Indian Register of Shipping

Report No.:

Report of Initial Survey/Annual Survey/Intermediate Survey/Renewal Survey/ Change of Flag Survey/Additional Survey/General Examination*

For compliance with the IGC/GC/EGC* Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk

Name of Ship: …… I. R. No.: ……..…….

IMO No.: …… Port of Survey: ……...…..……

NOTES:	
1	Use "Y" for Yes/Satisfactory, "N" for Not Satisfactory, "NO" for No, "NA" for Not Applicable, "P" for Remains outstanding.
2	Where internal examination of cargo tanks carried out then the tanks which were selected for examination are to be mentioned in the remark section.
3	Please refer relevant Flag State Instructions for maintenance, inspection and pressure testing of FFA equipment.
4	Where any repairs or any deficiencies pending, comments to be included in the remarks section.
5	Ships may be fitted with equipment over and above her requirement. Same to be maintained and included in report.
6	During Initial surveys, reference of all the relevant plans referred may be included in the remarks section.
7	Appropriate details of the approval (Certificate No, Date, issuing Authority) are to be filled in remarks column at the time of initial Survey, Change of Flag, installation of equipment or Change of Certification as relevant, alternatively page of document reflecting the approval details is to be uploaded as supporting document.
8	Ships & Crew certificates/Documents are to be available on board in original.

Sr. No.	Item	Y/N/NO/ NA/P
1	**Initial surveys**	
1.1	Examining during the initial cool down, loading and discharging of the first cargo, the overall performance of the cargo containment system and confirming that the system is in compliance with the design parameters. For vessels carrying liquefied natural gas, the examination includes witnessing the satisfactory operation of the following systems, if fitted:	…..
1.1.1	Gas detection system	…..
1.1.2	Cargo control and monitoring systems such as level gauging equipment, temperature sensors, pressure gauges, cargo pumps and compressors, and proper control of cargo heat exchanges, if operating	…..
1.1.3	Nitrogen generating plant or inert gas generator	…..
1.1.4	Nitrogen pressure control systems for insulation, interbarrier and other annular spaces	…..
1.1.5	Re-liquefaction plant	…..
1.1.6	Equipment fitted for the burning of cargo vapours, such as boilers, multi-fuel engines or gas combustion units	…..
1.1.7	Cofferdam heating systems	…..
1.1.8	On-deck cargo piping systems including expansion and supporting arrangements	…..
1.1.9	High level alarms, by witnessing topping-off process for cargo tanks.	…..
1.2	Examining the cargo containment system for cold spots during, or immediately following, the first loaded voyage.	…..
1.3	Examining the cargo and process piping, including the expansion arrangements, insulation from the hull structure, pressure relief and drainage arrangements, water curtain protection as appropriate and carrying out a leak detection test.	…..
1.4	Confirming that the cargo system valving arrangements are in accordance with the approved plans.	…..
1.5	Confirming that any liquid and vapour hoses are suitable for their intended purpose and, where appropriate, type-approved or marked with date of testing.	…..
1.6	Examining the arrangements for the cargo pressure/temperature control including, when fitted, the thermal oxidation systems or any refrigeration system and confirming that any associated safety measures and alarms are satisfactory.	…..

