



Indian Register of Shipping

## Report of Initial/ Annual/ Intermediate/ Renewal/ Change of Flag/ General Examination\*Survey For compliance with the IBC / BCH \*Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk

Name of ship:

## Plans referred during Initial Surveys:

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| Sr. No. |   | Condition # |
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| 1       | Initial surveys   |             |
| 1.1     | Confirming that tanks containing cargo or residues of cargo are suitably segregated from accommodation, service and machinery spaces and from drinking water and stores for human consumption, that cargo piping does not pass through any accommodation, service or machinery space other than cargo pump rooms or pump rooms and that cargoes are not to be carried in either the fore or the aft peak tank |             |
| 1.2     | Examining the air intakes and openings into the accommodation, service and machinery spaces in relation to the cargo piping and vent systems and their entrances, air inlets and openings in relation to the cargo area   |             |
| 1.3     | Examining the arrangements of the cargo pump rooms  |             |
| 1.4     | Examining the accesses to spaces in the cargo area  |             |
| 1.5     | Examining the bilge and ballast arrangements and confirming that pumps and pipelines are identified   |             |
| 1.6     | Examining, when applicable, the bow or stern loading and unloading arrangements with particular reference to the air inlets and entrances to the accommodation, machinery and service spaces, the electrical equipment, fire-fighting arrangements and means of communication and testing the remote shut down for the cargo pumps  |             |
| 1.7     | Confirming that the cargo tank types are arranged and installed in accordance with the approved plans, internally examining the cargo tanks, water ballast tanks and other spaces in the cargo area and pressure testing the boundaries   |             |
| 1.8     | Examining the cargo transfer arrangements and confirming that any hoses are suitable<br>for their intended purpose and, where appropriate, type-approved or marked with date<br>of testing  |             |
| 1.9     | Examining and testing any cargo heating and cooling systems   |             |
| 1.10    | Confirming that the cargo tank vent systems have been installed in accordance with the approved plans   |             |
| 1.11    | Confirming that high-level alarms, or overflow control systems or spill valves or other equivalent means provided to control possible liquid rising in the venting system, are operating satisfactorily   |             |
| 1.12    | Confirming that suitable provision is made for drainage of vent lines and that no shut-<br>off valves or other means of stoppage, including spectacle or blank flanges, are fitted<br>either to the individual vents or to the header, if the vents are combined or either above<br>or below pressure/vacuum relief valves with closed vent systems   |             |
| 1.13    | Confirming that suitable provisions are made for primary and secondary means (or alternative measures) for controlled tank venting  |             |

