

INDIAN REGISTER OF SHIPPING

CLASSIFICATION NOTES

Application of IRS Rules to Indian River Sea Vessels

Revision 01

April 2021



IRCLASS
Indian Register of Shipping

CLASSIFICATION NOTES**Application of IRS Rules to Indian River Sea Vessels****Revision 01, April 2021****TABLE 1 – AMENDMENTS INCORPORATED IN THIS VERSION**

| Clause | Subject/ Amendments |
|--------------------------------|--|
| Preamble (Last Paragraph, new) | Requirements for Indian River Sea Passenger Vessels Type 3 and Type 4 are clarified. |

Classification Notes

Application of IRS Rules to Indian River Sea Vessels Revision 01, April 2021

Preamble

Indian River Sea vessels are categorized as Type 1 to Type 4 according to their operational profile by the Government of India as per DGS Order No. 18 of 2013.

The Rules for construction and classification of Inland waterways vessels are to be applied to Indian River Sea Vessels Type 1 and Type 2. The Rules for construction and classification of steel ships (Main Rules) are applicable to Indian River Sea vessels Type 3 and Type 4 with some reduction in requirements as specified in this Classification Notes.

Changes to the requirements for application to River sea vessels for each relevant chapter of the Rules are specified.

This Classification Notes is to be read in conjunction with the Rules and Regulations for Construction and Classification of Steel Ships (Main Rules).

The Rules for Indian River Sea vessels are applicable to ships which are:

- less than 6000 GT in the case of cargo ships;
- less than 10000 GT in the case of dredgers;
- less than 3000 GT in the case of RSV Tankers;
- less than 8000 kW main propulsion power in the case of cargo ships;
- less than 10000 kW main propulsion power in the case of dredgers;
- less than 3000 kW main propulsion power in the case of RSV Tankers;
- not passenger vessels;
- not carrying bulk chemicals or gas in any form (packaged or otherwise);
- not fishing vessels;
- not military and government ships not used for commercial purposes.

Note : RSV tankers are vessels which carry petroleum oils of flash point exceeding 60 deg. C and vegetable oils specified in the DGS Order.

Indian River Sea Passenger Vessels Type 3 and 4 are to comply with the relevant requirements of DGS Order 5 of 2017. Such vessels are also to comply with the requirements of Rules and Regulations for the Construction and Classification of Steel Ships (Main Rules), as applicable, and would be assigned Class Notation “Indian River Sea Passenger Vessel Type 3” or “Indian River Sea Passenger Vessel Type 4” accordingly. The reduction in requirements specified in this Classification Note are for cargo vessels and are not applicable to Indian River Sea Passenger Vessels.

Part 1 Chapter 1 General

Part1 Chapter 1 of the Rules and Regulations for Construction and Classification of Steel Ships (Main Rules) are to be applied for Indian River Sea vessels Type 3 and 4 with the following changes to the clauses indicated below:

Clause 2.1.3

2.1.3 In the case of vessels with class notation “Indian River Sea vessel - Type 3”, “Indian River Sea vessel -Type 4”, applicable statutory requirements of the Indian flag administration for river-sea vessels are to be complied with as a prerequisite of classification.

Clause 2.7.1

2.7.1 When requested by an Owner and agreed to by IRS or when considered necessary by IRS, a class notation will be appended to the character of classification. This class notation will consist of one of, or a combination of – a type notation, a cargo notation, a special duties notation, a special features notation and/or a service restriction notation as shown in the following examples:

☯ SUL “Indian River Sea vessel- Type 3” ;

☯ SUL “Indian River Sea vessel- Type 4”, “For carriage of oil of flash point above 60 deg C”

☯ SUL “Indian River Sea vessel- Type 4”, “For carriage of vegetable oils”

Clause 2.7.3 :

2.7.3 Service restriction notation will generally be assigned in one of the forms given below, but this does not preclude the Owners or Shipbuilders from requesting special consideration for other forms of restrictions.

a) Indian River Sea Vessel - Type 3

Vessels engaged in operations between Indian ports in which the maximum distance does not exceed that can be covered by a fully loaded vessel at the vessel’s optimum speed in 48 hours, provided that such operation is carried out in fair weather and against a favourable weather forecast. Vessels falling under this Type shall at all times while operate within the territorial waters of India.

b) Indian River Sea Vessel- Type 4

Vessels engaged in operations between Indian ports during all-weather conditions. Vessels falling under this Type shall at all times operate within the territorial waters of India.

