

CLASS ANNUAL SURVEY/ INTERMEDIATE SURVEY/ SPECIAL SURVEY/ GENERAL EXAMINATION * CHECKLIST FOR BULK CARRIER

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
APPROVED TRIM & STABILITY INFORMATION Confirmation of availability of trim and stability booklet approved by administration.
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)
LOADING MANUAL Verified that vessel has an approved Loading Manual.
LOADING INSTRUMENT Availability of an approved loading instrument together with its operational manual & verification of test cases.
STEERING GEAR ENTRIES REQUIRED BY SOLAS/FLAG Verification of entries made in the ship's log for departure Steering checks & Emergency Steering drills.
DAMAGE STABILITY Availability of damage stability information. (Note: Applicable for Cargo vessel of 80 m & above length on or after 01/07/1998 and length > 100 m on or after 01/02/1992)
ESP DOCUMENT Availability of ESP documents on board.
STATUTORY CERTIFICATES Valid Statutory certificates available on board.
DAMAGE CONTROL PLANS & BOOKLET Verification that damage control plans and booklet are available (Note: Applicable for vessels of 500 GT & over and constructed on or after 01/02/1992)
MANOEUVRING BOOKLET Confirmation that the manoeuvring booklet is on board and the manoeuring information is displayed on the navigation bridge.
CARGO SECURING MANUAL Confirmation of availability of approved cargo securing manual.
THE SHIP STRUCTURE ACCESS MANUAL Confirming that the Ship Structure Access Manual is on board (bulk carriers of 20,000GT and over, constructed on or after 1st Jan. 2006)
CONSTRUCTION DRAWINGS MAINTAINED ON BOARD Confirmation that structural alterations performed, if any, have been approved by the classification society and reported on the as-built drawings kept on board. (Note: Applicable for ship constructed on or after 1 st Jan. 2007)
LOADING / UNLOADING BOOKLET a. Confirming, that the loading/unloading booklet required in SOLAS regulation VI/7 is on board. b. Confirming that; where restrictions are imposed with respect to the carriage of cargoes with a density of 1,780 kg/m ³ and above, 1. the restrictions imposed are identified and recorded in the booklet and; 2. a triangle is permanently marked at midship.
EMERGENCY TOWING PROCEDURES Confirmation that ship specific emergency towing procedures 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.

<p>COATING TECHNICAL FILE</p> <p>Confirmation that Coating Technical File is available on board and maintained.</p> <p>(Note: Applicable for ships of not less than 500 gross tonnage provided with dedicated seawater ballast tanks and double-side skin spaces arranged for ships of 150 m in length and upwards 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>
<p>OWNER'S INSPECTION AND MAINTENANCE OF CARGO HATCH COVERS</p> <p>Confirmation that vessel is provided with maintenance plan for cargo hatch covers and coamings and record maintained for the inspection, maintenance and replacement of components.</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, identified areas that need special attention.</p> <p>A – For the SCF stored on board ship, the Surveyor is to examine the information on board ship. In cases where any major event, including, but not limited to, substantial repair and conversion, or any modification to the ship structures, the surveyor is to also verify that the updated information is kept on board the ship. If the updating of the SCF onboard is not completed at the time of survey, the Surveyor is to record it and request for confirmation at the next periodical survey.</p> <p>B – For the SCF stored on shore archive, the Surveyor is to examine the list of information included on shore archive. In cases where any major event, including, but not limited to, substantial repair and conversion, or any modification to the ship structures, the Surveyor is to also verify that the updated information is stored on shore archive by examining the list of information included on shore archive or kept on board the ship. In addition, the Surveyor is to confirm that the service contract with the Archive Center is valid. If the updating of the SCF Supplement ashore is not completed at the time of survey, the Surveyor is to record it and request for confirmation at the next periodical survey.</p> <p>(Note: Applicable for bulk carrier of 150 m length & above as per SOLAS Chapter II-1, Part A-1, Regulation 3-10 (built to Goal Based Standards))</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 AND ARRANGEMENTS</p> <p>Confirmation that, where applicable, the approved documentation for the alternative design and arrangements is on board.</p>
<p>IGF</p>
<p>a. Examining the logbooks and operating records with regard to correct functioning of the gas detection systems, fuel supply/gas systems, etc.</p>
<p>b. Confirmation that the manufacturer/builder instructions and manuals covering the operations, safety and maintenance requirements and occupational health hazards relevant to fuel storage, fuel bunkering, and fuel supply and associated systems for the use of the fuel, are available on board.</p>
<p>c. Confirmed availability of IGF Code, or national regulations incorporating the provisions of IGF Code is on board.</p>
<p>d. Confirmed availability of maintenance procedures and information for all gas related installations and records for same are maintained.</p>
<p>e. Confirmed availability of suitable emergency procedures covering all aspects of fuel handling systems including procedures for the emergency shutdown of any equipment that has the potential to become hazardous under certain abnormal condition.</p>
<p>f. Confirmed that necessary information and procedures are in place for maintenance of electrical equipment installed in explosion hazardous spaces and a record of maintenance is available. The procedure provides that the inspection and maintenance of electrical installations in explosion hazardous spaces shall be performed in accordance with recognized</p>

