

L.N. 72 of 1967

MERCHANT SHIPPING ACT 1962
(1962 No. 30)

The Merchant Shipping (Life-Saving Appliances) Rules 1967

Commencement : 8th May, 1967.

PART I—GENERAL

In exercise of the powers conferred by section 153 of the Merchant Shipping Act 1962 and of all other powers enabling it in that behalf the Supreme Military Council hereby makes the following Rules—

1.—(1) These Rules may be cited as the Merchant Shipping (Life-Saving Appliances) Rules 1967.

Citation, and
revocation.

(2) The Merchant Shipping (Life-Saving Appliances) Rules 1963 are hereby revoked.

2.—(1) In these Rules, unless the context otherwise requires, the following expressions have the following meanings respectively—

Interpreta-
tion.

“the Act” means the Merchant Shipping Act 1962;

1962 No. 30.

“the appropriate authority” in relation to a power or function conferred by or under the Act or these Rules, means the Federal Executive Council or such other authority or public officer upon whom such power or function is vested or delegated according to law;

“buoyant apparatus” means flotation equipment (other than lifebuoys and life jackets) designed to support persons who are in the water;

“certificated lifeboatsman”, in relation to a ship, means any member of the crew who holds a certificate issued by or under the authority of the appropriate authority in accordance with the conditions laid down in Rule 39 (2), or any member of the crew who holds a certificate issued by or under the authority of any government outside Nigeria which is accepted by the appropriate authority as being the equivalent of any certificate issued by or under the authority of the appropriate authority;

“certified” means certified by a certificate issued under Chapter 31 of the Act;

“class C boat” means a boat complying with the provisions of Rule 22.

“fishing boat” means any power-driven fishing boat to which the Merchant Shipping (Fishing Boat) Regulations 1963 apply in accordance with regulation 1 of those Regulations;

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1963.

“launching appliance” means an appliance complying with the provision of Rule 36 (2);

“length”, in relation to a registered ship, means registered length and, in relation to an unregistered ship, means the length from the fore part of the stem to the aft side of the head of the stern post or, if no stern post is fitted to take the rudder, to the fore side of the rudder stock at the point where the rudder passes out of the hull;

“lifeboat” means a boat complying with the provisions of Rule 18;

“lifteraft” means a liferaft complying with the provisions of Rule 23;

“mechanically propelled lifeboat” means a lifeboat (other than a motor lifeboat) complying with the provisions of Rule 21;

“motor lifeboat” means a lifeboat complying with the requirements of Rule 20;

"passenger ship" means a ship carrying more than 12 passengers ;

"passenger ship's certificate" means a passenger ship's certificate issued by the appropriate authority pursuant to Chapter 31 of the Act ;

"person" means a person over the age of one year ;

"power-driven small craft" has the meaning assigned by Rule 3 of the Merchant Shipping (Power-Driven Small Craft) Rules 1963 ;

"ship" has the meaning assigned by section 2 of the Act ;

"tanker" means a cargo ship constructed or adapted for the carriage in bulk of liquid cargoes of an inflammable nature ;

"tons", in relation to the tonnage of a ship, means gross tons.

(2) In these Rules any reference to a Part, Rule or Schedule not otherwise identified is a reference to that Part, Rule or Schedule of these Rules.

**Ships to
which the
Rules apply.**

3. These Rules apply to—

(a) Nigerian ships ; and

(b) other ships while they are within any port in Nigeria :
Provided that these Rules shall not apply to—

(i) a ship by reason of her being within a port in Nigeria if she would not have been in any such port but for stress of weather or any other circumstance that neither the master nor the owner nor the charterer (if any) of the ship could have prevented or forestalled ;

(ii) pleasure yachts which are not passenger ships and are less than 45 feet in length ;

(iii) power-driven small craft.

**Classifica-
tion of ships.**

4.—(1) For the purposes of these Rules the ships to which these Rules apply shall be arranged in the following classes :—

Passenger Ships :

Class I —Passenger ships engaged on voyages (not being short international voyages) any of which are long international voyages.

Class II —Passenger ships engaged on voyages (not being long international voyages) any of which are short international voyages.

Class III —Passenger ships in respect of which there is or should be in force a certificate entitled "Passenger Certificate Class III" being a certificate for ships engaged on voyages of any kind other than international voyages and during the course of which the vessels does not proceed more than 50 miles from the coast of Nigeria.

Class IV —Ships plying only on island tidal waters and carrying any number of passengers.

Class IVA —Ships plying only on inland non-tidal waters and carrying any number of passengers.

Ships other than Passenger Ships :

Class V —Ships (other than ships of Classes I, V(A), IX and X) engaged on voyages any of which are long international voyages.

- Class VA** —Ships employed as fish processing or canning factory ships, and ships engaged in the carriage of persons employed on the fish processing or canning industries.
- Class VI** —Ships (other than ships of Classes III to IVA, IX and X) engaged on voyages (not being long international voyages) any of which are short international voyages.
- Class VII** —Ships (other than ships of Classes III to IVA, VII (A), VIII, IX and X) engaged on voyages which are not international voyages.
- Class VIIA** —Tugs and tenders, dredgers, cable-ships, bouyage vessels, hopper barges, lighthouse and survey vessels (other than ships of Classes II and III) which proceed to sea but are not engaged on long international voyages.
- Class VIII** —Ships plying only on any inland waters.
- Class IX** —Fishing boats other than ships of Classes I to IV (A).
- Class X** —Pleasure yachts (other than ships of Classes I to IV (A) of 45 feet or over in length.

(2) In this Rule—

“long international voyage” means an international voyage within the meaning of Part IV of the Act which is not a short international voyage within the meaning of that part of the Act;

“inland tidal waters” means inland waters within any of the areas described in Schedule 1;

“inland non-tidal waters” means inland waters other than inland tidal waters and includes the river Niger and its affluents;

“sea” does not include any inland waters;

“voyage” include an excursion.

PART II—PASSENGER SHIPS

5.—(1) This Rule applies to ships of Class I.

(2) Every ship to which this Rule applies shall carry—

(a) on each side of the ship lifeboats of sufficient aggregate capacity to accommodate one half of the total number of persons which the ship is certified to carry; or

(b) lifeboats and liferafts together providing sufficient aggregate capacity to accommodate the total number of persons which the ship is certified to carry:

Provided that

(i) there shall never be less than sufficient lifeboats on each side of the ship to accommodate $37\frac{1}{2}$ per cent of the total number of persons which the ship is certified to carry, and

(ii) in the case of any ship, the keel of which was laid before the commencement of these Rules, paragraph (b) above shall apply only if the total number of persons on board is not to be increased as a result of the provision of liferafts.

(3) On every ship to which this Rule applies two of the lifeboats required by paragraph (2) above shall be kept ready, one on each side of the ship, for immediate use in an emergency while the ship is at sea. These lifeboats shall be not more than 28 feet in length and each of them may be a motor lifeboat and may be counted for the purposes of paragraph (4) below.

Notwithstanding the provisions of Rule 35 (13), skates or other suitable appliances are not required to be fitted to these lifeboats.

(4) Every ship to which this Rule applies shall carry on each side of the ship at least one motor lifeboat :

Provided that in ships which are certified to carry not more than 30 persons, only one such motor lifeboat shall be required.

(5) In every ship to which this Rule applies which is certified to carry 1,500 persons or more each of the motor lifeboats carried in compliance with paragraph (4) shall be provided with the equipment specified in Rule 31 (1) and in every such ship which is certified to carry more than 199 but less than 1,500 persons at least one of the motor lifeboats carried in compliance with paragraph (4) of this Rule shall be so provided.

(6) Every motor lifeboat carried in compliance with this Rule shall be provided with the equipment specified in Rule 31 (2).

(7) Every ship to which this Rule applies which does not carry on each side of the ship a motor lifeboat provided with the equipment specified in Rule 31 (1) shall carry portable radio equipment which shall comply with the requirements of Rule 40.

(8) The lifeboats carried in compliance with this Rule shall be not less than 24 feet in length.

(9) In every ship to which this Rule applies each lifeboat shall be attached to a separate set of davits which shall be of the gravity type, except that luffing type davits may be fitted for operating lifeboats weighing not more than $2\frac{1}{4}$ tons in their turning out condition.

(10) The liferafts carried in compliance with paragraph (2) (b) above shall be served by launching appliances. There shall never be less than one such appliance on each side of the ship and the difference in the number of appliances fitted on each side shall not exceed one.

(11) Every ship to which this Rule applies shall carry liferafts, which need not be served by launching appliances, of sufficient capacity to accommodate 25 per cent of the total number of persons the ship is certified to carry, together with buoyant apparatus for 3 per cent of that number :

Provided that—

(a) if liferafts are also carried in compliance with paragraph (2) (b) above, all liferafts carried shall be of a type capable of being launched by the appliances fitted in compliance with paragraph (10) of this Rule ; and

(b) ships which have a factor of subdivision of 0.33 or less may carry, in lieu of liferafts for 25 per cent of the total number of persons which the ship is certified to carry and buoyant apparatus for 3 per cent of that number, buoyant apparatus for 25 per cent of that number.

(12) Every ship to which this Rule applies shall carry at least the number of lifebuoys determined in accordance with the following table :—

<i>Length of ship in feet</i>	<i>Minimum number of lifebuoys</i>
Less than 200	8
200 and less than 400	12
400 and less than 600	18
600 and less than 800	24
800 or over	30

(13) Every ship to which this Rule applies shall carry for every person on board weighing 70 pounds or more a lifejacket which shall comply with the requirements of Part I of Schedule 11 and for every person on board weighing less than 70 pounds a lifejacket which shall comply with the requirements of Part II of the said Schedule.

(14) In addition to lifejackets carried in compliance with paragraph (13) above, every ship shall carry lifejackets for at least 5 per cent of the number of persons which the ship is certified to carry and such lifejackets shall comply with the requirements of Part I of Schedule 11 and shall be stowed on deck in a suitable place which shall be conspicuously marked.

(15) Every ship to which this Rule applies shall carry a line-throwing appliance.

6.—(1) This Rule applies to ships of Class II.

Ships of Class II.

(2) Every ship to which this Rule applies shall, subject to the provisions of paragraph (8) below and of Rule 44, be fitted, in accordance with its length, with the number of sets of davits specified in Column A of the table set out in Schedule 2 :

Provided that no ship shall be required to be fitted with a number of sets of davits greater than the number of lifeboats required to accommodate the total number of persons which the ship is certified to carry.

(3) A lifeboat shall be attached to every such set of davits and the lifeboats so attached shall, subject to the provisions of paragraph (8) below, together provide at least the capacity specified in Column C of the table set out in Schedule 2 or the capacity required to accommodate the total number of persons which the ship is certified to carry if this is less.

(4) On every ship to which this Rule applies two of the lifeboats required by paragraph (3) above shall be kept ready, one on each side of the ship, for immediate use in an emergency while the ship is at sea. These lifeboats shall be not more than 28 feet in length and each of them may be a motor lifeboat and may be counted for the purpose of compliance with paragraph (5) below.

Notwithstanding the provisions of Rule 35 (13) of these Rules, skates or other suitable appliances are not required to be fitted to these lifeboats.

(5) Every ship to which this Rule applies shall carry on each side of the ship at least one motor lifeboat which shall be provided with the equipment specified in Rule 31 (2) :

Provided that in ships which are certified to carry not more than 30 persons only one such motor lifeboat shall be required.

(6) Subject to the provisions of paragraphs (7) and (8) below, when the lifeboats carried in compliance with the foregoing provisions of this Rule will not accommodate the total number of persons which the ship is certified to carry, additional sets of davits with a lifeboat attached to each shall be fitted to make up the deficiency in such accommodation.

(7) If in the opinion of the appropriate authority the volume of traffic so requires, the appropriate authority may permit any ship to which this Rule applies, being a ship which is subdivided in accordance with the requirements of construction rules under the Act to carry persons in excess of the lifeboat capacity provided on board that ship in compliance with paragraph (3) of this Rule:

Provided that—

(a) if such a ship is permitted by the appropriate authority, in pursuance of Section 164 (2) of the Act to proceed to sea from a port in Nigeria on a long international voyage, such a ship shall carry lifeboats attached to davits affording accommodation for at least 75 per cent of the persons on board;

(b) in all cases liferafts shall be carried so that the total number of lifeboats together with such liferafts shall be sufficient to accommodate the total number of persons which the ship is certified to carry; and

(c) in any such ship in which a two-compartment standard of subdivision is not achieved throughout by virtue of the application of the provisions of paragraph (9) of Schedule 2 there shall be provided liferafts of sufficient aggregate capacity to accommodate 10 per cent of the total number of persons which the ship is certified to carry, such liferafts being additional to those required to be provided in compliance with sub-paragraph (b) of this paragraph or with sub-paragraph (b) of paragraph (8) and with paragraph (12) below.

(8) Where it is shown to the satisfaction of the appropriate authority that it is impracticable in a ship engaged on a voyage which is not a long international voyage to stow satisfactorily the liferafts carried in that ship in pursuance of paragraph (7) above without reducing the number of lifeboats, the appropriate authority may permit the number of sets of davits required to be fitted under paragraph (2) of this Rule and Rule 44 (2) and the number of lifeboats attached to davits required under paragraph (3) above to be reduced:

Provided that—

(a) the number of lifeboats shall, in the case of ships of 190 feet or over in length, never be less than four, two of which shall be carried on each side of the ship, and in the case of ships of less than 190 feet in length, shall never be less than two, one of which shall be carried on each side of the ship;

(b) the number of lifeboats and liferafts shall always be sufficient to accommodate the total number of persons which the ship is certified to carry; and

(c) where the capacity of the lifeboats together provide less than that specified in Column C of the table set out in Schedule 2, there shall be provided liferafts of a type capable of being launched by the appliances referred to in Rule 36 (2). The total carrying capacity of such liferafts shall be at least the number obtained by dividing by 10 the difference

between the aggregate cubic capacity of the lifeboats and that specified in the said Column C, provided that such lifeboats shall together be sufficient for at least forty persons and that at least one launching appliance shall be provided on each side of the ship and the difference in the number of such appliances fitted on each side shall not exceed one.

(9) The lifeboats carried in compliance with this Rule shall not be less than 24 feet in length.

(10) In every ship to which this Rule applies the lifeboat davits required to be carried in compliance with this Rule shall be of the gravity type, except that luffing type davits may be fitted for operating lifeboats weighing not more than $2\frac{1}{2}$ tons in their turning out condition.

(11) Every ship to which this Rule applies which does not carry on each side of the ship a motor lifeboat provided with the equipment specified in Rule 31 (1) shall carry portable radio equipment which shall comply with the requirements of Rule 40 :

Provided that in the case of any ship engaged on voyages of such duration that, in the opinion of the appropriate authority, portable radio equipment is unnecessary, he may permit such equipment to be dispensed with.

(12) Every ship to which this Rule applies shall carry in addition to any lifeboats that may be carried in pursuance of paragraphs (7) and (8) above, lifeboats sufficient to accommodate 10 per cent of the total number of persons for whom there is accommodation in lifeboats.

(13) Every ship to which this Rule applies shall carry buoyant apparatus sufficient to support 5 per cent of the total number of persons which the ship is certified to carry.

(14) Every ship to which this Rule applies shall carry at least the number of lifebuoys determined in accordance with the following table :—

<i>Length of ship in feet</i>	<i>Minimum number of lifebuoys</i>
Less than 200	8
200 and less than 400	12
400 and less than 600	18
600 and less than 800	24
800 or over	30

(15) (a) Every ship to which this Rule applies shall carry for every person on board weighing 70 pounds or more a lifejacket which shall comply with the requirements of Part I of Schedule 11 and for every person on board weighing less than 70 pounds a lifejacket which shall comply with the requirements of Part II of the said Schedule.

(b) In addition to lifejackets carried in compliance with preceding subparagraph, every ship shall carry lifejackets for at least 5 per cent of the number of persons which the ship is certified to carry and such lifejackets shall comply with the requirements of Part I of Schedule 11 and shall be stowed on deck in a suitable place which shall be conspicuously marked.

(16) Every ship to which this Rule applies shall carry a line-throwing appliance.

7.—(1) This Rule applies to ships of Class III.

(2) Every ship to which this Rule applies shall, subject to the provisions of Rule 44 be fitted with the number of sets of davits specified in the table set out in Schedule 2 :

**Ships of
Class III.**

Provided that no ship shall be required to be fitted with a number of sets of davits greater than the number of lifeboats required to accommodate the total number of persons which the ship is certified to carry.

(3) A lifeboat shall be attached to every such set of davits.

(4) Such additional lifeboats, liferafts or buoyant apparatus shall be carried as shall be sufficient, together with the lifeboats required by paragraph (3) above for the total number of persons which the ship is certified to carry :

Provided that lifeboats and liferafts shall be carried to accommodate not less than 25 per cent of that number.

(5) The lifeboats carried in compliance with this Rule shall, where reasonable and practicable, be not less than 20 feet in length.

(6) Lifeboat davits required to be carried in compliance with this Rule shall be of the gravity type, except that luffing type davits may be fitted for operating lifeboats weighing not more than $2\frac{1}{2}$ tons in their turning out condition.

(7) Every ship to which this Rule applies shall carry at least eight lifebuoys, two of which shall have self-activating smoke signals attached capable of producing smoke of a highly visible colour for at least 15 minutes.

(8) Every ship to which this Rule applies shall carry for every person on board weighing 70 pounds or more a lifejacket which shall comply with the requirements of Part I of Schedule 11 and for every person on board weighing less than 70 pounds a lifejacket which shall comply with the requirements of Part II of the said Schedule.

(9) Every ship to which this Rule applies shall carry a line-throwing appliance.

8.—(1) This Rule applies to ships of Class IV.

(2) Every ship to which this Rule applies of 70 feet or over in length shall carry or tow at least one boat :

Provided that a ship which is designed and operated as a ferry and is used as such on voyages not exceeding one hour, shall not be required to carry or tow a boat.

(3) Every ship to which this Rule applies of 70 feet or over in length shall carry or tow at least six lifebuoys.

(4) Every ship to which this Rule applies of 70 feet or over in length shall carry subject to the requirements of paragraphs (2) and (3) above, such boats, liferafts, buoyant apparatus and lifebuoys as shall be sufficient for the total number of persons which the ship is certified to carry, provided that lifebuoys in excess of 60 per cent of this number shall be discounted.

(5) Every ship to which this Rule applies of less than 70 feet in length and plying more than three nautical miles from its starting point in any direction shall be provided with liferafts or buoyant apparatus sufficient for at least 60 per cent of the total number of persons which the ship is certified to carry, together with lifebuoys not less in number than is specified in paragraph (7) below, so, however, that the liferafts or buoyant apparatus, together with the lifebuoys, shall in all cases be sufficient for the total number of persons which the ship is certified to carry.

(6) Every ship to which this Rule applies of less than 70 feet in length and plying not more than three nautical miles from its starting point in any direction shall be provided with liferafts or buoyant apparatus sufficient for at least 40 per cent of the total number of persons which the ship is

Ships of
Class IV.

certified to carry, together with lifebuoys not less in number than is specified in paragraph (7) below, so, however, that the liferafts or buoyant apparatus, together with the lifebuoys, shall in all cases be sufficient for at least 70 per cent of the total number of persons which the ship is certified to carry.

(7) Every ship to which this Rule applies shall carry at least the number of lifebuoys determined by the following table:—

<i>Length of ship in feet</i>	<i>Minimum number of lifebuoys</i>
Not over 30	2
Over 30 and not over 35	4
Over 35 and not over 40	6
Over 40 and not over 50	8
Over 50 and not over 70	10

(8) In the case of ships to which this Rule applies not exceeding 30 feet in length the appropriate authority may permit lifebuoys to be carried in lieu of part or all of the liferafts or buoyant apparatus required to be carried in compliance with paragraphs (5) and (6) above.

(9) For the purposes of this Rule a lifebuoy shall be deemed sufficient to support two persons.

9.—(1) This Rule applies to ships of Class IV (A).

**Ships of
Class IV(A).**

(2) Rule 8 shall apply to ships of Class IV (A), being ships of 70 feet or over in length, as it applies to ships of Class IV.

(3) Every ship to which this Rule applies of less than 70 feet in length shall carry such liferaft or buoyant apparatus as shall be sufficient for at least 60 per cent of the total number of persons which the ship is certified to carry, together with lifebuoys not less in number than is specified in Rule 8 (7) so however that the liferafts or buoyant apparatus, together with the lifebuoys, shall at all times be sufficient for the total number of persons which the ship is certified to carry.

(4) In the case of ships not exceeding 30 feet in length to which this Rule applies the appropriate authority may permit lifebuoys to be carried in lieu of part of all of the liferafts or buoyants apparatus required to be carried in compliance with paragraph (3) above.

(5) For the purposes of this Rule a lifebuoy shall be deemed sufficient to support two persons.

PART III—SHIPS OTHER THAN PASSENGER SHIPS

10.—(1) This Rule applies to ships of Class V.

**Ships of
Class V.**

(2) Every ship to which this Rule applies of 500 tons or over shall carry on each side of the ship one or more lifeboats of sufficient aggregate capacity to accommodate all persons on board.

(3) In every ship to which this Rule applies of 1,600 tons or over the lifeboats shall be not less than 24 feet in length.

(4) Every ship to which this Rule applies of 500 tons or over, other than a tanker of 1,600 tons or over, shall carry liferafts of sufficient aggregate capacity to accommodate at least half the total number of persons on board.

(5) Every ship to which this Rule applies of under 500 tons shall carry either—

(a) the lifeboats prescribed in paragraph (2) above for ships of 500 tons or over and liferafts of sufficient aggregate capacity to accommodate all persons on board. Such ships with 16 persons or more on board shall carry at least two liferafts; or

(b) a lifeboat or Class C boat which shall be capable of being launched on one side of the ship and at least two liferafts of sufficient aggregate capacity to accommodate twice the total number of persons on board.

(6) Every ship to which this Rule applies being a tanker of 3,000 tons or over shall carry on each side of the ship at least two lifeboats of sufficient aggregate capacity to accommodate the total number of persons on board. Two lifeboats shall be carried aft and two amidships, except that in tankers which have no amidships superstructure all lifeboats shall be carried out :

Provided that, if in case of tankers with no amidships superstructure it is impracticable to carry four lifeboats aft, the appropriate authority may permit instead the carriage aft of one lifeboat on each side of the ship. In such a case the following provisions shall apply :—

(a) each lifeboat shall not exceed 26 feet in length ;

(b) each lifeboat shall be stowed as far forward as practicable and at least so far forward that the after end of the lifeboat is one-and-a-half times the length of the lifeboat forward of the ship's propeller ;

(c) each lifeboat shall be stowed as near the sea level as is safe and practicable ; and

(d) there shall be carried in addition liferafts sufficient to accommodate at least one-half of the total number of persons on board.

(7) Liferafts carried under this Rule shall be so stowed that they can be readily transferred to the water on either side of the ship.

(8) In every ship to which paragraph (2) or (6) above applies each lifeboat shall be attached to a separate set of davits which shall be of the gravity type except that, in ships other than tankers of 1,600 tons or over, luffing davits may be fitted for operating lifeboats weighing not more than $2\frac{1}{2}$ tons in their turning out condition.

(9) (a) In every ship to which this Rule applies of 1,600 tons or over, other than a tanker, one of the lifeboats carried in compliance with paragraph (2) above shall be a motor lifeboat.

