

**Department of Shipping
Inland Ship Safety Administration
141-143, Motijheel C/A (8th Floor)
Dhaka-1000.**

**Application form
for the Approval of Design /Plan
for Construction/Reconstruction of
Inland Ship**

M/s.

Ref. No Date:

Signature.....

Plan Approval Procedure (Inland Vessels)

Following procedures should be followed for approving plans for all types of inland vessels. The procedure ensures compliance with all the mandatory requirements specified by various inland vessels rules made under the ISO'76.

General Instructions:

01. All plans submitted must show sufficient details to demonstrate compliance with the relevant rules.
 02. Structural Fire Safety- S.R.O No. 301/Law, dt: 31/10/01, rules: 22-35 regarding heat resistant lining, Exhaust piping, Sight glass, Pump room, steer cage, Air intake/Exhaust ducting is to be followed and described clearly in the submission of drawing for approval.
 03. Six sets of plan is to be submitted, including one soft copy in compact disc (CD), where feasible.
 04. A list of documents and plans & an index shall be included with each submission.
 05. 1:100 Scale to be used in all design & plan, except smaller plans which can be drawn using scale 1:50. In one plan no more than one scale can be used, all dimensions must be in mm.
 06. All designs & plans and documents to be submitted with sequential number.
 08. Section modulus calculation for applicable structures such as kilson, floor plate scantling, kilsons & webs, shell & deck scantling, side frame, etc must be submitted along with the drawings.
 09. Stability calculation as per stability rules for inland Ship (S.R.O No. 287/Law, dt: 30/10/02) is to be submitted as follows:
The underwater shape and KM calculation done-
-either manually,
or by using computer software.
If manually, details of the calculation to be shown separately.
If using computer software- software type approval certificate to be submitted to the DOS, that has been approved by any IACS (International Associate of Classification Societies) member society.
Requirements of calculation:
 - Ships up to 70 metre, offset table interval max. 1 cm, based upon the offset table, under water shape and KM calculation to be prepared.
 - Calculation sheet should calculation of under water volume, water plan area at different draught, calculation of all hydrostatic curve, section modulus.
- Note:
The stability criteria for inland vessel need to be established or yet to be established, Till that time vessel's actual stability criteria, calculation manually or by using computer software, to be shown in the proposed plan and need not be complied with the criteria set in the rule book (IMO criteria)
10. Demonstration or compliance with the crowding requirement:
With will passengers (full capacity & 75 kg/passenger) on one extreme side on top deck vessel's heeling must not exceed 10 degree.
 11. General Characteristics for main and auxiliary engine and equipments to be submitted and placing and ventilation of accumulation to be shown.
 12. Plans to be drawn by any design firm/competent naval architect having a qualification approved by BUET or having a membership of any international professional body of Naval Architecture. The designing firm/person shall submit the plan for approval with a bank guarantee of Tk. 5,00,000/- as security on behalf of the firm/person.

General Requirements:

01. Design & plans for approval of Inland vessel to be submitted to the Department of Shipping for inland vessels of Length not exceeding 70 metre.
02. Passenger launch can be maximum tow decks only (main deck & second deck), except bridge deck of vessel exceeding 50 metre length.
03. Bridge deck of passenger launch (above 50 metre length) will contain only navigating bridge and no accommodation, situated not exceeding and with in (1/3) one third length of vessel, length from forward.
04. A topmost deck including second deck and bridge will be of half rounded design.
05. All opening in the hull and main deck including engine room to be of weather tight design & feathers of the water tightness (closing) to be shown in the plan.
06. Plan should include main machinery specification including main propulsion machinery electrical generator, emergency source of power, type of main and emergency steering arrangement (if any) numbers(s) of proposed main engines/aux, engine, number of cylinders, cylinder diameter, kilo watt power, make, power versus speed curve, maximum speed of vessel at designed power considering water and wind resistances.

Design Governing Criteria:

| | | |
|--------------------------|---|--|
| LOA | = | |
| B | = | |
| D | = | |
| Frame spacing | = | |
| Type | = | |
| Material of construction | = | |
| Area of operation | = | |

01. Vessel Particulars:
- (a) Vessel name :
 - (b) L_{OA} :
 - (c) L_{BP} :
 - (d) L_{WL} :
 - (e) B_{EXT} :
 - (f) B_{MLD} :
 - (g) DEPTH_{EXT} :
 - (h) DEPTH_{MLD} :
 - (i) DRAUGHT :
 - (j) Number of propeller :
 - (k) Diameter of propeller :
 - (l) Type of Engines :
 - (m) Power of Engines :
02. Type of Vessel- Passenger Cargo Tanker Barge Ferry
03. Owner :
- Company & Address :
- Designer :
- Checked by :
- Designing Firm name :
- & Address :
- Material : Steel (new) Steel (old) Wood Mixed
- Glass fiber Aluminum
04. Proposed route : Inland (calm water) Inland (partially smooth water)
- Inland (rough water) Inland (round seasonal water)
- Inland& bay crossing Inland & seasonal crossing
- Others (pls. specify)
05. Plying time : Day Night Day & Night

06. Verification for drawing & documents submitted for approval:

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| S/N | Details of the Drawing | Comments | |
|-----|--|----------|----|
| | | Yes | No |
| 01. | General Arrangement: Bulwark, railing, accommodation layout, deck layout, Engine room layout | | |
| 02. | <p>Safety Plan: To include fire extinguishing system, the position of fire hydrant, nozzle, fire pump, portable fire extinguishers, fire bucket, axe, sand box, crow bar, CO₂ room, deck isolating valve, shore connection, breathing apparatus, etc, and the easiest passage route reach the fire fighting appliances in case of emergency. (Fire & Safety Plan-S.R.O No. 301/Law, dt: 31.10.01, rule: 1-35 is to be followed and described clearly in the submission of drawing for approval.</p> <p>All bulkheads in accommodation is to be of min. 5 mm (new plate and 20% extra for old plates)</p> <p>Life Saving Application (LSA) Safety Plan: (S.R.O No. 306/Law, dt: 31.10.01) All the life saving appliance & equipment and easiest way to reach to the L.S.A shall be properly marked and shown in the plan & design for approval.</p> | | |
| 03. | Lines plan: To include off-set table, etc. | | |
| 04. | Hydrostatic curves: To include hydrostatic curve & table of dead weight, cf, cb, cm, cp, km, kn, etc. | | |
| 05. | Cross curve of stability: At interval of at least 15 degree. | | |
| 06. | <p>Preliminary stability booklet: Stability booklet shall contain at least following information:</p> <ul style="list-style-type: none"> • A table of contents & index for the booklet. • General description of the ship with principal dimensions. • General arrangement plan showing water tight compartment, permanent ballast if any, freeboard diagram. • Hydrostatic curve/tables & cross curve of stability calculated on even keel and intact & dynamic stability. • Capacity plan/table showing capacity and CG of each compartment. • Tank sounding table showing capacity and CG of each tank. • Information on loading restriction, such as, maximum KG or maximum GM curve or table that can be used to determine compliance with the applicable stability booklet. • at least four standard operating condition & examples (as per “Inland Shipp Stability Rule 2001”) for developing other loading condition using information contained in the stability booklet. • Details calculation showing whether the vessel satisfy the specific requirement on “Inland Shipping Rule (Stability) 2001” • Guidance for the master for safe operation of the ship. • Any other information which are unique/peculiar to the vessel. • Simplified stability date for passenger ships. Stability calculation to be shown for the following conditions: <ul style="list-style-type: none"> a) All passenger on one side with no wind and maximum beam wind speed of 60 knots & gust of 100 knots b) Half Passenger on be side with no wind and maximum beam wind speed of 60 knots & gust of 100 knots c) Empty ship with no wind and maximum beam wind speed of 60 knots & gust of 100 knots <p>In all cases vessel must have enough reserve bouncy to be upright.</p> | | |