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NA- Not Applicable.

standard.
g. Confirmed availability of operational procedures including fuel handling manual to ensure trained personnel can safely operate the fuel bunkering, storage and transfer systems.
h. Verified that inspection/survey plan for the liquefied gas fuel containment system approved by the Administration is on board. (Note: The inspection/survey plan identify aspects to be examined and/or validated during surveys throughout the liquefied gas fuel containment system's life and, in particular, any necessary in-service survey, maintenance and testing that was assumed when selecting liquefied gas fuel containment system design parameters. The inspection/survey plan may include specific critical locations where effective defect or crack cannot be assured.)
CLASS CERTIFICATE Confirmation that the survey/general examination* completed satisfactorily and Certificate endorsed/interim certificate issued/short term certificate issued*
WEATHER DECK
FIRE DOORS AND CONTROLS
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.
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. (Note: applicable where emergency fire pump is in steering gear compartment)
ANCHORING & MOORING EQUIPMENT Examining the anchoring equipment & mooring equipment. At renewal survey, during the examination, anchors are lowered and raised using the windlass.
SOUNDING PIPES Sounding pipes, including self closing devices on short sounding pipes.
HATCHWAYS Examination and testing of hatchways (Access hatch) on freeboard and superstructure decks including efficient condition of closing appliances, side bow and stern doors, flush deck scuttles, ash shoots and other openings.
WEATHER DECKS Examination of weather decks, ships side plating above water line.
DRIP TRAYS (IGF) Verified that portable and fixed drip trays are in satisfactory condition.
HULL MARKINGS Verification that hull markings such as freeboard markings, draft markings, vessel name, IMO number, port of registry are legible and in satisfactory condition.
VENTILATORS Examination and or testing of ventilators including efficiency of their closing appliances.
WINDOWS, SIDE SCUTTLES AND DEAD LIGHTS Examination and or testing of windows, side scuttles and dead lights.
SCUPPERS, SANITARY DISCHARGES, VALVES AND CONTROLS Examination scuppers and sanitary discharges and valves together with valves and their control gear.
SKYLIGHTS AND FIDDLEY OPENINGS Examination and or testing of skylights and fiddley openings including their closing appliances.
EXPOSED CASINGS, DECK HOUSES, COMPANION WAYS AND SUPERSTRUCTURES Examination and / testing of exposed casings, deck houses, companionways and superstructure bulkheads including closing appliances.
GUARD RAILS AND/OR BULWARKS Examination of the condition and arrangement, fittings & appliances for timber deck cargo.
COLLISION & WT 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.
MASTS AND STANDING RIGGING Masts, Derricks & Crane columns including their standing rigging.