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| 1.14   | Examining the location of the vent outlets in respect of the height above the weather deck or the fore and aft gangway, from the nearest air intakes or openings to accommodation, service and machinery spaces and ignition sources and confirming that any high velocity vents are of the approved type   |            |
| 1.14.1 | Examining the cross-sectional area and height of the vent outlets for cargo tank purging with the inert gas, as applicable.   |            |
| 1.15   | Examining the arrangements for environmental control, including the means of storing or generating and drying an inert gas  |            |
| 1.16   | Examining the electrical installations and confirming that, when appropriate, special materials have been used and that the electrical equipment installed in hazardous locations, as permitted, is certified by a recognized authority for the cargoes to be carried   |            |
| 1.17   | Confirming that independent cargo tanks are electrically bonded to the hull and that all gasketed cargo pipe joints and hose connections are electrically bonded.   |            |
| 1.18   | Examining the arrangements for the fire protection and fire extinction.   |            |
| 1.19   | Examining the fixed fire fighting system for the cargo pump room and confirming that the installation tests have been satisfactorily completed and that its means of operation are clearly marked.  |            |
| 1.20   | Checking the deck foam system for the cargo area, including the supplies of foam concentrate, and testing that the minimum number of jets of water at the required pressure in the fire main is obtained, when the system is in operation.  |            |
| 1.21   | Examining the system for continuous monitoring of the concentration of flammable vapors and confirming that the installation tests have been satisfactorily completed.  |            |
| 1.22   | Confirming that suitable portable fire extinguishing equipment for the cargoes to be carried is provided in the cargo area.   |            |
| 1.23   | Examining, and confirming the satisfactory operation of, the arrangements for the mechanical ventilation of spaces in the cargo area normally entered during cargo handling operations and checking in particular that:   |            |
| 1.23.1 | It can be controlled from outside the space   |            |
| 1.23.2 | Warning notices concerning its use have been posted   |            |
| 1.23.3 | It is of the extraction type, with extraction from below the floor plates, unless the space<br>houses electrical motors driving cargo pumps when it should be of the positive pressure<br>type  |            |
| 1.23.4 | The ducting does not pass through accommodation, machinery and service spaces and that the exhaust ducts are clear of the ventilation inlets and openings to such spaces  |            |
| 1.23.5 | The electric motors driving ventilation fans are positioned outside the ventilation ducts<br>and the ventilation fans and the ducts, in way of the fans only, are of non-sparking<br>construction in hazardous locations  |            |
| 1.24   | Examining, and confirming the satisfactory operation of, the arrangements for the mechanical ventilation of spaces normally entered, other than those covered by Sl. no. 1.23   |            |
| 1.25   | Confirming that double bottoms, cofferdams, duct keels, pipe tunnels, hold spaces and other spaces where cargo may accumulate are capable of being efficiently ventilated to ensure a safe environment when entry into the space is necessary and that, when appropriate, permanent ducting is provided and any ventilation fans comply with Sl. no. 1.23.5 |            |
| 1.26   | Examining the intrinsically safe systems and circuits used for measurement, monitoring, control and communication purposes in all hazardous locations   |            |
| 1.27   | Checking the provision of equipment for personnel protection and in particular that:  |            |
| 1.27.1 | Suitable protective clothing is available for the crew engaged in loading and discharging operations and that suitable storage is provided  |            |

| 1.27.2   | The required safety equipment and associated breathing apparatus and air supplies and,   |  |
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|          | when appropriate, emergency-escape respiratory and eye protection, are provided and  |  |
| 1.27.3   | are properly stowed<br>Medical first-aid equipment, including stretchers and oxygen resuscitation equipment  |  |
| 1.27.3   | are provided   |  |
| 1.27.4   | Arrangements have been made for the antidotes for the cargoes actually carried to be on board  |  |
| 1.27.5   | Decontamination arrangements and eyewashes are operational   |  |
| 1.27.6   | The required gas detection instruments are on board and that arrangements have been<br>made for the supply of the appropriate vapour detection tubes   |  |
| 1.27.7   | The stowage for cargo samples is satisfactory  |  |
| 1.28     | For the carriage of noxious liquid substances in bulk, the survey during construction<br>and after installation (as applicable to the cargoes the ship is to be certified to carry)<br>should consist of:  |  |
| 1.28.1   | Confirming that the pumping and stripping systems are satisfactory and that portable pipes or bends in sufficient number, if required, are on board.   |  |
| 1.28.2   | Conducting the water test for assessing the stripping quantity, as required  |  |
| 1.28.3   | Confirming that the tank washing machines provided on board are in working order, are<br>those described in the Procedures and Arrangements Manual and are installed in<br>accordance with the approved plans  |  |
| 1.28.4   | Confirming that the wash water heating system, if required, is installed in accordance with the approved plans   |  |
| 1.28.5   | Confirming that the number and position of tank cleaning openings for portable machines are in accordance with the approved plans  |  |
| 1.28.6   | Confirming that the underwater discharge outlet(s) are in accordance with the approved plans   |  |
| 1.28.7   | Verifying by actual test that the discharge rate of the pumps, where a variable rate type<br>is used, can be controlled as specified in the Procedures and Arrangements Manual   |  |
| 1.28.8   | Confirming that the ventilation equipment for residue removal is installed in accordance with the approved plan and is in working order and that the pressure in the driving medium for portable fans for ventilation equipment for residue removal can be |  |
|          | achieved to give the required fan capacity   |  |
| 1.28.9   | Confirming that the heating system for solidifying and high viscosity substances is installed in accordance with the approved plan.  |  |
| 1.28.10  | Confirming if applicable the construction and arrangement of ship certified to carry individually identified vegetable oils under exemption from the carriage requirements.  |  |
| 1.29     | Confirming that sampling points or detector heads are located in suitable positions in order that potentially dangerous leakages are readily detected.   |  |
| 1.30.1   | 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<br>ensure that the ship is loaded and operated in a safe and seaworthy manner, is available<br>on board   |  |
| 1.30.2   | 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  |  |
| 1.30.2.1 | Confirming that verification of installation and testing of stability instrument carried<br>out using the specified test conditions as in approved operation manual and found to be  |  |
|          | satisfactory.  |  |
| 1.30.2.2 | Confirming that Document of Approval (DOA) for stability instrument has been issued by / on behalf of the Administration and is operating satisfactorily.  |  |
| 1.30.2.3 | Confirming that an approved operation manual for stability instrument including test conditions is available on board.   |  |