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|-----|--|--|--|
| 07. | Capacity Plan: Capacity Plan must show the kg of each compartment, floor area of the compartment, cubic capacity of the compartment. | | |
| 08. | Mid ship section: ½ Mid ship section drawing must show bilge curvature & extension of at least three cross section kilsons, web frame, stringer, etc. | | |
| 09. | Drawing of longitudinal sections and deck plans including seating and opening: To include manholes, scupper freeing port, kilsons, web frame, stringer, etc. | | |
| 10. | Shell expansion including welds, openings, stringers, frames etc.: To include plate thickness, frame spacing etc. | | |
| 11. | Hatch coaming and covers: Drawing to include hatch way beam, hatch cover, deck plating, coaming height, hatch dimensions, hatch cover dimensions and insert plate. | | |
| 12. | Bulkheads including tanks: To include dimensions and spacing of stiffeners and plate thickness. | | |
| 13. | Tank top and separate tanks: To show manholes, sounding pipes, vent pipes, fittings pipes etc. | | |
| 14. | Bottom structure in engine room: To show engine foundation. | | |
| 15. | Main engine, Auxiliary machinery and equipment, deck equipment, davit etc. foundations: | | |
| 16. | Rudder & Steering arrangement: To show details of the rudder plate, rudder post, rudder stock, rudder stopper, main and emergency steering, coupling flange, pintle, propeller post, propeller boss and the dimensions, tiller and quadrant dia, steering chain, rod, sole piece, heel piece etc. | | |
| 17. | Calculation of equipment number: | | |
| 18. | Anchoring and mooring arrangement: To show anchor chain dimensions, length, chain dia, breaking load. | | |
| 19. | Rigging: To show the position of mast, mast head light , side light, stern lights, anchor light, towing light, not under command (NUC) lights, dangers cargo operation light, signal light with height above the main deck, vertical & horizontal separation and position & numbers of search light and whistles, intercom position, bridge view and window positioning for clear aft view. (S.R.O No. 305/Law, dt: 30.10.01) (Navigations) | | |
| 20. | Super structure and deck house: To include stores, common spaces, galley, No. of dead light, port holes, sill height, air, filling and vent pipe height etc. | | |
| 21. | General arrangements of machinery spaces: | | |
| 22. | Shafting and propeller: To show propeller boss, propeller details, shaft details. | | |
| 23. | Sounding, piping diagrams for bilge, emergency bilge injection, fire fighting, air, fuel, oil, lubricating oil, deck washing and all pipes under pressure: To show be position of hydrants, over flow pipes, air pipes, sounding pipe, pipe dimensions, striking plates and ballast piping. | | |
| 24. | Cargo piping and pump room including ventilation for tankers: | | |

| | | | |
|-----|---|--|--|
| 25. | Electrical installations: To show wiring for steering gear and navigation lights, cabins, engine room, position of switch board etc. | | |
| 26. | Accommodation plan officers, crew and passengers: The drawing must show sky light, angle, elevation, number position & dimensions of door stairs, positions and numbers of W.C toilets, basins & bath rooms, dressing rooms for ladies and gents, the railing with number to rails and uprights, spacing of railings and uprights (max. spacing for rails-200 mm, uprights-900mm), hand railings for all stairs more than three steps, (Emergency exit minimum 15 mm/passenger), including of stairs: <ul style="list-style-type: none"> • For passenger- max. 40 degree • For crew members- max. 50 degree • Engine room, pump room & other working spaces- max. 55 degree | | |
| 27. | Chain locker & hatch in the way of tank | | |
| 28. | Aft & fore body construction | | |
| 29. | Details of propeller | | |

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| | | | | | | | <u>Complied with</u> | |
| | | | | | | | Yes | No |
| 07. | Hull plate material dimension (rule-8) | | | | | | | |
| | Min. -4 (new plate) | As per rule | | | mm | <input type="checkbox"/> | <input type="checkbox"/> | |
| | Min. -4 (new plate) | As per drawing no. | | | mm | <input type="checkbox"/> | <input type="checkbox"/> | |
| 08. | Keel plating (rule-9) | | | | | | | |
| | Requirement as per table-1 of the Schedule of SRO no. 308/law-2001 | As per rule | | | mm | <input type="checkbox"/> | <input type="checkbox"/> | |
| | | As per drawing no. | | | mm | <input type="checkbox"/> | <input type="checkbox"/> | |
| 09. | Bottom plating (rule-10) | | | | | | | |
| | Requirement as per table-1 of the Schedule of SRO no. 308/law-2001 | As per rule | | | mm | <input type="checkbox"/> | <input type="checkbox"/> | |
| | | As per drawing no. | | | mm | <input type="checkbox"/> | <input type="checkbox"/> | |
| 10. | Frame spacing (rule-25) (standard-500mm) (min.-450mm, max.-550mm) | | | | | | | |
| | Section modulus requirement as per table-17 of the schedule | As per rule | | | cm ³ | <input type="checkbox"/> | <input type="checkbox"/> | |
| | | As per cal. sheet no. | | | cm ³ | <input type="checkbox"/> | <input type="checkbox"/> | |
| 11. | Bilge plating (rule-11) | | | | | | | |
| | Requirement as per table-3 of the Schedule | As per rule | | | mm | <input type="checkbox"/> | <input type="checkbox"/> | |
| | | As per drawing no. | | | mm | <input type="checkbox"/> | <input type="checkbox"/> | |
| 12. | Side Shell plating (rule-12) | | | | | | | |
| | Requirement as per table-4 of the Schedule | As per rule | | | mm | <input type="checkbox"/> | <input type="checkbox"/> | |
| | | As per drawing no. | | | mm | <input type="checkbox"/> | <input type="checkbox"/> | |
| 13. | Deck plating (Hatch way plate) (rule-13) | | | | | | | |
| | Requirement as per table-5 of the Schedule | As per rule | | | mm | <input type="checkbox"/> | <input type="checkbox"/> | |
| | | As per drawing no. | | | mm | <input type="checkbox"/> | <input type="checkbox"/> | |
| 14. | Deck plating (All deck plate) (rule-13) | | | | | | | |
| | Requirement as per table-6 of the Schedule | As per rule | | | mm | <input type="checkbox"/> | <input type="checkbox"/> | |
| | | As per drawing no. | | | mm | <input type="checkbox"/> | <input type="checkbox"/> | |
| 15. | Deck plating (Double bottom inner plate) (rule-13) | | | | | | | |
| | Requirement as per table-7 of the Schedule | As per rule | | | mm | <input type="checkbox"/> | <input type="checkbox"/> | |
| | | As per drawing no. | | | mm | <input type="checkbox"/> | <input type="checkbox"/> | |
| 16. | Stem (rule-14) | | | | | | | |
| | Requirement as per table-7 of the Schedule | As per rule | | | mm | <input type="checkbox"/> | <input type="checkbox"/> | |
| | | As per drawing no. | | | mm | <input type="checkbox"/> | <input type="checkbox"/> | |
| 17. | Bar Stem (rule-15) | | | | | | | |
| | Requirement as per table-8 of the Schedule | As per rule | | | mm | <input type="checkbox"/> | <input type="checkbox"/> | |
| | | As per drawing no. | | | mm | <input type="checkbox"/> | <input type="checkbox"/> | |
| 18. | Stern frame breadth (rule-16) | | | | | | | |
| | Requirement as per table-9 of the Schedule | As per rule | | | mm | <input type="checkbox"/> | <input type="checkbox"/> | |
| | | As per drawing no. | | | mm | <input type="checkbox"/> | <input type="checkbox"/> | |
| 19. | Stem frame thickness (rule-16) | | | | | | | |
| | Requirement as per table-9 of the Schedule | As per rule | | | mm | <input type="checkbox"/> | <input type="checkbox"/> | |
| | | As per drawing no. | | | mm | <input type="checkbox"/> | <input type="checkbox"/> | |

