tow lines as required by rules are provided onboard.   |  |
| 2    | <b>AIR PIPES</b><br>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.   |  |

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| 3   | <b>CHAIN LOCKER</b><br>Examination of chain locker, hold fast, hawse pipes and chain stoppers and pumping arrangement of the chain locker.  |  |
| 4   | <b>MEANS OF EMBARKATION AND DISEMBARKATION</b><br>Confirmation that accommodation ladders, gangways and its winches incl. brake system operationally tested with specified maximum operation load in accordance with Rules and found to be satisfactory.  |  |
| 5   | <b>PUMPING SYSTEM</b><br>Examination of all freshwater pumps, sewage pumps and system components for livestock in open condition to confirm these are in satisfactory condition.  |  |
| 6   | <b>PIPING SYSTEM</b><br>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, pipe tunnels, cofferdams and void spaces as applicable including plating and framing, bilge and drain wells soundings, venting, pumping and drainage arrangements.  |  |
| 7   | <b>WATERTIGHT CABLE TRANSIT SEAL SYSTEMS</b><br>(Note: Applicable for all vessels contracted for construction on or after 1 <sup>st</sup> July 2021)  |  |
|     | a. 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.  |  |
|     | b. 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.<br>Confirmation that the results are recorded in the Register against each of those cable transits.<br>(Note: Entries that were reviewed and examined during previous annual survey may be excluded) |  |
|     | c. Confirmation that the Special Survey is recorded in the Register.<br>(Note: A single record entry will be sufficient to record the survey of all transits.)  |  |
|     | d. 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.   |  |
| 8   | <b>EXAMINATION OF TANKS, SPACES AND THICKNESS MEASUREMENT</b>   |  |
| 8.1 | Confirmation that internal examination of tanks, spaces including testing and thickness measurements are carried out satisfactorily as per the rule requirements and reported separately.   |  |
| 8.2 | Examination of ballast tanks included examination of the condition of the corrosion prevention system in these spaces and found to be satisfactory.   |  |
| 8.3 | 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".   |  |
| 8.4 | 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.  |  |
| 8.5 | 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)   |  |
| 9   | <b>FOODER AND FRESH WATER SUPPLY SYSTEM</b><br>Examining internally the fodder tanks and the freshwater tanks of livestock spaces for satisfactory condition. (Please provide details of tanks in the remark section)   |  |
| 10  | <b>VENTILATION ARRANGEMENT IN LIVESTOCK SPACE</b><br>General inspection of ventilation fan and motor in the livestock spaces together with its control and operational mechanism for satisfactory condition including operational testing if required.  |  |
| 11  | Testing of interlocking devices of fan starters in the livestock space for satisfactory operation.  |  |
| S   | <b>ADDITIONAL REQUIREMENTS FOR CLASS ENTRY (EXISTING SHIP)</b>  |  |
| 1   | <b>GENERAL</b>  |  |
| 1.1 | Authorization for undertaking the class entry survey including scope of survey, class notation to be assigned is available.   |  |
| 1.2 | For transfer of class and dual classification cases confirmation that current classification survey status of the losing society/first society is available.  |  |
| 1.3 | 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".   |  |

| 1.4   | Separate reporting done using relevant checklists for class notations assigned to the vessel.  |                 |         |                |  |                        |  |          |  |                                   |  |                |  |   |  |  |
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| 2   | <b>GENERAL EXAMINATION OF ESSENTIAL MACHINERIES</b>  |                 |         |                |  |                        |  |          |  |                                   |  |                |  |   |  |  |
| 2.1   | 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.  |                 |         |                |  |                        |  |          |  |                                   |  |                |  |   |  |  |
| 2.2   | External examination of all pressure vessels including their associated piping and protective devices. Internal examination and hydraulic testing carried out satisfactorily as considered necessary.<br>(Note: Provide details under remark section where tests carried out.)   |                 |         |                |  |                        |  |          |  |                                   |  |                |  |   |  |  |
| 2.3   | 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.  |                 |         |                |  |                        |  |          |  |                                   |  |                |  |   |  |  |