Appendix - 1 List of Class notations: Table of class notations are amended as follows for application to Indian River sea vessels. Other notations may be considered where requested in special cases.

| Appendix 1 | | |
|---|----------------------|---|
| Table of characters of class and type notations of IRS, their expanded form and significance | | |
| Abbreviation | Expanded Form | Significance |
| Characters of Class | | |
| SUL | SARVOUTAM LANGER | Denotes vessels which are classed with Indian Register of Shipping where the hull and its appendages and equipment (i.e. anchors, chain cables, hawsers) meet the Rule requirements. |
| SU- | SARVOUTAM | Denotes vessels which are classed with IRS where the hull and its appendages meet the rule requirements but when the equipment of ship is not supplied or maintained as per the relevant Rules but is considered by IRS to be acceptable for particular service |
| SU | SARVOUTAM | Denotes vessels which are classed with IRS where the hull and its appendages meet the rule requirements but where for reason of their particular purpose or service normal equipment may be unnecessary |
| IY | INDIAN YANTRA | Denotes that for self-propelled seagoing vessels, the machinery installation complies with the applicable requirements of Indian Register of Shipping |
| 卐 | SWASTIKA | This distinguishing mark inserted before a Character of Class is assigned to new ships where the hull and its appendages, equipment and the machinery as appropriate, are constructed under special survey of IRS in compliance with the Rules to the satisfaction of IRS |
| [] | | When a Class Notation is enclosed within brackets, it indicates that applicable arrangements exist on board but the notation has been temporarily suspended |

| Abbreviation | Expanded Form | Significance |
|--|--|--------------|
| Class Notations – Hull | | |
| Indian River Sea Vessel - Type 3 | This notation will be assigned to vessels engaged in operations between Indian ports in which the maximum distance does not exceed that can be covered by a fully loaded vessel at the vessel's optimum speed in 48 hours, provided that such operation is carried out in fair weather and against a favourable weather forecast. Vessels falling under this Type shall at all times operate within the territorial waters of India. | |
| Indian River Sea Vessel- Type 4 | This notation will be assigned to vessels engaged in operations between Indian ports during all-weather conditions. Vessels falling under this Type shall at all times operate within the territorial waters of India. | |
| Specified Route Service | Service between two or more points or other geographical features which will form part of the Class Notation | |
| Specified Operating Area Service | Service within one or more geographical area(s) which will form part of the Class Notation | |
| "Strengthened for heavy cargoes" | This notation will be assigned for Ships where the scantlings and arrangements have been approved for heavier cargo loadings in any hold filled up to the top of the hatch coaming with cargo at a stowage rate of ≤ 1 [m ³ /tonne], when the draught in way of the hold is 80 per cent of the maximum permissible draught or more | |
| "Hold(s) ...(to be specified)..... may be empty" | This notation will be assigned when in association with the carriage of heavy cargoes, specified holds are permitted to be empty with the ship in the fully loaded condition | |
| INWATER SURVEY | Denotes that the examination of the ship's bottom and related items may be carried out while the ship is afloat in accordance with the applicable requirements indicated in Pt.1, Ch.2, Sec.7.2 | |