1.7	Confirming that the cargo tank vent systems, including the pressure relieving and vacuum protection systems have been installed in accordance with the approved plans, and that the PRVs are type approved or mark with date of testing.	…..
1.8	Examining the arrangements for the cargo containment system atmosphere control and environmental control of space surrounding type c independent tanks, including the means of storing or generating and drying an inert gas.	…..
1.9	Examining the electrical installations with particular reference to the certified safe type equipment fitted in gas-dangerous spaces and zones.	…..
1.10	Examining the arrangements for the fire protection and fire extinction.	…..
1.11	Examining the fixed fire-fighting system for the enclosed cargo machinery spaces and the enclosed cargo motor room and confirming that the installation tests have been satisfactorily completed and that its means of operation is clearly marked.	…..
1.12	Examining the fire water main with particular reference to the provision of hydrants and isolation arrangements, checking that the two jets of water reach all areas of the cargo and containment area at the required pressure and testing the remote means of starting one main fire pump.	…..
1.13	Examining and testing the water spray system for cooling, fire protection and crew protection and confirming that its means of operation is clearly marked.	…..
1.14	Examining and testing the dry chemical powder fire-extinguishing system for the cargo area, seeing that the fixed piping has been properly installed and has been proved clear and confirming that its means of operation is clearly marked.	…..
1.15	Examining the appropriate fire-extinguishing system for the enclosed cargo machinery spaces for ships that are dedicated to the carriage of a restricted number of cargoes and the internal water spray system for the turret compartments and confirming that the installation tests have been satisfactorily completed and that their means of operation is clearly marked.	…..
1.16	Confirming the provision and examining the disposition of the firefighters' outfits including its self-contained compressed air breathing apparatus, and provision of two-way portable radiotelephone apparatus of an explosion-proof type or intrinsically safe.	…..
1.17	Examining, and confirming the satisfactory operation of, the arrangements for the artificial ventilation of spaces in the cargo area normally entered during cargo handling operations and checking in particular that:	…..
1.17.1	It is controlled from outside the space	…..
1.17.2	Warning notices concerning its use have been posted	…..
1.17.3	It is fixed and is of the negative pressure type, permitting extraction from either the upper or lower parts of the space or from both the upper and lower parts when appropriate, for cargo compressor and pump rooms and for cargo control rooms when considered to be in hazardous areas	…..
1.17.4	It is of the positive pressure type for spaces containing electric motors driving cargo compressors or pumps and other non – hazardous spaces within the cargo area, except those containing inert gas generators	…..
1.17.5	Exhaust ducts are clear of the ventilation inlets and openings to accommodation spaces, service spaces, control stations and other non – hazardous spaces	…..
1.17.6	Intakes are arranged to minimize the recycling or hazardous vapours	…..
1.17.7	Ducts from hazardous areas are not led through accommodation, service and machinery spaces and control stations, except when Sl. no.1.23 applies	…..
1.17.8	The electric motors driving ventilation fans are positioned outside the ventilation ducts when the carriage of flammable products is intended and the ventilation fans and the ducts, in way of the fans only, are of non-sparking construction in hazardous areas	…..
1.18	Examining, and confirming the satisfactory operation of, the arrangements for the artificial ventilation of spaces normally entered other than those covered by Sl. no. 1.17.	…..
1.19	Examining, and testing as appropriate, the liquid level indicators, overflow control, pressure gauges, high pressure and, when applicable, low pressure alarms, and temperature indicating devices for the cargo tanks.	…..
1.20	Examining, and testing as appropriate, the permanently installed gas detection equipment.	…..
1.21	Examining, and testing as appropriate, the oxygen deficiency monitoring equipment (Note: Applicable for Gas Carriers constructed on or after 1 July 2016.)	…..
1.22	Examining, as appropriate, the automation systems used to provide instrumented control, monitoring/alarm or safety functions.	…..
1.23	Confirming that two sets of portable gas detection equipment suitable for the cargoes to be carried and a suitable instrument for measuring oxygen levels have been provided.	…..