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<p>WATER TIGHT DOORS AND CONTROLS Examining and testing (locally and remotely) all the watertight doors in watertight bulkheads including indicating lights and alarms.</p>
<p>COMPANIONWAYS Verification of Companionways and posting of appropriate notices.</p>
<p>CLOSEUP/OVERALL EXAMINATION OF CARGO HATCH COVERS AND COAMINGS Cargo hatch covers and coamings including their closing appliances, stowage, fit including efficiency of closing in sealed condition & operation including hatch cover sets within the forward 25% of the ship's length and at least one additional set, such that all sets on the ship are assessed at least once in every 5-year period, are to be surveyed open, closed and in operation to the full extent on each direction at each annual survey to the extent as per the requirement IRS Rules Part 1 Ch.2, Cl.2.2.2.2 to 2.2.2.7. Drainage channels and non return valves for cargo hatch to be specially examined. Above mentioned examination carried out for cargo hatch covers for Hold nos (1,2,3,4,5,...etc)/all.</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:..... IRS approval certificate Number..... 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>MAINTENANCE, REPAIR AND PARTIAL COATING OF DEDICATED BALLAST TANKS Confirmation that maintenance, repair and partial recoating of dedicated ballast tanks and double side skin spaces, as appropriate, are recorded in the coating technical file and the maintenance of the protective coating is included in the overall ship's maintenance scheme.</p>
<p>NEW INSTALLATION OF MATERIALS CONTAINING ASBESTOS Confirming that new equipment containing asbestos was not fitted on board since last survey.</p>
<p>ACCESS TO AND WITHIN SPACES IN, AND FORWARD OF, THE CARGO AREA OF OIL TANKERS AND BULK CARRIERS Checking, when appropriate, the provision of means of access to cargo and other spaces in accordance with the arrangements in the Ship Structures Access Manual of bulk carriers of 20,000 G/T and over. Confirming, when appropriate and as far as is practicable when examining internal spaces on bulk carriers of 20,000 G/T and over, that the means of access to cargo and other spaces remain in good condition.</p>
<p>GANGWAY, LIFELINES AND MEANS OF EMBARKATION/ DISEMBARKATION a. Satisfactory examination of items pertaining to lifelines, accommodation ladder, gangways, Davits, Winches for their satisfactory condition. Verification of inspection and maintenance records.</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.

b. Confirmation that embarkation ladder and accommodation ladder including safety net are in satisfactory condition and marked with safe working load.
INTERNAL SPACES Verification of the permanent means of access where appropriate of the internal spaces as far as practicable.
UPGRADATION / REPAIR TO COATING Confirmation that maintenance, repair and partial recoating had been done as per manufacturer's specification using acceptable coating system, suitable surface preparation and adequate film thickness under the supervision of coating manufacturer's representative/coating inspector. These had been verified through stage/patrol inspection during survey and considered acceptable. (Note: Ballast tank for which coating condition was upgraded to "GOOD" this time during survey are to be listed in the "Remark" section.)
OXYGEN AND GAS DETECTION EQUIPMENTS Confirmation that, when transporting a bulk cargo which is liable to emit a toxic or flammable gas, or cause oxygen depletion in the cargo space, an appropriate instrument for measuring the concentration of gas or oxygen in the air is provided. Verification that instructions for use of such equipment incl. operation by crew are available.
ADDITIONAL REQUIREMENTS: Additional Annual survey requirements for the foremost cargo hold.
VESSEL AGE OVER 10 YEARS
CARGO HOLDS: Single skin/other Bulk carrier: close up survey of forward cargo hold and overall survey of all cargo holds. Double skin bulk carrier: Overall survey of two selected cargo holds. Examination of all piping and penetrations in cargo holds including overboard piping.
VESSEL AGE ABOVE 15 YEARS
CARGO HOLDS: Overall survey of all cargo holds, close-up examination of a selected cargo hold in addition to the forward cargo hold. All piping and penetrations in cargo holds, including overboard piping are to be examined.
MACHINERY SPACES
MACHINERY AND BOILER SPACES Confirming that the machinery, boilers and other pressure vessels, associated piping systems and fittings are 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.
FIRE/EXPLOSION HAZARDS 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 ii) Verification that oil / water leakages, accumulation of oil, with potential source of ignition does not exist in the machinery spaces. Leakages if any have been dealt and source of leakages rectified. iii) Confirmation that floor plates & gratings are secured and found to be in order. 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.
STEERING GEAR a. All main and auxiliary steering arrangements and their associated equipment and control systems were examined and tested. 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.

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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.

b. Confirmation that steering gear compartment is in satisfactory condition and provided with handrail arrangements, grating or non-slip surface.

MEANS OF COMMUNICATION

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

BOILERS AND PRESSURE VESSELS

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

REMOTE CONTROLS

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.

BILGE PUMPING ARRANGEMENT

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

CARGO HOLD WATER LEVEL DETECTOR

For Single Hold Cargo Ship examining the cargo hold water level detector and its Audible & Visual alarm.