(b) In every ship to which this Rule applies being a tanker of 1,600 tons or over at least one of the lifeboats carried on each side of the ship in compliance with paragraph (2) or paragraph (6) above shall be a motor lifeboat.

(10) Every ship to which this Rule applies shall carry portable radio equipment which shall comply with the requirements of Rule 40 :

Provided that in the case of any ship engaged on voyages of such duration that, in the opinion of the appropriate authority, portable radio equipment is unnecessary, the appropriate authority may permit such equipment to be dispensed with.

(11) Every ship to which this Rule applies of 500 tons or over shall carry at least eight lifebuoys.

(12) Every ship to which this Rule applies of under 500 tons shall carry at least four lifebuoys.

(13) Every ship to which this Rule applies shall carry for every person on board weighing 70 pounds or more a lifejacket which shall comply with the requirements of Part I of Schedule 11 and for every person on board weighing less than 70 pounds a lifejacket which shall comply with the requirements of part II of the said Schedule.

(14) Every ship to which this Rule applies shall carry a line-throwing appliance.

11.—(1) Rule 16 of these Rules shall apply to ships of Class V (A), other than those ships specified in a paragraph (2) of this Rule, as it applies to ships of Class IX.

Ships of
Class V (A).

(2) Every ship employed as a fish processing or canning factory ship or in the carriage of persons employed in the fish processing or canning industries being a ship of 500 tons or over shall carry—

(a) lifeboats on each side of the ship of sufficient aggregate capacity to accommodate one half of the total number of persons on board ; or

(b) lifeboats and liferafts together providing sufficient aggregate capacity to accommodate the total number of persons on board, provided that there shall never be less than sufficient lifeboats on each side of the ship to accommodate 37½ per cent of the total number of persons on board.

(3) On every ship to which paragraph (2) above applies two of the lifeboats shall be kept ready, one on each side of the ship, for immediate use in an emergency while the ship is at sea. These lifeboats shall not be more than 28 feet in length and each of them may be a motor lifeboat and may be counted for the purpose of compliance with paragraph (4) below.

Notwithstanding the provisions of Rule 35 (13), skates or other suitable appliances are not required to be fitted to these lifeboats.

(4) Every ship to which paragraph (2) above applies shall carry on each side of the ship at least one motor lifeboat.

(5) (a) In every ship to which paragraph (2) above applies which is certified to carry 1,500 persons or more each of the motor lifeboats carried in compliance with paragraph (4) above shall be provided with the equipment specified in Rule 31 (1), and in every such ship which is certified to carry more than 199 but less than 1,500 persons at least one of the motor lifeboats carried in compliance with paragraph (4) of this Rule shall be so provided.

(b) Every motor lifeboat carried in compliance with paragraph (4) above shall be provided with the equipment specified in Rule 31 (2).

(6) Every ship to which paragraph (2) above applies which does not carry on each side of the ship a motor lifeboat provided with the equipment specified in Rule 31 (1) shall carry portable radio equipment which shall comply with the requirements of Rule 40.

(7) In every ship to which paragraph (2) above applies of 1,600 tons or over the lifeboats shall be not less than 24 feet in length.

(8) In every ship to which paragraph (2) above applies each lifeboat shall be attached to a separate set of davits which shall be of the gravity type.

(9) The liferafts carried in compliance with sub-paragraph (b) of paragraph (2) above shall be served by launching appliances. There shall never be less than one such appliances on each side of the ship and the difference in the number of appliances fitted on each side shall not exceed one.

(10) Every ship to which paragraph (2) above applies shall carry life-rafts, which shall not be required to be served by launching devices, of sufficient aggregate capacity to accommodate at least half the total number of persons on board :

Provided that if liferafts in addition to those carried in compliance with this paragraph are carried in compliance with sub-paragraph (b) of paragraph (2) above, all liferafts carried shall be of a type capable of being launched by the appliances fitted in compliance with paragraph (9) above.

(11) Every ship to which paragraph (2) above applies shall carry at least eight lifebuoys.

(12) Every ship to which paragraph (2) above applies shall carry for every person on board weighing 70 pounds or more a lifejacket which shall comply with the requirements of Part I of Schedule 11 and for every person on board weighing less than 70 pounds a lifejacket which shall comply with the requirements of Part II of the said Schedule.

(13) Every ship to which paragraph (2) above applies shall carry a line-throwing appliance.

**Ships of
Class VI.**

12.—Rule 10 shall apply to ships of Class VI as it applies to ships of Class V.

**Ships of
Class VII.**

13.—(1) Paragraphs (2), (3), (4), (6) and (7) of Rule 10 shall apply to ships of Class VII of 1,600 tons or over as they apply to ships of Class V of 500 tons or over.

(2) Paragraphs (5) and (7) of Rule 10 shall apply to ships of Class VII of under 1,600 tons as they apply to ships of Class V of under 500 tons except that ships of 500 tons or over which carry lifeboats as prescribed by paragraph (2) of Rule 10 shall carry liferafts of sufficient aggregate capacity to accommodate at least half the total number of persons on board.

(3) Paragraphs (11), (12), (13) and (14) of Rule 10 shall apply to ships of Class VII as they apply to ships of Class V and paragraph (8) of Rule 10 shall apply to such ships which carry lifeboats as prescribed by paragraph (2) thereof.

**Ships of
Class VII (A).**

14.—(1) This Rule applies to ships of Class VII (A).

(2) Paragraphs (2), (3), (4), (8), sub-paragraph (a) of paragraph (9) and paragraph (10) of Rule 10 shall apply to ships to which this Rule applies of 500 tons or over engaged on an international voyage, as they apply to ships of Class V of 500 tons or over.

(3) Every ship to which this Rule applies, other than a ship of 500 ton or over engaged on an international voyage, shall carry—

(a) a lifeboat or Class C boat which shall be capable of being launched on one side of the ship ;

(b) one or more liferafts of sufficient aggregate capacity to accommodate the total number of persons on board and any ship with 16 or more persons on board shall carry at least two liferafts ;

(c) buoyant apparatus sufficient to support the total number of persons on board.

(4) In every ship to which this Rule applies liferafts shall be so stowed that they can be readily transferred to the water on either side of the ship.

(5) Paragraphs (11), (12), (13) and (14) of Rule 10 shall apply to every ship to which this Rule applies as they apply to ships of Class V.

**Ships of
Class VIII.**

15.—(1) This Rule applies to ships of Class VIII.

(2) Every ship to which this Rule applies shall carry the following equipment—

(a) a boat or liferaft or buoyant apparatus in each case sufficient to accommodate the total number of persons on board; and

(b) in the case of ships of 70 feet or over in length, at least four lifebuoys and in the case of ships of less than 70 feet in length, at least two lifebuoys.

(3) Every tug and tender, etc., to which this Rule applies shall carry in addition to the equipment required by paragraph (2) above buoyant apparatus sufficient to support the total number of persons on board.

(4) Liferafts carried in accordance with this Rule shall be so stowed that they can be readily transferred to the water on either side of the ship.

16.—(1) This Rule applies to ships of Class IX.

Ships of
Class IX.

(2) Every ship to which this Rule applies of 150 feet or over in length shall carry either—

(a) at least two lifeboats attached to davits, so arranged that there is at least one lifeboat on each side of the ship, the lifeboats on each side of the ship being of sufficient aggregate capacity to accommodate half the total number of persons on board the ship; and at least two liferafts of sufficient aggregate capacity to accommodate not less than one-and-a-half times the total number of persons on board; or

(b) a lifeboat or Class C boat which shall be capable of being launched on one side of the ship and at least two liferafts of sufficient aggregate capacity to accommodate twice the total number of persons on board:

Provided that any ship of 250 feet in length or over to which this Rule applies shall comply with sub-paragraph (a) except that at least one of the lifeboats carried shall be a motor lifeboat.

(3) Every ship to which this Rule applies of less than 150 feet in length but of not less than 85 feet in length shall carry either—

(a) a lifeboat, attached to a davit, of sufficient capacity to accommodate the total number of persons on board the ship and liferafts on the following scale—

Ships with 16 or more persons on board—at least two liferafts;

Ships with fewer than 16 persons on board—at least one liferaft of sufficient aggregate capacity to accommodate the total number of persons on board; or

(b) a lifeboat or Class C boat which shall be capable of being launched on one side of the ship and at least two liferafts of sufficient aggregate capacity to accommodate twice the total number of persons on board;

(4) (a) In every ship to which this Rule applies of 150 feet or over in length which carries lifeboats in compliance with sub-paragraph (a) of paragraph (2) the lifeboat davits shall be of the gravity type except that davits which serve a lifeboat weighing not more than $2\frac{1}{2}$ tons in the turning out condition may be of the luffing type.

(b) In every ship to which this Rule applies which carries a lifeboat in compliance with sub-paragraph (a) of paragraph (3) the lifeboat davit to which the lifeboat shall be attached shall be of the mechanically controlled single-arm type.

(5) Every ship to which this Rule applies of less than 85 feet in length but of not less than 55 feet in length shall carry at least two liferafts of sufficient aggregate capacity to accommodate twice the total number of persons on board.

(6) Every ship to which this Rule applies of less than 55 feet in length but of not less than 40 feet in length shall carry one or more liferafts of sufficient aggregate capacity to accommodate the total number of persons on board.

(7) Liferafts carried in accordance with this Rule shall be so stowed that they can be readily transferred to the water on either side of the ship.

(8) (a) Every ship to which this Rule applies of 60 feet or over in length shall carry portable radio equipment which shall comply with the requirements of radio rules under the Act, or with the Performance Specification for a Voluntarily-Fitted Radio-telephone Equipment for use solely for Distress, Urgency and Safety Purposes 1964, issued by the Postmaster General, United Kingdom :

Provided that—

(i) any such ship of 140 feet or over in length, unless it carries portable radio equipment complying with the requirements of the said Rule 26, shall carry two sets of equipment which complies with the said Performance Specification and

(ii) any equipment which complies with the said Performance Specification shall be provided with a device for generating the radio-telephone alarm signal within the meaning of the said radio rules and shall be suitable for use in a liferaft and, if it is operated by batteries, shall be provided with new batteries annually.

(b) The equipment referred to in the preceding sub-paragraph (a) shall be kept in a suitable place ready to be moved into a lifeboat or a liferaft in case of emergency and in ships where the disposition of superstructures or deckhouse is such as to involve substantial fore and aft separation of the main transmitter and lifeboats such equipment shall be kept in the vicinity of those lifeboats or liferafts which are furthest away from the main transmitter.

(9) (a) Every ship to which this Rule applies of 70 feet or over in length shall carry at least four lifebuoys.

(b) Every such ship of less than 70 feet but of not less than 40 feet in length shall carry at least two lifebuoys.

(10) Every ship to which this Rule applies of less than 40 feet in length shall carry lifebuoys at least equal in number to half the total number of persons on board and in no case less than two lifebuoys.

(11) Every ship to which this Rule applies of 40 feet in length or over shall carry for every person on board weighing 70 pounds or more a lifejacket which shall comply with the requirements of Part I of Schedule 11 and for every person on board weighing less than 70 pounds a lifejacket which shall comply with the requirements of Part II of the said Schedule.

(12) Every ship to which this Rule applies of 50 feet or over in length shall carry a line-throwing appliance.

17.—(1) This Rule applies to ships of Class X.

(2) Every ship to which this Rule applies of 70 feet or over in length shall carry :—

(a) at least two liferafts of sufficient aggregate capacity to accommodate twice the total number of persons on board ;

(b) at least four lifebuoys ; and

(c) a line-throwing appliance ;

and any ship to which this Rule applies of 85 feet or over in length shall carry in addition a lifeboat or Class C boat which shall be capable of being launched on one side of the ship.

(3) Every ship to which this Rule applies of less than 70 feet in length which is engaged on either a voyage to sea in the course of which it is more than 3 miles from the coast of Nigeria or a voyage to sea during the months of June to October, inclusive, shall carry—

(a) one or more liferafts of sufficient aggregate capacity to accommodate the total number of persons on board; and

(b) at least two lifebuoys.

(4) Every ship to which this Rule applies of less than 70 feet in length which does not proceed to sea or which only proceeds to sea during the months of November to May, inclusive, on voyages in the course of which it is not more than 3 miles from the coast of Nigeria shall carry lifebuoys at least equal in number to half the total number of persons on board provided that such ships shall carry at least two lifebuoys and that any such ship which operates only in inland waters shall not be required to carry more than two lifebuoys.

(5) Every ship to which this Rule applies of less than 70 feet in length shall be provided with a buoyant line of at least 10 fathoms in length.

(6) Liferafts carried in accordance with this Rule shall be so stowed that they can be readily transferred to the water on either side of the ship.

(7) Every ship to which this Rule applies shall carry for every person on board weighing 70 pounds or more a lifejacket which shall comply with the requirements of Part I of Schedule 11 to these Rules and for every person on board weighing less than 70 pounds a lifejacket which shall comply with the requirements of Part II of the said Schedule or alternatively shall carry for every person on board, a lifejacket which shall comply with British Standards Specification No. BS3595: 1963 provided it does not depend wholly upon oral inflation.

PART IV—SUPPLEMENTAL

Requirements for Life-Saving Appliances

18. Lifeboats shall comply with the requirements specified in Schedule 3 to these Rules.

General requirements for lifeboats.

Carrying capacity of lifeboats.

19.—(1) Subject to the provisions of paragraphs (2), (3), (4) and (5) of this Rule, the number of persons which a lifeboat shall be deemed fit to accommodate shall be equal to the greatest whole number obtained by the formula $\frac{V}{X}$ where V is the cubic capacity of the lifeboat in cubic feet determined in accordance with the provisions of Schedule 4, and X is the volume in cubic feet for each person and which shall be 10 for a lifeboat of 24 feet in length or over and 16 for a lifeboat of 12 feet in length. For intermediate lengths of lifeboats, the value of X shall be determined by interpolation.

(2) The number of persons which a lifeboat is deemed fit to accommodate shall not exceed the number of adult persons wearing lifejackets for which there is proper seating accommodation arranged in such a way that the persons when seated do not interfere in any way with the use of the oars or the operation of other propulsion equipment.

(3) No lifeboat shall be deemed fit to accommodate more than 150 persons.

(4) No lifeboat shall be deemed fit to accommodate more than 100 persons unless it is a motor lifeboat.

(5) No lifeboat shall be deemed fit to accommodate more than 60 persons unless it is a motor lifeboat or a mechanically propelled lifeboat.

Motor
lifeboats.

20. Every motor lifeboat shall in addition to complying with the requirements of Schedule 3, comply with the following requirements :—

(a) it shall be fitted with a compression ignition engine and such engine and its accessories shall comply with the requirements of Schedule 5 and shall be kept so as to be at all times ready for use ;

(b) it shall be provided with sufficient fuel for 24 hours continuous operation at the speed specified in sub-paragraphs (d) or (e) of this Rule ;

(c) it shall be capable of going astern ;

(d) if it is a lifeboat provided in accordance with Rules 5 (4), 6 (5), 10 (9) (b) or Rule 11 (4) it shall be capable of going ahead in smooth water when loaded with its full complement of persons and equipment at a speed of 6 knots ;

(e) if it is a lifeboat other than a lifeboat provided in accordance with the Rules referred to in the preceding sub-paragraph it shall be capable of going ahead under the conditions specified in the preceding sub-paragraph at a speed of 4 knots.

Mechanically
propelled
lifeboats.

21. Mechanically propelled lifeboats shall, in addition to complying with the requirements of Schedule 3 be fitted with machinery which shall comply with the requirements to Schedule 6.

Class C
boats.

22. Class C boats shall comply with the requirements of Schedule 7.

Liferafts.

23.—(1) Liferafts shall comply with the requirements of either Part I or Part II of Schedule 8.

(2) Liferafts which are required to comply with Part I of Schedule 8 shall be surveyed at a servicing station approved by the appropriate authority or at the works of the manufacturers at intervals of not more than twelve months provided that in any case where this is impracticable, such interval may be extended by a period not exceeding three months.

Buoyant
apparatus.

24.—(1) Buoyant apparatus shall comply with the requirements of Schedule 9.

(2) The number of persons which buoyant apparatus shall be deemed fit to support shall be equal to—

(a) the greatest whole number obtained by dividing by 32 the number of pounds of iron which the apparatus is capable of supporting from its grab lines in fresh water, or

(b) the greatest whole number of feet in the perimeter of the apparatus, whichever number shall be the less.

Marking of
lifeboats,
Class C
boats, life-
rafts and
buoyant
apparatus.

25.—(1) The dimensions of a lifeboat or Class C boat and the number of persons which each is deemed fit to accommodate shall be clearly marked on it in permanent characters. The name and port of registry of the ship to which the lifeboat or Class C boat belongs shall be painted on each side of the bow.

(2) The number of persons which a liferaft which complies with Part I of Schedule 8 is deemed fit to accommodate shall be clearly marked in permanent characters on the liferaft and on the valise or other container in which the liferaft is contained when not in use. Every such liferaft shall also bear a serial number and the manufacturer's name.

(3) Every liferaft which complies with Part II of Schedule 8 shall be marked with the name and port of registry of the ship in which it is carried, and with the number of persons it is deemed fit to accommodate.

(4) The number of persons which buoyant apparatus is deemed fit to support shall be clearly marked on it in permanent characters.

26. Lifebuoys shall comply with the requirements of Schedule 10.

Lifebuoys.

Lifebuoy
lights, smoke
signals and
lines.

27.—(1) Lifebuoys carried in ships (except ships of Classes IV and IV (A) and VIII and ships of Class IX of less than 40 feet in length) in accordance with these Rules shall have attached to them self-igniting lights on the following scale:—

(a) in ships of Classes I and II, on at least half the lifebuoys and in no case on less than six;

(b) in ships of Classes V, VI, VII and VIIA and in ships of Class V (A) of 70 feet in length or over, on at least half the lifebuoys and in no case on less than two;

(c) in ships of Classes IX and X of 70 feet or over, in length on two lifebuoys;

(d) in ships of Classes V (A), IX and X of less than 70 feet in length, on one lifebuoy;

(2) The self-igniting lights shall be such that they cannot be extinguished in water. They shall be capable of burning for not less than 45 minutes and shall have a luminosity of not less than 3.5 lumens.

(3) The self-igniting lights attached to lifebuoys carried in tankers shall be of an electric battery type.

(4) (a) In every ship to which these Rules apply (except ships of Classes VA, IX and X of less than 70 feet in length one lifebuoy on each side of the ship shall have attached to it a buoyant line of at least 15 fathoms in length.

(b) In ships of Classes V (A) and IX of less than 70 feet in length, one lifebuoy shall have attached to it a buoyant line of at least 10 fathoms in length.

(c) The lifebuoys having lines attached to them in compliance with this Rule shall not have self-igniting lights attached.

(5) Not less than two of the lifebuoys to which self-igniting lights are attached in accordance with sub-paragraphs (a), (b), (c) of paragraph (1) of this Rule and the lifebuoy to which a self-igniting light is attached in accordance with sub-paragraph (d) of paragraph (1) of this Rule shall be provided with a self activating smoke signal capable of producing smoke of highly visible colour for at least fifteen minutes.

(6) Two of the lifebuoys provided with self-igniting lights in accordance with sub-paragraphs (a) (b) and (c) of paragraph (1) above and self-activating smoke signals in accordance with paragraph (5) above shall be carried one on each side of the navigating bridge, if any, and so fitted as to be capable of quick release.

The lifebuoys so carried and other lifebuoys in positions where the release of a self-igniting light depends upon the weight of the lifebuoy shall each weight not less than 9½ pounds.

28. Line-throwing appliances shall comply with the requirements of Schedule 12.

Line-throwing
apparatus.

Provision of Equipment and Rations in Lifeboats, Boats and Liferafts

29.—(1) Subject to the provisions of paragraphs (2), (3), (4), (5) and (6) below, the equipment of every lifeboat shall be as follows:—

Equipment
for lifeboats,
Class C boats
and other
boats.

(a) a single banked complement of buoyant oars, two spare buoyant oars, and a buoyant steering oar; one set and a half of crutches, attached to the lifeboat by lanyard or chain; a boat hook;

(b) two plugs for each plug hole (except where proper automatic valves are fitted) attached to the lifeboat by lanyards or chains; a bailer and two buckets;

(c) a rudder attached to the lifeboat and a tiller;

(d) a lifeline becketed round the outside of the lifeboat; means to enable persons to cling to the lifeboat if upturned in the form of bilge keels or keel rails together with grab lines secured from gunwale to gunwale under the keel;

(e) a locker conspicuously marked as such, suitable for the stowage of small items of equipment;

(f) two hatchets, one at each end of the lifeboat;

(g) a lamp with oil sufficient for 12 hours;

(h) a watertight box containing two boxes of matches not readily extinguished by wind;

(i) a mast or masts, with galvanised wire stays together with orange coloured sails which shall be marked for identification purposes with the first and last letter of the name of the ship to which the lifeboat belongs;

(j) a compass in binnacle complying with the requirements of Part I of Schedule 13;

(k) a sea anchor complying with the requirements of Part II of Schedule 13;

(l) two painters of sufficient length and size. One shall be secured to the forward end of the lifeboat with strop and toggle so that it can be released and the other shall be firmly secured to the stem of the lifeboat and be ready for use;

(m) a vessel containing one gallon of vegetable, fish or animal oil. A means shall be provided to enable the oil to be easily distributed on the water, and shall be so arranged that it can be attached to the sea anchor;

(n) four parachute distress rocket signals complying with the requirements of Part III of Schedule 13, and six hand-hold distress flare signals complying with the provisions of Part IV of Schedule 13;

(o) two buoyant smoke signals complying with the requirements of Part V of Schedule 13;

(p) a first aid outfit complying with the requirements of Part VI of Schedule 13;

(q) a waterproof electric torch suitable for morse-signalling together with one spare set of batteries and one spare bulb in a waterproof container;

(r) a daylight-signalling mirror;

(s) a jack-knife fitted with a tin opener to be kept attached to the lifeboat with a lanyard;

(t) two light buoyant heaving lines;

(u) a manual pump complying with the requirements of Part VII of Schedule 14 to these Rules;

(v) a whistle;

(w) fishing line and six hooks;

(x) a cover of a highly visible colour capable of protecting the occupants against injury by exposure ;

(y) a copy of the Ministry of Transport Rescue Signal Table ; and

(z) means to enable persons in the water to climb into the lifeboat :
Provided that—

(i) in ships of Classes II, VI, VII and VII (A) such lifeboats shall not be required to carry the equipment specified in sub-paragraphs (i), (r) and (w), and

(ii) in ships of Class III such lifeboats shall not be required to carry the equipment specified in sub-paragraphs (i), (j), (m), (o), (r), (v), (w), (x) and (y) nor the parachute distress rocket signals specified in sub-paragraph (n) of this paragraph.

(2) No motor lifeboat or mechanically propelled lifeboat shall be required to carry a mast or sails nor more than half the complement of oars. Every such lifeboat shall carry two boat hooks.

(3) Every motor lifeboat shall carry at least two portable fire extinguishers capable of discharging foam or other substance suitable for extinguishing oil fires ; a receptacle containing a sufficient quantity of sand and a scoop for distributing the sand.

Such portable fire extinguishers shall be of a type complying with the requirements of Rule 57 of the Merchant Shipping (Fire Appliances) Rules 1966, except that the capacity of each extinguisher shall not be required to exceed one gallon of fluid or its equivalent.