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| | | | | Complied with | |
| | | | | Yes | No |
| 20. | Propeller post breadth (rule-17) Requirement as per table-10 of the Schedule | As per rule | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| 21. | Propeller post radius (rule-17) Requirement as per table-10 of the Schedule | As per rule | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| 22. | Propeller post thickness (rule-17) Requirement as per table-10 of the Schedule | As per rule | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| 23. | Rudder post (rule-18) Requirement, welded, (min 4 boll), rudder can be sold or streamlined plate rudder (hollow) | As per rule | bolts | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per cal. sheet no. | bolts | <input type="checkbox"/> | <input type="checkbox"/> |
| 24. | Sole piece breadth (rule-19) Requirement as per table-11 of the Schedule | As per rule | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| 25. | Sole piece thickness (rule-19) Requirement as per table-11 of the Schedule | As per rule | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| 26. | Heel piece (rule-20) Requirement heel piece length shall be minimum three times the frame spacing | As per rule | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| 27. | Propeller boss (rule-21) Requirement as per table-12 of the Schedule | As per rule | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| 28. | Bottom construction (Floor plate scantling/section modulus) (rule-22) Requirement as per table-13 of the Schedule | As per rule | cm ³ | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per cal sheet no. /cal. | cm ³ | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | | | |
| 29. | Keelsons (rule-23) Requirement as per table-14 of the Schedule | As per rule | Nos. | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | Nos. | <input type="checkbox"/> | <input type="checkbox"/> |
| 30. | Webs thickness & sectional area (rule-23) Requirement as per table-15 of the Schedule | As per rule | mm, cm ² | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | mm, cm ² | <input type="checkbox"/> | <input type="checkbox"/> |
| 31. | Keelsons & Webs (Centre & side girders thickness & sectional area) (rule-23) Requirement as per table-16 of the Schedule | As per rule .. | C/K: mm, cm ² | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | S/K: mm, cm ² | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | C/K: mm, cm ² , | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | S/K: mm, cm ² | <input type="checkbox"/> | <input type="checkbox"/> |
| 32. | Shell & deck scantling (section modulus) (rule-24) Requirement as per table-13 of the Schedule | As per rule | cm ³ | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per cal sheet no. /cal. | cm ³ | <input type="checkbox"/> | <input type="checkbox"/> |

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| | | Complied with | | | |
| | | Yes | No | | |
| 33. | Side frame (section modulus) (rule-25) Requirement as per table-17 of the Schedule | As per rule As per cal sheet no. /cal. | cm ³ cm ³ | <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> |
| 34. | Frame spacing (rule-25): (standard-500mm)(min.-450mm,max.-550mm) Drawing must include specification of frame to ensure section modulus ξ In tanks section modulus to be increased by 10%, ξ Frame spacing for transverse girder: 450+2L mm (peak max.500mm) ξ Frame spacing for longitudinal girder: 500+2L mm max. | As per rule As per cal. sheet no. /cal. | mm mm | <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> |
| 35. | Web frame (Transverse framing difference between web framing) (rule-26) Requirement as per table-18 of the Schedule of SRO no.-308/law-2001 | As per rule As per drawing no. | m. m. | <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> |
| 36. | Side stringer (between framing) (if d>2.5 m) (rule-27) Requirement as per table-19 of the Schedule of SRO no.-308/law-2001 | As per rule As per cal. sheet no. /cal. | cm ³ cm ³ | <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> |
| 37. | Deck beam (section modulus) (rule-28) Requirement as per table- 20 of the Schedule of sro-308/law-2001 | As per rule As per cal. sheet no. /cal. | cm ³ cm ³ | <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> |
| 38. | Deck web beam (section modulus) (rule-29) Requirement must be twice of deck beam as per table-20 of the schedule of sro.no -308/law-2001 | As per rule As per cal. sheet no. /cal. | cm ³ cm ³ | <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> |
| 39. | Deck girder (section modulus) (rule-30) Requirement as per table-21 of the Schedule of SRO no.-308/law-2001 | As per rule As per cal. sheet no. /cal. | cm ³ cm ³ | <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> |
| 40. | Pillar (sectional modulus) (rule-31) Requirement as per table-22&23 of the Schedule of SRO no.-308/law-2001 | As per rule As per cal. sheet no. | P,kn/m ³ P,kn/m ³ | <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> |
| 41. | Bulkhead (rule-32) if l>20m, minimum number of bulkhead is 2 if l>30m, 2 bulkhead fore & aft. engine room 1 at forepeak, al transverse bulkhead till continuous main deck with vertical stiffener | As per rule As per drawing no. | min. no. of blkhd min. no. of blkhd | <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> |
| 42. | Collision bulkhead (position) (rule-33) Requirement as per table-24 of the Schedule of sro.no.-308/law-2001 | As per rule As per drawing no. / | ~ m. m. | <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> |
| 43. | After peak bulkhead (section modulus) (rule-33) Requirement as per table-25 of the Schedule of SRO no.-308/law-2001 | As per rule As per cal sheet no. /cal. | cm ³ cm ³ | <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> |

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| | | Complied with | | | |
| | | Yes | No | | |
| 44. | Other bulkhead (section modulus) (rule-34) Requirement as per table-26 of the Schedule of SRO no.-308/law-2001 | As per rule As per cal sheet no. /cal. | cm ³ cm ³ | <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> |
| 45. | Other bulkhead thickness & sectional modulus (rule-34) Requirement as per table-26 of the Schedule of SRO no.-308/law-2001 | As per rule As per drawing no. | mm. mm. | <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> |
| | Requirement as per table-26 of the Schedule of SRO no.-308/law-2001 | As per rule As per cal sheet no. /cal. | cm ³ cm ³ | <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> |
| 46. | Bulkhead penetration (rule-35) Collision bulkhead must not have any door or penetration, other bulkhead doors must be water tight with sufficient stiffeners and frames to compensate the strength of the bulkhead | As per rule As per drawing no. | 0 min. no. of blkhd pent 0 min. no. of blkhd pent | <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> |
| 47. | Water tight door (rule-36) Number of water tight door is to keep as low as possible. No penetration in collision bulkhead other than drainage or for filing pipe, that must be water tight | As per rule As per drawing no. | min. no. of blkhd pent min. no. of blkhd pent | <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> |
| 48. | Hull tanks (rule-37) Requirement as per table-27 of the Schedule | As per rule As per drawing no. | mm mm | <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> |
| | Requirement as per table-27 of the Schedule | Vent height As per rule . As per drawing no. | mm mm mm | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| | Note: Water tank, fuel of tank, ballast water tank etc. is to be made with transverse bulkhead. All tanks must have air pipe, overflow pipe with frame screen and minimum 450 mm, above weather deck, sounding pipe should run near to bottom plating, fitted with striking plate. ξ Fore peak & after peak tanks must not be used as bunker or fuel oil tank. ξ For plate thickness of hull tanks please see table-27 | | | | |
| 49. | Separate tanks (rule-38) Plate thickness | Plate (new/old) As per rule As per drawing no... | mm mm mm | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| | Note: Separate tanks must not be fitted with framing and secured properly. No separate fuel oil tank can be fitted in cargo tank. ξ Tank to have drip tray, self closing valve, approved heat resistant sight glass, ξ All tanks must have air pipe, overflow pipe with flame screen and minimum 450 mm, above weather deck, sounding pipe should run near to bottom plating, fitting with striking plate. ξ Tank plate thickness min. 4mm, section modulus min. 2cu.cm and plate must be new | | | | |
| 50. | Drinking water tank (rule-39) Tanks separated by | As per rule As per drawing no.01 | | <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> |