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| 1.30.2.4 | Where the Administration has waived the requirements of stability instrument, confirming that necessary waiver issued by the Administration is available on board and that the alternative means of verification for intact and damage stability recorded on the Certificate of Fitness is available onboard and is being applied effectively.                     |            |
| 1.30.3   | Confirming that a table giving the filling ratios for the cargo tanks at various densities has been provided   |            |
| 1.30.4   | Confirming that a copy of the IBC / BCH* Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk, or the equivalent national regulations, has been provided  |            |
| 1.30.5   | Confirming that information relating to the chemical and physical properties of the products to be carried has been provided and that provision has been made for the measures to be taken in an accident  |            |
| 1.30.6   | Confirming that a manual covering procedures for cargo transfer, tank cleaning, gas freeing, ballasting, etc., has been provided   |            |
| 1.30.7   | Confirming that compatibility information as to material of construction, protective linings and coating is provided on board.   |            |
| 1.31     | After a satisfactory survey, Confirm Certificate of Fitness / International Certificate of Fitness* for the Carriage of Dangerous Chemicals in Bulk issued.  |            |
| 2        | Annual surveys   |            |
| 2.1      | Checking that all statutory and class certificates are valid and onboard   |            |
| 2.1.1    | Checking that the ship's complement complies with the Minimum Safe Manning Document  |            |
| 2.1.2    | Checking that the master, officers and ratings are certified as required by the STCW Convention  |            |
| 2.1.3    | 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.   |            |
| 2.1.4    | Confirming that a table giving the filling ratios for the cargo tanks at various densities has been provided.  |            |
| 2.1.5    | Confirming that a copy of the International Code for the Construction and Equipment<br>of Ships Carrying Dangerous Chemicals in Bulk or the Code for the Construction and<br>Equipment of Ships Carrying Dangerous Chemicals in Bulk, or the equivalent national<br>regulations, has been provided   |            |
| 2.1.6    | Confirming that information relating to the chemical and physical properties of the products to be carried has been provided and that provision has been made for the measures to be taken in an accident.   |            |
| 2.1.7    | Confirming that a manual covering procedures for cargo transfer, tank cleaning, gas freeing, ballasting, etc., has been provided   |            |
| 2.1.8    | Confirming that the Procedures and Arrangements Manual is onboard  |            |
| 2.1.9    | Confirming that the Shipboard Marine Pollution Emergency Plan is onboard   |            |
| 2.1.10   | Confirming that the Cargo Record Book is on board and being correctly used.  |            |
| 2.1.11   | Confirming that compatibility information as to material of construction, protective linings and coating is provided on board.   |            |
| 2.1.12   | 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. |            |
| 2.1.13   | 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.  |            |