| Abbreviation | Expanded Form | Significance |
|---|--------------------------------|--|
| "For carriage of cement in bulk" | | This notation will be assigned for vessels which are designed and constructed solely for carriage of cement in bulk and the scantlings and arrangements have been approved accordingly |
| "For carriage of oil of flash point above 60 deg C" | | This notation will be assigned for vessels designed and constructed to carry petroleum oils of flash point above 60 deg.C according to the requirements of RSV tankers in the notification of the Govt. of India. |
| "For carriage of vegetable oils" | | This notation will be assigned for vessels designed and constructed to carry specified vegetable oils according to the requirements for RSV tankers in the notification of the Govt. of India. |
| Class Notations - Machinery | | |
| CCS | CENTRALIZED CONTROL STATION | Denotes that the propulsion and auxiliary machinery can be controlled and monitored with continuous supervision from a Centralized Control Station as detailed in Pt.4, Ch.7. It also denotes that the control engineering equipment has been arranged, installed and tested in accordance with Rules. |
| SYJ | SWACHALIT YANTRIK JHAZ | Denotes that the ship can be operated with the machinery spaces unattended in accordance with the applicable requirements of Part 5, Chapter 22 of the Rules |
| AGNI 1 | AGNI SHAMAK | Denotes that the ship is equipped for early stage fire-fighting and rescue operations close to structures including means for self-protection of the vessel |
| AGNI 2 | | Denotes that the ship is equipped for continuous fighting of large fires and for cooling of structures on fire including means for self-protection of the vessel |
| AGNI 3 | | Denotes that the ship is equipped for continuous fighting of large fires and for cooling of structures on fire and of greater capacity than for "AGNI 2" |
| TCM | TAILSHAFT CONDITION MONITORING | Denotes that sterntube bearing temperature and lubricating oil consumption are monitored, lubricating oil analysis is carried out regularly and records of monitoring / analysis are maintained as per Pt.1, Ch.2, Sec.11 of the Rules |

| Ship Type Notation | |
|---|---|
| Ship Type Notation | Significance |
| TUG | This notation will be assigned to all ships built in accordance with applicable requirements of Part 5, Chapter 7 of the Rules |
| DREDGER, HOPPER DREDGER, RECLAMATION CRAFT, HOPPER BARGE, SPLIT HOPPER BARGE | These notations will be assigned to self-propelled or non self-propelled vessels engaged in dredging or reclamation operation in accordance with applicable requirements of Part 5, Chapter 10 of the Rules |
| BARGE | This notation will be assigned to non-self-propelled, manned or unmanned ships carrying dry cargo in cargo holds and built in accordance with applicable requirements of Part 5, Chapter 11 of the Rules. For special purpose vessels, the Notation will be suitably modified, e.g. Shipborne Barge |
| OIL BARGE | This notation will be assigned to non-self-propelled, manned or unmanned ships intended to carry oil in bulk and built in accordance with the applicable requirements of River -Sea tankers according to the notification of the Govt. of India and Part 5, Chapter 11 of the Rules. Appropriate notation will be appended to indicate the type of cargo (e.g. " For carriage of oil with flash point above 60 deg C) |
| PONTOON | This notation will be assigned to non-self- propelled, manned or unmanned ships designed specifically for the carriage of non-perishable cargo or equipment on deck and built in accordance with the applicable requirements of Part 5, Chapter 11 of the Rules. For special purpose vessels, the Notation will be suitably modified, e.g. Crane Pontoon |

Part 1 Chapter 2 Periodical Surveys

Part1 Chapter 2 of the Rules and Regulations for Construction and Classification of Steel Ships (Main Rules) are to be applied to River sea vessels with the following changes:

Section 6: Other Ship Types

In the case of vessels with class notation “Indian River Sea vessel type-3” and “Indian River Sea vessel type-4” , the additional requirements for General Dry Cargo ships will not apply regardless of the cargo carried. Accordingly, the following clauses need not be complied with:

Clause 6.2.3 “Examination of cargo holds of dry cargo ships” during annual surveys will not apply

Clause 6.2.2.3 and 6.3.3.2 “Cargo holds of dry cargo ships” for intermediate surveys will not apply.

Clause 6.4.7 and Table 6.4.7.1 regarding close up survey of general dry cargo ships during special surveys will not apply.

Table 6.4.8.1.b) and clause 6.4.8.2 regarding thickness measurement during special surveys of general dry cargo ships will not apply.

Clause 6.4.9 “ Reporting and evaluation of survey of general dry cargo ships” will not apply.