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| | | | | Complied with | |
| | | | | Yes | No |
| | Fill, vent, sounding pipe | As per rule | | <input type="checkbox"/> | <input type="checkbox"/> |
| | Separate | As per drawing no..... | | <input type="checkbox"/> | <input type="checkbox"/> |
| | Note: <i>Drinking water tank must be separated from other tank by cofferdam. No sanitary or fuel oil or any other pipe other than water pipe, should run through water tanks.</i> | | | | |
| | ξ watertight manhole to be provided with raised still in the tank | | | | |
| | ξ Air, vent, filling or sounding pipe must be in a separate plate from other tanks. | | | | |
| 51. | Wash bulkhead (rule-40) | | | | |
| | Plate thickness-min. 5 mm | As per rule | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | section modulus min. 5 cu. cm | As per rule | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | Note: <i>Stiffener to run till second frame</i> | | | | |
| 52. | Engine room keelson (sectional area) (rule-44) | | | | |
| | Requirement as per table-15 | As per rule | cm ² | <input type="checkbox"/> | <input type="checkbox"/> |
| | of the Schedule | As per cal sheet no. /cal. | cm ² | <input type="checkbox"/> | <input type="checkbox"/> |
| 53. | Engine room web frames (web distance) (rule-45) | | | | |
| | Requirement as per table-18 | As per rule | m. | <input type="checkbox"/> | <input type="checkbox"/> |
| | of the Schedule | As per drawing no. | m. | <input type="checkbox"/> | <input type="checkbox"/> |
| 54. | Engine room web frames (section modulus) (rule-45) | | | | |
| | Requirement as per table-29 | As per rule | cm ³ | <input type="checkbox"/> | <input type="checkbox"/> |
| | of the Schedule | As per cal sheet no. /cal. | cm ³ | <input type="checkbox"/> | <input type="checkbox"/> |
| 55. | Longitudinal hatch coming (rule-47) | | | | |
| | Requirement as per table-30 | As per rule | m. | <input type="checkbox"/> | <input type="checkbox"/> |
| | of the Schedule | As per drawing no. | m. | <input type="checkbox"/> | <input type="checkbox"/> |
| 56. | Transverse hatch coming (rule-48) | | | | |
| | Requirement as per table-31 | As per rule | m. | <input type="checkbox"/> | <input type="checkbox"/> |
| | of the Schedule | As per drawing no. | m. | <input type="checkbox"/> | <input type="checkbox"/> |
| 57. | Hatch cover auxiliaries (rule-49) | | | | |
| | Requirement as per table-31 | As per rule | m. | <input type="checkbox"/> | <input type="checkbox"/> |
| | of the Schedule | As per drawing no. | m. | <input type="checkbox"/> | <input type="checkbox"/> |
| 58. | Hatch cover auxiliaries (section modulus) (rule-49) | | | | |
| | Requirement as per table-32 | As per rule | cm ³ | <input type="checkbox"/> | <input type="checkbox"/> |
| | of the Schedule | As per cal sheet no. /cal. | cm ³ | <input type="checkbox"/> | <input type="checkbox"/> |
| 59. | Hatch way beam (rule-50) | | | | |
| | Hatch cover beam | As per rule | cm ³ | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | cm ³ | <input type="checkbox"/> | <input type="checkbox"/> |

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| | | | | Complied with | |
| | | | | Yes | No |
| 60. | Hatch way beam (section modulus) (rule-50) Requirement as per table-33 of the Schedule | As per rule As per cal sheet no. /cal. | cm ³ cm ³ | <input type="checkbox"/> | <input type="checkbox"/> |
| 61. | Side hatch way beam (rule-51) Side hatch way beam | As per rule As per drawing no. /cal | cm ³ cm ³ | <input type="checkbox"/> | <input type="checkbox"/> |
| 62. | Side hatch way beam (section modulus) (rule-51) Requirement as per table-33 of the Schedule | As per rule As per drawing no. /cal | cm ³ cm ³ | <input type="checkbox"/> | <input type="checkbox"/> |
| 63. | Steel hatch cover (rule-52) Min. cover thickness- 4 mm 20% extra for by crossing | As per rule As per drawing no. | m. m. | <input type="checkbox"/> | <input type="checkbox"/> |
| 64. | Steel hatch cover (section modulus) (rule-52) Requirement as per table-32 of the Schedule | As per rule As per cal sheet no. /cal. | cm ³ cm ³ | <input type="checkbox"/> | <input type="checkbox"/> |
| 65. | Wooden hatch cover (rule-53) Wooden hatch cover Length | As per rule As per drawing no. | mm mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | Wooden hatch cover Thickness | As per rule As per drawing no. | mm mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | Securing arrangement by | As per rule | mm mm | <input type="checkbox"/> | <input type="checkbox"/> |
| 66. | Deck opening (rule-54) Deck opening corners to be properly strengthened with | As per rule As per drawing no. As per rule | | <input type="checkbox"/> | <input type="checkbox"/> |
| 67. | Doors on main deck (rule-55) Doors sills | As per rule As per drawing no. | mm mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | Watertight securing arrangement with | As per rule | | <input type="checkbox"/> | <input type="checkbox"/> |

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| | | | | Complied with | |
| | | | | Yes | No |
| 68. | Machinery space opening (rule-56) water tight casing height of the Schedule | As per rule | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. [redacted] | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | Space separated by | As per rule | | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per rule | | <input type="checkbox"/> | <input type="checkbox"/> |
| 69. | Opening at cargo hold (rule-57) Entry at cargo hatch | As per rule | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | Toggles with water tight steel hatch covers | As per rule | Nos | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. [redacted] | Nos | <input type="checkbox"/> | <input type="checkbox"/> |
| 70. | Man hole & flush deck plug (rule-59) All man hole & flush deck plug to be water tight, if needed with gasket. cover by water tight with | As per rule | | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per rule | | <input type="checkbox"/> | <input type="checkbox"/> |
| 71. | Freeing port (rule-60) Freeing port min. area | As per rule | m ² | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | m ² | <input type="checkbox"/> | <input type="checkbox"/> |
| | Nos. vertical stands are fitted in every | As per rule | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| 72. | Drainage pipe (rule-61) Drainage pipe | As per rule | Nos | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. [redacted] | Nos | <input type="checkbox"/> | <input type="checkbox"/> |
| | Drainage pipe thickness | As per rule | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. [redacted] | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| 73. | Supper structure, deck house & quarter deck bulkhead (rule-62) Stiffened | As per rule | | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per rule | | <input type="checkbox"/> | <input type="checkbox"/> |
| 74. | Supper structure, deck house & quarter deck bulkhead (rule-63) Bulkhead thickness | As per rule | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | Bulkhead section modulus requirement as per table-35 of the schedule | As per rule | cm ³ | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per cal sheet no. /cal. | cm ³ | <input type="checkbox"/> | <input type="checkbox"/> |
| 75. | Engine casing (rule-64) Engine casing plate thickness | As per rule | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | Section modulus requirement as per table-35 of the schedule | As per rule | cm ³ | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per call sheet no. /cal. | cm ³ | <input type="checkbox"/> | <input type="checkbox"/> |