(4) The equipment of every boat carried in a ship of Class IV, IV (A) or VIII shall be as follows :—

(a) at least four oars or paddles ;

(b) two plugs for each plug hole ;

(c) a bailer ;

(d) a painter of sufficient length and size ;

(e) a hatchet or matchet.

(5) Every lifeboat or Class C boat which is carried in compliance with sub-paragraph (b) of Rule 10 (5), sub-paragraph (a) of Rule 14 (3), sub-paragraph (b) of Rule 16 (2), sub-paragraph (b) of Rule 16 (3) and Rule 21 (2) shall be equipped as follows :—

(a) a single complement of buoyant oars and one spare buoyant oar provided that there shall never be less than three oars ; one set of crutches attached to the boat by lanyard or chain ; a boat hook ;

(b) two plugs for each plug hole (except where proper automatic valves are fitted) attached to the boat by lanyards or chains ; a bailer and a bucket ;

(c) a rudder attached to the boat and a tiller ;

(d) a lifeline becketed round the outside of the boat ;

(e) a locker conspicuously marked as such, suitable for the stowage of small items of equipment ;

(f) a painter of sufficient length and size secured to the forward end of the boat with strop and toggle so that it can be released ;

(g) means to enable persons to cling to the boat if upturned in the form of bilge keels or keel rails ;

(h) a waterproof electric torch suitable for morse signalling together with one spare set of batteries and one spare bulb in a waterproof container ; and

(i) two light buoyant heaving lines.

**Rations for
lifeboats.**

30.—(1) Every lifeboat carried in a ship of Class I, every lifeboat carried in a ship of Class V in compliance with Rule 10 (2), and every lifeboat carried in a ship of Class V (A) in compliance with Rule 11 (2) shall be provided with at least the rations specified in the following scale for each person it is deemed fit to accommodate :—

(a) 16 ounces of biscuits ;

(b) 16 ounces of barley sugar ; and

(c) 16 ounces of sweetened condensed milk of first quality ;

(2) All the foods specified in the preceding paragraph shall be packed in suitable watertight containers and labelled to indicate the contents.

(3) Every lifeboat carried in a ship of Class I, II, III, V, V (A), VI, VII, VII (A) and IX shall be provided with at least 6 pints (or 3 litres) of fresh water for each person whom it is deemed fit to accommodate, or at least 4 pints (or 2 litres) of fresh water for each such person together with a desalting apparatus capable of providing at least 2 pints (or 1 litre) of drinking for each person and in either case the total quantity of water shall be increased as far as is practicable :

Provided that this paragraph shall not apply to any lifeboat which is carried as an alternative to a Class C boat in a ship of Class V, V (A), VI, VII, VII (A), or IX.

(4) The water shall be kept in the lifeboat in suitable containers and there shall be provided at least one dipper, which shall be attached to the containers by a lanyard, and three rust-proof drinking vessels (one graduated in $\frac{1}{2}$, 1 and 2 ounces), provided that a container of not more than 4 pints (or 2 litres) capacity shall not be required to be provided with a dipper. The water shall be frequently changed so as to ensure that it is always clean and fit for drinking.

**Special
equipment
for certain
motor
lifeboats.**

31.—(1) In every ship of Classes I and V (A) the motor lifeboats which are required to comply with Rule 5 (5) (a) or Rule 11 (5) (a) shall be provided with the following equipment :—

(a) radio equipment which shall comply with the requirements of the Merchant Shipping (Radio) Rules 1966 and in addition the following provisions shall apply thereto :—

(i) it shall be installed in a cabin large enough to accommodate both the apparatus and the person using it ;

(ii) the arrangements shall be such that the efficient operation of the transmitter and receiver shall not be impaired through interference from the engine of the motor lifeboat whether a battery is on charge or not ; and

(iii) the radio battery shall not be used to supply power to any engine starting motor or ignition system.

(b) a dynamo fitted to the engine of the motor lifeboat and capable of recharging all batteries in the lifeboat.

(2) In every ship of Classes I, II and V (A) the motor lifeboats which are required to comply with Rule 5 (5) (b), Rule 6 (5) and Rule 11 (5) (b) shall be provided with a searchlight which shall include a lamp of at least 80 watts, an efficient reflector and a source of power which will give effective illumination of a light-coloured object having a width of about 60 feet at a distance of 200 yards for a total period of six hours. The searchlight shall be capable of working for at least three hours continuously.

32.—(1) All items of equipment provided in a lifeboat, Class C boat or other boat, with the exception of the boat hook which shall be kept free for fending off purposes, shall be suitably secured within the lifeboat or boat. Any lashing shall be carried out in such a manner as to ensure the security of the equipment and so as not to interfere with the lifting hooks, if fitted, or to prevent ready embarkation. All items of such equipment shall be as small and as light in weight as possible and shall be packed in suitable and compact form.

Security of equipment and rations in lifeboats, class C boats and other boats.

(2) All the rations provided in a lifeboat shall be stowed in watertight tanks, which shall be firmly secured to the lifeboat.

(3) The tanks for the food and water ration shall be conspicuously marked "food" or "water" whichever is appropriate.

33.—(1) Subject to the provisions of paragraphs (2), (3) and (4) of this Rule, the equipment and rations provided in every liferaft shall be as follows:—

Equipment and rations for liferafts.

- (a) one buoyant rescue quito, attached to at least 100 feet of buoyant line;
- (b) for liferafts which are fit to accommodate not more than 12 persons, one safety knife and one bailer;
for liferafts which are fit to accommodate 13 persons or more, two safety knives and two bailers;
- (c) two sponges;
- (d) two sea anchors, one permanently attached to the liferaft and one spare with line;
- (e) two paddles;
- (f) one repair outfit capable of repairing punctures in buoyancy compartments unless the liferaft complies with the requirements of Part II of Schedule 8.
- (g) one topping-up pump or bellows, unless the liferaft complies with Part II of Schedule 8;
- (h) three safety tin openers;
- (i) a first aid outfit complying with the requirements of Part VIII of Schedule 13;
- (j) one rust-proof drinking vessel, graduated in $\frac{1}{4}$, 1 and 2 ounces;
- (k) one waterproof electric torch suitable for morse-signalling together with one spare set of batteries and one spare bulb in a waterproof container;
- (l) one daylight signalling mirror and one signalling whistle;
- (m) two parachute distress rocket signals complying with the requirements of Part III of Schedule 13;
- (n) six hand-held distress flare signals complying with the requirements of Part IV of Schedule 13;
- (o) one fishing line and six hooks;
- (p) 12 ounces of suitable non-thirst provoking food providing at least 2,200 calories per pound weight and 6 ounces of barley sugar or other equally suitable sweets for each person the liferaft is deemed fit to accommodate;

(g) watertight receptacles containing 3 pints (or $1\frac{1}{2}$ litres) of fresh water for each person the liferaft is deemed fit to accommodate, of which 1 pint (or $\frac{1}{2}$ litre) per person may be replaced by a suitable de-salting apparatus capable of producing an equal amount of fresh water ;

(r) six anti-seasickness tablets for each person which the liferaft is deemed fit to accommodate ;

(s) instructions printed in the English language on how to survive in the liferaft ; and

(t) one copy of the Ministry of Transport Rescue Signal Table.

(2) In ships of Class II one or more liferafts, not being less than one-sixth of the number of liferafts carried in any such ship, shall be provided with the equipment specified in sub-paragraphs (a) to (g) inclusive, (h), (s) and (t) of paragraph (1) of this Rule, and with one-half of the equipment specified in sub-paragraphs (m) and (n) of the said paragraph, and the remainder of the liferafts carried shall be provided with the equipment specified in paragraphs (a) to (g) inclusive, (s) and (t) of the said paragraph.

(3) In ships of Classes III, IV, IV (A) and VIII liferafts shall be provided with the equipment specified in sub-paragraphs (a), (b), (c), (e), (f), (g), (s) and (t) of paragraph (1) of this Rule together with one sea-anchor which shall be permanently attached to the liferafts.

(4) In ships of Class X of less than 70 feet in length liferafts shall be provided with the equipment specified in sub-paragraphs (a), (b), (c), (e), (f), (g), (i), (j), (k), (m), (r), (s) and (t) of paragraph (1) of this Rule together with the following equipment :—

(a) one sea-anchor which shall be permanently attached to the liferaft ;

(b) two safety tin-openers ;

(c) three hand-held distress flare signals complying with the requirements of Part IV of Schedule 13 and ;

(d) watertight receptacles containing 1 pint (or $\frac{1}{2}$ litre) of fresh water for each person which the liferaft is deemed fit to accommodate.

Stowage and Handling of Life-Saving Appliances

General provisions relating to the stowage and handling of lifesaving appliances.

34.—(1) The arrangement of each lifeboat, Class C boat or other boat, liferaft and article of buoyant apparatus shall be such that it will not interfere with the operation of other life-saving appliances or impede in any way their prompt handling or the marshalling of persons at the launch-stations or their embarkation.

(2) Lifeboats, Class C boats or other boats, liferafts and buoyant apparatus shall be so stowed that they can all be launched safely in the shortest possible time and the overall launching period shall not exceed 30 minutes in the case of (a) ships of Classes I and II and (b) ships of Class V (A) which carry liferafts under launching appliances.

Stowage and handling of lifeboats, class C boats and other boats.

35.—(1) Subject to the provisions of paragraphs (2), (3) and (4) of this Rule, every lifeboat attached to a set of davits, other than a lifeboat which is carried as an alternative to a Class C boat or other boat, shall be so arranged that even under unfavourable conditions of trim and of up to 15 degrees of list either way it can be put into the water when loaded with its full complement of persons and equipment required by these Rules.

(2) Any lifeboat which is carried as an alternative to a Class C boat or other boat, and any Class C boat or other boat, which is attached to a davit or set of davits other than a mechanically controlled single-arm davit shall be so arranged that when loaded with its equipment required by these Rules and a launching crew of two persons it can be put into the water on one side of the ship when the ship is upright or is listed to 15 degrees towards that side

(3) Every lifeboat, Class C boat or other boat attached to a mechanically controlled single-arm davit shall be so arranged that when loaded with its equipment required by these Rules and a launching crew of two persons it can be put into the water on one side of the ship when the ship is upright or is listed up to 15 degrees towards that side, except that in ships of Class IX which carry a lifeboat in compliance with sub-paragraph (a) of Rule 16 (3), the lifeboat shall be so arranged that when loaded with its required equipment and a launching crew of two persons it can be put into the water on either side of the ship, or, if the ship has a list, on the side to which the ship is listed.

(4) Every lifeboat or Class C boat carried in compliance with Rules 11 (5) (b), 13 (2), 14 (3) (a), 16 (2) (b), 16 (3) (b), and 17 (2) if not attached to a davit or set of davits, shall be attached to a device which shall be provided primarily for the purpose of launching the boat and which shall be capable of putting the boat into the water on one side of the ship when it is loaded with its equipment required by these Rules and a launching crew of two persons and when the ship is upright or is listed up to 15 degrees towards that side.

(5) Not more than one lifeboat, Class C boat or other boat shall be attached to any set of davits, davit or other means of launching.

(6) Lifeboats shall only be stowed on more than one deck on condition that proper measures are taken to prevent lifeboats on a lower deck being fouled by those stowed on a deck above.

(7) Lifeboats shall not be placed in the bows of the ship, and they shall be situated in such position as to ensure safe launching having particular regard to clearance from the propeller and steeply overhanging portions of the hull aft, and to ensure so far as is practicable that they can be launched down the straight side of the ship.

(8) Davits shall be suitably placed in the ship.

(9) Davits winches, falls, blocks and all other launching gear provided in accordance with these Rules shall comply with the requirements of Schedule 14.

(10) (a) All lifeboats, Class C boats or other boats attached to davits shall be served by wire rope falls and winches in the following cases:—

(i) when they are attached to gravity davits; or,

(ii) when they are attached to mechanically controlled single arm davits; or,

(iii) when they are fitted in any ship of Classes I or II, or in any ship of Class V (A) in compliance with Rule 11 (2); or

(iv) when they are fitted in any ship of Classes V, VI or VII (A) in compliance with Rule 10 (2) or sub-paragraph (a) of Rule 10 (5); or

(v) when the weight of the attached lifeboat, Class C boat or other boat in the lowering condition exceeds $2\frac{1}{2}$ tons:

Provided that the appropriate authority may permit other types of falls to be fitted with or without winches in cases other than emergency lifeboats, where it is satisfied that such falls are adequate.

(b) In every ship to which these Rules apply in which lifeboats, Class C boats or other boats are served by wire rope falls, winches shall be provided for handling such falls.

(c) Emergency lifeboats carried in compliance with Rule 5 (3), Rule 6 (4) or Rule 11 (3) shall be served by winches which are capable of recovering them at a speed of not less than 60 feet per minute when the lifeboat is loaded with its equipment required by these Rules and a distributed load equal to 2,240 pounds.

(11) Efficient hand gear shall be provided for the recovery of all lifeboats Class C boats or other boats which are served by winches.

(12) Where davits are recovered by action of the falls by power, safety devices shall be fitted which will automatically cut off the power before the davits come against the stops and ensure that the wire rope falls or davits are not over-stressed.

(13) To facilitate the launching of lifeboats against a list of 15 degrees, skates or other suitable means shall be provided for any lifeboat stowed under davits which are of such strength that the lifeboat can be lowered with its full complement of persons and its equipment required by these Rules.

(14) Means shall be provided for bringing the lifeboats, which are required to be capable of being lowered in the fully loaded condition, against the ship's side and for holding them there for the safe embarkation of persons.

(15) In ships other than ships in which the lifeboat, Class C boat or other boat is attached to a mechanically controlled single-arm davit, the davits shall be fitted with a wire rope span so positioned that when the boat is in the lowering position the span is as near as practicable over the centre line of the boat. There shall be at least two lifelines fitted to the span and the lifelines shall be long enough to reach the water with the ship at her lightest seagoing draught and listed to 15 degrees either way.

(16) Lifeboats, Class C boats and other boats attached to davits shall have the falls ready for service, and the falls shall be at least long enough to reach the water with the ship at her lightest sea-going draught and listed to 15 degrees either way. Means shall be provided for detaching the lifeboats, Class C boats or other boats from the falls. Lower fall blocks shall be fitted with a suitable ring or long link for attaching to the sling hooks, unless disengaging gear complying with the requirements of Schedule 15 is fitted. The points of attachment of the lifeboats, Class C boats and other boats to the falls shall be at such height above the gunwale as to ensure stability when lowering the lifeboats Class C boats or other boats.

(17) Every emergency lifeboat carried in compliance with Rule 5 (3), Rule 6 (4) and Rule 11 (3) shall be provided with means for facilitating the attachment of the lower fall blocks to the lifting arrangements of the boat when the boat is recovered from the sea in adverse weather conditions. For this purpose a pendant of adequate strength and suitable length shall be provided for each davit, and the one end of the pendant shall be attached to the lower fall block and the other end to the lifting arrangement on the boat. Means shall in addition be provided for hanging off the boat after hoisting to enable the lower fall block to be attached directly to the lifting hook.

(18) In any ship to which these Rules apply when a lifeboat is attached to any set of davits, davit, or other means of launching not of sufficient strength that the lifeboat can be safely lowered into the water when loaded with its full complement of persons and equipment required by these Rules under the conditions of trim and of list specified in these Rules for the Class of Ship, or when any Class C boat or other boat not of sufficient strength that it can be safely lowered into the water when loaded with its full complement of persons and equipment required by these Rules is attached to any set of davits, davit, or other means of launching, each davit or other means of launching shall be conspicuously marked with a red band 6 inches wide painted on a white background.

PART V—MISCELLANEOUS PROVISIONS

Stowage and handling of liferafts, buoyant apparatus, lifebuoys, and life-jackets.

36.—(1) Liferafts and buoyant apparatus shall be so stowed that they can be put into the water safely even under unfavourable conditions of trim and of up to 15 degrees of list either way.

(2) (a) In every ship of Classes I, II and V (A) which carry liferafts in accordance with Rule 5 (2) (b), 6 (8) (c) or 11 (2) (b) there shall be provided for such liferafts launching appliances complying with the requirements of Schedule 16.

(b) Every liferaft launching appliance shall be so arranged that even under unfavourable conditions of trim and of up to 15 degrees of list either way each liferaft which is designed for use with such an appliance can be launched when loaded with its full complement of persons and equipment.

(c) Liferafts for which launching appliances are provided, and such launching appliances, shall not be placed in the bows of the ship and shall be so placed as to ensure safe launching having particular regard to clearance from the propeller and steeply overhanging portions of the hull aft, and to ensure so far as it is practicable that they can be launched down the straight side of the ship.

(d) Means shall be provided for bringing liferafts for which launching appliances are provided against the ship's side and for holding them there for the safe embarkation of persons.

(3) Lifebuoys shall be so stowed as to be readily accessible to all persons on board, and in such a way that they can be rapidly cast loose.

(4) Lifejackets shall be so stowed as to be readily accessible to all persons on board. Their position shall be clearly and permanently indicated.

37.—(1) Arrangements shall be made to ensure that it is possible to effect embarkation into the lifeboats, Class C boats and other boats, and liferafts rapidly and in good order.

(2) In every ship arrangements shall be made for warning the passengers and crew when the ship is about to be abandoned.

(3) (a) In ships of Classes V, VI, VII and VII (A), in ships of Class IX of 150 feet or over in length and in ships of Class X one ladder shall be carried at each set of lifeboat davits where the davits are capable of lowering the lifeboat when loaded with its full complement of persons and its equipment required by these Rules. Such provision shall also be made for ships of Classes I, II and III and for those ships of Class V (A) to which Rules (2) refers, except that in such ships the appropriate authority may permit such ladders to be replaced by suitable mechanical devices provided that there shall not be less than one ladder on each side of the ship.

(b) In ships of Classes V, V (A), VI, VII, VII (A), IX and X which carry a Class C boat or a lifeboat which is not capable of being lowered into the water when loaded with its full complement of persons and its equipment required by these Rules suitable means shall be provided for embarking persons into the boat.

(c) In ships of Classes I, II and III, in ships of Class V (A) to which Rule 11 (2) refers and in ships of Classes V, VI and VII (A) of 500 tons or over, sufficient ladders shall be provided to facilitate embarkation into the liferafts when waterborne except that in such ships the appropriate authority may permit the replacement of some or all of such ladders by suitable mechanical devices.

(d) The ladders provided in compliance with this paragraph of this Rule shall be of sufficient length to reach the water line with the ship at her lightest sea-going draught and listed to 15 degrees either way.

Embarkation into lifeboats, Class C boats and other boats, and liferafts.

Manning of
lifeboats
and liferafts.

(4) Ships of Classes I, II, III, V, V (A), VI, VII, VII (A) and IX shall be provided with means situated outside the engine room whereby any discharge of water into the lifeboats or into liferafts at fixed launching positions, including those under launching appliances, can be prevented.

38.—(1) In ships of Classes I, II and III, a deck officer or certificated lifeboatman shall be placed in charge of each lifeboat and a second in command shall also be nominated. The person in charge shall have a list of the lifeboat's crew and shall see that the persons placed under his orders are acquainted with their several duties.

(2) In ships of Class I, a person trained in the handling and operation of liferafts shall be assigned to each liferaft.

(3) (a) In ships of Classes II and III carrying liferafts served by launching appliances, two persons trained in the handling and operation of liferafts shall be assigned to each launching appliance.

(b) In ships of Classes II, and III carrying liferafts not served by launching appliances which are stowed in groups at fixed launching positions, a person trained in the handling and operation of liferafts shall be assigned to each such position.

(4) In ships of Classes I and II a person capable of working the radio equipment and searchlight equipment shall be assigned to each lifeboat carrying such equipment.

(5) In every ship in which motor lifeboats are carried a person capable of working the motor shall be assigned to each motor lifeboat.

Certificated
lifeboat-
men.

39.—(1) The crew of every ship of Class I, II and III shall include, for each lifeboat carried in compliance with these Rules, a number of certificated lifeboatmen not less than that specified in the following table:—

<i>Prescribed complement of lifeboat</i>	<i>Minimum number of Certificated Lifeboatmen</i>
Less than 41 persons	2
From 41 to 61 persons	3
From 62 to 85 persons	4
More than 85 persons	5

(2) An applicant for a lifeboatman's certificate shall be at least 18 years of age and shall submit himself for examination at such time and place as may be directed by the appropriate authority who, on being satisfied that he has had sufficient service at sea and has been trained in all the operations connected with the launching and practical handling of lifeboats and other life-saving equipment and in the use of oars and propelling gear and, further, that he is capable of understanding and answering any orders relative to all kinds of life-saving appliances, may issue a certificate to him.

(3) In this Rule, "prescribed complement" means the number of persons which the lifeboat is deemed fit to accommodate under these Rules.

Portable
radio
equipment.

40.—(1) The portable radio equipment required to be carried in compliance with Rule 5 (6), Rule 6 (11), Rule 10 (10) and Rule 11 (6) shall comply with such of the requirements of radio rules under the Act as apply thereto and shall be kept in a suitable place ready to be moved into a lifeboat or a liferaft in case of emergency.

(2) In ships where the disposition of superstructures or deck houses is such as to involve substantial fore and aft separation of the main transmitter and lifeboats, such equipment shall be kept in vicinity of those lifeboats or liferafts which are furthest away from the main transmitter.

41. Every ship of Class I shall be provided throughout the ship with electrically operated signals controlled from the bridge for summoning passengers to muster stations.

Electrically
operated
signals.

42.—(1) In every ship of Class I, II, or III, an electric lighting system shall be provided throughout the ship and in particular upon the decks from which lifeboats and liferafts are embarked. Provision shall also be made in every such ship for the electric lighting of the launching gear and of the lifeboats, and of the liferaft launching appliances where provided and the liferafts which they serve, during the preparation for and process of launching and also for illuminating the water into which the lifeboats and liferafts served by launching appliances are launched until the process of launching is completed, and for lighting the stowage position of liferafts for which launching appliances are not provided. The lighting shall be operated from the ship's main generating plants and shall be so arranged that power may be supplied from the emergency source of power referred to in Construction rules under the Act.

Electric
lighting.

(2) In every ship of Class I and II, the exit from every main compartment occupied by passengers or crew shall be continuously lighted by an emergency electric lamp, operated from the ship's main generating plant and so arranged that power may be supplied from the emergency source of power referred to in construction rules under the Act.

(3)—(a) In every ship of Classes V, V (A) and VI of 500 tons or over and in every ship of Class VII (A) of such tonnage engaged on international voyages provision shall be made for the electric lighting of the launching gear and of the lifeboats and of the liferafts launching appliances, where provided, and of the liferafts which they serve, during the preparation for and process of launching and also for lighting the water into which the lifeboats, and the liferafts served by launching appliances, are launched until the process of launching is completed and for the lighting of the stowage position of liferafts for which launching appliances are not provided.

(b) In every ship of Classes V, V (A) and VI of 1,600 tons or over and in every ship of Class VII (A) of such tonnage engaged on international voyages provision shall be made for the electric lighting of the alleyways, stairways and exits so as to ensure that access of all persons on board to the launching stations and stowage positions of lifeboats and liferafts is not impeded.

(c) The lighting required by sub-paragraph (a) and (b) of this paragraph shall be operated from the ship's main electric generating plant and in addition shall be capable of being operated—

(i) in every such ship of 5,000 tons or over, from an emergency source of electric power which shall be provided for such lighting or in the case of any ship to which Rule 6 of the Merchant Shipping (Cargo Ship Construction and Survey) Rules 1966 applies from the emergency source of electric power required by that Rule;

(ii) in every such ship of 1,600 tons or over but of under 5,000 tons, from an emergency source of electric power which shall be provided for such lighting or in the case of any ship to which Rule 7 of the said Rules applies from the emergency source of electric power required by that Rule.