Part 3 Chapter 4 Design Loads

In **Clause 1.2.2** the following text is added at the end regarding reduction factor R_s for dynamic components of sea pressures and wave bending moments:

In case of vessels with class notation "Indian River Sea vessel - Type 3" or "Indian River Sea vessel -Type 4", reduction factor " R_s " is to taken as 0.75.

In **Clause 3.3.2** the requirement for minimum value of tank testing pressure " p_0 " of 0.024 [N/mm²] (corresponding head of about 2.4 m above tank top) is waived for river sea vessels of less than 90 m. The requirement for pressure " p_0 " is to be read as follows for vessels with class notation "Indian River Sea vessel - Type 3" or "Indian River Sea vessel -Type 4":

$p_0 = 0.01$ [N/mm²] for $L \leq 20$ [m]

$= 0.024$ [N/mm²] for $L \geq 90$ [m]

For L between 20 [m] and 90 [m] the value of ' p_0 ' is to be obtained by linear interpolation.

Part 3 Chapter 5 Longitudinal Strength

In **Clause 6.1.1** Requirement for loading manual for river sea vessels is given in new paragraph as follows, deleting the reference to applicability of Loadline Convention.

6.1.1 An approved loading manual is to be provided for ships covered by Regulation 10 of the Load Line Convention except those belonging to Category II and of length less than 90 [m] for which the maximum deadweight does not exceed 30% of the displacement at summer loadline draft.

In case of vessels with class notation "Indian River Sea vessel- Type 3" or "Indian River Sea vessel- Type 4", an approved loading manual is to be provided except for those ships belonging to Category II and of length less than 90 [m] for which the maximum deadweight does not exceed 30% of the displacement at the maximum draft.

Part 3 Chapter 7 Bottom Structure

In **Clause 3.1.1** the requirement for minimum value of tank testing pressure “ p_0 ” of 0.024 [N/mm²] (corresponding head of about 2.4 m above tank top) is waived for river sea vessels of less than 90 m. The requirement for pressure “ p_0 ” is to be read as follows for vessels with class notation "Indian River Sea vessel - Type 3" or "Indian River Sea vessel -Type 4":

$$p_0 = 0.01 \text{ [N/mm}^2\text{]} \text{ for } L \leq 20 \text{ [m]}$$

$$= 0.024 \text{ [N/mm}^2\text{]} \text{ for } L \geq 90 \text{ [m]}$$

For L between 20 [m] and 90 [m] the value of ' p_0 ' is to be obtained by linear interpolation.

In **Clause 7.1.3** It is clarified that slamming strength requirements do not apply to river sea vessel type 3 which operates only in fair weather.

Clause 7.1.3 is to be read as shown below:

7.1.3 Where a ship is classed for 'Restricted Service' or 'Sheltered water service', compliance with the requirements of this section may be modified or waived altogether. This section need not be applied to vessels with class notation "Indian River Sea vessel- Type 3".

Part 3 Chapter 8 Side Structure

In **Clause 3.2.2** the requirement for minimum value of tank testing pressure “ p_0 ” of 0.024 [N/mm²] (corresponding head of about 2.4 m above tank top) is waived for river sea vessels of less than 90 m. The requirement for pressure “ p_0 ” is to be read as follows for vessels with class notation "Indian River Sea vessel - Type 3" or "Indian River Sea vessel -Type 4":

$$p_0 = 0.01 \text{ [N/mm}^2\text{]} \text{ for } L \leq 20 \text{ [m]}$$

$$= 0.024 \text{ [N/mm}^2\text{]} \text{ for } L \geq 90 \text{ [m]}$$

For L between 20 [m] and 90 [m] the value of ' p_0 ' is to be obtained by linear interpolation.