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| | | | | Complied with | |
| | | | | Yes | No |
| 76. | Decks (rule-65) | | | | |
| | Inside deck plate thickness | As per rule | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | Outside deck plate thickness | As per rule | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| As per drawing no. | | mm | <input type="checkbox"/> | <input type="checkbox"/> | |
| | Deck Beam section modulus requirement as per table-36 of the schedule | As per rule | cm ³ | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per cal. sheet no. /cal. | cm ³ | <input type="checkbox"/> | <input type="checkbox"/> |
| | Deck girder section modulus requirement as per table-37 of the schedule | As per rule | cm ³ | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per cal. sheet no. /cal. | cm ³ | <input type="checkbox"/> | <input type="checkbox"/> |
| 77. | Rudder & steering gear (rule-66) | | | | |
| | Steering type | As per rule | | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no.. | | <input type="checkbox"/> | <input type="checkbox"/> |
| | Emergency steering | As per rule | | <input type="checkbox"/> | <input type="checkbox"/> |
| As per drawing no.. | | | <input type="checkbox"/> | <input type="checkbox"/> | |
| 78. | Rudder stock (rule-67) | | | | |
| | Rudder area requirement as per table 38 & 39 of the schedule | As per rule | m ² | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no... | m ² | <input type="checkbox"/> | <input type="checkbox"/> |
| | Rudder stock dia requirement as per table 38 & 39 of the schedule | As per rule | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| As per drawing no .. | | mm | <input type="checkbox"/> | <input type="checkbox"/> | |
| 79. | Pintle (rule-68) | | | | |
| | Pintle length | As per rule | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | Pintle dia requirement as per table 40 of the schedule | As per rule | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| As per drawing no. | | mm | <input type="checkbox"/> | <input type="checkbox"/> | |
| 80. | Coupling flange (rule-69) | | | | |
| | Coupling flange thickness | As per rule | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | Coupling bolt centre edge | As per rule | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| As per drawing no. | | mm | <input type="checkbox"/> | <input type="checkbox"/> | |
| 81. | Coupling bolt (rule-70) | | | | |
| | Rudder stock dia. | As per rule | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | Coupling bolt dia. | As per rule | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| As per drawing no. | | mm | <input type="checkbox"/> | <input type="checkbox"/> | |
| 82. | Rudder plate (rule-71) | | | | |
| | Plate rudder | As per rule | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per rule | mm | <input type="checkbox"/> | <input type="checkbox"/> |

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| | | | | | | Complied with | |
| | | | | | | Yes | No |
| 83. | Main steering gear (rule-72) | | | | | | |
| | Rudder stock dia | | As per rule | mm | | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | As per drawing no. | mm | | <input type="checkbox"/> | <input type="checkbox"/> |
| | Hard P to S | | | | | | |
| | | | As per rule | 0 | | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | As per drawing no. | 0 | | <input type="checkbox"/> | <input type="checkbox"/> |
| 84. | Emergency steering gear (rule-72) | | | | | | |
| | Type of steering gear | | As per rule | | | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | As per drawing no. | | | <input type="checkbox"/> | <input type="checkbox"/> |
| | Hard P to S | | | | | | |
| | | | As per rule | 0 | | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | As per drawing no. | 0 | | <input type="checkbox"/> | <input type="checkbox"/> |
| | 3 position of steering indicator | | | | | | |
| | | | As per rule | | | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | As per drawing no. | | | <input type="checkbox"/> | <input type="checkbox"/> |
| 85. | Tiller & Quadrant (rule-74) | | | | | | |
| | Hub dia requirement as per rule-74 (4) | | As per rule | mm | | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | As per drawing no. | mm | | <input type="checkbox"/> | <input type="checkbox"/> |
| | Bolt dia requirement as per table-42 of the schedule | | | | | | |
| | | | As per rule | mm | | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | As per drawing no. | mm | | <input type="checkbox"/> | <input type="checkbox"/> |
| | Tiller or Quadrant dia requirement as per table-42 of the schedule | | | | | | |
| | | | As per rule | mm | | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | As per drawing no. | mm | | <input type="checkbox"/> | <input type="checkbox"/> |
| 86. | Steering chain & rod (rule-78) | | | | | | |
| | Steering chain dia requirement as per table-44 of the schedule | | As per rule | mm | | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | As per drawing no. | mm | | <input type="checkbox"/> | <input type="checkbox"/> |
| | Steering rod dia requirement as per table-44 of the schedule | | | | | | |
| | | | As per rule | mm | | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | As per drawing no. | mm | | <input type="checkbox"/> | <input type="checkbox"/> |
| 87. | Chain cable & ropes (Accessories) (rule-79) | | | | | | |
| | Requirement as per table-45 | Accessories no. A | Passenger ship Z1 | Wind age area | No. of anchor | <input type="checkbox"/> | <input type="checkbox"/> |
| | as per rule | | n/a | n/a | kg | <input type="checkbox"/> | <input type="checkbox"/> |
| | drawing no. | | n/a | n/a | kg | <input type="checkbox"/> | <input type="checkbox"/> |
| 88. | Requirement for chain cables (rule-81) | | | | | | |
| | Length of chain cable. | | As per rule | m. | | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | As per drawing no. | m. | | <input type="checkbox"/> | <input type="checkbox"/> |
| | Chain dia requirement as per table-46 of the schedule | | | | | | |
| | | | As per rule | mm | | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | As per drawing no. | mm | | <input type="checkbox"/> | <input type="checkbox"/> |
| | braking load requirement as per table-46 of the schedule | | | | | | |
| | | | As per rule | KN | | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | As per drawing no. | KN | | <input type="checkbox"/> | <input type="checkbox"/> |

