

ANNEX VII

To the Notification

(Stipulations in exemption of Section 289 & 290 of M.S. Act)

Fire Fighting Appliances

1.1 Fire pumps

- 1.1.1 Every river-sea vessel under this Notification shall be provided with at least one independent power-operated fire pump of capacity not less than 70 cbm/hour.
- 1.1.2 Every fire pump shall be arranged to draw water directly from sea and discharge into a fixed fire main.
- 1.1.3 Centrifugal pumps or other pumps connected to the fire main through which back flow could occur shall be fitted with non-return valves.
- 1.1.4 In river-sea vessels under this Notification, if a fire in any one compartment could put all the fire pumps out of action, there shall be provided in a position outside such spaces an independently driven emergency fire pump which shall comply with the requirements of 1.1.1

The emergency fire pump shall be capable of producing at least a jet of water of not less than 6 m from one hydrant and hose through a nozzle complying with the requirements of 1.3.

- 1.1.5 Where the fire pumps are capable of developing a pressure exceeding the design pressure of the fire mains, water service pipes, hydrants and hoses, relief valves shall be fitted. Such valves shall be so placed and adjusted as to prevent excessive pressure in the fire main system.
- 1.1.6 The pumps required for the provision of water for other fire extinguishing systems required by this Annex, their sources of power and their controls shall be installed outside the space or spaces protected by such systems and shall be so arranged that a fire in the space or spaces protected will not put any such system out of action.

1.2 Fire main, water service pipes, fire hydrants and fire mains

- 1.2.1 In every river-sea vessel under this Notification a fire main of 65 mm size shall be laid with isolating valve on the weather deck for feeding any or all fire hydrants.
- 1.2.2 In every river-sea vessel under this Notification, the number and position of hydrants shall be such that at least one jet of water from a single length of hose can reach any part of the river-sea vessel normally accessible to the crew while the river-sea vessel is being navigated and any part of any cargo space when empty. Furthermore, such hydrants shall be positioned near the accesses to the protected spaces.
- 1.2.3 Material readily rendered ineffective by heat shall not be used for fire main and hydrants unless adequately protected. The pipes and hydrants shall be so placed that the fire hoses may be easily coupled to them.
- 1.2.4 In river-sea vessels where deck cargo may be carried, the position of the hydrants shall be such that they are always accessible and the pipes shall be arranged as far as practicable to avoid risk of damage by such cargo.
- 1.2.5 A valve shall be fitted to serve each fire hose so that any fire hose may be removed while the fire pumps are at work.
- 1.2.6 The fire mains shall be provided with isolating valves located so as to permit optimum utilization in the event of physical damage to any part of the main.
- 1.2.7 Fire mains shall have no connections other than those required for fire-fighting, except for the purposes of washing the deck and anchor chains or operating the chain locker bilge ejector.

1.3 Fire hoses and nozzles

- 1.3.1 Every river-sea vessel under this Notification shall be provided with a minimum of 2 fire hoses.
- 1.3.2 Where hydrants are required in any machinery spaces, each hydrant shall be provided with a fire hose. Where practicable fire hoses shall be connected to the hydrants in such machinery spaces.
- 1.3.3 A single length of fire hose shall not exceed 18 m.

- 1.3.4 Fire hoses shall be oil-resistant and of approved material.
- 1.3.5 Fire hoses of unlined canvas shall have a diameter of not less than 64 mm. Hoses of at least 45 mm internal diameter having a throughput comparable to that of 64 mm internal diameter unlined canvas at corresponding pressure may be used. Fire hoses of an internal diameter not less than 32 mm may be accepted in the accommodation spaces of all river-sea vessels.
- 1.3.6 Fire hoses provided in compliance with these requirements shall not be used for any purpose other than fire fighting or testing of the fire appliances.
- 1.3.7 Every fire hose shall be provided with an approved nozzle and the necessary couplings.
- 1.3.8 Standard nozzle size shall be 12 mm.

1.4 Fire extinguishers

- 1.4.1 Fire extinguishers shall be of approved types and designs.
- 1.4.2 The capacity of required portable fluid fire extinguishers shall be not more than 13.5 L and not less than 9 L. Other extinguishers shall have a fire extinguishing capability at least equivalent to that of a 9 L fluid fire extinguisher.
- 1.4.3 The capacity of required portable carbon dioxide fire extinguishers shall not be less than 3 kg.
- 1.4.4 The capacity of required portable dry powder fire extinguishers shall not be less than 4.5 kg.
- 1.4.5 All required portable fire extinguishers shall not exceed 23 kg. in weight in a fully charged condition and shall be at least as portable as 13.5 litre fluid fire extinguisher.
- 1.4.6 A spare charge shall be provided for every portable fire extinguisher provided in compliance with this Notification for Indian river-sea vessels, except that for each such fire extinguisher which is of a type that cannot readily be recharged

while the river-sea vessel is at sea an additional fire extinguisher of the same type, or its equivalent, shall be provided in lieu of a spare charge.

1.4.7 Fire extinguishers shall be periodically examined and subjected to such tests as follows:

1. The condition of the charges of extinguishers other than carbon dioxide extinguishers, shall be checked annually. If on checking there is any indication of deterioration, the charges shall be renewed and, in any case, at least every four years. A record of the annual check shall be fixed to each fire extinguisher.
2. Carbon dioxide extinguishers and gas propellant cartridges of other extinguishers shall be examined externally for corrosion and for loss of content annually. They shall be recharged or renewed if the loss of gas by weight exceeds 10% of the original charge as stamped on the bottles or cartridge, or have corroded excessively externally.
3. All portable fire extinguishers, other than carbon dioxide extinguishers, shall be tested by hydraulic pressure once every four years and the date of such test legibly marked on the extinguisher.
4. New carbon dioxide extinguishers, which do not require to be recharged, shall be tested by hydraulic pressure 10 and 20 years after manufacture and thereafter every five years.
5. Carbon dioxide extinguishers, which require recharging, shall be pressure tested before being recharged if four years have elapsed since the last hydraulic test was carried out.