| 2.4   | Examination of navigating lights and indicators for their working condition including verification of alternative sources of power.  |                 |         |                |  |                        |  |          |  |                                   |  |                |  |   |  |  |
| 2.5   | Confirmation that following machinery and items have been dismantled and inspected for satisfactory condition.<br>(Note: Details of items inspected undertaken are to be provided in below table.)   |                 |         |                |  |                        |  |          |  |                                   |  |                |  |   |  |  |
|   | <table border="1"> <thead> <tr> <th>Machinery/Items</th> <th>Details</th> </tr> </thead> <tbody> <tr> <td>a. Main Engine</td> <td></td> </tr> <tr> <td>b. Auxiliary Engine(s)</td> <td></td> </tr> <tr> <td>c. Pumps</td> <td></td> </tr> <tr> <td>d. Pressure Vessels (Air bottles)</td> <td></td> </tr> <tr> <td>e. Compressors</td> <td></td> </tr> <tr> <td>f. Any other machinery/item (please specify the same under "Details")</td> <td></td> </tr> </tbody> </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") |  |  |
| 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") |  |                 |         |                |  |                        |  |          |  |                                   |  |                |  |   |  |  |
| 2.6   | 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   |                 |         |                |  |                        |  |          |  |                                   |  |                |  |   |  |  |
| 2.7   | Examination of recirculating and ice clearing arrangements, if any for satisfactory condition.   |                 |         |                |  |                        |  |          |  |                                   |  |                |  |   |  |  |
| 2.8   | 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.   |                 |         |                |  |                        |  |          |  |                                   |  |                |  |   |  |  |
| 2.9   | Examination and testing of steering gear under working condition including testing of alternate means of steering for satisfactory working.  |                 |         |                |  |                        |  |          |  |                                   |  |                |  |   |  |  |
| 2.10  | Verification of initial start arrangements for satisfactory condition.   |                 |         |                |  |                        |  |          |  |                                   |  |                |  |   |  |  |
| 2.11  | Confirmation that a short sea trial held satisfactorily.<br>(Note: 1. Mandatory where the vessel was laid up for a long period.<br>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)   |                 |         |                |  |                        |  |          |  |                                   |  |                |  |   |  |  |
| 2.12  | Any class notation included in H. O. authorization but not assigned.<br>(Note: Include explanation included in "Remarks".)   |                 |         |                |  |                        |  |          |  |                                   |  |                |  |   |  |  |
| 3   | <b>AVAILABILITY OF PLANS/DOCUMENTS</b>   |                 |         |                |  |                        |  |          |  |                                   |  |                |  |   |  |  |
| 3.1   | All relevant plans/ documents are available. If not appropriate actions initiated in consultation with Head Office.<br>(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.<br>(ii) Plans/documents as listed in survey procedure B-03 Annexure 2 are to be submitted to head office)   |                 |         |                |  |                        |  |          |  |                                   |  |                |  |   |  |  |
| 3.2   | Shipboard arrangement verified against plans/documents and confirmation that no alteration/modification is done to the vessel.   |                 |         |                |  |                        |  |          |  |                                   |  |                |  |   |  |  |
| 3.3   | 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)).   |                 |         |                |  |                        |  |          |  |                                   |  |                |  |   |  |  |
| 4   | <b>THICKNESS MEASUREMENTS</b>  |                 |         |                |  |                        |  |          |  |                                   |  |                |  |   |  |  |
| 4.1   | 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.  |                 |         |                |  |                        |  |          |  |                                   |  |                |  |   |  |  |

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|     | (Note: Copy of TM to be uploaded)   |  |