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| | | | Complied with | | |
| | | | Yes | No | |
| 89. | Towing & morning lines (rule-82) | | | | |
| | Morning lines | As per rule | Nos. | <input type="checkbox"/> | <input type="checkbox"/> |
| | (steel or synthetic) | As per drawing no. | Nos. | <input type="checkbox"/> | <input type="checkbox"/> |
| | Length of tow/moor lines requirement | As per rule | m | <input type="checkbox"/> | <input type="checkbox"/> |
| | as per table-46 of the schedule | As per drawing no. | m | <input type="checkbox"/> | <input type="checkbox"/> |
| | Dia lines requirement | As per rule | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| 90. | Bulwark railing (rule-83) | | | | |
| | Bulwark thickness requirement | As per rule | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | as per table-47 of the schedule | As per drawing no. | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | Rail height | As per rule | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | Gap bet. stay & height | As per rule | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| 91. | Chain lockers (rule-84) | | | | |
| | For locker thickness requirement | As per rule | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | as per table-48 of the schedule | As per drawing no. | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | Stern locker thickness | As per rule | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| 92. | Propeller bracket (rule-85) | | | | |
| | V or I strut thickness requirement | As per rule | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | as per table-49 of the schedule | As per drawing no. | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | Shell plate thickness | As per rule | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| 93. | Anchor windlass (rule-86) | | | | |
| | Windlass (.....) | As per rule | KN | <input type="checkbox"/> | <input type="checkbox"/> |
| | Nominal pull | As per drawing no. | KN | <input type="checkbox"/> | <input type="checkbox"/> |
| 94. | Morning equipment (rule-86) | | | | |
| | Sets of double bollard | As per rule | Nos. | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | Nos. | <input type="checkbox"/> | <input type="checkbox"/> |
| 95. | Deck reinforced | As per rule | | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | | <input type="checkbox"/> | <input type="checkbox"/> |
| | Bottom sealing (rule-88) | | | <input type="checkbox"/> | <input type="checkbox"/> |
| | Wooden plank thickness | As per rule | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | mm | <input type="checkbox"/> | <input type="checkbox"/> |

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| | | | Complied with | | |
| | | | Yes | No | |
| 96. | Bilge & ballast system (rule-142) No. of bilge pump | As per rule | Nos. | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | Nos. | <input type="checkbox"/> | <input type="checkbox"/> |
| | Dia. of lines requirement as per table-57 of the schedule | As per rule | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| P/p drive | As per rule | | <input type="checkbox"/> | <input type="checkbox"/> | |
| | As per drawing no. | | <input type="checkbox"/> | <input type="checkbox"/> | |
| Emergency bilge P/p | As per rule | | <input type="checkbox"/> | <input type="checkbox"/> | |
| | As per drawing no. | | <input type="checkbox"/> | <input type="checkbox"/> | |
| 97. | General service pump (rule-143) Gs p/p fitted | As per rule | No. | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | No. | <input type="checkbox"/> | <input type="checkbox"/> |
| | P/p drive | As per rule | | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | | <input type="checkbox"/> | <input type="checkbox"/> |
| 98. | Air pipe (rule-144) No. of tank or cofferdam | As per rule | Nos. | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | Nos. | <input type="checkbox"/> | <input type="checkbox"/> |
| | Position of air pipe | As per rule | On the main deck | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | complied | <input type="checkbox"/> | <input type="checkbox"/> |
| | Closing fitted | As per rule | | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | | <input type="checkbox"/> | <input type="checkbox"/> |
| No. of cargo hold | As per rule | Nos. | <input type="checkbox"/> | <input type="checkbox"/> | |
| | As per drawing no. | Nos. | <input type="checkbox"/> | <input type="checkbox"/> | |
| 99. | Sounding pipe (rule-145) No. of cargo hold | As per rule | Nos. | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | Nos. | <input type="checkbox"/> | <input type="checkbox"/> |
| | Dia. of sounding pipe | As per rule | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| 100. | Over flow pipe (rule-147) No. of over flow pipe | As per rule | Nos. | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | Nos. | <input type="checkbox"/> | <input type="checkbox"/> |
| | Dia. of over flow pipe | As per rule | mm | <input type="checkbox"/> | <input type="checkbox"/> |
| As per drawing no. | | mm | <input type="checkbox"/> | <input type="checkbox"/> | |
| 101. | Stability & KM calculation: | | | | |
| | Manually | Rule | | <input type="checkbox"/> | <input type="checkbox"/> |
| | Using computer software | Drawing no. | | <input type="checkbox"/> | <input type="checkbox"/> |
| | Software approved | Rule | | <input type="checkbox"/> | <input type="checkbox"/> |
| | Approval. Cert. provided | Drawing no. | | <input type="checkbox"/> | <input type="checkbox"/> |

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| | | | Complied with | |
| | | | Yes | No |
| 102. | Load lines & Free board calculation (rule-4-21) | | | |
| | Load lines & Free board | As per rule | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | <input type="checkbox"/> | <input type="checkbox"/> |
| | Sill height | As per rule | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | <input type="checkbox"/> | <input type="checkbox"/> |
| | Hatch coaming height | As per rule | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | <input type="checkbox"/> | <input type="checkbox"/> |
| | Air/vent pipe height | As per rule | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | <input type="checkbox"/> | <input type="checkbox"/> |
| 103. | Manhole/entry to hatch-coaming height: | | | |
| | Coaming height | As per rule | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | <input type="checkbox"/> | <input type="checkbox"/> |
| 104. | Passenger ship structural configuration (rule-214) | | <input type="checkbox"/> | <input type="checkbox"/> |
| | Note: For ship above 40 meter longitudinal framing can be used at bottom and strength deck, or as an alternative transverse framing can be used at strength deck. | | <input type="checkbox"/> | <input type="checkbox"/> |
| | For ship above 40 meter double bottom and strength deck, shall be used, ship above 36 meter will be single compartment type as per stability rule with watertight bulkheads. | | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | <input type="checkbox"/> | <input type="checkbox"/> |
| | Framing user at double bottom | As per rule | | |
| | | As per drawing no. | <input type="checkbox"/> | <input type="checkbox"/> |
| | Framing user at deck | As per rule | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | | |
| | Strength deck used | As per rule | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | <input type="checkbox"/> | <input type="checkbox"/> |
| | D.B single compartment type | As per rule | | |
| | | As per drawing no. | | |
| | | | <input type="checkbox"/> | <input type="checkbox"/> |
| 105. | Double bottom structure: | | <input type="checkbox"/> | <input type="checkbox"/> |
| | Depth at center line of D.B (min. 800mm) | As per rule | | |
| | | As per drawing no. | <input type="checkbox"/> | <input type="checkbox"/> |
| | Thickness of inner plate (equal to bottom late) | As per rule | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | | |
| 106. | Double bottom bulkheads: | | <input type="checkbox"/> | <input type="checkbox"/> |
| | Center line bulkhead (if B>8m) | As per rule | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | | |
| | Transverse bulkhead in every D.B tank | As per rule | <input type="checkbox"/> | <input type="checkbox"/> |
| | | As per drawing no. | <input type="checkbox"/> | <input type="checkbox"/> |
| | Bulkhead plate thickness | As per rule | | |
| | | As per drawing no. | | |
| | | | <input type="checkbox"/> | <input type="checkbox"/> |
| | As described above the compliance of construction rules (S.R.O no. 308/Law, dt: 31.10.01) till rule-284 is to be shown and described in the submission for approval of drawings and plates. | | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | <input type="checkbox"/> | <input type="checkbox"/> |

Approval of design of an inland Vessel

- a. Vessel name :
- b. L_{OA} :
- c. L_{BP} :
- d. L_{WL} :
- e. B_{EXT} :
- f. B_{MLD} :
- g. DEPTH_{EXT} :
- h. DEPTH_{MLD} :
- i. DRAUGHT :
- j. Number of propeller ..
- k. Diameter of propeller :
- l. Type of Engines :
- m. Power of Engines : BHP .
- n. Ship's owner name :
- & address :

- Drawn by (firm/person) :
- Design by (firm/person) :
- Checked by (firm/person) :

- Verify & checked for compliance of the rules by (DOS/LCS/BIWTA) :
- Approved by :
- Department of shipping, Dhaka.