Part 3 Chapter 9 Deck Structure

In **Clause 3.3.1** the requirement for minimum value of tank testing pressure “ p_0 ” of 0.024 [N/mm²] (corresponding head of about 2.4 m above tank top) is waived for river sea vessels of less than 90 m. The requirement for pressure “ p_0 ” is to be read as follows for vessels with class notation "Indian River Sea vessel - Type 3" or "Indian River Sea vessel -Type 4":

$$p_0 = 0.01 \text{ [N/mm}^2\text{]} \text{ for } L \leq 20 \text{ [m]}$$

$$= 0.024 \text{ [N/mm}^2\text{]} \text{ for } L \geq 90 \text{ [m]}$$

For L between 20 [m] and 90 [m] the value of ' p_0 ' is to be obtained by linear interpolation.

Part 3 Chapter 10 Bulkheads

In **Clause 3.3.1** the requirement for minimum value of tank testing pressure “ p_0 ” of 0.024 [N/mm²] (corresponding head of about 2.4 m above tank top) is waived for river sea vessels of less than 90 m. The requirement for pressure “ p_0 ” is to be read as follows for vessels with class notation "Indian River Sea vessel - Type 3" and "Indian River Sea vessel -Type 4":

$p_0 = 0.01$ [N/mm²] for $L \leq 20$ [m]

= 0.024 [N/mm²] for $L \geq 90$ [m]

For L between 20 [m] and 90 [m] the value of ' p_0 ' is to be obtained by linear interpolation.

Part 3 Chapter 11 Superstructures, Deckhouses and bulwarks

In the case of vessels with class notation “**Indian River sea vessel- Type 3**”, which operate only in fair weather, some of the requirements related to protection from green water on decks may be waived as specified in the following:

5.4.1 Where bulwarks on the weather portion on freeboard or superstructure decks form wells, provision is to be made for rapidly freeing the decks of water.

Clauses 5.4.2 to 5.4.6 regarding freeing port areas need not be applied.

Subsection 5.5 “Freeing ports in way of wells in combination with open superstructures” also need not be applied to vessels with class notation “Indian River sea vessel- Type 3”.

Sub section 5.7 “Protection of crew requirements for specific ship types” regarding walkways etc also need not be applied to vessels with class notation “Indian River Sea vessel -Type 3”.

Section 6 “Means of Embarkation and disembarkation”, which gives special requirements for such means, need not be applied to vessels with class notation “Indian River sea vessel- Type 3” and “Indian River sea vessel- Type 4” .

Part 3 Chapter 12 Openings and Closing appliances

In the case of river-sea vessels Type 3 due to their operation in only fair weather, the following reduction in requirements are given.

Additional requirements for small hatches on the exposed fore-deck also can be waived due to minimal deck wetness. Accordingly, in clause **7.1.8**, is amended as follows:

7.1.8 In addition to the requirements, in 7.1.1 to 7.1.6, small hatches on the exposed foredeck of vessels with $L \geq 80$ [m] are to meet the requirements of 7.2. The requirements of 7.2 need not be applied to vessels with class notation "Indian River Sea vessel -Type 3".

Requirement of efficient deck house or companion way to protect openings on decks above the freeboard deck also need not be applied to River sea vessels type 3. Accordingly, **clause 7.5.1** is amended as follows:

7.5.1 Openings in freeboard decks, other than hatchways, machinery space openings, manholes and flush scuttles, are to be protected by an enclosed superstructure or by a deckhouse or companionway of equivalent strength and weathertightness to an enclosed superstructure, effectively secured to deck.

Any such openings:

- a) in an exposed superstructure deck,
 - b) on top of a deckhouse on the freeboard deck and giving access to space below freeboard deck,
 - c) in an exposed position on the deck above a superstructure deck and giving access to space within that superstructure,
- shall be protected by an efficient deckhouse or companionway as above. However, in the case of c) it is considered that openings in the top of a deckhouse:

- i) on a raised quarter deck or
- ii) on a superstructure of less than standard height but having a height equal to or greater than standard quarter deck height are to be provided with an acceptable means of closing but need not be protected by an efficient deckhouse or companionway provided the height of the deckhouse is at least the standard height of a superstructure.