(d) In every such ship of 500 tons or over but of under 1,600 tons the lighting required by sub-paragraph (a) of this paragraph shall be operated from the ship's main electric generating plant and in addition shall be capable of being operated from an emergency source of electric power which shall be provided for such lighting or where, in the case of any cargo ship, emergency source of electric power is required under any construction rules under the Act from that emergency source of electric power or, if the appropriate authority so permits, from the reserve source of electrical energy required by radio rules under the Act on condition that the lighting circuit can be readily disconnected and the said reserve source is capable of supplying the additional load or loads without falling below the capacity required by the aforesaid rules.

(4) In every ship of Classes V, V(A), VI and VII (A) to which paragraph (3) of this Rule does not apply and in every ship of Classes VII and IX, means shall be provided for the electric lighting of the launching gear and lifeboats or boats during the preparation for and process of launching and also for the lighting of the stowage position of the liferafts.

Ships
distress
signals.

43.—(1) Every ship to which these Rules apply, except ships of Classes IV, IV (A), and VIII, ships of Class IX of less than 40 feet in length and ships of Class X, shall carry not less than twelve parachute distress rocket signals which shall comply with the requirements of Schedule 17.

(2) Ships of Class IX of less than 40 feet in length shall carry not less than six red star distress signals which shall comply with the requirements of paragraph (4) below.

(3) Ships of Class X which proceed to sea shall carry not less than six pyrotechnic distress signals which shall be either parachute distress rocket signals of a type which complies with the requirements of Schedule 17 or red star distress signals which shall comply with the requirements of paragraph (4) below.

(4) Any red star distress signals required by this Rule shall be capable of emitting two or more red stars either together or separately at or to a height of not more than 150 feet. Each of these stars shall burn with a minimum luminosity of 5,000 candle power for not less than five seconds.

(5) All pyrotechnic distress signals shall be packed in a water-tight container and shall be clearly and indelibly labelled to indicate their purpose.

Equivalents
and exemp-
tions.

44.—(1) Where these Rules require that a particular fitting, material, appliances or apparatus, or type thereof, shall be fitted or carried in a ship, or that any particular provision shall be made, the appropriate authority may permit any other fitting, material, appliance or apparatus, or type thereof, to be fitted or carried or any other provision to be made in that ship if the appropriate authority is satisfied by trial thereof that such other fitting, material, appliance or apparatus, or type thereof, or provision, is at least as effective as that required by these Rules.

(2) If it appears to the appropriate authority, on the application of the owner of any ship, that it is not practicable or reasonable to fit in that ship the number of sets of davits required by these Rules the appropriate authority may permit one or more sets of davits to be dispensed with in that ship subject to such conditions, if any, as the appropriate authority thinks fit:

Provided that, in the case of ships of Classes II and III the number of sets of davits fitted shall, subject to the provisions of Rules 6 (2) and 6 (8), in no case be less than the minimum number determined by Column 8 of the table set out in Schedule 2.

(3) If a ship of Class I is permitted by the terms of her passenger steamer's certificate to carry, between specified ports or places abroad, a number of passengers in addition to the number allowed when the ship is proceeding to sea from Nigeria, the appropriate authority may, subject to such conditions as it thinks fit, permit as regards the part of the voyage between such specified ports or places, modifications of the provisions of Rules 5 (2) and 5 (11) (which relate to lifeboats, liferafts and buoyant apparatus):

Provided that where such modifications are allowed the total number of lifeboats together with such liferafts as are carried shall be always sufficient for the total number of persons which the ship is certified to carry and in addition liferafts shall be carried sufficient to support 10 per cent of that number of persons.

(4) The appropriate authority may exempt any ship not normally engaged on international voyages but which, in exceptional circumstances, is required to undertake a single international voyage from any of the requirements of these Rules, provided that the ship complies with safety requirements which in the opinion of the appropriate authority are adequate for the voyage which is to be undertaken by the ship.

(5) If it is impracticable or unreasonable for a ship to carry a lifeboat or boat of the minimum length prescribed by these Rules, the appropriate authority may permit a smaller lifeboat or boat to be carried by that ship.

(6) The appropriate authority may, either absolutely or subject to such conditions as it thinks fit, exempt any ship of which the keel was laid before the coming into operation of these Rules, from any requirement of these Rules, if it is satisfied that compliance with a requirement is either impracticable or unreasonable in the case of that ship.

SCHEDULES

SCHEDULE I

Rule 4

INLAND TIDAL WATERS AREAS

1. All those inland waters in the area bounded by the border with Dahomey in the West, the meridian of 5 degrees East longitude in the East, and the parallel of 7 degrees North latitude in the North.

2. All those inland waters in the area bounded by the meridian of 5 degrees East longitude in the West, the meridian of 6 East longitude in the East, and the parallel of 6 degrees 5 minutes North latitude in the North.

3. All those inland waters in the area bounded by the meridian of 6 degrees East longitude in the West, the border with the Cameroons in the East, and the parallel of 5 degrees North latitude in the North.

SCHEDULE 2

Table showing the minimum number of sets of davits to be provided and the minimum cubic capacity of lifeboats in ships of Class II. Rules 6 and 44.

<i>Length of ship (in Feet)</i>	(A) <i>Minimum number of sets of davits</i>	(B) <i>Smaller number of sets of davits authorised exceptionally</i>	(C) <i>Minimum capacity of lifeboats in cubic feet</i>
Under 120 ..	2	2	400
120 and under 140 ..	2	2	650
140 and under 160 ..	2	2	900
160 and under 175 ..	3	3	1,150
175 and under 190 ..	3	3	1,350
190 and under 205 ..	4	4	1,550
205 and under 220 ..	4	4	1,750
220 and under 230 ..	5	4	1,850
230 and under 245 ..	5	4	2,150
245 and under 255 ..	6	5	2,400
255 and under 270 ..	6	5	2,700
270 and under 285 ..	7	5	3,000
285 and under 300 ..	7	5	3,300
300 and under 315 ..	8	6	3,600
315 and under 330 ..	8	6	3,900
330 and under 350 ..	9	7	4,300
350 and under 370 ..	9	7	4,750
370 and under 390 ..	10	7	5,150
390 and under 410 ..	10	7	5,550
410 and under 435 ..	12	9	6,050
435 and under 460 ..	12	9	6,550
460 and under 490 ..	14	10	7,150
490 and under 520 ..	14	10	7,800
520 and under 550 ..	16	12	8,400
550 and under 580 ..	16	12	—
580 and under 610 ..	18	13	—
610 and under 640 ..	18	13	—
640 and under 670 ..	20	14	—
670 and under 700 ..	20	14	—
700 and under 730 ..	22	15	—
730 and under 760 ..	22	15	—
760 and under 790 ..	24	17	—
790 and under 820 ..	24	17	—
820 and under 855 ..	26	18	—
855 and under 890 ..	26	18	—
890 and under 925 ..	28	19	—
925 and under 960 ..	28	19	—
960 and under 995 ..	30	20	—
995 and under 1,030 ..	30	20	—

Table showing the minimum number of sets of davits to be provided in ships of Class III :

<i>Length of ship in feet</i>	<i>Minimum numbers of sets of davits</i>
Under 200	2
200 and under 240	3
240 and under 280	4
280 and under 320	5
320 and over	6

SCHEDULE 3

GENERAL REQUIREMENTS FOR LIFEBOATS

Rule 18

1. Every lifeboat shall be constructed with rigid sides.
2. In any lifeboat fitted with a rigid shelter, the shelter shall be capable of being readily opened from both inside and outside and shall not impede rapid embarkation and disembarkation or the launching and handling of the lifeboat. Such a shelter where fitted may be accepted as complying with the requirements of sub-paragraph (a) of Rule 27 (1).
3. Every lifeboat, except wooden lifeboats made of planks, shall have a block coefficient of the cubic capacity as determined in accordance with Schedule 4 of not less than 0.64.
4. Every lifeboat shall be of such form and proportions that it shall have ample stability in a seaway, and sufficient freeboard when loaded with its full complement of persons and equipment.
5. Every lifeboat shall be so constructed that it shall be capable of maintaining positive stability when open to the sea and loaded with its full complement of persons and equipment.
6. Every lifeboat shall be properly constructed for the purpose for which it is intended and shall be of sufficient strength to permit its being safely lowered into the water when loaded with its full complement of persons and equipment. It shall be of such strength that it will not suffer residual deflection if subjected to an overload of at least 25 per cent.
7. No lifeboat shall be less than 16 feet in length except that where these Rules permit a lifeboat to be carried as an alternative to a Class C boat, the length of such lifeboat shall not be less than that of the Class C boat as determined in accordance with paragraph (3) of Schedule 7.
8. No lifeboat when laden with its full complement of persons (calculated at 165 pounds per person) and equipment shall weigh more than 20 tons.
9. In every lifeboat all thwart and side seats shall be fitted as low in the lifeboat as practicable and bottom boards shall be fitted.
10. Every lifeboat shall have a mean sheer at least equal to 4 per cent of its length. The sheer shall be approximately parabolic in form.
11. Every lifeboat shall be fitted with internal buoyancy appliances which shall consist either of air cases or buoyant material which shall not be adversely affected by oil or oil products and which shall not adversely affect the boat.
12. In every lifeboat the total volume of the internal buoyancy appliances shall be such that it will be at least equal to the sum of the volumes of
 - (a) that required to float the lifeboat and its full equipment when the lifeboat is flooded and open to the sea so that the top of the gunwale amidships is not submerged; and
 - (b) that equal to 10 per cent of the cubic capacity of the lifeboat.

13. In the case of lifeboats which accommodate 100 or more persons, the volume of the buoyancy appliances required by sub-paragraph (b) of the preceding paragraph of this Schedule shall be increased as follows :—

(i) In lifeboats which accommodate from 100 to 130 persons by an amount determined by interpolating between nil at 100 persons and 1.5 per cent of the cubic capacity of the lifeboat at 130 persons ;

(ii) in lifeboats which accommodate over 130 persons by an amount equal to 1.5 per cent of the cubic capacity of the life boat.

SCHEDULE 4

CALCULATION OF CUBIC CAPACITY OF LIFEBOATS

Rule 19

1. Subject to the provisions of paragraph 4 of this Schedule, the cubic capacity of a lifeboat for the purposes of these Rules shall be measured in cubic feet and shall be determined by Stirling's (Simpson's) Rule, which may be considered as given by the following formula :—

Cubic Capacity = $L(4A + 2B + 4C)$, where L denotes the length of the
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lifeboat in feet from the inside of the shell at the top of the stem to the corresponding point at the top of the stern post ; in the case of a lifeboat with a square stern the length is measured to the inside of the top of the transom ; and

A, B, C, denote respectively the areas of the cross-sections at the quarter length forward, amidships and the quarter length aft which correspond to the three points obtained by dividing L into four equal parts (the areas corresponding to the two ends of the lifeboat shall be considered negligible).

The areas A, B, C shall be deemed to be given in square feet by the successive application of the following formula to each of the three cross-sections :—

Area = $h(a + 4b + 2c + 4d + e)$, where h denotes the depth measured
12

in feet inside the shell from the keel to the level of the gunwale or, in certain cases, to a lower level as determined hereafter ; and a, b, c, d, e denote the horizontal breadths of the lifeboat measured in feet inside the shell at the upper and lower points of the depth and at the three points obtained by dividing h into four equal parts (a and e being the breadths at the extreme points and c at the middle point of h).

The capacity of a square-sterned lifeboat shall be calculated as if the lifeboat had a pointed stern.

2. If the sheer of the gunwale, measured at the two points situated at a quarter of the length of the lifeboat from the ends, exceeds 1 per cent of the length of the lifeboat, the depth employed in calculating the area of the cross-section A or C shall be deemed to be the depth amidships plus 1 per cent of the length of the lifeboat.

3. If the depth of the lifeboat amidships exceeds 45 per cent of the breadth, the depth employed in calculating the area of the amidship cross-section B shall be deemed to be equal 45 per cent of the breadth, and the depth employed in calculating the areas of the quarter length sections A and C is obtained by increasing this last figure by an amount equal to 1 per cent of the length of the lifeboat.

Provided that in no case shall the depths employed in the calculation exceed the actual depths at these points. SEC 4.

4. Unless the owner of the lifeboat requires the cubic capacity to be determined by exact measurement, the cubic capacity of a lifeboat constructed of wooden planks may be assumed to be the product of the length, the breadth and the depth multiplied by 0.6 if this formula does not give a greater capacity than that obtained by the formula set out in paragraph 1 of this Schedule. The dimensions shall be measured in the following manner:

Length—From the intersection of the outside of the planking with the top of the stem to the corresponding point at the stern post, or in the case of a square-sterned lifeboat, to the after side of the top of the transom;

Breadth—From the outside of the planking at the point where the breadth of the lifeboat is greatest;

Depth—Amidships inside the planking from the keel to the level of the top of the gunwale, but the depth used in calculating the cubic capacity may not in any case exceed 45 per cent of the breadth.

5. The cubic capacity of a motor lifeboat or a lifeboat fitted with other propelling gear shall be obtained from the gross capacity by deducting a volume equal to that occupied by the motor and its accessories or the gearbox of the other propelling gear, and any equipment with which the lifeboat may be provided in compliance with Rule 29.

SCHEDULE 5

MACHINERY OF MOTOR LIFEBOATS

Rule 20 (a)

1. The engine shall be capable of being readily started in cold weather and of running reliably under conditions of extremes of temperature.

2. The engine shall operate properly under conditions of at least 10 degrees list and 10 degrees trim. Circulating water pumps where fitted shall be self-priming.

3. The engine and its accessories, including the fuel tank, pipes and fittings, shall be adequately protected to ensure reliable operation under conditions likely to arise at sea during adverse weather. The engine casing shall additionally be fire-resisting, and in the case of air-cooled diesel engines shall be so designed that the supply of cooling air is not restricted.

4. Means shall be provided in all lifeboats to prevent the spread of oil. In a wooden lifeboat a metal tray shall be fitted under the engine.

5. The fuel tank shall be substantially constructed, securely fixed in position with a metal tray underneath and fitted with suitable filling, vapour venting and relief arrangements. No part of the tank or its connections nor any part of the fuel piping or fittings shall depend on soft solder for tightness, and tanks made of steel shall be protected externally against corrosion by sea water by metal spraying or similar means. The tank and its connections shall be capable of withstanding hydraulic pressure corresponding to a head of at least 15 feet. A cock shall be fitted at each end of the fuel pipe.

6. The engine and fuel tank spaces shall be efficiently ventilated.

7. The shafting and other moving parts shall be fenced where necessary to protect the persons in the lifeboat from injury.

SCHEDULE 6

MACHINERY OF MECHANICALLY PROPELLED LIFEBOATS Rule 21

1. The propelling gear shall be so arranged that it can be rapidly and easily made ready for service and will not interfere with the rapid embarkation of persons into the lifeboat.
2. If the propelling gear is manually operated it shall be capable of being operated by persons untrained in its use and shall be capable of being operated when the lifeboat is flooded.
3. The propelling gear shall not require adjustment to enable it to be worked by persons of different stature. It shall be effective in propelling the lifeboat partially or fully loaded.
4. The propelling gear shall be substantially constructed and fitted to the lifeboat in an efficient manner. The metal part of any operating handle shall suitably sheathed by material other than wood to ensure that the hands of the operators are protected in conditions of extreme cold.
5. The propelling gear shall be of sufficient power to enable the lifeboat when loaded with its equipment required by these Rules and a distributed weight equal to the full number of persons which it is fit to carry, to be propelled at a speed ahead of at least 3.5 knots in smooth water over a distance of $\frac{1}{4}$ mile.
6. The propelling gear shall be capable of propelling the lifeboat ahead or astern and a device shall be fitted by means of which the helmsman can cause the lifeboat to go astern or ahead at any time when the propelling gear is in operation.

SCHEDULE 7

REQUIREMENTS FOR CLASS C BOATS

Rule 22

1. Every Class C boat shall be an open boat constructed with rigid sides.
2. The boat shall be of such form and proportions that it shall have ample stability in a seaway and sufficient freeboard when loaded with its equipment and the number of persons specified in Column (3) of paragraph (3) of this Schedule.
3. The length of the boat and the number of persons for whom seating shall be provided in the boat shall be determined in accordance with the following table:—

(1) Number of Persons on board the ship	(2) Minimum Length of Boat in feet	(3) Minimum Seating Capacity of Boat (persons)
More than 8	16	9
8	15	8
6 or 7	14	7
5	13	5
4 or less	12	4

- (4) All thwart and side seats in the boat shall be fitted as low in the boat as practicable and bottom boards shall be fitted.
- (5) The boat shall be square-sterned and shall have a mean sheer at least equal to five per cent of its length.

(6) The boat shall be fitted with internal buoyancy appliances which shall be so placed as to secure stability when the boat is fully laden under adverse weather conditions.

(7) Every boat shall be fitted with internal buoyancy appliances which shall consist either of aircases or buoyant material which shall not be adversely affected by oil or oil products and which shall not adversely affect the boat.

(8) The total volume of the internal buoyancy appliances shall be such that it will be at least equal to the sum of the volume of :

(a) that required to float the boat and its full equipment when the boat is flooded and open to the sea so that the top of the gunwale amidships is not submerged ; and

(b) that equal to 7.5 per cent of the cubic capacity of the boat which shall be determined in the same manner as that prescribed for lifeboats in Schedule 4.

SCHEDULE 8

REQUIREMENTS FOR LIFERAFTS

PART I—INFLATABLE LIFERAFTS

Rule 23

1. Subject to the provisions of paragraphs 2 and 3 of this Part of this Schedule every inflatable liferaft shall comply with the following requirements :—

(a) The liferaft shall be so constructed that, when fully inflated and floating with the cover uppermost, it shall be stable in a seaway ;

(b) The liferaft shall be so constructed that if it is dropped into the water from a height of 60 feet, neither the liferaft nor its equipment will be damaged ;

(c) The construction of the liferaft shall include a cover of a highly visible colour which shall automatically be set in place when the liferaft is inflated. The cover shall be capable of protecting the occupants against injury from exposure, and means shall be provided for collecting rain water. The top of the cover shall be fitted with a lamp which derives its luminosity from a sea-activated cell and a similar lamp shall also be fitted inside the liferaft ;

(d) The liferaft shall be fitted with a painter and shall have a lifeline becketed round the outside. A lifeline shall also be fitted round the inside of the liferaft ;

(e) The liferaft shall be capable of being readily righted by one person if it inflates in an inverted position ;

(f) The liferaft shall be fitted at each opening with efficient means to enable persons in the water to climb on board ;

(g) The liferaft shall be contained in a valise or other container so constructed as to be capable of withstanding hard wear under conditions encountered at sea. The liferaft in its valise or other container shall be inherently buoyant ;

(h) The buoyancy of the liferaft shall be so arranged as to ensure by a division into an even number of separate compartments, half of which shall be capable of supporting out of the water the number of persons

which the liferaft is fit to accommodate, or by some other equally efficient means, that there is a reasonable margin of buoyancy if the raft is damaged or partially fails to inflate ;

(i) The total weight of the liferaft, its valise or other container and its equipment shall not exceed 400 pounds ;

(j) The number of persons which a liferaft shall be deemed fit to accommodate shall be equal to —

(i) the greatest whole number obtained by dividing by 3.4 the volume measured in cubic feet, of the main buoyancy tubes (which for this purpose shall include neither the arches nor the thwart or thwarts if fitted) when inflated ; or

(ii) the greatest whole number obtained by dividing by 4 the area, measured in square feet, of the floor (which for this purpose may include the thwart or thwarts if fitted) of the liferaft when inflated,

whichever number shall be less ;

(k) The floor of the liferaft shall be waterproof and shall be capable of being sufficiently insulated against cold ; either

(i) by means of one or more compartments which the occupants can inflate if they so desire, or which inflate automatically and can be deflated and re-inflated by the occupants ; or

(ii) by other equally efficient means not dependent on inflation ;

(l) The liferaft shall be inflated by a gas which is not injurious to the occupants and the inflation shall take place automatically either on the pulling of a line or by some other equally simple and efficient method. Means shall be provided whereby a topping-up pump or bellows may be used to maintain pressure ;

(m) The liferaft shall be of suitable material and construction, and shall be so constructed as to be capable of withstanding exposure for 30 days afloat in all sea conditions ;

(n) Every liferaft which is designed for use with a launching appliance shall be properly constructed for the purpose for which it is intended and shall be of sufficient strength to permit it to be safely lowered into the water when loaded with its full complement of persons and equipment ;

(o) The liferaft shall have a carrying capacity calculated in accordance with sub-paragraph (j) of this paragraph of not less than six persons or more than twenty-five persons ;

(p) The liferaft shall be capable of operating throughout a temperature range of 150°F. to minus 22°F. (or 66°C. to minus 30°C.) ;

(q) The liferaft shall be fitted with arrangements enabling it to be readily towed ;

(r) Every liferaft carried on a ship which is provided with portable radio equipment which complies with the specification set forth in Part II of Schedule 5 of the Merchant Shipping (Radio) Rules 1966 or in Schedule 11 of the Merchant Shipping (Radio) (Fishing Boats) Rules 1966 shall be provided with arrangements for accommodating properly in the operating position the aerial referred to in those Schedules of the said Rules,

2. In ships of Classes IV, IV (A) and VIII and in ships of Class X of less than 70 feet in length the requirements of sub-paragraphs (b), (c), (h), (o), (p), and (q) of paragraph 1 of this Part of this Schedule may be modified as follows :—

(a) the height of 60 feet referred to in the said sub-paragraph (b) may be the height equivalent to that of the deck on which the liferaft is stowed above the ship's light water line, but in no case less than 20 feet ;

(b) means for collecting rain water referred to in the said sub-paragraph (c) shall not be required to be provided ;

(c) the method for insulating the floor of the liferaft against cold as referred to in the said sub-paragraph (h) shall not be required to be complied with ;

(d) the minimum carrying capacity of liferafts required by the said sub-paragraph (o) as six persons may be four persons, provided that liferafts which are deemed fit to accommodate less than six persons shall only be carried on such ships on which the total number of persons on board is less than six ;

(e) the temperature of minus 22°F. (minus 30°C.) referred to in the said sub-paragraph (p) may be 32°F. (0°C.) ;

(f) the arrangements for towing in the said sub-paragraph (q) shall not be required to be provided.

3. In ships of Classes VII and IX, and in ships of Class VII (A) not being ships of 500 tons or over engaged on an international voyage and in ships of Class X of 70 feet in length or over the requirements of sub-paragraph (o) of paragraph (1) of this Part of this Schedule may be modified as specified in sub-paragraph (d) of paragraph (2) of this Part of the Schedule.

