
STATUTORY INSTRUMENTS

1975 No. 330

The Fishing Vessels (Safety Provisions) Rules 1975

PART II

FISHING VESSEL CONSTRUCTION RULES

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BILGE PUMPING ARRANGEMENTS

Requirements for vessels of 24.4 metres in length and over

36.—(1) Every vessel of 24.4 metres in length and over to which these Rules apply shall be provided with:—

- (a) efficient bilge pumping plant and means for drainage so arranged that water entering any part of the hull, other than a space permanently appropriated for the carriage of fresh water, water ballast, oil fuel or liquid cargo and for which other efficient means of pumping or drainage are provided, can be pumped out through at least one suction pipe when the vessel is upright or is listed not more than 5 degrees either way. Wing suction shall be provided if necessary for this purpose. Arrangements shall be provided for an easy flow of water to the suction pipes.

Provided that where the safety of the vessel is not thereby impaired, the bilge pumping arrangements may be dispensed with in any particular compartment or compartments of any vessel or class of vessels;

- (b) arrangements for the drainage of all insulated compartments;
 - (c) not less than two independent powered bilge pumps provided that:—
 - (i) one such pump may be driven from the main engine;
 - (ii) a ballast pump or other general service pump of adequate capacity may be used as an independent bilge pump;
 - (iii) a properly installed bilge ejector in combination with a power driven pump may be provided as a substitute for one independent power driven bilge pump.
- (2) In every such vessel—
- (a) bilge pumps shall be self-priming. Pumps, other than hand pumps of the lever type and pumps provided for peak compartments only, shall, whether operated by hand or by power, be capable of drawing water from any space required by paragraph (1) above to be drained;
 - (b) power bilge pumps shall be capable of giving a speed of water of not less than 2 metres per second through the main bilge pipe when its diameter is that determined by sub-paragraph 5(a) of this Rule. Each pump shall have a direct suction from the space in which it is situated, provided that not more than two direct suctions shall be required in any one space. The diameter of the direct suction shall be not less than that of the main bilge pipe. The direct suctions in the machinery space shall be so arranged that water may be pumped from each side of the space through direct suctions to independent bilge pumps;

- (c) one of the sea water pumps circulating each main engine shall be fitted with emergency bilge suction connections, which shall be provided with non-return valves, to the lowest drainage level in the machinery space, or as near thereto as is reasonably practicable. In vessels powered by steam the diameter of these connections shall be at least two-thirds of that of the main sea inlet. In motor vessels these connections shall be of the same diameter as the pump inlet. Where any main circulating pump is not suitable for this purpose a direct emergency bilge suction shall be led from the largest available independent power driven pump to the drainage level of the machinery space. Such emergency suction shall be of the same diameter as the main inlet of the pump used. The capacity of the pump so connected shall exceed that of a required bilge pump by an adequate amount. The open end of such suctions or the strainer, if any, attached thereto shall be accessible for clearing. The spindles of the main sea inlet and the direct suction valves shall extend well above engine room platform level:
- (d) where hand bilge pumps are fitted they shall be either rotary, semirotary or lever operated and shall be operable from above the freeboard deck, and be so arranged that the bucket and tail valve can be withdrawn at all times.
- (3) In every such vessel distribution boxes, valves and cocks fitted in bilge pumping systems shall be in accessible positions.
- (4) In every such vessel—
- (a) pipes from the pumps for draining hold spaces or any part of the machinery space shall be independent of pipes which may be used for filling or emptying spaces in which water or oil is carried;
- (b) bilge pipes in boiler or machinery spaces including spaces in which oil settling tanks or oil fuel pumping units are situated shall be of steel or other equivalent material;
- (c) bilge suction pipes shall not be led through double bottom tanks unless they are of heavy gauge steel construction with a minimum number of joints and shall be tested after fitting to a pressure of 3.5 kilogrammes force per square centimetre;
- (d) bilge suction pipes shall be fitted with flanged joints and shall be properly secured in position and provided with expansion joints or bends. Pipes situated in fish holds, chain lockers or other positions where they are liable to damage shall be adequately protected.
- (5) In every such vessel—
- (a) the internal diameter of main and branch bilge suction pipes shall be determined to the nearest 5 millimetres by the following formulae:

where d_m = internal diameter of the main bilge suction pipes in millimetres;

d_b = internal diameter of the branch bilge suction pipes in millimetres;

L = Principal Length of vessel in metres;

B = Principal Breadth of vessel in metres;

D = Principal Depth of vessel in metres;

C = Length of compartment in metres;

- (b) the inside diameter of the bilge main and bilge suction directly connected to the pump shall be not less than 50 millimetres;
- (c) bilge and ballast pumping systems shall be so arranged as to prevent water passing from the sea or from water ballast spaces into holds or into machinery spaces or from one watertight compartment to another. The bilge connection to any pump which draws from the sea or from water ballast spaces shall be fitted with either a non-return valve or a cock which

cannot be opened simultaneously either to the bilges and to the sea or to bilges and water ballast spaces. Valves in bilge distribution boxes shall be of a non-return type;

- (d) any bilge pipes piercing a collision bulkhead shall be fitted with a screw-down valve at the bulkhead with remote control from above the deck at which the bulkhead terminates, with an indicator showing the position of the valve. If the valve is fitted on the after side of the bulkhead and is readily accessible under all service conditions the remote control may be dispensed with.