1.24	Checking the provision of equipment for personnel protection and in particular that:	…..
1.24.1	An adequate supply of compressed air is provided and examining, that the spare air bottle, air compressor and charging manifold are provided and properly stowed.	…..
1.24.2	A Stretcher and the medical first-aid equipment, including oxygen resuscitation equipment, when available, for the products to be carried, are provided	…..
1.24.3	Respiratory and eye protection suitable for emergency escape purposes are provided and properly stowed.	…..
1.24.4	Decontamination arrangements and eyewashes are operational	…..
1.24.5	Suitable protective equipment, including eye protection, is provided for protection of crew members engaged in normal cargo operations, and properly stowed	…..
1.24.6	Sufficient, but not less than three complete sets of safety equipment each permitting personnel to enter and work in a gas-filled space are provided and are properly stowed	…..
1.25	Examining, when applicable, the arrangements for the use of cargo as fuel and testing that the gas supply to the space containing gas consumer is cut off should the double –wall concentric pipes lose the inert gas pressure or the exhaust ventilation not be functioning correctly and that the master gas fuel valve may be manually closed from within the space, and atleast one remote location.	…..
1.26.1	Confirming that a loading and stability information booklet, containing details of typical service and ballast conditions, provisions for evaluating other conditions of loading, a summary of the ship's survival capabilities and sufficient information to ensure that the ship is loaded and operated in a safe and seaworthy manner, is available on board.	…..
1.26.1.1	Confirming that verification of installation and testing of stability instrument carried out using the specified test conditions as in approved operation manual and found to be satisfactory.	…..
1.26.1.2	Confirming, where applicable, the approved stability instrument is available on board and operating satisfactorily and verifying that Document of Approval (DOA) for stability instrument has been issued by/on behalf of the Administration.	…..
1.26.1.3	Confirming that an approved operation manual for stability instrument including test conditions is available on board.	…..
1.26.1.4	Confirming, when a dispensation from carriage of a stability instrument applies, the alternative means of verification for intact and damage stability is recorded on the Certificate of Fitness and is being applied effectively.	…..
1.26.2	Confirming that damage survival capability information is supplied on the basis of loading information for all anticipated conditions of loading and variations in draught and trim.	…..
1.26.3	Confirming that necessary information for the safe carriage of the products to be carried has been provided.	…..
1.26.4	Confirming that a copy of the IGC/GC/EGC* Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk, or the equivalent national regulations, has been provided.	…..
1.26.5	Confirming that, where applicable, the approved documentation for the alternative design and arrangements for the segregation of the cargo area is on board.	…..
1.26.6	Confirming that, where applicable, the evaluation certificate[#] for the adequacy of type C tank vent systems is on board. ([#]refer A.829(19))	…..
1.26.7	confirming that the approved document for the maximum allowable loading limits together with PRVs setting pressures is on board.	…..
1.26.8	Confirming that the approved cargo operations manuals, including relevant procedures for ESD system and emergency isolating operations of PRVs has been provided. (Note: Applicable for Gas Carriers constructed on or after 1 July 2016.)	…..
2	**Annual surveys/Change of Flag/Additional Survey/General Examination***	
2.1.1	Verification that all statutory certificates and class certificate are available and valid.	…..
2.1.2	Checking that the ship's complement complies with the Minimum Safe Manning Document.	…..
2.1.3	Checking that the master, officers and ratings are certificated as required by the STCW Convention.	…..
2.1.4	Confirming that, where applicable, the approved documentation for the alternative design and arrangements for the segregation of the cargo area is on board.	…..
2.1.5	Confirming that, where applicable, the evaluation certificate[#] for the adequacy of type C tank vent systems is on board. ([#]refer A.829(19))	…..
2.1.6	Checking the log-book entries to confirm whether any changes were made in setting the pressure of PRVs or any emergency isolation action effected in the event of a failure of a cargo tank-installed PRV, and confirming that signs are posted in the cargo control room, if provided, and at each PRV.	…..

2.1.7	Confirming that the approved document for the maximum allowable loading limits together with PRVs setting pressures is on board.	…..
2.1.8	Confirming that the approved cargo operations manuals, including relevant procedures for ESD system and emergency isolating operations of PRVs has been provided. (Note: Applicable for Gas Carriers constructed on or after 1 July 2016.)	…..
2.1.9	Examining, where applicable, the alternative design and arrangements for the segregation of the cargo area, in accordance with the test, inspection and maintenance requirements, if any, specified in the approved documentation.	…..
2.1.10	Checking whether any new equipment has been fitted and, if so, confirming that it has been approved before installation and that any changes are reflected in the appropriate certificate.	…..
2.1.11	Confirming that the loading and stability information booklet, containing details of typical service and ballast conditions, provisions for evaluating other conditions of loading, a summary of the ship's survival capabilities and sufficient information to ensure that the ship is loaded and operated in a safe and seaworthy manner, is available on board.	…..
2.1.12	Confirming that damage survival capability information is supplied on the basis of loading information for all anticipated conditions of loading and variations in draught and trims.	…..
2.1.12.1	Confirming, where applicable, the approved stability instrument is available on board and operating satisfactorily and verification that Document of Approval (DOA) issued by/on behalf of the Administration is available on board.	…..
2.1.12.2	Confirming that an approved operation manual for stability instrument including test conditions is available on board.	…..
2.1.12.3	Confirming that stability instrument has been checked for accuracy at regular intervals by ship’s staff by applying test loading conditions.	…..
2.1.12.4	Confirming, when a dispensation from carriage of a stability instrument applies, the alternative means of verification for intact and damage stability recorded on the Certificate of Fitness is available on board and being applied effectively.	…..
2.1.13	Confirming that necessary information for the safe carriage of the products to be carried has been provided.	…..
2.1.14	Confirming that there are records of the performance of the cargo containment system.	…..
2.1.15	Confirming that a copy of the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk, or the equivalent national regulations, has been provided.	…..
2.1.16	confirming, when appropriate, that confirmation of compliance for the SEEMP is provided to and retained on board the ship.	…..
2.1.17	confirming, when appropriate, the validity of the Statements of Compliance related to fuel oil consumption reporting and operational carbon intensity rating.	…..
2.1.18	Confirming that non-destructive testing plan of independent tank type B cargo tank is available.	…..
2.1.19	Confirming that approved inspection/testing plan of membrane cargo containment system.	…..
2.2.1	Confirming that any special arrangements to survive conditions of damage are in order.	…..
2.2.2	Confirming that the wheelhouse doors and windows, side scuttles and windows in superstructure and deckhouse ends in the cargo area are in a satisfactory condition.	…..
2.2.3	Examining the cargo machinery space and turret compartment, including their escape routes.	…..
2.2.4	Confirming that the manually operated ESD (emergency shutdown) system together with the automatic shutdown of the cargo pumps and compressors are satisfactory.	…..
2.2.5	Examining the cargo control room.	…..
2.2.6	Examining the gas detection arrangements for cargo control rooms and the measures taken to exclude ignition sources where such spaces are classified as hazardous areas.	…..
2.2.7	Confirming the arrangements for the air locks are being properly maintained.	…..
2.2.8	Examining, as far as practicable, the bilge, ballast and oil fuel arrangements.	…..
2.2.9	Examining, when applicable, the bow or stern loading and unloading arrangements with particular reference to the electrical equipment, fire-fighting arrangements and means of communication between the cargos control room and the shore location.	…..
2.2.10	Confirming that the sealing arrangements at the gas domes are satisfactory. (Note: Where cargo tank dome penetrates exposed deck, visually examine closing and sealing devices/expansion joint between the cargo tank dome and cargo hold coaming for the condition of rubber and any cracks or wear and tear)	…..
2.2.11	Confirming that portable or fixed drip trays or deck insulation for cargo leakage is in order.	…..
2.2.12	Examining the cargo and process piping, including the expansion arrangements, insulation from the hull structure, pressure relief and drainage arrangements and water curtain protection as appropriate.	…..