PART II—RIGID LIFERAFTS

Every rigid liferaft shall comply with the following requirements :—

(a) The liferaft shall be so constructed that if it is dropped into the water from its stowed position neither the liferaft nor its equipment will be damaged ;

(b) Any liferaft which is designed for use with a launching appliance shall be properly constructed for the purpose for which it is intended and shall be of sufficient strength to permit it to be safely lowered into the water when loaded with its full complement of persons and equipment ;

(c) The liferaft shall be so constructed that its air cases or buoyant material are placed as near as possible to its sides ;

(d) The deck area of the liferaft shall be situated within that part of the liferaft which affords protection to its occupants. The nature of the deck shall be such as to prevent so far as practicable the ingress of water and it shall effectively support the occupants out of the water ;

(e) The liferaft shall be fitted with a cover or equivalent arrangement of a highly visible colour, which shall be capable of protecting the occupants against injury whichever way up the liferaft is floating ;

(f) The equipment of the liferaft shall be so stowed as to be readily available whichever way up the liferaft is floating ;

(g) The total weight of any liferaft and its equipment carried in passenger ships shall not exceed 400 pounds. Liferafts in cargo ships may exceed 400 pounds in weight if they are capable of being launched from both sides of the ship or if means are provided for putting into the water mechanically on either side of the ship ;

- (h) The liferaft shall at all times be effective and stable when floating either way up;
- (i) The number of persons which the liferaft shall be deemed fit to accommodate shall be equal to—
 - (i) the greatest whole number obtained by dividing by 3.4 the volume, measured in cubic feet, of the air cases or buoyant material; or
 - (ii) the greatest whole number obtained by dividing by 4 the deck area of the liferaft measured in square feet,
 whichever number shall be the less;
- (j) The liferaft shall have a painter attached and a lifeline securely becketed round the outside. A lifeline shall also be fitted round the inside of the liferaft;
- (k) The liferaft shall be fitted at each opening with efficient means to enable persons in the water to climb on board;
- (l) the liferaft shall be so constructed as not to be affected by oil or oil products;
- (m) A buoyant light of the electric battery type shall be attached to the liferaft by a lanyard;
- (n) The liferaft shall be fitted with arrangements enabling it to be readily towed;
- (o) Liferafts shall be so stowed as to float free in the event of the ship sinking;
- (p) Every liferaft carried on a ship which is provided with portable radio equipment which complies with the specification set forth in radio rules under the Act shall be provided with arrangements for accommodating properly in the operating position the aerial referred to in any such rules.

SCHEDULE 9

REQUIREMENTS FOR BUOYANT APPARATUS

Rule 24

1. Buoyant apparatus shall be of such construction that it retains its shape and properties when exposed to the weather on board ship and when in the water. It shall be constructed so as not to require adjustment prior to use.
2. Buoyant apparatus shall be capable of withstanding a drop test, the height of which shall be equivalent to that of the deck on which it is stowed above the ship's light water line, but in no case less than 60 feet in ships of Class I.
3. Buoyant apparatus shall be effective and stable when floating either way up. It shall be capable of supporting a weight of iron, suspended in fresh water from the grab lines, of 15 pounds per foot of length along any edge (subject to a minimum of 64 pounds) without immersing any part of the upper surface of the apparatus.
4. The air cases or equivalent buoyancy shall be placed as near as possible to the sides of the apparatus, and such buoyancy shall not be dependent upon inflation. Buoyant material shall not be adversely affected by oil or oil products nor shall it adversely affect the buoyant apparatus.

5. Grab lines shall be fitted all round the apparatus in such a manner as to provide a number of equal loops corresponding to the number of persons which the apparatus is fit to support. Each loop shall have a cork or light wood float and the depth of the loop when wet shall not be less than 6 inches and not more than 8 inches.

On apparatus exceeding 12 inches in overall depth two rows of grab lines shall be fitted, one having its points of attachment a little below the top of the air cases and the other a little above the bottom of the air cases and as close to the sides of the air cases as is practicable. On apparatus of 12 inches or less in overall depth one row of grab lines may be attached along the line of the middle of the depth.

The grab lines shall be of rope of not less than $1\frac{1}{2}$ inches in circumference. They may be attached to the apparatus by being passed through holes in the framing and being interlaced to prevent movement, or they may be attached to the apparatus by means of wrought iron or steel fastenings. Whichever method is adopted the attachment shall be strong enough to permit the apparatus being lifted by the grab lines.

6. Buoyant apparatus shall be fitted with a painter.

7. Buoyant apparatus shall not exceed 400 pounds in weight unless suitable means are provided to enable it to be launched without lifting by hand. If the weight of the apparatus exceeds 300 pounds, suitable handles or rungs shall be fitted for this purpose.

8. Buoyant apparatus carried in ship of Class I shall not be less than 3 feet 6 inches in breadth.

SCHEDULE 10

REQUIREMENTS FOR LIFEBOYS

Rule 26

1. Every lifebuoy shall be constructed of cork, evenly formed and securely plugged, or of other equally efficient buoyant material which shall not be adversely affected by oil or oil products, and shall be capable of floating in fresh water for the least 24 hours with 32 pounds of iron suspended from it.

2. Every lifebuoy made of plastic or other synthetic compounds shall be capable of retaining its buoyant properties and durability in contact with sea water or oil products, or under variation of temperature or climatic changes prevailing in open sea voyages.

3. A lifebuoy shall not be filled with rushes, cork shavings, granulated cork or any other loose granulated material, and its buoyancy shall not depend upon air compartments which require to be inflated.

4. The inside diameter of a lifebuoy shall be 18 inches and the outside diameter 30 inches. The major axis of the section shall be 6 inches. The minor axis of the section shall be 4 inches.

5. Every lifebuoy shall be of a highly visible colour.

6. Every lifebuoy shall be marked in block letters with the name and, except in the case of ships of Classes IV, IV (A), VIII and X, the port of registry of the ship in which it is carried. Lifebuoy constructed of materials other than cork shall be permanently marked with the manufacturer's trade name for that product.

7. Every lifebuoy shall be fitted with grab lines which shall be of good quality unkinkable line and well secured at four equidistant points, providing four loops of line each not less than 2 feet 4 inches long.

8. The weight of a lifebuoy shall not exceed 13 pounds 8 ounces when newly constructed.

SCHEDULE 11

REQUIREMENTS FOR LIFEJACKETS

Rules 5 (12), 6 (10), 10 (13), 11 (12), 16 (11) and 17 (7)

PART I

1. Subject to the provisions of paragraph (7) of this Part of this Schedule, every lifejacket for use by a person weighing 70 pounds or more shall provide a minimum of 35 pounds buoyancy in fresh water for 24 hours.

2. Every such lifejacket shall be marked indelibly on both sides in letters not less than half an inch in size with the words "PERSON OF 70 lb. OR MORE" and on one side only with the maker's name or other identification mark.

3. Every such lifejacket shall also comply with the following requirements:—

(a) it shall be so constructed as to eliminate as far as possible all risk of its being put on incorrectly and it shall be capable of being worn inside out;

(b) it shall turn the wearer on entering still water to a safe floating position within 5 seconds with the body inclined backwards from its vertical floating position and shall support the head of the conscious or unconscious wearer so that the mouth shall not be less than 6 inches above water;

(c) it shall not be adversely affected by oil or oil products;

(d) it shall be of a highly visible colour;

(e) it shall be fitted with a ring or loop or similar device of adequate strength to facilitate rescue;

(f) it shall be made of materials of low flammability and the fabric with which it is covered and its tapes shall be rotproof;

(g) it shall be fitted with an approved whistle firmly attached by a lanyard;

(h) it shall have fastening tapes securely attached to the lifejacket cover and capable of taking a load of 200 pounds. The method of fastening the tapes shall be such as to be easily understood and capable of being readily carried out. Metal fastenings when used shall be of a size and strength consistent with the fastening tapes and of corrosion resistant material; and

(i) it shall allow the wearer to jump a vertical distance of 20 feet into the water without injury and without dislodgment of the lifejacket.

4. The buoyancy of every such lifejacket shall be provided by kapok or other equally effective buoyant material.

5. Every such kapok lifejacket shall in addition to complying with the requirements of paragraphs (1) to (4) of this Part of this Schedule comply with the following requirements:—

(a) it shall contain not less than 35 ounces of kapok;

(b) the kapok shall be of good flotation quality, well teased, evenly packed and free from seeds and other foreign matter;

(c) the kapok shall be protected from the effects of oil or oil products so that the loss of buoyancy in the lifejacket, after floating in disturbed water containing a layer of not less than 3 millimetres in depth of a mixture of gas oil for a period of 48 hours, shall not exceed 2 per cent of the initial buoyancy and for the purpose of this test the lifejacket shall be loaded with weights equal to half its initial buoyancy ; and

(d) the covering shall be of pre-shrunk cotton material, the weight of which in loomstate per linear yard shall be not less than 6 ounces for a width of 27 inches and in proportion for other widths. The fabric shall be free from admixture of sizing or other foreign matter. The threads per inch in loomstate shall be warp 44 two-fold threads and weft 34 two-fold threads. The sewing shall be carried out with linen thread of not less quality than No. 25a fine cord Whittemore Cord.

6. Every such lifejacket using a buoyant material other than kapok shall in addition to complying with the requirements of paragraphs 1 to 4 and 5 (d) of this Part of this Schedule comply with the following requirements :—

(a) the material shall not weigh more than 12 pounds per cubic foot, and shall be of good quality and clean. If the material is in pieces the size of each piece shall be not less than 10 cubic inches, unless such pieces are in layer form and are fastened together with an approved adhesive ; and

(b) the material shall be chemically stable.

7. Every lifejacket the buoyancy of which depends on inflation, which may be carried for use by members of the crews of ships, other than tankers, of Classes V, VI, VII, VII(A) and IX, shall comply with the requirements of paragraph (3) of this Part of this Schedule and in addition shall comply with the following requirements :—

(a) it shall have two separate buoyancy compartments in either of the following forms—

(i) one compartment of inherent buoyancy equal to at least 20 pounds and one air compartment of at least 15 pounds, or

(ii) two separate air compartments each of at least 20 pounds buoyancy

(b) it shall be marked indelibly on both sides in letters not less than one inch in size with the words "CREW ONLY" and on one side only with the maker's name or other identification mark in smaller letters ; and

(c) it shall be capable of being inflated both mechanically and by mouth.

PART II

1. Every lifejacket for use by a person weighing less than 70 pounds shall provide a minimum buoyancy of 15 pounds in fresh water for 24 hours.

2. Every such lifejacket shall be marked indelibly on both sides in letters not less than half an inch in size with the words "FOR PERSON UNDER 70 lb." and on one side only with the maker's name or other identification mark.

3. Every such lifejacket shall comply with the requirements of paragraph (3) and (4) of Part I of this Schedule.

4. Every such kapok lifejacket shall contain not less than 15 ounces of kapok and shall in addition to complying with the requirements of paragraphs 1 to 3 of this Part of this Schedule comply with the requirements of sub-paragraphs (b), (c) and (d) of paragraph 5 of Part I of this Schedule.

5. Every such lifejacket using a buoyant material other than kapok shall in addition to complying with the requirements of paragraphs 1 to 3 of this Part of this Schedule comply with sub-paragraph (d) of paragraph 5 and sub-paragraphs (a) and (b) of paragraph 6 of Part I of this Schedule.

SCHEDULE 12

REQUIREMENTS FOR LINE-THROWING APPLICATIONS

Rule 28

1. Every line-throwing appliance shall include 4 rockets and 4 lines, each line being $\frac{1}{4}$ inch in circumference and of suitable length, and having a breaking strain of not less than 250 pounds.

2. Every line-throwing appliance shall be capable of throwing the line in such a manner that the lateral deflection of the line on either side of the direction of firing does not exceed 10 per cent of the length of flight of the rocket.

3. The lines and the rockets, with the means of igniting them, shall be kept in a watertight case.

4. Every line-throwing appliance carried in ships of 75 feet in length or over, shall be capable of throwing a line $\frac{1}{4}$ inch in circumference a minimum distance of 250 yards in calm weather.

5. Every line-throwing appliance carried in ships of less than 75 feet in length, but not less than 50 feet in length, shall be capable of throwing a line $\frac{1}{4}$ inch in circumference a minimum distance of 200 yards in calm weather.

6. All components, compositions and ingredients of the rockets and the means of igniting them shall be of such a character and of such quality as to enable them to maintain their serviceability under good average storage conditions for a period of at least two years. The date on which the rocket is filled shall be stamped indelibly on the rocket and its container and the date of packing shall be similarly stamped on the cartridge containers.

SCHEDULE 13

SPECIFICATIONS OF EQUIPMENT FOR LIFEBOATS, BOATS AND LIFERAFTS

PART I—COMPASSES FOR LIFEBOATS

Rule 29 (1) (j)

1. Every compass shall be of the liquid type. The liquid used shall be a mixture of industrial methylated spirit and water, specific gravity 0.93 at 60°F. It shall be clear, free from sediment, cloudiness, and dirt defects. The compass shall function efficiently over a temperature range of -10°F to +120°F.

2. The magnet shall have ample directive force. In the United Kingdom a period of 18 to 22 seconds after a deflection of 40 degrees at a temperature of about 60°F shall be deemed to comply with this requirement. For the purposes of this paragraph a "period" is the time taken by a complete oscillation of the card after a deflection of 40 degrees, a swing past the position of rest, and back again to the completion of its swing on the side to which it was originally deflected.

3. Over a range of -10°F to 120°F the card system when immersed in the compass liquid shall rest on the pivot with a weight between 4 and 10 grammes.

4. The card shall be not less than 4 inches in diameter and shall have a clearance from the bowl of at least $\frac{1}{8}$ inch. It shall be marked to half points, the eight principal points being distinctively marked. The card shall be luminised or fitted with a suitable means of illumination.

5. The centre of the card shall be of sapphire or equally hard jewel and shall be removeable from the float.

6. The pivot of the card shall be of iridium or equally suitable hard material.

7. The arrangements made to allow for the expansion and contraction of the liquid shall enable the compass to withstand a temperature range of 10°F. to +120°F. without leakage, formation of bubbles or other defects.

8. The bowl shall be adequately weighted and properly poised in the gimbals which shall give fore and aft and thwartship action. The gimbaling shall be in a same horizontal plane as the point of suspension of the card and the outer gimbal pins shall be placed fore and aft. The bowl shall be placed in a binnacle or box of non-magnetic material and the lubber line or point shall be luminised or fitted with suitable means of illumination. The card system shall remain free when the bowl is tilted by 10 degrees.

9. The direction of the lubber line or point from the centre of the card shall lie in the same vertical plane as the outer gimbal axis or other fore and aft datum lines. The cumulative effect of card, pivot, directional and other similar errors, and of inaccurate positioning of the lubber's point, shall be such that in the undisturbed earth's field the direction as read on the card against the lubber's point shall not differ by more than 3 degrees from the magnetic direction of the outer gimbal axis or other fore and aft datum line for any direction of the latter.

10. The minimum thickness of the metal used in the construction of the compass shall be as follows:—

Compass bowl	..	..	..	..	..	21 S.W.G.
Binnacle	..	..	..	..	..	24 S.W.G.
Lamp	..	..	..	..	..	24 S.W.G.

The compass bowl shall be efficiently stiffened to take gimbal pins. The binnacle shell shall be swaged or spun into the base ring and soldered all round.

The gimbal ring shall be of naval brass or other grid non-magnetic metal $\frac{3}{8}$ inch by $\frac{1}{8}$ inch. Gimbal pins shall be of naval brass or other hard non-magnetic material of $\frac{1}{4}$ inch diameter; both they and the bearings in which they engage shall be perfectly smooth.

11. The paint inside the bowl shall show no sign of blistering.

12. The materials and workmanship shall be good throughout and the compass shall be such as will remain efficient under sea-going conditions.

13. The bowl of the compass shall be engraved or stamped with the maker's name or other identification.

PART II

SEA ANCHORS FOR LIFEBOATS AND BOATS OTHER THAN CLASS C BOATS

Rule 29 (1) (k) and (5) (g)

1. Every sea anchor shall comply with the following requirements:—

(a) It shall be constructed of No. 1 best flax canvas, or other suitable material:

(b) The canvas part shall be strongly sewn together and be roped at the seams with $1\frac{1}{2}$ inches bolt rope; the ropes then being formed into a bridle with a thimble seized in the connecting end, and the ropes extended and seized into a parcelled loop to form the attachment for the tripping line.

(c) A hawser shall be attached to the sea anchor by means of a shackle of suitable size to take the thimble.

(d) The length of the hawser shall be three times the length of the lifeboat or boat.

(e) A tripping line two fathoms longer than the hawser shall be provided.

2. A circular sea anchor shall be fitted at the mouth with a galvanised iron hoop. Any other type of sea anchor shall be fitted with galvanised iron spreaders across the mouth and with an ash spreader at the upper edge.

3. The size of sea anchors shall be as follows :—

(a) For lifeboats over 30 feet in length—

Non-circular folding sea anchors—Mouth 30 inches upper edge.
27 inches lower edge.
27 inches each side.

Area of mouth 770 square inches.

Length of canvas bag—4 feet 6 inches.

Hawser—3 inches in circumference.

Tripping line—2 inches in circumference.

(b) For lifeboats over 22 feet in length but not over 30 feet in length—

Circular sea anchors—Mouth 27 inches diameter.

Non-circular folding sea anchors—Mouth 24 inches each side
length of canvas bag—4 feet.

Hawser—3 inches in circumference.

Tripping line—2 inches in circumference.

(c) For lifeboats not over 22 feet in length and other boats (other than Class C boats)—

Circular sea anchors—Mouth 24 inches diameter.

Non-circular folding sea anchors—Mouth $21\frac{1}{2}$ inches each side

Length of canvas bag—3 feet 6 inches.

Hawser— $2\frac{1}{2}$ inches in circumference.

Tripping line— $1\frac{1}{2}$ inches in circumference.

PART III.—PARACHUTE DISTRESS ROCKET SIGNALS FOR LIFEBOATS AND LIFERAFTS

Rule 29 (1) (n)

Rule 33 (1) (m)

1. Every parachute distress rocket signal shall consist of a single bright red star which is projected to the required height by means of a rocket, and which burns while falling, its rate of fall being controlled by means of a small parachute to an average rate of 15 feet per second. It shall be fitted with a self-contained means of ignition so designed as to operate from the hand-held position without external aid, and as to enable the rocket to be discharged from a lifeboat, boat or liferaft without harm to the occupants.

2. When the rocket is fired approximately vertically, the star and parachute shall be ejected at or before the top of the trajectory at a minimum height of 600 feet. The rocket shall also be capable of functioning when fired at an angle of 45 degrees to the horizontal.

3. The star shall burn with a minimum luminosity of 15,000 candle power for not less than 30 seconds. It shall burn out at a height of not less than 150 feet from the sea level.

4. The parachute shall be of such a size as to provide the required control of the rate of fall of the burning star. It shall be attached to the star by means of flexible fireproof harness.

5. The rocket shall be waterproofed and capable of satisfactory functioning after immersion in water for one minute.

6. All components, compositions and ingredients shall be of such a character and of such a quality as to enable the rocket to maintain its serviceability under good average storage conditions for a period of at least two years.

7. The rocket shall be packed in a container which shall be effectively sealed. If made of metal, the container shall be well tinned and lacquered or otherwise adequately protected against corrosion.

8. The date of which the rocket is filled shall be stamped indelibly on the rocket and on the container.

9. Clear and concise directions for use in the English language shall be printed indelibly on the rocket.

PART IV.—HAND-HELD DISTRESS FLARE SIGNALS FOR LIFEBOATS AND LIFERAFTS

Rules 29 (1) (n), 33 (1) (n) and (4) (c)

1. Every hand-held distress flare signal shall be fitted with a self-contained means of ignition so designed as to operate from a hand-held position without external aid and as to enable the flare to be displayed from a lifeboat, boat or liferaft without harm to the occupants.

2. Where the flare is carried in a liferaft it shall be so constructed that, when the flare is fired, no burning composition will fall from the flare which might cause damage to the liferaft.

3. The flare shall be capable of emitting a red light of a minimum luminosity of 15,000 candle power for not less than 55 seconds.

4. The flare shall be waterproofed and capable of satisfactory functioning after immersion in water for one minute.

5. All components, composition and ingredients shall be of such a character and of such a quality as to burn evenly and as to enable the flare to maintain its serviceability under good average storage conditions for a period of at least two years.

6. The flare shall be stamped indelibly with the date on which it is filled.

7. Clear and concise directions for use in the English language shall be printed indelibly on the flare.

PART V.—BUOYANT SMOKE SIGNALS FOR LIFEBOATS

Rule 29 (1) (o) and Rule 43 (2)

1. Every buoyant smoke signal shall be fitted with a self-contained means of ignition.
2. The signals shall be capable, while floating on the water, of emitting a dense volume of range-coloured smoke for a period of not less than two minutes and not more than four minutes.
3. The signal shall be waterproofed and capable of satisfactory functioning after immersion in water for one minute.
4. All components, composition and ingredients shall be of such a character and of such a quality as to burn evenly and as to enable the signal to maintain its serviceability under good average storage conditions for a period of at least two years.
5. The signal shall be stamped indelibly with the date on which it is filled.
6. Clear and concise directions for use in the English language shall be printed indelibly on the signal.

PART VI.—FIRST AID OUTFITS FOR LIFEBOATS

Rule 29 (1) (p)

1. The contents of every first aid outfit provided in a lifeboat shall comply with the standards and requirements of the current issue of the British Pharmacopoeia, the British Pharmaceutical Codex or the National Formulary, where such standards are applicable, and shall include the following :—

<i>Article</i>	<i>Quantity</i>
(a) Collapse Revivers (6 capsuls of Fragrant Ammonia) ..	1 Tin
(b) Compound Codeine Tablets (Tab. Codein. Co.) ..	25 Tablets
(c) Six Morphine Ampoule Syringes containing a solution of either a morphine salt equivalent to Anhydrous Morphine $\frac{1}{2}$ gr. in 1 c.c. or Papaveretum B.P.C. $\frac{1}{2}$ gr. in 1 c.c. in screw capped metal drum with directions for use. ..	1 Drum
(d) Standard Dressings No. 14, Medium B.P.C. 6" \times 4" ..	2 Drum
(e) Standard Dressings No. 15, Large B.P.C. 8" \times 6" ..	2 Drum
(f) Elastic Adhesive Dressings, 2" \times 3", packets of three ..	2 Packets
(g) Bandages, Triangular, illustrated, not less than 38" side, 54" base ..	5
(h) Gauze, white, absorbent, compressed, 36" \times 2 $\frac{1}{2}$ yds. ..	3
(i) Roller Bandages, compressed, 2 $\frac{1}{2}$ " \times 4 yds. ..	4
(j) Bandage, unbleached Calico 6" \times 6 yds. ..	1
(k) Cotton Wool, compressed 4 oz. packet ..	1 Packet
(l) Safety Pins, brass plated 2" ..	6
(m) Soft paraffin, 1 oz. tube ..	1 Tube
(n) Scissors 4", 1 sharp, 1 blunt point, of rustless and stainless steel ..	1
(o) Energy Tablets (10 mg. amphetamine sulphate) ..	60 Tablets
(p) Silica Gel. ..	1 Capsule
(q) Instructions in the English language printed on linen or waterproof paper.	

2. The first aid outfit shall be packed in a container which shall comply with the following requirements:—

(a) It shall be durable, damp-proof, and effectively sealed. It shall also be sealed with a device to indicate that the contents are intact.

(b) It shall be packed in a room from which atmospheric moisture has been removed as far as possible.

(c) Where the container is made of metal, it shall be well tinned and lacquered, and a handle shall be fitted to the lid.

(d) An itemized list of contents shall be given on the outside of the container.

PART VII.—MANUAL PUMPS FOR LIFEBOATS Rule 29 (1) (a)

Every lifeboat manual pump shall comply with the following requirements:—

1. The capacity when operated at not more than 60 double strokes per minute at 4 feet suction head, shall be not less than

(a) 7 gallons per minute in lifeboats of 24 feet in length or over; or

(b) 5 gallons per minute in lifeboats of less than 24 feet in length.