(6) In every such vessel bilge suctions in the machinery space shall be led from readily accessible mud boxes placed wherever practicable above the level of the working floor of the space. The boxes shall have straight tailpipes to the bilges and covers secured in such a manner as will permit them to be readily opened and closed. The suction ends in hold spaces and tunnel wells shall be enclosed in strum boxes having perforations approximately 10 millimetres in diameter, and the combined area of such perforations shall be not less than twice that of the suction pipe. Strum boxes shall be so constructed that they can be cleared without breaking any joint of the suction pipe.

(7) In every such vessel—

- (a) subject to the requirements of sub-paragraph (b) below, the tanks forming part of the structure of the vessel and all watertight compartments, not being part of the machinery space, shall be provided with efficient sounding arrangements which shall be protected where necessary against damage. Where such arrangements consist of sounding pipes, a thick steel doubling plate shall be securely fixed below each sounding pipe for the sounding rod to strike upon. All such sounding pipes shall extend in readily accessible positions above the vessel's freeboard deck;
- (b) sounding pipes for bilges, coffer dams and double bottom tanks being bilges, coffer dams and tanks situated in the machinery space, shall extend to readily accessible positions above the vessel's freeboard deck unless the upper ends of the pipes are accessible in ordinary circumstances and are furnished with cocks having parallel plugs with permanently secured handles so loaded that on being released they automatically close the cocks. Sounding pipes for bilges shall not be less than 65 millimetres in diameter.

Requirements for vessels of 12 metres in length and over but less than 24.4 metres in length

37.—(1) Subject to paragraphs (2) and (3) below every vessel of 12 metres in length and over but less than 24.4 metres in length to which these Rules apply shall be provided with:—

- (a) efficient means of draining any compartment, other than a compartment appropriated for the storage of oil or fresh water, when the vessel is upright or is listed not more than five degrees either way. A centre line suction shall be provided in the engine room and in the fish hold to the lowest drainage level of the compartment.

Provided that:—

- (i) if the vessel is divided into watertight compartments the bilge suctions and means of drainage shall be so arranged that any water entering any main watertight compartment can be pumped out through at least one bilge suction situated in such a compartment;
 - (ii) if the vessel is not divided into watertight compartments the means of drainage shall be so arranged that any water entering the vessel can drain to at least one bilge suction;
- (b) not less than two bilge pumps—
- (i) having a total capacity of not less than 455 litres per minute if the vessel is 20 metres in length and over but less than 24.4 metres in length. At least one such pump shall

- be a power pump having a capacity of not less than 230 litres per minute. Where two power pumps are provided each pump shall be independently driven;
- (ii) having a total capacity of not less than 275 litres per minute if the vessel is 15 metres in length and over but less than 20 metres in length. At least one such pump shall be a power pump having a capacity of not less than 140 litres per minute. Where two power pumps are provided each pump shall be independently driven;
- (iii) one of which shall be a hand pump if the vessel is less than 15 metres in length. Each pump shall have a capacity of not less than 90 litres per minute.
- (2) In any such vessel a properly installed bilge ejector in combination with a power driven pump may be provided as a substitute for one power driven bilge pump.
- (3) In any such vessel a general service pump of sufficient capacity may be used as an independent bilge pump. Where more than one pump is installed one of the bilge pumps may be driven from the main engine.
- (4) In every such vessel—
- (a) bilge pumps shall be self-priming. Pumps other than hand pumps of the lever type shall, whether operated by hand or power, be capable of drawing water from any space required by sub-paragraph (1)(a) above;
 - (b) bilge pumps may be arranged for automatic starting provided that the bilge pumping system is fit for its intended purpose;
 - (c) where hand operated bilge pumps are fitted they shall be either rotary, semi-rotary or lever operated and shall be operable from the freeboard deck and shall be so arranged that the bucket and tail valve can be withdrawn for examination and overhaul at all times.
- (5) In every such vessel distribution boxes, valves and cocks fitted in bilge pumping systems shall be in accessible positions.
- (6) In every such vessel—
- (a) pipes from the pumps for draining hold spaces or any part of the machinery space shall be independent of pipes which may be used for filling or emptying spaces in which water or oil is carried;
 - (b) bilge pipes shall be of steel or other suitable material having flanged or screwed joints, provided that flexible piping, if accessible for inspection and jointed with suitable clamps, may be installed where necessary.
- (7) In every such vessel—
- (a) if the vessel is 15 metres in length and over but less than 24.4 metres in length bilge branch suction pipes shall be not less than 50 millimetres inside diameter;
 - (b) if the vessel is less than 15 metres in length bilge branch suction pipes shall be not less than 38 millimetres inside diameter;
 - (c) where a bilge main is fitted the cross sectional area of the bilge main shall be at least equal to the aggregate cross sectional area of the two largest branch suction pipes connected to the bilge main;
 - (d) bilge pumping systems shall be arranged in accordance with Rule 36(5)(c) of these Rules. Non-return valves shall be fitted in the discharge lines of hand operated bilge pumps unless the pumps are of suitable design and discharge directly onto the deck.
- (8) In every such vessel bilge suction pipes shall be fitted with readily accessible strainers. The total area of the perforation in the strainer shall be not less than twice the cross sectional area of the bilge pipe.