1.4.8 One of the portable fire extinguishers intended for use in any space shall be stowed near an entrance to that space.

1.4.9 HALON fire extinguishers shall not be used.

1.4.10 Each fire extinguisher shall as far as is practicable be clearly marked on the front with a label of durable material with at least the following information in English:

1. name of manufacturer;
2. type of fire for which the extinguisher is suitable;
3. type and quantity of extinguishing medium;
4. approval details;

5. operating instruction supplemented by diagrams;
6. intervals for recharging;
7. temperature range over which the extinguisher will operate satisfactorily; and
8. test pressure.

In addition, the year of manufacture, test pressure and any serial number shall be stamped on the outside of the container.

1.5 Fire buckets

- 1.5.1 Fire buckets shall be of material, which is not readily flammable. They shall be painted red, clearly marked with the word "**FIRE**" and provided with lanyards of sufficient length, having regard to the size of the river-sea vessel.
- 1.5.2 The capacity of each of the fire buckets referred to in this part shall be at least 9 L.
- 1.5.3 Fire buckets provided in compliance to this part shall not be used for any purpose other than extinguishing fires.

1.6 Portable fire extinguishers in accommodation spaces, service spaces and control stations

- 1.6.1 In every river-sea vessel there shall be provided a sufficient number of approved portable fire extinguishers to ensure that at least one extinguisher will be readily available for use in any part of accommodation spaces, service space and control stations. The minimum number of fire extinguishers to be provided in such river-sea vessels shall be 3. The arrangement of such fire extinguishers shall be to the satisfaction of the Administration.

1.7 Fire extinguishing systems and appliances in the machinery spaces

- 1.7.1 In every river-sea vessel under this Notification, there shall be provided for the protection of any space containing internal combustion type machinery having a total power output of 1500 kW and above:
 1. one of the following fixed fire-extinguishing systems:

- (i) a gas system;
- (ii) a high expansion foam system or
- (iii) a pressure water-spraying system

- 2. at least one portable extinguisher suitable for extinguishing oil fires for each 750 kW of engine power output or part thereof, but the total number of such fire extinguishers so supplied shall be not less than two and not exceed six.

1.7.2 In every river-sea vessel under this Notification, there shall be provided for the protection of any space containing internal combustion type machinery having a total power output less than 1500 kW:

- 1. at least one portable fire extinguisher suitable for extinguishing oil fires for each 75kW or part thereof of such machinery, but the total number of such extinguishers so supplied shall not be less than two and need not exceed seven; or
- 2. at least two portable fire extinguishers suitable for extinguishing oil fires together with one non-portable foam fire extinguisher of at least 45 liters capacity or at least 15 kg capacity or equivalent.

1.8 Fireman's outfit

1.8.1 Every river-sea vessel under this Notification shall be provided with at least one fireman's outfit.

1.8.2 A fireman's outfit shall consist of:

- 1. personnel equipment comprising:
 - (i) protective clothing of material to protect the skin from the heat radiating from the fire and from burns and scalding by steam. The outer surface of protective clothing shall be water-resistant;
 - (ii) boots and gloves of rubber or other electrically non-conducting material;
 - (iii) a rigid helmet providing effective protection against impact;

- (iv) an electric safety lamp (hand lantern) of an approved type with a minimum burning period of three hours; and
- (v) an axe to the satisfaction of the Administration; and

2. breathing apparatus of an approved type, which may be either:

- (i) a smoke helmet or smoke mask which shall be provided with a suitable air pump and a length of air hose sufficient to reach from the open deck, well clear of hatch or doorway, to any part of the holds or machinery spaces. Where in order to comply with this paragraph, an air hose exceeding 36 m in length would be necessary, a self-contained breathing apparatus shall be substituted or provided, in addition, as determined by the Administration; or
- (ii) a self-contained compressed-air operated breathing apparatus, the volume of air contained in the cylinders of which shall be at least 1,200 L, or other self-contained breathing apparatus which shall be capable of functioning for at least 30 minutes. A number of spare charges, suitable for use with the apparatus provided, shall be available on board to the satisfaction of the Administration.

1.8.3 For each breathing apparatus a fireproof lifeline of sufficient length and strength shall be provided capable of being attached by means of a snap hook to the harness of the apparatus or to a separate belt in order to prevent the breathing apparatus becoming detached when the lifeline is operated.

1.8.4 The Administration may require additional sets of personal equipment and breathing apparatus, having due regard to the size and type of the river-sea vessel.

1.8.5 The fireman's outfits or sets of personal equipment shall be so stored as to be easily accessible and ready for use and where more than one fireman's outfit or more than one set of personnel equipment is carried, they shall be stored in widely separated positions.

1.9 Fireman's Axe

1.9.1 Every river-sea vessel under this Notification shall be provided with at least one fireman's axe in an easily accessible location outside the machinery, accommodation and service spaces.

1.10 Fire control plan

1.10.1 In every river-sea vessel under this Notification, there shall be provided a permanently exhibited fire plan displayed conspicuously for use in the language of the river-sea vessel, if not English.