DANGEROUS GOODS ARRANGEMENTS

Examining, when appropriate, the special arrangements for carrying dangerous goods, including checking the electrical equipment and wiring, the ventilation, the provision of protective clothing and portable appliances and the testing of the water supply, bilge pumping and any water spray system.

FIRST START ARRANGEMENT

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

NORMAL OPERATION OF PROPULSION MACHINERY

Confirming that the normal operation of the propulsion machinery can be sustained or restored even though one of the essential auxiliaries becomes inoperative.

AUTOMATION

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

SCHEDULE OF BATTERIES

Schedule of batteries for essential and emergency services available on board and maintenance being done as per this schedule.

FORWARD SPACE / TANK BILGE PUMPING SYSTEMS

Examination and test of the pumping systems for draining and pumping ballast tanks forward of the collision bulkhead and bilges of dry spaces any part of which extends forward of the foremost cargo hold and of their controls.

SEA WATER PIPE EXPANSION JOINTS

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

MACHINERY SPACE VENTILLATION

Confirmation that machinery space ventilation is in good working condition.

EMERGENCY GENERATOR ROOM VENTILATORS ARRANGEMENT

Verification that following requirement of emergency generator room ventilation louvers and its closing appliance examined/ tested and found satisfactory.

- a) Manual or power operation of louvers and its closing appliance.
- b) Operating instruction, where hand –operated system is in use

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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>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>VENTILATION SYSTEM (IGF)</p>
<p>a. Examining the ventilation system, including portable ventilating equipment where fitted, for spaces containing fuel storage, fuel bunkering, and fuel supply units or components or associated systems, including air locks, pump rooms, compressor rooms, fuel preparation rooms, fuel valve rooms, control rooms and spaces containing gas burning equipment</p>
<p>b. Testing, as far as practicable, alarms such as differential pressure and loss of pressure alarms.</p>
<p>c. Control, monitoring and safety system (IGF)</p>
<p>d. Confirming gas detection and other leakage detection equipment in compartments containing fuel storage, fuel bunkering, and fuel supply equipment or components or associated systems, including indicators and alarms, is in satisfactory operating condition.</p>
<p>e. Confirming the satisfactory operation of the control, monitoring and automatic shutdown systems of the fuel supply and bunkering systems.</p>
<p>f. Confirmed that calibration of the gas detection systems carried out in accordance with manufacturer requirement and record of same available.</p>
<p>g. Confirmation of shutdown of ESD protected machinery spaces operational and tested operationally as far as practicable.</p>
<p>TOWING AND MOORING EQUIPMENT</p> <p>Confirming that the towing and mooring equipment is properly marked with any restriction associated with its safe operation for ships constructed on or after 01/01/2007.</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>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>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>
<p>PROTECTION ARRANGEMENT FOR HARMONIC FILTER</p> <p>Confirmation that protection for harmonic filter, including alarm tested and found satisfactory.</p>

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3. Repairs now recommended and remain outstanding.
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(Note: Applicable for vessel keel laid on or after 01 July 2017 and on exiting ship retrofitted with harmonic filter on or after 01 July 2017.)
HAZARDOUS AREA (IGF) Examined that electrical equipment, bulkhead / deck penetration and access opening in hazardous area are maintained and in satisfactory condition
ELECTRICAL BONDING (IGF) Examining electrical equipment including electrical bonding arrangements and bulkhead/deck penetrations including access openings in hazardous areas.
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 arrangements 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/PROTECTION ARRANGEMENTS
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 simultaneously (whilst also permitting the simultaneous operation of foam system on tankers). 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 and possible 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.
FIXED FIRE FIGHTING SYSTEM (MACHINERY SPACE, PAINT LOCKER, DEEP FAT COOKING ETC.) i) Examination of fixed firefighting system controls, piping, instructions and marking. Checking for evidence of proper maintenance and servicing including date of last systems tests. ii) Verification with regard to correct positioning (for in service condition) of safety pins where used on cylinder head discharge valves for fixed firefighting CO2 system are in accordance with manufacture's instruction manual.

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4. Opportunity to examine/test was not provided this time. Remains outstanding.

NA- Not Applicable.