In the case of vessels with class notation "Indian River Sea vessel- Type 3", openings on decks above the freeboard deck need only be provided with an acceptable means of closing and need not be protected by a deckhouse or companionway

Part 3 Chapter 13 Ventilators, Air pipes and Discharges

1. Additional requirements for strength of attachments of fore deck fittings also need not be applied to River sea vessel type 3 due to low probability of fore deck green water loads. Accordingly, clause 1.4.1 is amended as follows:

1.4.1 The air pipes, ventilators and their closing devices fitted on ships of $L \geq 80$ [m] on exposed decks in the forward $0.25L$ are to satisfy the requirements given in 1.4.2 and 1.4.3 if the height of the exposed deck in way of the item is less than $0.1L$ or 22 [m] above the summer load waterline, whichever is the lesser:

However, these requirements need not be applied to cargo tank venting systems and inert gas systems of oil tankers, chemical carriers and liquefied gas carriers.

The requirements of 1.4.2 and 1.4.3 need not be applied to vessels with class notation "Indian River Sea vessel -Type 3".

Part 3 Chapter 18 Hull inspection, workmanship and testing

The requirement for minimum value of tank testing pressure “ p_0 ” of 0.024 [N/mm²] (corresponding head of about 2.4 m above tank top) can be waived for river sea vessels of less than 90 m.

Accordingly, in **Table 3.4.1, note 9)** is to be read follows for vessels having class notation “Indian River Sea vessel- Type 3” and “Indian River Sea vessel- Type 4”:

For vessels of $L < 90$ [m], the head of water above highest point of tank may be $(0.02L + 0.6)$ [m], but not less than 1.0 [m].

Part 4 Chapter 3 Pumping and Piping

In **Clause 2.1.1**, waiver of bilge suctions for small compartments may be allowed in river sea vessels. Clause 2.1.1 is amended as follows for such vessels:

2.1.1 All ships are to be provided with necessary pumps, suction and discharge piping and means of drainage so arranged that any compartment can be pumped out effectively, when the ship is on an even keel and/or designed trim and is either upright or has a list of not more than 5 degrees, through at least one suction, except for machinery spaces where at least two suctions are required, one of which is to be a branch bilge suction and the other is to be a direct bilge suction. Wing suctions will, generally, be necessary for this purpose, except for short narrow compartments, where a single suction may be sufficient. In the case of vessels with class notation “Indian River Sea vessel -Type 3” or “Indian River Sea vessel - Type 4” IRS may allow the means of pumping or drainage to be dispensed with in any particular compartment having volume, in cubic metres (m³) less than the ship’s moulded displacement per centimetre (cm) immersion at draught T (refer Pt.3, Ch. 1, Sec 2.1), if it is satisfied that the safety of the ship is not thereby impaired.

In **Clause 2.7.4** waiver is given for emergency bilge suctions for River-sea vessels of less than 50 m length. Accordingly, clause 2.7.4 is amended for such vessels as follows:

2.7.4 Emergency bilge suction:

a) An emergency bilge suction is to be fitted to the largest independent power pump, capacity of which is at least equal to the bilge pump. In the case ships with class notation “Indian River Sea vessel- Type 3” or “Indian River Sea vessel- Type 4” of length less than 50 [m], emergency bilge suction need not be provided.

In **Clause 2.9.1 and 2.9.2** regarding size of bilge main and branch lines, may be reduced for river- sea vessels. Accordingly, clauses 2.9.1 and 2.9.2 are amended as follows:

2.9.1 The internal diameter of the bilge pipes is not to be less than that found by the following formula to the nearest 5 [mm] commercial size available:

$$d_m = 1.68 L (B + D) + 25 \text{ [mm]}$$

$$d_b = 2.15 C (B + D) + 25 \text{ [mm]}$$

In the case of vessels with class notation “Indian River Sea vessel -Type 3” or “Indian River Sea vessel- Type 4”, the internal diameter of the bilge pipes is not to be less than that found by the following formula to the nearest 5 [mm] commercial size available:

$$d_m = 1.5 \sqrt{L (B + D)} + 25 \text{ [mm]}$$

$$d_b = 2.0 \sqrt{C (B + D)} + 25 \text{ [mm]}$$

2.9.2 In any case, bilge main suction line and branch bilge suction line diameters are not to be less than 50 [mm] and the diameter of the main bilge line is not be less than that of the branch bilge line.