2.2.13	Confirming that the cargo tank and interbarrier space pressure and relief valves, including safety systems and alarms, are satisfactory.	…..
2.2.14	Confirming that any liquid and vapour hoses are suitable for their intended purpose and, where appropriate, type-approved or marked with date of testing.	…..
2.2.15	Examining the arrangements for the cargo pressure/temperature control including, when fitted, the thermal oxidation system and any refrigeration system or and confirming that any associated safety measures and alarms are satisfactory.	…..
2.2.16	Examining the cargo, bunker, ballast and vent piping systems, including PRVs, vacuum relief valves, vent masts and protective screens, as far as practicable and confirming PRVs are type approved or marked with date of testing.	…..
2.2.17	Confirming that arrangements are made for sufficient inert gas to be carried to compensate for normal losses and that means are provided for monitoring the spaces.	…..
2.2.18	Confirming that the use of inert gas has not increased beyond that needed to compensate for normal losses by examining records of inert gas usage.	…..
2.2.19.1	Confirming that any air-drying system and any interbarrier and hold space purging inert gas system are satisfactory.	…..
2.2.19.2	Confirming the arrangements for sufficient medium to be carried where drying agents are used on air inlets to cargo tank and/or the surrounding spaces.	…..
2.2.20	Confirming that electrical equipment hazardous areas is in a satisfactory condition and is being properly maintained.	…..
2.2.21	Examining the arrangements for the fire protection and fire extinction and testing the remote means of starting one main fire pump.	…..
2.2.22	Examining the fixed fire-fighting system for enclosed cargo machinery spaces, and for the enclosed cargo motor room with in cargo area and confirming that its means of operation is clearly marked.	…..
2.2.23	Examining the water spray system for cooling, fire protection and crew protection and confirming that its means of operation is clearly marked.	…..
2.2.24	Examining the dry chemical powder fire-extinguishing system for the cargo area and confirming that its means of operation is clearly marked.	…..
2.2.25	Examining the appropriate fire-extinguishing system for the enclosed cargo machinery spaces for ships that are dedicated to the carriage of a restricted number of cargoes and the internal water spray system for the turret compartments and confirming their means of operation is clearly marked.	…..
2.2.26	Confirming the provision and examining the condition of the firefighters' outfits including their self-contained compressed air breathing apparatus and provision of two-way portable radiotelephone apparatus of an explosion-proof type or intrinsically safe.	…..
2.2.27	Examining, as far as practicable, and confirming the satisfactory operation of, the arrangements for the artificial ventilation of spaces in the cargo area normally entered during cargo handling operations.	…..
2.2.28	Examining, and confirming the satisfactory operation of, the arrangements for the artificial ventilation of spaces normally entered other than those spaces in cargo area normally entered during cargo handling operations.	…..
2.2.29	Examining, and testing as appropriate and as far as practicable, the liquid level indicators, overflow control, pressure gauges, high pressure and, when applicable, low pressure alarms, and temperature indicating devices for the cargo tanks.	…..
2.2.30	Examining, and testing as appropriate, the gas detection equipment.	…..
2.2.31	Examining, and testing as appropriate, the oxygen-deficiency monitoring equipment (Note: Applicable for Gas Carriers constructed on or after 1 July 2016.)	…..
2.2.32	Confirming that two sets of portable gas detection equipment suitable for the cargoes to be carried and a suitable instrument for measuring oxygen levels have been provided	…..
2.2.33	Examining, as appropriate, the automation systems used to provide instrumented control, monitoring/alarm or safety functions. (Note: Applicable for Gas Carriers constructed on or after 1 July 2016.)	…..
2.2.34	Checking the provision of equipment for personnel protection and in particular that:	…..
2.2.34.1	Sufficient but not less than three complete sets of safety equipment each permitting personnel to enter and work in a gas-filled space are provided and are properly stowed.	…..
2.2.34.2	An adequate supply of compressed air is provided and examining, that the spare air bottle, air compressor and charging manifold are provided and properly stowed.	…..