<p>iii) Examination of fixed carbon dioxide fire-extinguishing systems for the protection of machinery spaces, where applicable are provided with two separate controls, one for discharging the gas from the storage container, each of them located in a release box clearly identified for the particular space.</p> <p>iv) Examining the fire-extinguishing systems for spaces containing paint and/or flammable liquids and deep-fat cooking equipment in accommodation and service spaces.</p>
<p>STRUCTURAL FIRE PROTECTION AND FIRE DAMPERS</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.</p> <p>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.</p>
<p>REMOTE STOPPING OF FANS, OIL PUMPS, ETC</p> <p>Verify that the remote controls for stopping fans and machinery and shutting off fuel supplies in machinery spaces are in working order.</p> <p>The stopping of ventilation and boiler forced and induced draft fans and the stopping of oil fuel and other pumps that discharge flammable liquids.</p>
<p>CLOSING ARRANGEMENTS FOR SKYLIGHTS, FLAPS ETC</p> <p>Examination of closing arrangements of ventilators, funnel annular spaces, skylights, doorways and tunnel where applicable, including condition of operating mechanism e.g. wire ropes, hydraulic piping etc.</p>
<p>REMOTE CLOSING OF VALVES</p> <p>a. 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 contain oil fuel, lubricating oil and other flammable oils.</p> <p>b. Confirmation that quick closing valves are in satisfactory condition and no valve is isolated/disconnected and operating instructions are displayed.</p>
<p>FIREMAN'S OUTFITS & EEBDS</p> <p>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 apparatus cylinders used during drills or a suitable number of spare cylinders to replace those used are provided and provision of two-way portable radiotelephone apparatus of an explosion proof type or intrinsically safe.</p>
<p>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.</p> <p>(Note: Applicable for ships designed to carry containers on or above weather deck, as applicable.)</p>
<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>CARGO SPACE</p> <p>The operation of the means of control provided for closing the various openings.</p>
<p style="text-align: center;">FUEL SYSTEM (IGF)</p>
<p>FUEL HANDLING PIPING, MACHINERY AND EQUIPMENT</p> <p>Examining and testing of piping, hoses, emergency shut-down valves, remote operating valves, relief valves, machinery and equipment for fuel storage, fuel bunkering, and fuel supply such as venting, compressing, refrigerating, liquefying, heating, cooling or otherwise handling the fuel as far as practicable.</p> <p>Confirmed that mean of inerting provided on board is in satisfactory condition.</p> <p>Confirmation of stopping of pumps and compressor in case of emergency shut down of the system.</p>
<p>FUEL STORAGE SYSTEM</p> <p>Examining the condition and arrangement of fuel storage, bunkering and supply systems including external examination of storage tank (including secondary barrier if fitted), internal examination of tank connection space and</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.