- Approved no. & date :

The Department of Shipping hereby approves the plan of the above mentioned vessel on condition that the Construction Supervisor will ensure compliance of the Inland Shipping Ordinance 1976 & rules made there under and as per this approval booklet including instructions for supervisor during the construction of the vessel. He will also submit a compliance certificate after the completion and test trial of the vessel for registration of the vessel of the register of Inland Ships.

Instructions for Construction Supervisor/Panel Supervisor:

1. The Supervisor shall follow the instruction as per the charter of duties of the Supervisors of the Department of Shipping cir. no. CESS/002/POS, dated 3 March 2003; He will inform the Department of Shipping in writing at the following stages of the Construction:

- (A) a) Completion of lofting,
 d) Completion of laying of keel,
 c) Completion of framing,
 d) Completion of hull,
 e) Completion of installation of engines propulsion system and fittings of rudder,
 f) Launching,
 g) Completion of superstructure,
 h) Completion of system fittings.
- (B) Carry out inclining experiment in presence of Government Surveyor for Inland Shipping and produce final stability booklet; and
- (C) Print draft and load line mark on the inland ship/craft. as instructed in the said circular.

(D) Load line and Free board calculation (rule 4-21):

| Load line & Free board | As per rule mm. | Drawing No. mm. | Comment |
|------------------------|-----------------|-----------------|---------|
| Free board | | | |
| Sill height | | | |
| Hatch coaming height | | | |
| Air pipe height | | | |
| | | | |

(E) Note:

1. All doors at open deck to be water tight,
2. Minimum sill height-150 mm, for tug-300 mm.
3. Vessel intended to go to Chittagong, min. sill height-450 mm.
4. Min. hatch coaming height-450 mm.
5. Vessel intended to go to Chittagong, min. hatch coaming height-750 mm.
6. No port hole below free board deck
7. Air pipes min. height-450 mm.
8. Vessel intended to go to Chittagong, min. air pipe height-750 mm.
9. All port holes, sky lights, hatch covers, air pipes doors open to deck and any entry below free board deck must be weather tight.

(F) For passenger launch-
 Vessel plying only in calm water, min. free board-300 mm.
 For sunken deck passenger vessel, min. free board-300 mm.

(G) Check water tightness of the tanks, bulkheads, welded joints, etc.

(H) Check the dimension of plates, frames & other specification of the equipment and materials used for construction as per the approved plan.

(I) Final stability booklet: Stability booklet shall contain at least the following information:

- i) Aitable of contents & index for the booklet,
- ii) General description of the ship with principal dimensions,
- iii) General arrangement plan showing water tight compartment ballast if any, free board diagram.
- iv) Hydrostatic curves/tables & cross curves of stability calculated on even keel and intact & Dynamic stability (as per Inland Ship Stability Rule-2001, where applicable)

- vi) Tank sounding table showing capacity and CG of each tank.
- vii) Information on loading restrictions, such as, maximum KG or minimum GM curve or table that can be used to determine compliance with the applicable stability criteria.
- viii) At least four standard operating condition & examples (as per Inland Ship Stability Rule-2001, where applicable) for Developing other loading condition using information contained in the Stability Booklet.
- ix) Detailed calculation showing whether the vessel satisfy the specific requirement of, “Inland Ship Stability Rule-2001”
- x) Guidance for the master for safe operation of the Ship.
- xi) Inclining test report for the ship.
- xii) Any other information which are unique/peculiar to the vessel.
- xiii) Simplified stability data for passenger ships. Stability calculation to be shown for the following conditions:
 - (d) All passenger on one side with no wind and maximum beam wind speed of 60 knot & gust of 100 knots,
 - (e) Half passenger on one side with no wind and maximum beam wind speed of 60 knot & gust of 100 knots,
 - (f) Empty ship with no wind and maximum beam wind speed of 60 knot & gust of 100 knots,

In all cases vessel must have enough reserve buoyancy to be upright.

2. Water tightness test as per table-41 to be conducted for all plates, welded joints, bulkheads etc. as following:
 - ξ All tanks to be designed & tested for water tightness with head one meter high above topmost level or above overflow/vent pipe.
 - ξ All bulkhead to be designed, inspected & tested for water tightness.
 - ξ All double bottom tanks to be designed & tested for water tightness with head three meter high above topmost level or above overflow/vent pipe.

3. To check conformity with Fire & Safety Plan: (S.R.O no. 301/Law, dt: 31.10.01, rule- 1-35 is to be followed)
 - All bulkheads in accommodation is to be of min. 5 mm (new plate) and 20% extra for old plates;

Fire pump (rule-5)

| | No. of pump | No. of hydrant | Delivery m ³ | Comment |
|-------------|-------------|----------------|-------------------------|---------|
| As per rule | | | | |
| Drawing No. | | | | |

- Rule 6(4): Min. hydrant diameter-40 mm.
- Rule 6(7): Min. inner diameter for fire main:50 mm.

A. Cargo ship (rule-13)

Total engine power: 12-40 KW/40-180 KW/180-450 KW/450-800 KW/ above-

| Type | As per rule | Drawing No. | Comment |
|--|-------------|-------------|---------|
| Fire extinguisher AB/ABE/BE 9ltr/6ltr | | No. | |
| Fire pump | | No. | |
| Fire bucket | | No. | |
| Fire axe | | No. | |
| Sand box | | No. | |
| Others | | No. | |

B. Passenger ship (rule-17/18)

Total engine power: 12-40 KW/40-180 KW/180-450 KW/450-800 KW/ above-

| Type | As per rule | Drawing No. | Comment |
|--|-------------|-------------|---------|
| Fire extinguisher AB/ABE/BE 9ltr/6ltr | | No. | |
| Fire pump | | No. | |
| Fire bucket | | No. | |
| Fire axe | | No. | |
| Sand box | | No. | |
| Others | | No. | |

C. Tanker ship (rule-16)

Total engine power: 12-40 KW/40-180 KW/180-450 KW/450-800 KW/ above-

| Type | As per rule | Drawing No. | Comment |
|--|-------------|-------------|---------|
| Fire extinguisher AB/ABE/BE 9ltr/6ltr | | No. | |
| Fire pump | | No. | |
| Fire bucket | | No. | |
| Fire axe | | No. | |
| Sand box | | No. | |
| Others | | No. | |

D. Dumb barge (rule-14)

Total engine power: 12-40 KW/40-180 KW/180-450 KW/450-800 KW/ above-

| Type | As per rule | Drawing No. | Comment |
|--|-------------|-------------|---------|
| Fire extinguisher AB/ABE/BE 9ltr/6ltr | | No. | |
| Fire pump | | No. | |
| Fire bucket | | No. | |
| Fire axe | | No. | |
| Sand box | | No. | |
| Others | | No. | |

E. Other ship (rule-15/19/20)

Total engine power: 12-40 KW/40-180 KW/180-450 KW/450-800 KW/ above-

| Type | As per rule | Drawing No. | Comment |
|--|-------------|-------------|---------|
| Fire extinguisher AB/ABE/BE 9ltr/6ltr | | No. | |
| Fire pump | | No. | |
| Fire bucket | | No. | |
| Fire axe | | No. | |
| Sand box | | No. | |
| Others | | No. | |

4. To check conformity with the rules and approved plans:

1) Machinery space: (rule-42)