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| 2.1.2.1 | Where a stability instrument is fitted on board verification that Document of Approval (DOA) issued by / on behalf of the Administration is available on board and is operating satisfactorily.  |   |
| 2.1.2.2 | Confirming that an approved operation manual for stability instrument including test conditions is available on board.   |   |
| 2.1.2.3 | Confirming that stability instrument has been checked for accuracy at regular intervals by ship's staff by applying test loading conditions  |   |
| 2.1.2.4 | Where the Administration has waived the requirements of stability instrument, confirming that necessary waiver issued by the Administration is available on board and that the alternative means of verification for intact and damage stability recorded on the Certificate of Fitness is available onboard and is being applied effectively. |   |
| 2.2     | Confirming that wheelhouse doors and windows, side scuttles and windows in superstructure and deckhouse ends facing the cargo area are in a satisfactory condition.  |   |
| 2.3     | Confirming that potential sources of ignition in or near the cargo pump room are eliminated, such as loose gear, combustible materials, etc. that there are no signs of undue leakage and that access ladders are in a satisfactory condition.   |   |
| 2.4     | Confirming that removable pipe lengths or other approved equipment necessary for cargo separation are available in the pump room and are in a satisfactory condition.  |   |
| 2.5     | Examining all pump room bulkheads for signs of cargo leakage or fractures and, in particular, the sealing arrangements of all penetrations of pump room bulkheads.   |   |
| 2.6     | Confirming that the remote operation of the cargo pumps bilge system is satisfactory.  |   |
| 2.7     | Examining the bilge and ballast arrangements and confirming that pumps and pipelines are identified.   |   |
| 2.8     | Confirming, when applicable, that the bow or stern loading and unloading arrangements are in order and testing the means of communication and the remote shut down for the cargo pumps.  |   |
| 2.9     | Examining the cargo transfer arrangements and confirming that any hoses are suitable<br>for their intended purpose and, where appropriate, type-approved or marked with date<br>of testing   |   |
| 2.10    | Examining, when applicable, the cargo heating or cooling systems, including any sampling arrangements, and confirming that the means for measuring the temperature and associated alarms are operating satisfactorily.   |   |
| 2.11    | Examining, as far as practicable, the cargo tank vent system, including the pressure/vacuum valves and secondary means to prevent over- or under-pressure and devices to prevent the passage of flame, and the arrangement of cargo tank purging with inert gas, as applicable   |   |
| 2.12    | Examining the gauging devices, high-level alarms and valves associated with overflow control.  |   |
| 2.13    | Confirming that arrangements for sufficient gas to be carried or generated to compensate for normal losses, and that the means provided for monitoring ullage spaces, are satisfactory.  |   |
| 2.14    | Confirming that arrangements are made for sufficient medium to be carried where drying agents are used on air inlets to cargo tanks.   |   |
| 2.15    | Confirming that all electrical equipment in dangerous zones is suitable for such locations is in satisfactory condition and has been properly maintained.  |   |
| 2.16    | Examining the fixed fire-fighting system for the cargo pump room and the deck foam system for the cargo area and confirming that their means of operation are clearly marked.  |   |
| 2.17    | Confirming that the condition of the portable fire extinguishing equipment for the cargoes to be carried in the cargo area is satisfactory.  |   |
| 2.18    | Confirming that the system for continuous monitoring of the concentration of flammable vapours is satisfactory.  |   |