relief valves if accessible.
Verification of satisfactory operation of tank monitoring system, examination and testing of installed bilge alarms and means of drainage.
Examination and testing of the remote and local closing of the installed main tank valve for fuel storage system.
FUEL BUNKERING SYSTEM
Examining and testing of bunkering stations and the fuel bunkering system including operation of the fuel bunkering control, monitoring and shutdown systems.
FUEL SUPPLY SYSTEM
Examining and testing of fuel supply system including the fuel supply system control, monitoring and shut-down systems
Examining and testing of remote and local operation of master fuel valve for each engine compartment.
HOUSE KEEPING
i) Verification that general housekeeping / cleanliness in engine room, on deck, accommodation, hospital, galley, wash basins and toilets are satisfactory.
ii) Confirmation that no loose drums and no heavy items without securing/lashing on deck.
iii) Confirmation that Spare anchor where provided, its lashing bracket in good condition.
FLAG SPECIFIC REQUIREMENTS
Confirmation that flag specific requirements/instructions, if any are complied with. Please Provide details in Remark section.
H.O. INSTRUCTIONS
Confirmation that H.O. Instructions pertaining to this survey if any communicated separately, have been compiled with. Please Provide details in Remark section.
ADDITIONAL REQUIREMENTS TOWARDS CLASS INTERMEDIATE SURVEY
CONTINUED COMPLIANCE WITH UR 19
Confirmation that thickness measurement and subsequent repairs/reinforcement required has been completed and vessel continues to comply with IACS UR S19 with respect to initial approval calculation/document for vertical corrugated aft transverse watertight bulkhead of fore most cargo hold for vessels subject to this requirement.
CONTINUED COMPLIANCE WITH UR 31
Confirmation that thickness measurement and subsequent repairs/reinforcement required has been completed and vessel continues to comply with IACS UR S31 with respect to initial approval calculation/document for side shell frames and brackets of cargo holds for vessels subject to this requirement
PIPING SYSTEM
(This section is applicable where the intermediate survey is equivalent to the previous special survey) Examination of all piping systems within Cargo Holds, Ballast Tanks incl. Double Bottom tanks, Fuel Oil Tanks, Pipe tunnels, Cofferdams and Void Spaces bounding cargo holds and operational testing to working pressure to confirm that the tightness and condition are satisfactory.
CLOSE-UP/OVERALL EXAMINATION OF CARGO HATCH COVERS AND COAMINGS INCL. OPERATION OF HATCH COVERS
(This section is applicable where the intermediate survey is equivalent to the previous special survey)
i) Examination of all cargo hatch covers and coamings including their closing appliances, stowage, fit & operation (IRS Rules) for satisfactory condition.
ii) Confirmation that all mechanically operated hatch covers have been checked for operation and effectiveness of sealing arrangement and found to be satisfactory.
iii) Verification for continued compliance with IACS UR S30 for Cargo Hatch cover securing arrangements and stoppers for bulk carriers constructed before 1st January 2004 and not built in accordance with UR S21 (for No.1 and No.2 Cargo Hold Hatch).
EXAMINATION OF TANKS, SPACES AND THICKNESS MEASUREMENT
Confirmation that internal examination of tanks, spaces including testing and thickness measurements carried out satisfactorily as per the rule requirements and reported separately.
WATER LEVEL DETECTION AND ALARM SYSTEM
(This section is applicable where the intermediate survey is equivalent to the previous special survey) For ships complying with the requirements of SOLAS XII/12 for hold, ballast and dry space, confirmation that examination and a test, of the water level detection system and their alarms carried out and found to be satisfactory.

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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.

SAFETY SYSTEM (IGF)
Examining and testing gas detectors, temperature sensors, pressure sensors, level indicators, and other equipment providing input to the fuel safety system, including verification of the response upon fault conditions
ADDITIONAL REQUIREMENTS TOWARDS SPECIAL SURVEY
CLOSE-UP/OVERALL EXAMINATION OF CARGO HATCH COVERS AND COAMINGS INCL. OPERATION OF HATCH COVERS
<p>i) Examination of all cargo hatch covers and coamings including their closing appliances, stowage, fit & operation (IRS Rules) for satisfactory condition.</p> <p>ii) Confirmation that all mechanically operated hatch covers have been checked for operation and effectiveness of sealing arrangement and found to be satisfactory.</p> <p>iii) Verification for continued compliance with IACS UR S30 for Cargo Hatch cover securing arrangements and stoppers for bulk carriers constructed before 1st January 2004 and not built in accordance with UR S21 (for No.1 and No.2 Cargo Hold Hatch).</p>
EXAMINATION OF TANKS, SPACES AND THICKNESS MEASUREMENT
Confirmation that internal examination of tanks, spaces including testing and thickness measurements carried out satisfactorily as per the rule requirements and reported separately.
CONTINUED COMPLIANCE WITH UR 19
Confirmation that thickness measurement and subsequent repairs/reinforcement required has been completed and vessel continues to comply with IACS UR S19 with respect to initial approval calculation/document for vertical corrugated aft transverse watertight bulkhead of fore most cargo hold for vessels subject to this requirement.
CONTINUED COMPLIANCE WITH UR 31
Confirmation that thickness measurement and subsequent repairs/reinforcement required has been completed and vessel continues to comply with IACS UR S31 with respect to initial approval calculation/document for side shell frames and brackets of cargo hold for vessels subject to this requirement
MOORING ROPES AND TOW LINES
Confirmation that sufficient mooring ropes and tow lines as required by rules are provided onboard.
AIR PIPES
Internal Examination of Automatic air pipe heads as required by IRS Rules, to confirm these are maintained in satisfactory condition.
LONGITUDINAL STRENGTH EVALUATION FOR CSR BULK CARRIERS
<p>(This section is applicable for CSR Bulk Carriers and during special surveys carried out after the ship reached 15 years of age or during the special survey No.3, if this is carried out before the ship reaches 15 years).</p> <p>Confirmation that the ship's longitudinal strength evaluated by using the thickness of structural members measured, renewed and reinforced, as appropriate, in accordance with the criteria for longitudinal strength of the ship's hull girder for CSR bulk carriers was considered acceptable.</p> <p>(The final result of evaluation of the ship's longitudinal strength required above after renewal or reinforcement work of structural members, if carried out as a result of initial evaluation, is to be reported as a part of the Executive Hull Summary.)</p>
MEANS OF EMBARKATION AND DISEMBARKATION
Confirmation that accommodation ladders, gangways and its winches incl. brake system operationally tested with specified maximum operation load in accordance with IRS and found to be satisfactory.
WATER LEVEL DETECTION AND ALARM SYSTEM
For ships complying with the requirements of SOLAS XII/12 for hold, ballast and dry space water level detectors, an examination and a test of the water ingress detection systems and of their alarms to confirm these are in satisfactory condition.
PIPING SYSTEM
Examination of all piping systems within Cargo Holds, Ballast Tanks incl. Double Bottom tanks, Fuel Oil Tanks, Pipe tunnels, Cofferdams and Void Spaces bounding cargo holds including plating and framing, bilge and drain wells soundings, venting, pumping and drainage arrangements and operational testing to working pressure to confirm that the tightness and condition are satisfactory.
ADDITIONAL REQUIREMENT FOR IGF
FUEL HANDLING AND PIPING
Examining of all piping for fuel storage, fuel bunkering, and fuel supply such as venting, compressing, refrigerating, liquefying, heating storing, burning or otherwise handling the fuel and liquid nitrogen installations, Confirmation of