However, in the case of vessels with class notation “Indian River sea vessel- Type 3” or “Indian River Sea vessel- Type 4” bilge main suction line and branch bilge suction line diameters are not to be less than as given in Table 2.9.2.

| Table 2.9.2 : Bilge Main/branch minimum size | |
|---|---------------------------------|
| <i>Ship Length</i> | <i>Minimum Pipe Size (I.D.)</i> |
| Below 20 m | 30 mm |
| 20 m or greater but below 30 m | 40 mm |
| 30 m or greater | 50 mm |

Clause 2.10.1

Requirement for number of bilge pumps may be reduced for River sea vessels as indicated in the amended clause 2.10.1 below:

2.10.1 All ships, other than passenger ships, are to be provided with at least two independent power bilge pumps. For ships of length 91.5 [m] and below, one of these pumps may be main engine driven. See 2.13 for requirements regarding passenger ships.

“Vessels with class notation “Indian River Sea vessel- Type 3” or “Indian River Sea vessel- Type 4” may be provided with one fixed power driven pump, which may be main engine driven, and one portable mechanical pump.” Fixed arrangements are to be provided for stowage of the portable pump to ensure its ready availability.

Clause 2.10.2

In view of the reduced size of bilge piping for river sea vessels in 2.9.2, and consequent reduction in bilge pump capacity as per the formula specified in

2.10.2, it is necessary to specify a minimum capacity of bilge pump. Accordingly, clause 2.10.2 is amended as follows:

2.10.2 The capacity of each bilge pump is to be sufficient enough to give the water a speed of at least 122 [metres/minute] through the rule size of the main bilge line under normal working conditions.

The capacity of the bilge pump may be found by the following formula :

$$Q = 5.75 \times 10^{-3} \times d^2 \text{ [m}^3\text{/hour]}$$

where,

Q = Capacity of pump [m³/hour];

d = rule diameter of bilge main [mm].

In case of vessels with class notation “Indian River Sea vessel –Type 3” or “Indian River Sea vessel- Type 4”, the capacity of the bilge pump is not to be less than the minimum values specified in Table 2.10.2.”

| Table 2.10.2 : Bilge pump minimum capacity | |
|---|---------------------------|
| Vessel Length | Minimum Capacity per Pump |
| Below 20 m | 5.5 m ³ /hr |
| 20 m or greater but below 30 m | 11 m ³ /hr |
| 30 m or greater but below 50 m | 14 m ³ /hr |
| 50 m and greater | As per above formula |

Sub-section 3.6 “Water level detectors in single hold cargo ships”

The requirement for water level detectors in single hold cargo ships of less than 80 [m] length need not be applied for vessels with class notation “River Sea vessel -Type 3” and River sea vessel- Type 4”.

Clause 4.2.4 No. of fuel tanks- Storage/Service tanks:

The requirement for minimum two fuel oil service tanks need not be applied to river-sea vessels. Accordingly, the following changes are to be made to clause 4.2.4

4.2.4 Minimum two fuel oil service tanks for each type of fuel used on board necessary for propulsion and vital systems or equivalent arrangements (See Fig. 4.2.4 for equivalent arrangement) are to be provided with a capacity of at least 8 hours at maximum continuous rating of the propulsion plant and normal operating load of the generating plant. Vessels with class notation “River Sea vessel -Type 3” and River sea vessel- Type 4” need not comply with this requirement.

Part 4 Chapter 8 Electrical Installations

Clause 2.5.1 Number of Generators

Redundancy requirement for main generators may be waived. One generator may be sufficient provided generator power is not required for propulsion and emergency steering of hand hydraulic type is available. In this condition the vessels are considered to be able to return safely to a nearby port at reduced speed if necessary.