2.2.34.3	A Stretcher and the medical first-aid equipment, including oxygen resuscitation equipment, when available, for the products to be carried, are provided.	…..
2.2.34.4	Respiratory and eye protection suitable for emergency escape purposes are provided and properly stowed.	…..
2.2.34.5	Decontamination arrangements and eyewashes are operational.	…..
2.2.34.6	Suitable protective equipment, including eye protection, is provided for protection of crew members engaged in normal cargo operations, and properly stowed.	…..
2.2.35	Examining, when applicable, the arrangements for the use of cargo as fuel and testing, as far as practicable, that the gas supply to the space containing gas consumer is cut off should the double wall concentric pipes lose the inert gas pressure or the exhaust ventilation not be functioning correctly and that master gas fuel valve may be manually closed from within the space and at least one remote location.	…..
3	**Intermediate surveys (to be filled, in addition to all check items for Annual surveys)**	
3.1	Confirming, where applicable, that pipelines and independent cargo tanks are electrically bonded to the hull.	…..
3.2	Generally examining the electrical equipment and cables in hazardous areas and zones such as cargo machinery space and areas adjacent to cargo tanks to check for defective equipment, fixtures and wiring. The insulation resistance of the circuits should be tested and in cases where a proper record of testing is maintained consideration should be given to accepting recent readings.	…..
3.3	Confirming that spares are provided for cargo area mechanical ventilation fans.	…..
3.4	Confirming that the heating arrangements, if any, for steel structures are satisfactory.	…..
3.5	Examining and/or testing as considered necessary of closing and sealing devices/ expansion joints of the cargo tank domes where they penetrate exposed decks.	…..
4	**Renewal Surveys (to be filled, in addition to all check items for Annual & Intermediate surveys)**	
4.1	Examining the insulation and means of support of the cargo tanks and confirming that the secondary barrier remains effective.	…..
4.2	Internal examination of selected cargo tanks. (Please specify the tanks which were selected for examination) Remarks ……..……..	…..
4.3	Confirming that the high-level alarms of cargo tanks are properly working, by witnessing topping-off process for cargo tanks, at the first occasion of full loading after each dry-docking. (Note: The expression "each dry-docking" stated above is considered to be the survey of the outside of the ship's bottom required for the renewal of the Cargo Ship Safety Construction Certificate and/or the Cargo Ship Safety Certificate).	…..
5	**Recommendation**	
5.1	Confirmation that the Initial Survey/Annual Survey/Intermediate Survey/Renewal Survey/Change of Flag* Survey/Additional Survey/General Examination* completed satisfactorily and Interim/Full Term/Short Term* Certificate of Fitness/International Certificate of Fitness* for the Carriage of Liquefied Gases in Bulk has been issued/endorsed/extended*	…..
Remarks:		

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Surveyor(s) to Indian Register of Shipping

Date: ……..……..

Port: …….