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3. Repairs now recommended and remain outstanding.
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removal of insulation from the piping and opening for examination and hydrostatic test of suspected pipeline as necessary, and leak test of complete piping after reassembly carried out and found satisfactory.
FUEL VALVES
Examining and testing of emergency shut-down valves, check valves, block and bleed valves, master gas valves, remote operating valves, isolating valves for pressure relief valves in the fuel storage, fuel bunkering, and fuel supply piping systems, with randomly selected valves being opened for examination.
PRESSURE RELIEF VALVES
Examining pressure relief valves connected to fuel storage tanks, connecting pipes & venting system checked in open condition, tested for the setting, and found satisfactory.
Confirmation that pressure relief valves in fuel supply/bunker lines, checked in open condition for internal examination, tested for the setting and found satisfactory. (Note: Where proper record of continuous overhaul and resetting of individually identifiable relief is maintained, consideration to be given to acceptance on the basis of opening, internal examination, and testing of representative sampling of valves, including each size and type of valves in use, provided logbook evidence that remaining valve have been overhauled and tested since crediting of the previous special survey.)
Confirmation that pressure/Vacuum relief valves or devices for interbarrier spaces and hold spaces, examined in open condition , tested for setting and found satisfactory.
FUEL STORAGE TANK
Examining of fuel storage tanks internally in accordance with an approved survey plan, visual examination of tank insulation and tank support arrangement, NDT of suspected area if required. (Note: Vacuum insulated independent fuel storage tank of type C need not be examined and record of vacuum monitoring system be examined and record to be reviewed.)
FUEL HANDLING EQUIPMENT
Examining of fuel pumps, compressors, process pressure vessels, inert gas generators, heat exchangers and other components used in connection with fuel handling.
ELECTRICAL EQUIPMENT
Confirmed that electrical equipment fitted in hazardous area are certified safe type and are maintained in satisfactory condition
Confirmed that electrical cable installed in hazardous area are continuous and are in satisfactory condition.
Examining and functional testing of pressurized equipment and associated alarms and testing of system to de-energization electrical equipment, which are not certified for use in hazardous areas
Verified that insulation resistance of the equipment, electrical circuit terminating in or passing through hazardous area carried out and meeting the requirement.
SAFETY SYSTEM
Examining and testing gas detectors, temperature sensors, pressure sensors, level indicators, and other equipment providing input to the fuel safety system, including verification of the response upon fault conditions,
Confirmation that calibrations of pressure, temperature and level indicating equipment in accordance with the manufacturer's requirements carried out and record for same available.

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