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| 2.19   | Examining, as far as practicable, and confirming the satisfactory operation of, the arrangements for the ventilation of spaces normally entered during cargo handling  |           |
|        | operations and other spaces in the cargo area.   |           |
| 2.20   | Confirming, as far as practicable, that the intrinsically safe systems and circuits used for   |           |
|        | measurement, monitoring, control and communication purposes in all hazardous locations are being properly maintained.  |           |
| 2.21   | Examining the equipment for personnel protection and in particular that:   |           |
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| 2.21.1 | The protective clothing for crew engaged in loading and discharging operations and its stowage is in a satisfactory condition  |           |
| 2.21.2 | The required safety equipment and associated breathing apparatus and associated air supplies and, when appropriate, emergency-escape respiratory and eye protection, are in a satisfactory condition and are properly stowed   |           |
| 2.21.3 | Medical first-aid equipment, including stretchers and oxygen resuscitation equipment are in a satisfactory condition   |           |
| 2.21.4 | Arrangements have been made for the antidotes for the cargoes actually carried to be on board  |           |
| 2.21.5 | Decontamination arrangements and eyewashes are operational   |           |
| 2.21.6 | The required gas detection instruments are on board and arrangements have been made<br>for the supply of the appropriate vapour detection tubes  |           |
| 2.21.7 | The arrangements for the stowage of cargo samples are satisfactory   |           |
| 2.22.1 | Examining externally and confirming that the pumping and piping systems, including a stripping system if fitted, and associated equipment remain as approved.  |           |
| 2.22.2 | Examining externally the tank washing piping and confirming that the type, capacity, number, and arrangement of the tank washing machines are as approved.   |           |
| 2.22.3 | Examining externally the wash water heating system.  |           |
| 2.22.4 | Examining externally, as far as practicable, the underwater discharge arrangements.  |           |
| 2.22.5 | Confirming that the means of controlling the rate of discharge of the residue is as approved.  |           |
| 2.22.6 | Confirming that the ventilation equipment for residue removal is as approved.  |           |
| 2.22.7 | Examining externally, as far as is accessible, the heating system required for solidifying and high viscosity substances   |           |
| 2.22.8 | Examining any additional requirements listed on the Certificate of Fitness /<br>International Certificate for fitness* for the Carriage of Dangerous Chemical in Bulk.   |           |
| 2.23   | Confirming that sampling points or detector heads are located in suitable positions in order that potentially dangerous leakages are readily detected.   |           |
| 2.24   | After a satisfactory survey, confirmation that the Certificate of Fitness / International Certificate of Fitness* for the Carriage of Dangerous Chemicals in Bulk has been endorsed.   |           |
| 3      | Intermediate (to be filled, in addition to all check items for Annual survey)  |           |
| 3.1    | Examination of vent line drainage arrangements.  |           |
| 3.2    | Confirmation, where applicable, that pipelines and independent cargo tanks are electrically bonded to the hull.  |           |
| 3.3    | Generally examining the electrical equipment and cables in dangerous zones such as cargo pump rooms 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. |           |
| 3.4    | Confirmation that spares are provided for cargo area mechanical ventilation fans.  |           |
| 3.5    | Verifying from the Cargo Record Book that the pumping and stripping arrangements have been emptying the tanks efficiently and are all in working order   |           |
| 3.6    | Confirming, if possible, that the discharge outlet(s) are in good condition  |           |

| 3.7 | Confirming that the ventilation equipment for residue removal is satisfactory and that<br>the pressure in the driving medium for portable fans for ventilation equipment for<br>residue removal can be achieved to give the required fan capacity |  |
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| 3.8 | After a satisfactory survey, confirmation that the Certificate of Fitness / International Certificate of Fitness* for the Carriage of Dangerous Chemicals in Bulk has been endorsed.  |  |
| 4   | Renewal surveys (to be filled, in addition to all check items for Annual & Intermediate survey)   |  |
| 4.1 | Confirmation that an approved stability instrument, if fitted on board, has been checked for accuracy by applying test conditions as in approved operation manual in presence of the Surveyor.  |  |
| 4.2 | After a satisfactory survey, confirmation that the Certificate of Fitness / International Certificate of Fitness* for the Carriage of Dangerous Chemicals in Bulk has been issued / endorsed and validity extended*.                              |  |

## Surveyor(s) to Indian Register of Shipping

| Date:  |  |
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| Place: |  |