| 4.2 | 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.<br>(Note: Copy of TM to be uploaded) |  |
| 5   | <b>EXAMINATION OF BALLAST TANKS AND CARGO SPACES</b>  |  |
| 5.1 | Examination of ballast tanks and cargo spaces undertaken and are reported separately.   |  |
| 6   | <b>TANKS TESTING</b><br>Testing of ballast tanks undertaken as reported separately.   |  |
| 7   | <b>ANCHORS AND ANCHOR CHAIN CABLES</b><br>Confirmation that anchors examined and chain cables ranged and gauged and found to be satisfactory.   |  |
| 8   | <b>OVERDUE SURVEY AND CONDITIONS OF CLASS</b>   |  |
| 8.1 | 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.<br>(Note: Applicable for vessels less than 15years of age)  |  |
| 8.2 | 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.<br>(Note: Applicable for vessels of 15years of age and over)   |  |
| 9   | <b>OUTSTANDING CONDITION OF CLASS</b><br>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.<br>(Note: Details of outstanding conditions of class dealt with at the time of class entry are to be reported separately)   |  |
| 10  | <b>MATERIAL TESTING</b><br>Confirmation that material used for construction of the vessel meet Rule requirements and confirmed through material testing as required by survey procedure B-03.<br>(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.<br>(ii) Applicable to class entry of non-compliant vessel subject to IACS PR 1D)   |  |
| 11  | <b>NON-DESTRUCTIVE TESTING</b><br>Confirmation that NDT of weld joints undertaken as required by survey procedure B-03.<br>(Note: Applicable to class entry of non-compliant vessel subject to IACS PR 1D)  |  |
| 12  | <b>HYDRAULIC TEST</b><br>Confirmation that hydraulic testing of pressure vessel and piping system carried out in accordance with applicable class rules as per survey procedure B-03.<br>(Note: Applicable to class entry of non-compliant vessel subject to IACS PR 1D)  |  |
| 13  | <b>COMPLIANCE TO RETROACTIVE RULE REQUIREMENTS</b><br>Confirmation that vessel is in compliance with retroactive Rule requirements which are applicable to the vessel at the time of class entry.<br>(Note: Applicable to class entry of non-compliant vessel subject to IACS PR 1D)  |  |
| 14  | <b>INSTRUCTION FROM FLAG ADMINISTRATION</b><br>Confirmation that specific instruction from flag if any is taken into account.   |  |
| T   | <b>CHANGE OF FLAG/CHANGE OF CERTIFICATION SURVEY (EXISTING SHIP)</b>  |  |
| 1   | Valid Permanent/ Provisional Registry certificate is available as issued by gaining flag/flag for which certification is being done.  |  |
| 2   | 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.  |  |
| 3   | Statutory certificates, supplements & documents issued on behalf of previous flag/RO are available.   |  |
| 4   | Exemptions, where applicable, have been issued by the gaining flag / flag for which certification is being done.  |  |
| 5   | Information on additional flag requirements, if any are taken into account.   |  |
| 6   | All relevant drawings, documents etc. are available. If not, appropriate actions initiated.   |  |
| 7   | Plans and documents requiring approval on behalf of gaining flag have been approved.  |  |

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| 8               | Confirmation that mandatory certificate, documents required to be carried on board are available.<br>(Note: Refer Instruction to Surveyors (Statutory) D-05 and Flag instruction)  |  |
| 9               | Confirmation that statutory documents/plans onboard are in the language as required by applicable conventions, codes and confirming flag specific requirements.  |  |
| 10              | Confirmation that marking and carving as required by flag has been done on the vessel.   |  |
| 11              | 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.   |  |
| 12              | 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.   |  |
| U               | <b>STATUS OF SURVEY AND CERTIFICATE</b>  |  |
| 1               | Confirmation that the Annual Survey/Intermediate Survey/Special Survey* completed satisfactorily.  |  |
| 2               | 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.<br>(Note: (i) Authorisation reference received from head office/flag Administration are to be provided under "Remarks"<br>(ii) Further survey scope covered for postponement survey are to be confirmed by indicating under "Remarks") |  |
| 3               | On satisfactory completion of the survey/examination* Full-Term Certificate issued/endorsed/extended/Interim certificate issued/Short term certificate issued*<br>(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)  |  |
| 4               | 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.<br>(Note: Explanation for carrying out surveys partly may be included under "Remarks")   |  |
| 5               | 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.   |  |
| 6               | 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.   |  |
| 7               | 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.  |  |
| <b>REMARKS:</b> |  |  |