2. In its normal dry state (excluding internal grease or other assistance) the pump shall be readily self-priming when operated at a suction head of not less than 4 feet.

3 All parts of the pump shall be of material unaffected by the corrosive effects of sea water.

4. The interior of the pump, including valves, shall be readily accessible for emergency cleaning, and the cover for access shall be capable of being easily removed without the use of a spanner or other special tool.

5. The pump branches shall be suitable for use with rubber hose connections of at least $1\frac{1}{4}$ inches bore. The metal part of the operating handle shall be suitably sheathed by material other than wood to ensure that the hands of the operator are protected when the pump is used in extreme cold. The spindle gland shall be of the spring loaded seal ring type.

PART VIII.—FIRST AID OUTFITS FOR LIFERAFTS Rule 33 (1) (i)

1. Subject to the provisions of paragraph (2) of this Part of this Schedule the contents of every first aid outfit provided in a liferaft shall comply with the standards and requirements of the current issue of the British Pharmacopoeia, the British Pharmaceutical Codex, or the National Formulary, where such standards are applicable, and shall include the following:—

Article	Quantity
(a) Standard Dressing No. 14, Medium B.P.C., 6"×4"	4
(b) Standard Dressings No. 15, Large B.P.C., 8"×6"	4
(c) Bandages, Triangular, illustrated, not less than 38" side, 54" base	4
(d) Open Wove Bandages, B.P.C., 3"×4 yds.	10
(e) Antiseptic Burn or Wound Cream, Cetrimide B.P., 0.5 per cent w/w/ 50 gm. tube	2
(f) Scissors 4", 1 sharp, 1 blunt point, of rustless and stainless steel	1

- (g) Six Morphine Ampoule Syringes containing a solution of either morphine salt equivalent to Anhydrous Morphine $\frac{1}{2}$ gr. in 1 c.c. or Papaveretum B.P.C. $\frac{1}{2}$ gr. in 1 c.c. in screw capped metal drum with directions for use 1 Drum
- (h) Instructions in the English language printed on linen or waterproof paper.

2. In ships of Class X of less than 70 feet in length the contents of the first aid outfit provided in every lifeboat shall be one-half of the quantities specified in sub-paragraphs (a) to (e) inclusive of the preceding paragraph together with the items specified in sub-paragraphs (f) and (h) of the said paragraph.

3. The first aid outfit shall be packed in a container which shall be durable, damp-proof, and effectively sealed. An itemized list of contents shall be given on the outside of the container.

SCHEDULE 14

DAVIT AND LIFEBOAT LAUNCHING GEAR

PART I—GENERAL

Rule 35 (9)

In this Schedule the expression "working load" means—

(a) in relation to davits to which sub-paragraph (a) of paragraph (1) of Part II of this Schedule applies, the sum of the weight of the lifeboat, its full equipment, the blocks and falls, and the maximum number of persons which the lifeboat is deemed fit to carry, the weight of each person being taken to be 165 pounds;

(b) in relation to davits and other means of launching to which sub-paragraph (b) or (c) of paragraph (1) of Part II of this Schedule applies, the sum of the weight of the lifeboat, Class C boat or other boat, its full equipment, the blocks and falls, and a launching crew consisting of two persons, the weight of each person being taken to be 165 pounds;

(c) in relation to winches the maximum pull exerted by the fall or falls at the winch drum during lowering, hoisting or stowing which in any case is to be taken as not less than the working load on the davit or davits divided by the velocity ratio of the lowering tackle.

PART II—CONSTRUCTION

1. Strength.—(a) Every davit serving a lifeboat which is required by Rule 37 (1) to be put into the water when loaded with its full complement of persons shall, together with its winch, falls, blocks and all other associated lowering gear, be of such strength that the lifeboat with its full equipment and manned by a launching crew of not less than two persons can be turned out and then safely lowered into the water from the embarkation position with its full complement of persons, when the ship has a trim of up to 10 degrees and is listed up to 15 degrees either way.

(b) Every mechanically controlled single-arm davit shall together with its winch, falls, blocks and all other associated lowering gear be of such strength and the operating gear shall be of such power that the lifeboat when fully equipped and manned with a launching crew of two members can be turned out and then safely lowered into the water with the ship listed to 25 degrees.

(c) Every set of davits, davit or other means of launching to which a lifeboat, Class C boat or other boat is attached, other than a davit the strength of which is specified in sub-paragraph (a) or (b) of this paragraph, shall together with its winch, falls, blocks and all other associated lowering gear be of such strength that the lifeboat, Class C boat or other boat with its full equipment and manned by a launching crew of two members, can be turned out and then safely lowered into the water when the ship has a trim of 10 degrees and is listed up to 15 degrees either way.

(d) Every set of davits, davit or other means of launching to which a lifeboat, Class C boat or other boat is attached, together with its winch and all associated hoisting gear shall be of such strength that the boat can be safely hoisted and stowed when loaded with its full equipment and at least two persons, and in addition in the case of an emergency lifeboat that it can be safely hoisted from the water to the embarkation deck at a speed of not less than 60 feet per minute when loaded with its full equipment and a distributed load of 2,240 pounds.

2. Gravity davits. All gravity davits shall be so designed that there is a positive turning out moment during the whole of the davit travel from the inboard to the outboard position when the vessel is upright and also when the vessel is listed at any angle up to and including 25 degrees either way from upright.

In the case of gravity type davits comprising arms mounted on rollers which engage with and travel down fixed inclined trackways, the track ways shall be inclined at an angle of not less than 30 degrees to the horizontal when the vessel is upright.

3. Luffing davits. The operating gear of all luffing type davits shall be of sufficient power to ensure that the lifeboats, Class C boats or other boats fully equipped and manned with the launching crew, but not loaded with other persons, can be turned out against a list of at least 15 degrees.

4. Mechanically controlled single-arm davits. The working load of any mechanically controlled single-arm davit shall not exceed 1.5 tons.

5. Stresses.—(a) In the case of davits other than mechanically controlled single-arm davits the designed stress on the davit arms, when operating under maximum load and conditions of trim and of list, shall afford an adequate factor of safety having regard to the quality of the material used, the method of construction, and the live nature of the load to which the davits are subjected.

(b) In the case of mechanically controlled single-arm davits the designed stress on the davit when operating under maximum load and conditions of favourable list shall afford an adequate factor of safety having regard to the quality of the material used, the method of construction, and the live nature of the load to which the davit is subjected.

6. Static load test.—Each davit with its arm at full out-reach shall be capable of withstanding a static load test of not less than 2.2 times that part of the working load supported by the arm.

7. Attachments at the davit head.—The attachments at the davit head from which the blocks are suspended shall be capable of withstanding a proof load test of not less than $2\frac{1}{2}$ times the maximum load on the attachments.

8. Blocks.—(a) All blocks used in the operation of hoisting and lowering of lifeboats, Class C boats or other boats shall be of a design that affords an adequate factor of safety. Lower blocks, when fitted, shall be non-toppling and in the case of emergency lifeboats provision shall be made to prevent the falls from cabling. The size of blocks shall be commensurate with the size of the falls.

(b) A metal block shall be capable of withstanding a proof load test of not less than $2\frac{1}{2}$ times the maximum load it is intended to carry in service. The clearance between the sheaves and the block cheeks of metal blocks in which wire rope is used shall be kept to a practical minimum that will prevent the rope from overriding the rim of the sheave of any block or lead sheave. Component parts of blocks other than their sheaves shall be of ductile material.

(c) A wood block shall be capable of withstanding a proof load of not less than $2\frac{1}{2}$ times the load on the block. The width between the cheeks shall be half an inch greater than the diameter of new cordage ropes when those ropes are $3\frac{3}{4}$ inches in circumference, and less in proportion to the circumference of the ropes when they are smaller.

9. Wire ropes.—(a) The breaking tensile load of each wire rope used for lowering lifeboats, Class C boats or other boats shall be not less than six times the maximum load on the wire rope when lowering, hoisting or stowing.

(b) Wire ropes shall be securely attached to the drum of the winch, and the end attachments of the wires and other parts from which the lifeboat, Class C boat or other boat is to be suspended shall be capable of withstanding a proof load of not less than $2\frac{1}{2}$ times the load on such attachments and other parts.

(c) Where wire rope splices or ferrule-secured eye terminals are used they shall be capable of withstanding a proof test of not less than $2\frac{1}{2}$ times the load imposed on them in service unless samples representing each size of wire on which they are used, show a factor of safety of at least 5 when tested to destruction.

10. Winches.—(a) In the case of davits other than mechanically controlled single-arm davits, winch drums shall be arranged to keep the two falls separate and to enable them to pay out at the same rate. The leads of the wire ropes shall be such that they will wind evenly on the drums and lead blocks shall be arranged to give a fleet angle or angle of lead of not more than five degrees for grooved drums and three degrees for ungrooved drums. In the case of mechanically controlled single-arm davits, the lead of the wire rope fall shall be such that the fall winds evenly on the drum.

(b) Winch brakes shall be of robust construction and afford complete control and limitation of speed in the operation of lowering. The hand brake shall be so arranged that it is normally in the "ON" position and returns to the "ON" position when the control handle is not being operated. The weight on the brake lever shall be sufficient to operate the brake effectively without additional pressure. The brake gear shall include means for automatically controlling the speed of lowering to ensure that the lifeboat, Class C boat or other boat is lowered expeditiously without exceeding a rate of lowering consistent with safety. For this purpose, the automatic brake shall be set to give a speed of lowering of the lifeboat of between 60 and 120 feet per minute. Ratchet gear shall be incorporated in the hand brake mechanism of lifeboat winches. Where practicable the brake gear shall be

so situated as to enable the man operating the winch to have the lifeboat, Class C boat or other boat under observation during the whole process of its being launched into the water, provided that winches serving emergency lifeboats shall in any case be so placed.

(c) Each winch shall be capable of lowering and holding a test load of 1.5 times the working load as defined in paragraph (c) of Part I of this Schedule.

(d) Winches shall be so constructed that the crank handle or handles are not rotated by moving parts of the winch when the lifeboat, Class C boat or other boat is being lowered or when it is being hoisted by power and provision shall be made to allow the falls to be manually unwound.

11. Cordage rope falls.—Cordage rope falls shall be of manilla or some other suitable material and shall be durable, unkinkable, firm laid and pliable. They shall be able to pass freely under any conditions through a hole $\frac{3}{8}$ inch larger than the nominal diameter of the rope. The breaking load of each rope used for lowering lifeboats, Class C boats or other boats shall be not less than 6 times the maximum load on the rope when lowering or hoisting. Rope of less than $2\frac{1}{2}$ inches in circumference shall not be used for lifeboat falls. Winding reels or flaking boxes for the manilla rope falls shall be provided.

12. Bollards.—Suitable bollards or other equally effective appliances for lowering any lifeboat, Class C boat or other boat shall be provided in all cases where cordage rope falls are used. Such bollards or other appliances shall be sited so as to ensure that the lifeboat, Class C boat or other boat served by them can be safely lowered, and fairleads or lead sheaves shall be fitted so as to ensure that it shall not be fitted during the process of turning out or swinging out.

PART III—TESTS AFTER INSTALLATION ON BOARD

1. General.—Tests shall be made to ensure that all lifeboats, Class C boats or other boats attached to davits can be re-stowed from the embarkation position safely and with facility when loaded with the required equipment and that when so loaded the lifeboat, Class C boat or other boat can when released be lowered by gravity into the water against the frictional resistance of the winch, falls, blocks and other associated gear.

2. Lowering tests.—(a) Each pair of davits to which sub-paragraph (a) of paragraph (1) of Part II of this Schedule applies and any associated lifeboat winches and their brakes shall be capable of withstanding the following test:—

the lifeboat at each set of davits shall be lowered from the embarkation deck into the water loaded with the equipment required by these Rules and a distributed weight equal to the full number of persons which it is deemed fit to accommodate plus 10 per cent of the working load. Winch brakes exposed to the weather shall be capable of withstanding the foregoing test with the braking surface wetted.

(b) In the case of davits to which sub-paragraph (b) or (c) of paragraph (1) of Part II of this Schedule applies, the lifeboat, Class C boat or other boat shall be lowered into the water with the equipment required by these Rules and a distributed weight equal to the weight of a launching crew of two persons plus 10 per cent of the working load.

(c) For the purpose of the tests required under sub-paragraphs (a) and (b) of this paragraph the weight of a person shall be taken to be 165 pounds.

3. Hoisting tests for emergency lifeboats. Emergency lifeboats which are required by these Rules to be served by winches for recovery shall in addition to the tests required by paragraphs (1) and (2) of this Part of this Schedule be tested by hoisting the emergency lifeboat with the equipment required by these Rules and a distributed load of 2,240 pounds plus 10 per cent of the total hoisting load, including blocks and falls, from the water to the embarkation deck, at the maximum hoisting speed.

SCHEDULE 15

LIFEBOAT DISENGAGING GEARS

Rule 35 (16)

1. Lifeboat disengaging gears shall be so arranged as to ensure simultaneous release of both ends of the lifeboat.

2. The means of effecting release shall be placed aft.

3. The gear shall be of a type which will permit the release of the lifeboat only when it is waterborne.

4. The gear shall be of a type which will permit release should there be a towing strain on the link or falls.

5. The hooks shall be suitable for instant unhooking by hand.

6. The point of attachment of the hook to the eye, ring or link of the block shall not be lower than when ordinary fixed hooks are fitted.

7. The gear and mechanism for effecting release shall be so constructed and arranged as to ensure the safety of the lifeboat independently of any safety pins.

8. The means for effecting release shall be by hauling on or letting go a line or by using a lever. If release is effected by a pull a line the line shall be properly cased in. Rods or other connections between hooks shall also be cased in whenever this is necessary for the safety or the efficient action of the gear or for the protection of persons from injury.

The fairleads shall be properly arranged to prevent the lines from jamming or nipping, and shall be strongly attached to permanent parts of the lifeboat. The lines shall be fitted with chains where necessary for efficiency.

9. Such parts of the gear as would otherwise be likely to be set fast by rust or corrosion shall be made of non-corrodible metal.

10. No part of the gear taking the weight of the lifeboat shall be made of cast metal.

11. The scantlings and proportions of all parts which support the weight of the lifeboat shall be designed to provide breaking strength proportionate to a load of at least $2\frac{1}{2}$ times the weight of the heaviest loaded lifeboat in which the gear is intended to be fitted.

SCHEDULE 16

LIFERAFT LAUNCHING APPLIANCES

Rule 36 (2)

1. In this Schedule the expression "working load" means—

the sum of the weight of the liferaft and its equipment, all other associated gear that is supported by the launching appliance during the launching operation and the maximum number of persons which the liferaft is deemed fit to carry, the weight of each person being taken to be 165 pounds.

2. Strength.—Every liferaft launching appliance and all associated gear which during the launching operation is subjected to the working load or to a load imposed due to the working load shall be of such strength that the liferaft when loaded with its full complement of persons and equipment can be safely lowered when the ship has a trim of up to 10 degrees and is listed up to 15 degrees either way.

3. Construction.—Each part of every liferaft launching appliance shall be such that when the appliance is operating under the working load and unfavourable conditions of list and trim it shall have an adequate factor of safety having regard to the material used, the method of construction and the nature of its duty. Except for lead sheaves and block sheaves, all parts of the appliance and its associated gear which are subjected to the working load or on which the safety of the appliance or the liferaft while in the process of launching depends shall be constructed of ductile material and no part, other than lead sheaves and block sheaves, shall be constructed of cast metal unless the appropriate authority shall so permit.

4. Static Load Test.—Every liferaft launching appliance shall be capable of withstanding a static load test of not less than 2.2 times the working load.

5. Operation.—(a) Every liferaft launching appliance shall be so designed that the liferaft when loaded with its full complement of persons and equipment can be safely lowered into the water.

(b) The speed of lowering of the liferaft shall be automatically controlled at not less than 60 feet per minute nor more than 120 feet per minute and the descent of the liferaft shall be at all times under the manual control of the operator.

(c) Operation of the launching appliance shall not be solely dependent on the use of means other than manual effort or gravity. The arrangements shall be such that the liferaft can be lowered by gravity.

(d) Arrangements shall be such that on becoming waterborne the liferaft shall be automatically released from the launching appliance, and there shall be provision for the manual release of the liferaft by a person on board the liferaft.

(e) When liferaft launching appliances incorporate winches, the winches shall be constructed in accordance with paragraph (10) of Part II of Schedule 14 to these Rules.

6. Lowering Tests.—Every liferaft launching appliance shall be tested by lowering the largest liferaft it is intended to serve when loaded with its full equipment and a distributed weight equal to the full number of persons which it is deemed fit to accommodate plus 10 per cent of the working load from the embarkation position into the water.

7. Operational Tests.—Tests shall be made to ensure that any liferaft served by any launching appliance when loaded only with its full equipment can be lowered by gravity into the water. If more than one liferaft is served by any launching appliance effective successive launching shall be demonstrated.

SCHEDULE 17

SHIPS' PARACHUTE DISTRESS ROCKET SIGNALS

Rule 43 (1) and (4)

1. Every ship's parachute distress rocket signal shall consist of a single bright red star which is projected to the required height by means of a rocket, and which burns while falling, its rate of fall being controlled by means of a parachute to an average rate of 15 feet per second.

2. When the rocket is fired approximately vertically, the star and parachute shall be ejected at or before the top of the trajectory, at a minimum height of 750 feet. The rocket shall in addition be capable of functioning when fired at an angle of 45 degrees to the horizontal.

3. The star shall burn with a minimum luminosity of 30,000 candle power for not less than 40 seconds. It shall burn out at a height of not less than 150 feet from the sea level.

4. The parachute shall be of such size as to provide the required control of the rate of fall of the burning star. It shall be attached to the star by means of a flexible fireproof harness.

5. The rocket may be ignited by any suitable method. If external ignition by means of a safety fuse is employed, the outer end of the safety fuse shall be covered with a metal ferrule primed with match composition and a separate striker shall be suitably attached to each rocket.

6. The match composition, the striker composition, the ferrule, and the whole of the external surface of the rocket shall be waterproofed.

7. The rocket shall be capable of functioning properly after immersion in water for one minute and removal of the adhering water by shaking.

8. All components, compositions and ingredients shall be of such a character and of such a quality as to enable the rocket to maintain its serviceability under good average storage conditions for a period of at least two years.

9. The rocket shall be packed in a container which shall be durable, damp-proof and effectively sealed. If made of metal, the container shall be well tinned and lacquered, or otherwise adequately protected against corrosion.

10. The date on which the rocket is filled shall be stamped indelibly on the rocket and on the container.

11. Clear and concise directions for use in the English language shall be printed indelibly on the rocket.

MADE by the Supreme Military Council at Lagos this 8th day of May 1967.

H. A. EJUEYITCHIE,
*Secretary to the
Federal Military Government*

EXPLANATORY NOTE

(This Note is not part of the Rules)

These Rules supersede the Merchant Shipping (Life-Saving Appliances) Rules 1963. They include such requirements as appear to the Federal Executive Council to implement the provisions of the International Convention for the Safety of Life at Sea 1960 relating to the provision of life-saving appliances in merchant ships engaged on international voyages.

The principal changes are :—

(a) An extension in the use of liferafts including their carriage in passenger and cargo ships of all classes and in certain fishing boats and pleasure yachts.

(b) The introduction of provisions enabling ships of Class V of under 500 tons to dispense with the carriage of lifeboats and carry instead additional liferafts as in the case of ships of Class VI of similar tonnage.

(c) The introduction of provisions to enable tankers of 3,000 tons or over with no amidships superstructure to carry fewer lifeboats, the permitted reduction being off-set by the carriage of liferafts.

(d) The introduction of provisions to ensure that fish processing ships and analogous ships of Class V(A) of 500 tons or over shall comply with requirements which are broadly similar to those applicable to ships of Class I.

(e) The provision of portable radio equipment on ships of Class IX, i.e. fishing boats of 60 feet in length or over.

(f) The introduction of provisions requiring all motor lifeboats to have compression-ignition engines.

L.N. 73 of 1967

THE MERCHANT SHIPPING ACT 1962
(1962 No. 30)

The Merchant Shipping (Musters) Rules 1967

Commencement : 8th May 1967

In exercise of the powers conferred upon it by section 153 of the Merchant Shipping Act 1962, and of all other powers enabling it in that behalf, the Supreme Military Council hereby makes the following Rules :—

1.—(1) These Rules may be cited as the Merchant Shipping (Musters) Rules 1967 and shall apply throughout Nigeria.

Citation,
extent, etc.

(2) In these Rules "muster", where the context allows, includes a boat-drill and a fire-drill.

2. These Rules shall apply to—

(a) Nigerian ships ;

(b) other ships while they are within any port in Nigeria :

Ships to
which Rules
apply.

Provided that these Rules shall not apply to a ship by reason of her being within a port in Nigeria if she would not have been in any such port but for stress of weather or any other circumstances that neither the master, nor the owner, nor the charterer (if any) of the ship could have prevented or forestalled.

3. For the purposes of these Rules the ships to which these Rules apply shall be arranged in the same classes in which ships are arranged for the purposes of the Merchant Shipping (Life-Saving Appliances) Rules 1967, and any reference in these Rules to a ship of any class shall be construed accordingly.

Muster list.

4.—(1) The master of every ship of Classes I, II, III, V, VA and VI shall prepare a muster list showing in respect of each member of the crew the special duties which are allotted to him in the event of an emergency and the station (hereinafter referred to as his "emergency station") to which he is to go in that event.

(2) The muster list shall specify definite signals, to be made on the whistle or siren, for calling all the crew to their emergency stations, and in passenger ships one of the signals so specified shall be the signal required by rule 5 (2) of these Rules.

(3) In ships of Class I, and in ships of 150 feet in length or over of Classes V, VA and VI, the signals mentioned in paragraph (2) above shall be supplemented by other means of warning which shall be electrically operated and which shall be capable of being operated from the bridge.

(4) The muster list shall also specify the means of indicating when the ship is to be abandoned.

(5) The muster list shall show the duties assigned to the different members of the crew in connection with—

(a) the closing of the watertight doors, fire doors, sidescuttles and valves and the closing mechanisms of scuppers, ash-shoots or other similar openings in the ship's side;

(b) the equipping of the boats and other life-saving appliances;

(c) the launching of the boats and liferafts attached to davits or to other launching appliances;

(d) the general preparation of any other boats and of other life-saving appliances;

(e) the muster of the passengers (if there are any); and

(f) the extinction of fire.

(6) The duty of seeing that the boats and other life-saving appliances are at all times ready for use, shall be specified in the muster list as the duty of one or more officers.

(7) The muster list shall show the several duties assigned to the members of the stewards' department in relation to the passengers at a time of emergency.

These duties shall include—

(a) warning the passengers;

(b) seeing that they are suitably clad and have put on their lifejackets in a proper manner;

(c) assembling the passengers at muster stations;

(d) keeping order in the passages and on the stairways and generally controlling the movements of the passengers; and

(e) seeing that a supply of blankets is taken to the lifeboats.

(8) The muster list shall be prepared (or, if a new list is not necessary, revised) after the agreement with the crew has been signed and before the ship proceeds to sea, and shall be dated and signed by the master.

(9) If, after the muster list has been prepared, any change takes place in the crew which necessitates an alteration in the muster list, the master shall either revise the list or prepare a new list.