Note: Adequate webs, frame, pillar for strength,

- Continuation of frames and girder to next framings for proper transferring of thrust & forces generated by machineries,
- space must have properly designed entrance staircase & emergency exit,
- continuous thick rider plate fitted on continuous transverse girder for holding down bolts must be provided,
- staircase inclination- max. 55⁰

| | max. staircase angle | emergency exit | Comment |
|-------------|----------------------|----------------|---------|
| As per rule | | | |
| Drawing No. | | | |

2) Machinery space floor plate: (rule-43)

Note: even floor plate, no flange, floors with 'T' section.

| | no flange | even with 'T' section. | Comment |
|-------------|-----------|------------------------|---------|
| As per rule | | | |
| Drawing No. | | | |

3. Engine room side stingers: (rule-46)

Note: If at half height of engine room is more than 2 meter depth of ship, then side stringer to be fitted in the engine room.

| | side stinger mm. | sec. modu. mm. | Comment |
|-------------|---------------------|-------------------|---------|
| As per rule | | | |
| Drawing No. | | | |

4. Engine room side stingers: (rule-46)

Note: If at half height of engine room is more than 2 meter depth of ship, then side stringer to be fitted in the engine room.

| | side stinger mm. | sec. modu. mm. | Comment |
|-------------|---------------------|-------------------|---------|
| As per rule | | | |
| Drawing No. | | | |

5. Longitudinal hatch coaming: (rule-46)

Note: Longitudinal girders to be fitted in way of hatch coaming.

- Hatch coaming height min. 450 mm.
- Hatch corners to have rounded doubler plate.
- Hatch coaming (height min. 450 mm.) plate thickness as per table 30.

| | coaming plate mm. | girder fitted | Comment |
|-------------|----------------------|---------------|---------|
| As per rule | | | |
| Drawing No. | | | |

6. Port hole & side scuttle: (rule-46)

Note: No port hole & side scuttle at 20% length from forward at shell plating,

- No port hole & side scuttle under free board deck & port hole & side scuttle to be water tight.
- No port hole & side scuttle at shell plating above free board line must have weather tight deadlight arrangement, if intended to ply on partial bay (bay crossing).

| | Port hole position | Dead light | Comment |
|-------------|-----------------------|------------|---------|
| As per rule | | | |
| Drawing No. | | | |

7. Man hole & flash deck plug (rule-59)

Note: All man hole & flash deck plug to be water tight, if needed with gasket.

| | Man hole watertight | Plugs watertight | Comment |
|-------------|------------------------|---------------------|---------|
| As per rule | | | |
| Drawing No. | | | |

7. Freeing ports (rule-60):

Note: Bulwarks to have sufficient freeing ports for efficient drainage on weather deck.

- Area of freeing port: $0.1 \times L \text{ m}^2$ where L is length of bulwark on deck,
- If freeing ports area 250 mm. high, than vertical stand to fit every 900 mm.

| | Freeing port min. area m^2 | No. vertical stand | Comment |
|-------------|--|-----------------------|---------|
| As per rule | | | |
| Drawing No. | | | |

8. Drainage pipe (rule-61):

Note: Weather deck with sufficient drainage pipe with non return value, pipe thickness not less than shell plate thickness.

| | Drain pipe no. | Pipe dia & thickness | Comment |
|-------------|----------------|-------------------------|---------|
| As per rule | | | |
| Drawing No. | | | |

9. Super structure, Deck house & Quarter deck (rule-62):

Note: All Super structure, Deck house & Quarter decks to be well supported by girders, stiffeners and framing.

| | Superstructure stiffened | Deck house stiffened | Comment |
|-------------|-----------------------------|-------------------------|---------|
| As per rule | | | |
| Drawing No. | | | |

9. Super structure, Deck house & Quarter deck bulkhead (rule-63):

- a. Min. bulkhead thickness-3 mm. & section modulus- as per table 35,
- b. Forward bulkhead section modulus to increase by 20%

| | Bulkhead mm. | Sec. Modu. cm^3 | Comment |
|-------------|-----------------|-----------------------------|---------|
| As per rule | | | |
| Drawing No. | | | |

11. Main steering gear (rule-72):

Note: Main steering gear, capable to turn the rudder from 30° one side to 30° other side within not more than 30 second,

- Manual hand steering up to rudder stock diameter-100 mm. for one rudder, 80 mm. for two rudder, 60 mm. for three rudder (condition not for passenger ship).
- Turn of steering wheel not more than 30 turn from hard port starboard,
- Required force to turn hand wheel 200 newton (N) max.

| | Rudder stock dia. | Hard P to S | Comment |
|-------------|----------------------|-------------|---------|
| As per rule | mm. | 0 | |
| Drawing No. | mm. | 0 | |

12. Emergency steering gear (rule-73):

Note: Emergency Main steering gear for all passenger vessel above 40 meter.

- Capable to turn the rudder from 15th one side to 15th other side within not more than 60 second,
- Manual steering can be used, if hydraulic steering is provided as main steering,
- Three position to show rudder indicator main steering position at bridge, emergency steering position and on top of steering gear /room.

| | Type of steering gear. | Hard P to S | 3 position of steering ind. | Comment |
|-------------|------------------------|-------------|-----------------------------|---------|
| As per rule | | 0 | | |
| Drawing No. | | 0 | | |

13. Tiller & Quadrant (rule-73):

Note: Facility to lock tiller & quadrant to be provided,

- Hub dia. to be as per rule-74 (4)
- Rudder bolt dia. as per rule-42
- Tiller & quadrant as per rule-43

| | Tiller lock facility & dia mm. | Hub dia mm. | Bolt dia mm. | Comment |
|-------------|--------------------------------|-------------|--------------|---------|
| As per rule | | | | |
| Drawing No. | | | | |

14. Hydraulic piping (rule-76)

Note: Positioning of hydraulic piping to be as near of the centre line of ship,

- Piping through cargo hatch to be avoided & steel shield to provided to cover piping, piping system to avoid torsion & vibration,
- Separate piping for main & emergency steering,
- Sight & fitter in the hydraulic system.

| | Pipe positioning | Separate sys. for main/max. | Sight glass & filter | Comment |
|-------------|------------------|-----------------------------|----------------------|---------|
| As per rule | | | | |
| Drawing No. | | | | |

15. Bulwark & railing (rule-83)

Note: Bulwark & guard railing at fore, aft. plate & weather deck of a ship shall be min. 600 mm. high,

- For passenger ship bulwark & guard railing shall be min. 900 mm. high,
- Bulwark plate thickness as table-47,
- Bulb section of railing upper part 100 X 8 mm, angle- 60 X 30 X 5 mm, flat bar stay 60 X 6 mm,
- Stay or pillar after every 1200 mm on the deck beam or bracket, every fourth pillar to be stiffened with rail,
- Vessels without bulwark shall have railings on deck, topmost rail diameter shall be min. 50 mm, other rails diameter shall be min. 25 mm,
- Distance between rails shall be 300 mm and for passenger between stay shall be max. 900-1200 mm,

| | Bulwark plate thickness mm. | rail height | Gap bet. stay & height | Bulwark/ railing | Comment |
|-------------|-----------------------------|-------------|------------------------|------------------|---------|
| As per rule | | | | | |
| Drawing No. | | | | | |

Instruction to the Passenger

Registrar of Inland Ships to monitor the information of Panel Supervisor during the construction stages of vessel when informed, to present during the including experiment and register the vessel when applied by the owner.