Accordingly, clause 2.5.1 is amended as follows:

2.5.1 The number and capacity of generators are to be such that with any one generator not in operation, the capacity of the remaining generators is to be sufficient for:

- supplying all essential and other services mentioned under 1.5.1 and 1.5.2 of this chapter which can be expected to be in use simultaneously, at full power on the propulsion plant, and including the maximum load which can be expected to occur on the lighting installation; and
- to have sufficient reserve capacity for starting the largest electric motor on board, without the transient voltage and frequency variations exceeding the values specified in 2.3.

However, in the case of vessels of less than 3000 GT with Class notation “Indian River Sea vessel- Type 3” or “Indian River Sea vessel- Type 4”, only one generator need be provided, which is having capacity sufficient for the loads mentioned above, subject to the condition that generator power is not needed for propulsion and auxiliary steering. The main propulsion machinery of the vessel may be accepted as the prime mover of this generator.

The above reduction in the requirement for number of generators will not apply to vessels carrying flammable oils as cargo.

Clause 2.5.6 b):

Where the main generator is essential for propulsion and steering of the ship and more than one generator is provided, the requirement for automatic starting and connecting to main switchboard of standby generator in clause 2.5.6 b) may be waived for River sea vessels and coastal service vessels of less than 3000 GT.

Accordingly, clause **2.5.6 b)** is amended as follows:

2.5.6 b) Where the electrical power is normally supplied by one generator provision shall be made, upon loss of power, for automatic starting and connecting to the main switchboard of stand-by generator(s) of sufficient capacity with automatic restarting of the essential auxiliaries, in sequential operation if required. Starting and connection to the main switchboard of the stand-by generator is to be preferably within 30 seconds, but in any case not more than 45 seconds, after loss of power. Where prime movers with longer starting time are to be used, the starting and connection time are subject to special approval.

However, in the case of vessels of less than 3000 GT with Class notation “Indian River Sea vessel- Type 3” or “Indian River Sea vessel- Type 4”, the above requirements for automatic starting and connecting of standby generators need not be applied.

Clause 2.8.9.4 Emergency source of power- batteries/Emergency DG

The number of hours of availability of emergency power may be reduced to six hours from eighteen hours in the case of River sea vessel type 3. Accordingly, Clause 2.8.9.4 is amended as follows:

2.8.9.4 In a ship engaged regularly in voyages of short duration, IRS if satisfied that an adequate standard of safety would be attained may accept a lesser period than the 18 hour period specified in paragraphs 2.8.9.1(b) to 2.8.9.1(d) and 2.8.9.2 but not less than 12 hours. For ships with class notation “Indian River Sea vessel - Type 3”, the requirement of 18 hour period specified in paragraphs 2.8.9.1(b), 2.8.9.1 c), 2.8.9.1(d) and 2.8.9.2 may be reduced to not less than 6 hours.

Part 5 : Special Ship Types

1. In the case of Indian River sea vessels, the requirements of Part 5 will apply only to those ship types covered by the River-sea vessel notification of the Govt. of India.

The requirements for RSV tankers carrying petroleum oils or vegetable oils would be as specified in the annexes to the RSV notification.

2. In general, the following chapters of Part 5 will apply to vessels with Class notation “Indian River Sea vessel -Type 3” and “Indian River Sea vessel -Type 4”, depending on the type of vessel and special class notation:

Chapter 5 Container ships

Chapter 7 Tugs

Chapter 10 Dredgers

Chapter 11 Barges and Pontoons

Chapter 22 Vessels with unattended machinery spaces

Chapter 25 Fire Fighting ships

3. The following Chapters of Part 5 are not applicable to Indian River sea vessels.

Chapter 1 Dry Bulk cargo carriers

Chapter 2 Oil tankers

Chapter 3 Chemical carriers

Chapter 4 Liquefied gas carriers

4. Application of requirements of other chapters of Part 5 may be considered where corresponding special class notations are requested.

Part 6 : Fire Safety Requirements

The requirements of Part 6 are not applicable to Indian River sea vessels. Fire safety requirements as given in the annexes to the River sea vessel notification of Govt. of India are to be applied.

End of Classification Note