(10) Copies of the muster list shall be posted in several parts of the ship, and in particular in the crew's quarters, before the ship proceeds to sea, and shall be kept so posted while the ship is at sea.

5.—(1) Muster stations for all passengers in the event of an emergency shall be appointed; and the position of those stations and the meaning of signals affecting passengers, with precise instructions as to what passengers are to do, shall be clearly stated in English and such other languages as are appropriate on cards posted in their cabins and in conspicuous places in other passenger quarters.

Muster stations and emergency signals for passengers.

(2) The emergency signal for summoning passengers to their muster stations shall be a succession of seven or more short blasts followed by one long blast on the whistle or siren.

(3) In ships of Class I the signal mentioned in paragraph (2) above shall be supplemented by other means of warning, audible throughout the ship, which shall be electrically operated and capable of being operated from the bridge.

6.—(1) In ships of Class I a muster of the crew shall be held before the ship leaves her final port of departure in Nigeria, and if any passengers are embarked at that or any other port, a muster of the passengers shall be held within twenty-four hours after leaving the port in question.

Training.

(2) In ships of Classes I, II and III, musters of the crew shall take place at intervals of not more than seven days, when practicable, to ensure that the crew understand and are drilled in the duties assigned to them in the event of an emergency.

(3) In ships of Classes V, VA, VI, VII and VIIA, and in ships of Class IX of 70 feet in length or over which proceed beyond home trade limits, musters of the crew shall take place at intervals of not more than fourteen days, and if more than 25 per cent of the crew have been replaced at any port, one such muster shall take place within twenty-four hours of leaving that port. In all other ships of Class IX the master shall take steps to ensure that the crew understand the uses of the life-saving equipment and fire appliances on board, and know where they are kept.

(4) Different groups of boats shall be used in turn at successive boat drills so that every lifeboat shall be swung out at least once a month and, if practicable and reasonable, lowered at least once every four months. The musters and inspections shall be so arranged that the crew thoroughly understand, and are practised in, the duties they have to perform, and that all life-saving appliances and fire appliances, with the gear appertaining to them, are always ready for immediate use.

(5) The master shall take steps to ensure that the crew are properly instructed in the handling and operation of the liferafts on board.

7. The Merchant Shipping (Musters) Rules 1963 are hereby revoked.

Revocation.
L.N. 61 of
1963.

MADE by the Supreme Military Council at Lagos this 8th day of May 1967.

H. A. EJUEYITCHIE,
*Secretary to the Federal
Military Government*

EXPLANATORY NOTE

(This Note is not part of the above Rules, but is intended to explain their purposes)

These Rules supersede the Merchant Shipping (Musters) Rules 1963.

Ships are arranged into classes for the purposes of the Rules, the classification being uniform with that in the Merchant Shipping (Life-Saving Appliances) Rules 1967. The Rules provide for the assignment of the duties to be performed by members of the crew in case of emergency, for training in those duties, and for the emergency signal for passengers. The Rules include provisions necessary to implement the provisions of the International Convention for the Safety of Life at Sea 1960 relating to musters.

MERCHANT SHIPPING ACT 1962

(1962 No. 30)

The Merchant Shipping (Pilot Ladders) Rules 1967

Commencement : 28th February 1966

In exercise of the powers conferred by section 153 of the Merchant Shipping Act 1962, and of all other powers enabling it in that behalf, the Federal Executive Council hereby makes the following rules :—

1.—(1) These rules may be cited as the Merchant Shipping (Pilot Ladders) Rules 1967; shall be deemed to have come into force on 28th February 1966 and shall apply throughout Nigeria.

Citation,
commence-
ment,
application
and revo-
cation.

(2) These rules shall apply—

(a) to Nigerian ships ;

(b) to ships of any other nationality while in port in Nigeria for reasons unconnected with stress of weather or other circumstance which the master, owner, or charterer (if any), as the case may be, could have prevented or forestalled.

(3) The Merchant Shipping (Pilot Ladders) Rules 1952 of the United Kingdom to the extent to which they are deemed to have been made under the Merchant Shipping Act 1962 and be in force, shall cease to have effect in Nigeria ; and the reference thereto in the Fourth Schedule to the Act of 1962 shall be deleted.

S.1. 1952/
1952.

2.—(1) For the purposes of these rules the ships to which these rules apply shall be arranged in the following classes—

Classifica-
tion of ships.

Class I : Passenger ships engaged on voyages (not being short international voyages) any of which are long international voyages.

Passenger
ships.

Class II : Passenger ships engaged on voyages (not being long international voyages) any of which are short international voyages.

Class III : Passenger ships in respect of which there is or should be in force a certificate entitled "Passenger Certificate Class III" being a certificate for ships engaged on voyages of any kind other than international voyages and during the course of which the vessel does not proceed more than 50 miles from the coast of Nigeria.

Class IV : Ships plying only on inland tidal waters and carrying any number of passengers.

Class IVA : Ships plying only on inland non-tidal waters and carrying any number of passengers.

Class V : Ships (other than ships of Classes I, VA, IX and X) engaged on voyages any of which are long international voyages.

Ships other
than
passenger
ships.

Class VA : Ships employed as fish processing or canning factory ships, and ships engaged in the carriage of personnel employed in the fish processing or canning industries.

Class VI : Ships (other than ships of Classes II, VIIA, IX and X) engaged on voyages (not being long international voyages) any of which are short international voyages.

Class VII : Ships (other than ships of Classes III to IVA inclusive, VIIA, VIII, IX and X) engaged only on Voyages which are not international voyages.

Class VIIA : Tugs and tenders, dredgers, cable-ship buoyage vessels, hopper barges, lighthouse and survey vessels (other than ships of Classes II, III, IV and IVA) which proceed to sea but are not engaged on long international voyages.

Class VIII : Ships plying only on any inland waters.

Class IX : Fishing boats (other than ships of Classes I to IVA inclusive).

Class X : Pleasure yachts (other than ships of Classes I to IVA inclusive) of 45 feet in length or over.

(2) For the purposes of this rule the following expressions have the following meanings respectively :—

“long international voyage” means an international voyage which is not a short international voyage within the meaning of the Merchant Shipping Act 1962 ;

“inland tidal waters” means those inland waters as specified in the Schedule to these rules ;

“inland non-tidal waters” means inland waters other than inland tidal waters and includes the river Niger and its affluents ;

“sea” does not include any inland waters ;

“voyage” includes an excursion.

1962 No. 30.

Provision of
Pilot
Ladders.

3.—(1) Every ship of Classes I, II, V, VA, VI and VII shall be provided with a pilot ladder which shall comply with the requirements of rule 4 of these rules.

(2) Ships of Classes III to IVA inclusive and VIIA to X inclusive, shall not be required to be provided with pilot ladders.

Require-
ments and
use of pilot
ladders.

4.—(1) Every pilot ladder shall be efficient for the purpose of enabling a pilot to embark and disembark safely ; and any such ladder shall be used only by pilots, and persons (including officials) authorised by the captain or on his behalf, while a ship is arriving at, or leaving a port.

(2) Every pilot ladder shall be secured in a position clear of any possible discharges from the ship, and so that each step rests firmly against the ship's side, and so that the pilot can gain convenient access to the ship after climbing not less than five feet or more than thirty feet.

(3) A single length of ladder shall be used capable of reaching the water from the point of access to the ship when the ship is in an unloaded condition and in normal trim with no list.

(4) Whenever the distance from the water to the point of access to the ship exceeds thirty feet, access from the pilot ladder to the ship shall be by means of an accommodation ladder or other equally safe and convenient means.

(5) The treads of the pilot ladder shall be of hard wood not less than, nineteen inches long, four and a half inches wide and one inch in depth spaced not less than twelve inches nor more than fifteen inches apart and secured in such a manner that they will remain horizontal.

(6) The side ropes of the pilot ladder shall consist of two Manilla ropes, two and a quarter inches in circumference on each side.

(7) Two man-ropes of not less than two and a half inches in circumference, properly secured to the ship, and a safety line, shall be kept ready for use if required.

(8) Hard wood battens about six feet long shall be provided at such intervals as will prevent the pilot ladder from twisting.

(9) Means shall be provided to enable the pilot ladder to be used on either side of the ship and to enable the pilot to pass safely and conveniently from the head of the pilot ladder into the ship or on to the ship's deck.

(10) A light shall be provided at night so that the pilot ladder overside, as well as the position where the pilot boards the ship, shall be adequately lit.

5. The rigging of pilot ladders and the embarkation and disembarkation of pilots thereby shall be supervised by a responsible officer of the ship.

Supervision
of rigging.

6.—(1) Where these rules require that a particular fitting, material, appliance or apparatus, or type thereof, shall be fitted or carried in a ship, or that any particular provision shall be made, the Federal Executive Council or any person to whom authority is delegated may allow any other fitting, material, appliance or apparatus, or type thereof, to be fitted or carried, or any other provision to be made in that ship if it is satisfied by trial thereof, that such other fitting, material, appliance or apparatus, or type thereof, or provision, is at least as effective as that required by these rules.

Equivalents
and
exemptions.

(2) The Federal Executive Council or any person to whom authority is delegated may exempt any ship of Class VII from the requirements of these rules.

SCHEDULE

INLAND TIDAL WATERS AREAS

1. All those inland waters in the area bounded by the border with Dahomey in the West, the meridian of 5 degrees East longitude in the East, and the parallel of 7 degrees North latitude in the North.

2. All those inland waters in the area bounded by the meridian of 5 degrees East longitude in the West, the meridian of 6 degrees East longitude in the East, and the parallel of 6 degrees 5 minutes North latitude in the North.

3. All those inland waters in the area bounded by the meridian of 6 degrees East longitude in the West, the border with the Cameroons in the East, and the parallel of 5 degrees North latitude in the North.

MADE at Lagos this 5th day of July 1967.

MUSA DAGGASH,
Permanent Secretary,
Federal Ministry of Transport

EXPLANATORY NOTE

(This Note does not form part of the rules but is intended to explain their purpose)

These rules require the provision of a pilot ladder in ships of certain classes and include such requirements as appear to the Federal Executive Council to implement the provisions of the International Convention for the Safety of Life at Sea 1960 relating to Pilot Ladders.

L.N. 75 of 1967

MERCHANT SHIPPING ACT 1962
(1962 No. 30)

**The Merchant Shipping (Manning) (Amendment)
Regulations 1967**

Commencement : 5th July 1967

In exercise of the powers conferred by section 427 of the Merchant Shipping Act 1962, and of all other powers enabling it in that behalf, the Federal Executive Council hereby makes the following Regulations :—

1. These Regulations may be cited as the Merchant Shipping (Manning) (Amendment) Regulations 1967 and shall apply throughout Nigeria.

Citation,
and extent.

2. The Merchant Shipping (Manning) Regulations 1963 shall be amended as follows—

Amend-
ments of
L.N. 58 of
1963.

(a) in regulation 1 (2), for sub-paragraph (b) there shall be substituted the following sub-paragraph—

“(b) boats kept solely for pleasure purposes;”;

(b) after sub-paragraph (d) there shall be added the following sub-paragraph—

“(e) any boat belonging to a registered ship.”;

(c) for regulations 3 and 4 there shall be substituted the new regulations 3 and 4 set out in Part I of the Schedule to these Regulations; and

(d) after regulation 6 there shall be inserted the Schedule set out in Part II of the Schedule to these Regulations.

SCHEDULE

PART I

Regulation 2.

3. In this Part of these Regulations—

“inland tidal waters” means inland waters within any of the areas described in the Schedule to these Regulations;

“inland non-tidal waters” means inland waters other than inland tidal waters, and includes the river Niger and its affluents;

“power driven small craft” means any small craft propelled by one or more outboard engines each not exceeding thirty brake horse power;

“tons” means gross tons.

Inter-
pretation
of Part II.

4.—(1) A ship of 100 tons or more plying exclusively on any inland waters shall have for service on board—

Persons in
charge on
deck, and in
the engine
room.

(i) one person holding a certificate of competency as Rivermaster;

(ii) one person holding a certificate of competency as Quartermaster;

(iii) one person holding a certificate of competency as Third-class Engineer, or two persons each holding a certificate of competency as Marine Engineering Assistant; and

(iv) four deckhands.

(2) A ship of less than 100 tons being 100 feet or more in length and plying exclusively on any inland waters, shall have for service on board—

(i) one person holding a certificate of competency as Rivermaster;

(ii) one person holding a certificate of competency as Marine Engineering Assistant ; and

(iii) three deckhands.

(3) A ship of 50 feet or more but less than 100 feet in length plying exclusively on any inland waters, shall have for service on board—

(i) one person holding a certificate of competency as Quartermaster ;

(ii) one person holding a certificate of competency as Marine Engineering Assistant ; and

(iii) two deckhands.

(4) A ship of 20 feet or more but less than 50 feet in length plying exclusively on inland tidal waters shall have for service on board—

(i) one person holding a certificate of competency as Quartermaster ;

(ii) one person holding a certificate of competency as Marine Engineering Assistant ; and

(iii) one deckhand :

Provided that where such a ship is specially designed for one-man control, and the total brake horse power of the engine or engines does not exceed 100, the Marine Engineering Assistant need not be carried.

(5) A ship of less than 20 feet in length plying exclusively on inland tidal waters shall have for service on board—

(i) one person holding a certificate of competency as Quartermaster ; and

(ii) one person holding a certificate of competency as Marine Engineering Assistant :

Provided that where such a ship is specially designed for one-man control, the Marine Engineering Assistant need not be carried.

(6) A ship of 20 feet or more but less than 50 feet in length, plying exclusively on inland non-tidal waters, shall have for service on board—

(i) one person holding a certificate of competency as Riverman ;

(ii) one person holding a certificate of competency as Motorman ; and

(iii) one deckhand :

Provided that where such a ship is specially designed for one-man control, and the total brake horse power of the engine, or engines, does not exceed 100, the Motorman need not be carried.

(7) A ship of less than 20 feet in length, plying exclusively on inland non-tidal waters, shall have for service on board—

(i) one person holding a certificate of competency as Riverman ; and

(ii) one person holding a certificate of competency as Motorman :

Provided that where such a ship is specially designed for one-man control, the Motorman need not be carried.

(8) A power driven small craft plying exclusively on any inland water shall have for service on board—

(i) one person holding a certificate of competency as a Power Driven Small Craft Operator ; and

(ii) one deckhand.

PART II
SCHEDULE

INLAND TIDAL WATERS AREAS

1. All those inland waters in the area bounded by the border with Dahomey in the West, the meridian of 5 degrees East longitude in the East, and the parallel of 7 degrees North latitude in the North.

2. All those inland waters in the area bounded by the meridian of 5 degrees East longitude in the West, the meridian of 6 East longitude in the East, and the parallel of 6 degrees 5 minutes North latitude in the North.

3. All those inland waters in the area bounded by the meridian of 6 degrees East longitude in the West, the border with the Cameroons in the East, and the parallel of 5 degrees North latitude in the North.

MADE at Lagos this 5th day of July 1967.

MUSA DAGGASH,
Permanent Secretary,
Federal Ministry of Transport

THE MERCHANT SHIPPING (FIRE APPLIANCES) RULES 1967

ARRANGEMENT OF RULES

PART I—GENERAL

Rule

1. Citation, commencement and revocation.
2. Interpretation.
3. Ships to which the Rules apply.
4. Classification of ships.

PART II—PASSENGER SHIPS

SHIPS OF CLASS I

5. Fire patrol, alarm and detection systems.
6. Fire pumps, fire main, water service pipes, hydrants, hoses and nozzles.
7. Portable fire extinguishers in accommodation and service spaces.
8. Fixed fire smothering arrangements in cargo spaces.
9. Machinery spaces containing oil-fired boilers or oil burning equipment.
10. Machinery spaces containing internal combustion type machinery.
11. Machinery spaces containing steam engines.
12. Firemen's outfits.
13. International shore connection.

SHIPS OF CLASS II

14. Ships of Class II

SHIPS OF CLASS III OF 70 FEET OR OVER IN LENGTH

15. Ships of Class III of 70 feet or over in length.

SHIPS OF CLASS III OF LESS THAN 70 FEET IN LENGTH

16. Fire pumps, fire main, water service pipes, hydrants, hoses and nozzles.
17. Portable fire extinguishers.
18. Machinery spaces containing oil-fired boilers or oil burning equipment.
19. Machinery spaces containing internal combustion type machinery.

SHIPS OF CLASS IV OR IVA OF 70 FEET OR OVER IN LENGTH—FULLY DECKED

20. Fire pumps, fire main, water service pipes, hydrants, hoses and nozzles

SHIPS OF CLASS IV OR IVA OF LESS THAN 70 FEET IN LENGTH—FULLY DECKED

21. Ships of Class IV or IVA of less than 70 feet in length—fully decked. SHIPS OF CLASS IV OR IVA—NOT FULLY DECKED

22. Ships of Class IV or IVA not fully decked.

PART III—SHIPS OTHER THAN PASSENGER SHIPS

SHIPS OF CLASS V OF 500 TONS OR OVER

23. Fire pumps, fire main, water service pipes, hydrants, hoses and nozzles.
 24. Portable fire extinguishers.
 25. Fixed fire smothering arrangements in cargo spaces.
 26. Machinery spaces containing oil-fired boilers or oil burning equipment.
 27. Machinery spaces containing internal combustion type machinery.
 28. Machinery spaces containing steam engines.
 29. Firemen's outfits.
 30. International shore connection.

SHIPS OF CLASS V OF UNDER 500 TONS

31. Ships of Class V of under 500 tons.

SHIPS OF CLASS VA

32. Class VA ships of 500 tons or over.

SHIPS OF CLASS VI

33. Class VI ships of 1,000 tons or over.
 34. Class VI ships of 500 tons or over but under 1,000 tons.
 35. Class VI ships of 150 tons or over but under 500 tons.
 36. Class VI ships of under 150 tons.

SHIPS OF CLASS VII, VIIA OR VIII

37. Ships of Class VII, VIIA or VIII.

SHIPS OF CLASS IX

38. Class IX ships of 1,000 tons or over.
 39. Class IX ships of 500 tons or over but under 1,000 tons.
 40. Class IX ships of 150 tons or over but under 500 tons.
 41. Class IX ships of under 150 tons.
 42. Power to exempt Class IX ships from the provisions of these Rules.

SHIPS OF CLASS X

43. Class X ships of 150 tons or over.

PART IV—SUPPLEMENTAL

44. Additional requirements for ships carrying explosives.
 45. Fire pumps.
 46. Fire main, water service pipes and hydrants.
 47. Fire hoses, nozzles, etc.
 48. International shore connection.
 49. Fire extinguishers.
 50. Fire buckets.
 51. Fixed pressure water spraying systems for machinery spaces.
 52. Fixed fire smothering gas and steam installations.

- 53. Fixed foam fire extinguishing installations.
- 54. Fire detection systems.
- 55. Firemen's outfits.
- 56. Means for stopping machinery, shutting off oil fuel suction pipes and closing of openings.
- 57. Fire control plans.
- 58. Availability of fire fighting appliances.
- 59. Equivalents and exemptions.

SCHEDULES

- 1. Inland tidal waters areas.
- 2. International shore connection.
- 3. Non-portable foam fire extinguishers.
- 4. Non-portable carbon dioxide fire extinguishers.
- 5. Breathing apparatus.

22. Ships of Class IV or IVA not fully decked.

PART III—SHIPS OTHER THAN PASSENGER SHIPS

SHIPS OF CLASS V OF 500 TONS OR OVER

- 23. Fire pumps, fire main, water service pipes, hydrants, hoses and nozzles.
- 24. Portable fire extinguishers.
- 25. Fixed fire smothering arrangements in cargo spaces.
- 26. Machinery spaces containing oil-fired boilers or oil burning equipment.
- 27. Machinery spaces containing internal combustion type machinery.
- 28. Machinery spaces containing steam engines.
- 29. Firemen's outfits.
- 30. International shore connection.

SHIPS OF CLASS V OF UNDER 500 TONS

31. Ships of Class V of under 500 tons.

SHIPS OF CLASS VA

32. Class VA ships of 500 tons or over.

SHIPS OF CLASS VI

- 33. Class VI ships of 1,000 tons or over.
- 34. Class VI ships of 500 tons or over but under 1,000 tons.
- 35. Class VI ships of 150 tons or over but under 500 tons.
- 36. Class VI ships of under 150 tons.

SHIPS OF CLASS VII, VIIA OR VIII

37. Ships of Class VII, VIIA or VIII.

SHIPS OF CLASS IX

- 38. Class IX ships of 1,000 tons or over.
- 39. Class IX ships of 500 tons or over but under 1,000 tons.
- 40. Class IX ships of 150 tons or over but under 500 tons.
- 41. Class IX ships of under 150 tons.
- 42. Power to exempt Class IX ships from the provisions of these Rules.

SHIPS OF CLASS X

43. Class X ships of 150 tons or over.

PART IV—SUPPLEMENTAL

- 44. Additional requirements for ships carrying explosives.
- 45. Fire pumps.
- 46. Fire main, water service pipes and hydrants.
- 47. Fire hoses, nozzles, etc.
- 48. International shore connection.
- 49. Fire extinguishers.
- 50. Fire buckets.
- 51. Fixed pressure water spraying systems for machinery spaces.
- 52. Fixed fire smothering gas and steam installations.

53. Fixed foam fire extinguishing installations.
54. Fire detection systems.
55. Firemen's outfits.
56. Means for stopping machinery, shutting off oil fuel suction pipes and closing of openings.
57. Fire control plans.
58. Availability of fire fighting appliances.
59. Equivalents and exemptions.

SCHEDULES

1. Inland tidal waters areas.
2. International shore connection.
3. Non-portable foam fire extinguishers.
4. Non-portable carbon dioxide fire extinguishers.
5. Breathing apparatus.

22. Ships of Class IV or IVA not fully decked.

PART III—SHIPS OTHER THAN PASSENGER SHIPS

SHIPS OF CLASS V OF 500 TONS OR OVER

- 23. Fire pumps, fire main, water service pipes, hydrants, hoses and nozzles.
- 24. Portable fire extinguishers.
- 25. Fixed fire smothering arrangements in cargo spaces.
- 26. Machinery spaces containing oil-fired boilers or oil burning equipment.
- 27. Machinery spaces containing internal combustion type machinery.
- 28. Machinery spaces containing steam engines.
- 29. Firemen's outfits.
- 30. International shore connection.

SHIPS OF CLASS V OF UNDER 500 TONS

31. Ships of Class V of under 500 tons.

SHIPS OF CLASS VA

32. Class VA ships of 500 tons or over.

SHIPS OF CLASS VI

- 33. Class VI ships of 1,000 tons or over.
- 34. Class VI ships of 500 tons or over but under 1,000 tons.
- 35. Class VI ships of 150 tons or over but under 500 tons.
- 36. Class VI ships of under 150 tons.

SHIPS OF CLASS VII, VIIA OR VIII

37. Ships of Class VII, VIIA or VIII.

SHIPS OF CLASS IX

- 38. Class IX ships of 1,000 tons or over.
- 39. Class IX ships of 500 tons or over but under 1,000 tons.
- 40. Class IX ships of 150 tons or over but under 500 tons.
- 41. Class IX ships of under 150 tons.
- 42. Power to exempt Class IX ships from the provisions of these Rules.

SHIPS OF CLASS X

43. Class X ships of 150 tons or over.

PART IV—SUPPLEMENTAL

- 44. Additional requirements for ships carrying explosives.
- 45. Fire pumps.
- 46. Fire main, water service pipes and hydrants.
- 47. Fire hoses, nozzles, etc.
- 48. International shore connection.
- 49. Fire extinguishers.
- 50. Fire buckets.
- 51. Fixed pressure water spraying systems for machinery spaces.
- 52. Fixed fire smothering gas and steam installations.

53. Fixed foam fire extinguishing installations.
54. Fire detection systems.
55. Firemen's outfits.
56. Means for stopping machinery, shutting off oil fuel suction pipes and closing of openings.
57. Fire control plans.
58. Availability of fire fighting appliances.
59. Equivalents and exemptions.

SCHEDULES

1. Inland tidal waters areas.
2. International shore connection.
3. Non-portable foam fire extinguishers.
4. Non-portable carbon dioxide fire extinguishers.
5. Breathing apparatus.

MERCHANT SHIPPING ACT 1962

(1962 No. 30)

The Merchant Shipping (Fire Appliances) Rules 1967

Commencement : 28th February 1966

In exercise of the powers conferred by section 153 of the Merchant Shipping Act 1962, as modified by the Constitution (Suspension and Modification) Decree 1967, and of all other powers enabling it in that behalf, the Supreme Military Council hereby makes the following Rules :—

PART I—GENERAL

1.—(1) These Rules may be cited as the Merchant Shipping (Fire Appliances) Rules 1967, shall be deemed to have come into force on 28th February 1966 and shall apply throughout Nigeria.

(2) The Merchant Shipping (Fire Appliances) Rules 1951 of the United Kingdom to the extent to which they are deemed to have been made under the Merchant Shipping Act 1962 and be in force, shall cease to have effect in Nigeria, and the reference thereto in the Fourth Schedule to the Act of 1962 shall be deleted.

(3) The Merchant Shipping (Fire Appliances) Rules 1963 are hereby revoked.

2.—(1) In these Rules, except where the context otherwise requires, the following expressions have the meanings hereby assigned to them, that is to say—

“accommodation space” means passenger spaces, corridors, lavatories, cabins, offices, crew spaces, isolated pantries and lockers and similar spaces;

“the Act” means the Merchant Shipping Act 1962;

“the appropriate authority” means the Supreme Military Council;

“cargo space” means spaces appropriated for cargo other than mail and bullion, and trunks leading to such spaces;

“crew space” means crew accommodation within the meaning of the Act;

“control station” includes those spaces in which radio, main navigating or central fire-recording equipment or the emergency generator is located;

“length” in relation to a registered ship means registered length, and in relation to an unregistered ship means the length from the fore part of the stem to the aft side of the head of the stern post or if no stern post is fitted to take the rudder, to the fore side of the rudder stock at the point where the rudder passes out of the hull;

“machinery space” means any space where propelling, auxiliary, or refrigerating machinery, boilers, pumps, engineer's workshops, generators, ventilation or air-conditioning machinery, oil filling station are installed and similar spaces and trunkways leading to such spaces;

“oil fired boiler” means any boiler wholly or partly fired by liquid fuel not being a domestic boiler of less than 250,000 B.T.U. per hour;

“oil fuel unit” means the equipment used for the preparation of oil fuel for delivery to the oil burners of an oil fired boiler and includes the oil pressure pumps, filters and heaters;

“passenger ship” means a ship carrying more than 12 passengers;

Citation,
commence-
ment,
application
and
revocation.
S.I. 1952/
1950.

L.N. No. 63
of 1963.

Interpreta-
tion.

1962 No. 30.

"passenger space" means space provided for the use of passengers ;

"sailing ship" includes a ship provided with sufficient sail area for navigation under sails alone, whether or not fitted with mechanical means of propulsion ;

"service space" includes galleys, main pantries, laundries, store rooms, paint room, baggage room, mail rooms, bullion rooms, carpenters' and plumbers' workshops, and trunkways leading to such spaces ;

"settling tank" means an oil storage tank having a heating surface of not less than 2 square feet per ton of oil capacity ;

"ship" includes a ship propelled by electricity or other mechanical power ;

"tanker" means a cargo ship constructed or adapted for the carriage in bulk of liquid cargoes of an inflammable nature ;

"tons" in relation to the tonnage of a ship means gross tons.

(2) In these Rules any reference to a Part, Rule or Schedule not otherwise identified is a reference to that Part, Rule or Schedule of these Rules.

3.—These Rules apply to—

(a) Nigerian ships

(b) other ships while within any port in Nigeria :

Provided that these Rules shall not apply to—

(i) a ship by reason of her being within a port in Nigeria if she would not have been in any such port but for stress of weather or any other circumstance that neither the master nor the owner nor the charterer (if any) of the ship could have prevented or forestalled ;

(ii) Pleasure yachts which are not passenger ships and are less than 45 feet in length ;

(iii) Power-driven small craft.

Ships to
which the
Rules apply.

Classifica-
tion of ships.

4.—(1) For the purposes of these Rules the ships to which these Rules apply shall be arranged in the following classes :—

Passenger Ships :

Class I —Passenger ships engaged on voyages any of which are long international voyages.

Class II —Passenger ships engaged on voyages (not being long international voyages) any of which are short international voyages.

Class III —Passenger ships in respect of which there is or should be in force a certificate entitled "Passenger Certificate Class III" being a certificate for ships engaged on voyages of any kind other than international voyages and during the course of which the vessel does not proceed more than 50 miles from the coast of Nigeria.

Class IV —Ships plying only on inland tidal waters and carrying any number of passengers.

Class IV(A).—Ships plying only on inland non-tidal waters and carrying any number of passengers.

Ships other than Passenger Ships :

Class V.—Ships (other than ships of Classes I, V(A) IX and X) engaged on voyages any of which are long international voyages.

Class V(A).—Ships employed as fish processing or canning factory ships, and ships engaged in the carriage of persons employed in the fish processing or canning industries.

Class VI.—Ships (other than ships of Classes III to IV(A), IX and X) engaged on voyages (not being long international voyages) any of which are short international voyages.

Class VII.—Ships (other than ships of Classes III to IV(A) inclusive, VII(A), VIII, IX and X) engaged only on voyages which are not international voyages.

Class VII(A).—Tugs and tenders, dredgers, cables ships, voyage vessels, hopper barges, lighthouse and survey vessels (other than ships of Classes II and III) which proceed to sea but are not engaged on long international voyages.

Class VIII.—Ships plying only on any inland waters.

Class IX.—Fishing boats (other than ships of Classes I to IV(A) inclusive).

Class X.—Pleasure yachts (other than ships of Classes I to IV(A) inclusive) of 45 feet or over in length.

(2) For the purposes of this Rule the following expressions have the following meanings respectively—

“Long international voyage” means an international voyage which is not a short international voyage within the meaning of the Act ;

“Inland tidal waters” means those inland waters as specified in Schedule I ;

“Sea” does not include any inland waters ;

“Inland non-tidal waters” means waters not being the sea or inland tidal waters as specified in Schedule I ;

“Voyage” includes an excursion.

PART II—PASSENGER SHIPS

SHIPS OF CLASS I

5.—(1) (a) In every ship of Class I an efficient patrol system shall be maintained so that any outbreak of fire may be promptly detected.

(b) Manual fire alarms shall be fitted throughout the passenger spaces and crew spaces which will enable the fire patrol to give an alarm immediately to the navigating bridge or fire control station.

(2) In every ship of Class I there shall be provided in any part of the ship which is not accessible to the fire patrol a fire detection system complying with the requirements specified in Rule 54.

(3) The appropriate authority may, if satisfied that it would be unreasonable to require compliance with paragraph (2) above in respect of a ship on account of the short duration of the voyages on which that ship is engaged, exempt that ship from the requirements of the said paragraph (2).

6.—(1) Every ship of Class I shall be provided with appliances in accordance with this Rule whereby at least two jets of water as required by these Rules can, while the ship is being navigated, reach any part of the ship normally accessible to the passengers or crew including any store room or any part of any cargo space when empty.

Fire patrol,
alarm and
detection
systems.

Fire pumps,
fire main,
water service
pipes,
hydrants,
hoses and
nozzles.

(2) Every ship of Class I of 4,000 tons or over shall be provided with at least three fire pumps operated by power and every ship of Class I under 4,000 tons shall be provided with at least two such pumps. Each such pump shall be capable of delivering at least one jet simultaneously from each of any two hydrants, hoses and nozzles provided in the ship and shall comply with the requirements of Rule 45.

(3).—(a) In every ship of Class I of 1,000 tons or over the arrangement of the sea connections, pumps and the sources of power for operating them shall be such as will ensure that fire in any one compartment will not put all the fire pumps out of action.

(b) If in any ship of Class I of less than 1,000 tons fire in any one compartment could put all the fire pumps out of action there shall be provided, in a position outside the machinery spaces, an independently driven power operated emergency fire pump and its sources of power and sea connection. Such pump shall be capable of producing at least two jets of water from any two hydrants and hoses through nozzles which shall comply with Rule 47 (4) (b), while simultaneously maintaining a pressure of at least 30 pounds per square inch at any hydrant in the ship.

(4) In every ship of Class I there shall be provided a fire main, water service pipes, hydrants, hoses and nozzles which shall be so arranged that they comply with the requirements of Rules 46 and 47 when all water-tight doors and all doors in bulkheads constructed in accordance with Construction rules under the Act are closed.

(5) In every ship of Class I at least one fire hose shall be provided for every hydrant fitted in compliance with these Rules.

(6) In every ship of Class I fitted with oil-fired boilers or internal combustion type propelling machinery there shall be provided in each space containing such boilers or machinery at least two fire hydrants, one on the port side and one on the starboard side. In addition, in any such ship in which there is access to the machinery space by way of a shaft tunnel, a fire hydrant shall be provided in the tunnel at the end adjacent to that space. A spray nozzle shall be provided for every fire hose at every hydrant fitted in such spaces in compliance with these Rules.

Portable fire
extinguishers
in accommo-
dation and
service
spaces.

7.—(1) In every ship of Class I there shall be provided on each deck a sufficient number of portable fire extinguishers so that at least two of these shall be readily available for use in every accommodation and service space between water-tight bulkheads and bulkheads constructed in compliance with Construction rules under the Act. In enclosed accommodation and service spaces above the bulkhead deck at least one such extinguisher shall be provided for use on each side of the ship in such spaces. In addition at least one portable fire extinguisher and an asbestos blanket shall be provided in every galley:

Provided that where the superficial deck area of any galley exceeds 500 square feet at least two such extinguishers and two such blankets shall be provided.

(2) In every ship of Class I at least one portable fire extinguisher shall be provided for use in each control station.

Fixed fire
smothering
arrange-
ments in
cargo spaces.

8.—(1) In every ship of Class I of 1,000 tons or over there shall be provided a fixed fire smothering gas installation complying with the requirements of Rule 52 which shall be so arranged as to protect every cargo space.

(2) The appropriate authority may, if satisfied that to require compliance with the requirements of this rule would be unreasonable on account of the short duration of the voyages on which a ship is engaged, exempt that ship from the requirements of this Rule.

9.—(1) In every ship of Class I there shall be provided for the protection of any space containing any oil-fired boiler, oil fuel settling tank or oil fuel unit at least one of the following fixed fire extinguishing installations :—

Machinery spaces containing oil-fired boilers or oil burning equipment.

(a) a pressure water spraying system complying with the requirements of Rule 51 ;

(b) a fire smothering gas installation complying with the requirements of Rule 52 ;

(c) a foam fire extinguishing gas installation complying with the requirements of Rule 53.

(2) If the engine and boiler rooms are not entirely separated from each other by a bulkhead, or if fuel oil can drain from the boiler room into the engine room, the combined engine and boiler rooms shall for the purpose of paragraph (1) above be regarded as a single space.

(3) In addition to the requirements of paragraph (1) above there shall be provided—

(a) in each boiler room one or more foam fire extinguishers each of at least 30 gallons capacity or carbon dioxide fire extinguishers each of at least 100 lb capacity and the extinguishers shall be sited so as to be readily accessible in the event of fire and they shall be sufficient in number to enable foam or carbon dioxide to be directed on to any part of the boiler room and spaces containing any part of the oil fuel installation ;

(b) in each firing space and in each space which contains any part of any oil fuel installation at least two portable fire extinguishers suitable for extinguishing oil fires ;

(c) in each firing space a receptacle containing at least 10 cubic feet of sand or other dry material suitable for quenching oil fires together with a scoop for its distribution, or alternatively an additional portable fire extinguisher suitable for extinguishing oil fires.

10.—(1) In every ship of Class I there shall be provided for the protection of any space containing internal combustion type machinery used for main propulsion, or having in the aggregate a total power of not less than 1,000 b.h.p. for auxiliary purposes, at least one of the fixed fire extinguishing installations required by Rule 9 (1).

Machinery spaces containing internal combustion type machinery.

(2) In addition to the requirements of paragraph (1) above, there shall be provided in any such space :—

(a) one foam fire extinguisher of at least 10 gallons capacity or a carbon dioxide fire extinguisher of at least 35 lb capacity ;

(b) one portable fire extinguisher suitable for extinguishing oil fires for each 1,000 b.h.p. or part thereof of such machinery but in no event less than two such extinguishers so however that no more than six such extinguishers shall be required in any such space.

11. In every ship of Class I there shall be provided in spaces containing steam turbines or enclosed pressure lubricated steam engines used either for main propulsion, or having in the aggregate a total power of not less than 1,000 b.h.p. for auxiliary purposes :—

Machinery spaces containing steam engines.

(a) foam fire extinguishers each of at least 10 gallons capacity or carbon dioxide fire extinguishers each of at least 35 lb capacity sufficient in number to enable foam or carbon dioxide to be directed on to any part of the pressure lubrication system and on to any part of the casings enclosing pressure lubricated parts of the turbine engines or associated gearing, if any :

Provided that such extinguishers shall not be required if equivalent protection is provided in such spaces by a fixed fire extinguishing installation fitted in compliance with Rule 9 (1) and (2) or Rule 10 (1) ;

(b) one portable fire extinguisher for each 1,000 b.h.p. or part thereof of such machinery, suitable for extinguishing oil fires, but in no event less than two such extinguishers so however that not more than six such extinguishers shall be required in any one such space and such extinguishers shall not be required in addition to any provided in compliance with Rule 10 (2).

Firemen's
outfits.

12.—(1) Every ship of Class I shall carry one fireman's outfit for each 100 feet (or part thereof) of the registered length of the ship, but in no case less than two, and every such outfit shall comply with the requirements of Rule 55 and at least two of them shall include breathing apparatus of the air hose type.

(2) If in any such ship which carries firemen's outfits containing only breathing apparatus of the air hose type an air hose exceeding 120 feet in length would be necessary to reach from the open deck well clear of any hatch or doorway to any part of the accommodation, service, cargo or machinery spaces, at least two sets of breathing apparatus of the self-contained type shall be provided in addition.

International
shore
connection.

13. Every ship of Class I of 1,000 tons or over shall be provided with at least one international shore connection which shall comply with the requirements of Rule 48 to enable water to be supplied from another ship or from the shore to the fire main and fixed provision shall be made to enable such a connection to be used on the port side and on the starboard side of the ship.

SHIPS OF CLASS II

Ships of
Class II.

14. Rules 5 to 13 shall apply to ships of Class II as they apply to ships of Class I.

SHIPS OF CLASS III OF 70 FEET OR OVER IN LENGTH

Ships of
Class III of
70 feet or
over in
length.

15. Rule 5 (1) and Rules 6 to 13 shall apply to ships of Class III of 70 feet or over in length as they apply to ships of Class I.

SHIPS OF CLASS III OF LESS THAN 70 FEET IN LENGTH

Fire pumps,
fire main,
water service
pipes, hyd-
rants, hoses
and nozzles.

16. Every ship of Class III of less than 70 feet in length shall be provided in a position outside the machinery spaces with a hand pump with a permanent sea connection, a hose with a $\frac{3}{8}$ inch diameter nozzle, capable of producing a jet of water having a throw of not less than 20 feet which can be directed on to any part of the ship, and a spray nozzle.

Portable fire
extin-
guishers.

17. Every ship of Class III of less than 70 feet in length shall be provided with at least one portable fire extinguisher in each of the passenger spaces above the bulkhead deck, and with at least two such extinguishers in each of the crew spaces and of the passenger spaces below that deck. At least one portable fire extinguisher shall be available for use in any galley.

Machinery
spaces con-
taining oil
fired boilers
or oil burn-
ing equip-
ment.

18.—(1) In every ship of Class III of less than 70 feet in length there shall be provided in any space containing any oil-fired boiler, oil fuel settling tank or oil fuel unit one or more foam fire extinguishers each of at least 10 gallons capacity or carbon dioxide extinguishers each of at least 35 lb capacity. The extinguisher, or extinguishers, shall be sited so as to be readily accessible in the event of fire and they shall be sufficient in number to enable foam or carbon dioxide to be directed on to any part of the boiler room or spaces containing any part of the oil fuel installation.

(2) In addition to the requirements of paragraph (1) above there shall be provided—

(a) in each firing space and in each space which contains any part of any oil fuel installation at least two portable fire extinguishers suitable for extinguishing oil fires ;

(b) in each firing space a receptacle containing at least 2 cubic feet of sand or other dry material suitable for quenching oil fires together with a scoop for its distribution, or alternatively an additional portable fire extinguisher suitable for extinguishing oil fires.

Machinery
spaces con-
taining inter-
nal combus-
tion type
machinery.

19. Every ship of Class III of 50 feet or over in length but of less than 70 feet in length shall be provided in each space containing internal combustion type propelling machinery with at least five portable fire extinguishers suitable for extinguishing oil fires, and every ship of Class III of less than 50 feet in length shall be provided with at least three such portable fire extinguishers in such spaces.

SHIPS OF CLASS IV OR IVA OF 70 FEET OR OVER IN LENGTH— FULLY DECKED

20.—(1) Every ship of Class IV or IVA of 70 feet in length or over shall be provided with appliances in accordance with this Rule whereby at least one jet of water as required by these Rules can reach any part of the ship normally accessible to the passengers or crew while the ship is being navigated and any store room and any part of any cargo space when empty.

Fire pumps,
fire main,
water ser-
vice pipes,
hydrants,
hoses and
nozzles.

(2) Every such ship shall be provided with at least one fire pump operated by power. Each such pump shall be capable of delivering at least one jet of water from any fire hydrant, hose and nozzle provided in the ship and shall comply with the requirements of Rule 45.

(3) Every such ship fitted with oil-fired boilers or internal combustion type propelling machinery shall be provided with an additional fire pump which shall be permanently connected to the fire main but which shall not be required to be operated by power. Such pump and its source of power, if any, shall not be situated in the same compartment as the pump required by paragraph (2) above and shall be provided with a permanent sea connection situated outside the machinery space. If such pump is operated by power it shall comply with the requirements of the said paragraph (2) and if it is manually operated it shall be capable of producing a jet of water having a throw of not less than 20 feet from nozzles provided in compliance with this Rule.

(4) Every such ship shall be provided with a fire main, water service pipes, hydrants, hoses and nozzles which shall comply with the requirements of Rules 46 and 47.

(5) Every such ship shall be provided with at least one fire hose for every hydrant fitted in compliance with these Rules.

(6) Every such ship fitted with oil-fired boilers or internal combustion type machinery shall be provided with at least one fire hydrant in each space containing such boilers or machinery. A spray nozzle shall be provided for every fire hose at every hydrant fitted in such spaces in compliance with these Rules.

(7) Every ship of Class IV & IVA or 70 feet or over in length shall be provided with at least one portable fire extinguisher in each of the passenger spaces above the bulkhead deck, and with at least two such extinguishers in each of the crew spaces and of the passenger spaces below that deck. At least one portable fire extinguisher shall be available for use in any gallery.

(8) In every ship of Class IVA of 70 feet or over in length there shall be provided in any space containing any oil-fired boiler, oil fuel settling tank or oil fuel unit, one or more foam fire extinguishers each of at least 30 gallons capacity or carbon dioxide extinguishers each of at least 100 lb capacity. The extinguisher, or extinguishers, shall be sited so as to be readily accessible in the event of fire and they shall be sufficient in number to enable foam or carbon dioxide to be directed on to any part of the boiler room or spaces containing any part of the oil fuel installation.

(9) In addition to the requirements of paragraph (8) above, there shall be provided—

(a) in each firing space and in each space which contains any part of any oil fuel installation at least two portable fire extinguishers suitable for extinguishing oil fires;

(b) in each firing space a receptacle containing at least 5 cubic feet of sand or other dry material suitable for quenching oil fires together with a scoop for its distribution, or alternatively an additional portable fire extinguisher suitable for extinguishing oil fires.

(10) In every ship of Class IV & IVA or 70 feet or over in length there shall be provided in any space containing internal combustion type propelling machinery—

(a) one foam fire extinguisher of at least 10 gallons capacity or one carbon dioxide fire extinguisher of at least 35 lb capacity;

(b) one portable fire extinguisher suitable for extinguishing oil fires for each 1,000 b.h.p. or part thereof of the said machinery, but in no event less than two such extinguishers; provided that no more than six such extinguishers shall be required in any such space.

SHIPS OF CLASS IV & IVA OR LESS THAN 70 FEET IN LENGTH—FULLY DECKED

21. Rules 16 to 19 inclusive apply to ships of Class IV of IVA of less than 70 feet in length as they apply to ships of Class III of less than 70 feet in length.

Ships of
Class IV or
IVA of less
than 70
feet—fully
decked.

SHIPS OF CLASS IV OR IVA—NOT FULLY DECKED

22.—(1) Every ship of Class IV or IVA which is not fully decked shall be provided with—

Ships of
Class IV or
IVA—not
fully decked.

(a) a receptacle containing an adequate quantity of sand or other dry material suitable for quenching oil fires ;

(b) a scoop for distributing the contents of the receptacle ;

(c) the number of portable foam fire extinguishers shown in the following table :—

<i>Length of the ship</i>	<i>Number of foam extinguishers</i>
Not over 30 feet	2
Over 30 feet but not over 50 feet	3
Over 50 feet	5

(d) in the case of any ship of 40 feet or over in length, two fire buckets, and in the case of any ship of less than 40 feet in length, one fire bucket, unless in both cases the equipment required by paragraph (2) below is provided.

(2) Every ship of Class IV or IVA which is not fully decked but is decked in any way of the machinery spaces shall be provided, in a position outside such spaces, with a hand pump, a hose with a $\frac{3}{8}$ inch diameter nozzle and a spray nozzle : Provided that the pump shall be capable of producing a jet of water having a throw of not less than 20 feet which can be directed on to any part of the ship.

PART III—SHIPS OTHER THAN PASSENGER SHIPS

SHIPS OF CLASS V OF 500 TONS OR OVER

23.—(1) Every ship of Class V of 500 tons or over shall be provided with appliances in accordance with this Rule whereby at least two jets of water as required by these Rules can, while the ship is being navigated, reach any part of the ship normally accessible to the passengers or crew including any store room or any part of any cargo space when empty.

Fire pumps,
fire main,
water service
pipes,
hydrants,
hoses and
nozzles.

(2) (a) Every ship of Class V of 1,000 tons or over shall be provided with at least two fire pumps operated by power and each pump shall be capable of delivering at least one jet of water simultaneously from each of any two fire hydrants, hoses and nozzles provided in the ship and shall comply with the requirements of Rule 45.

(b) Every ship of Class V of 500 tons or over but under 1,000 tons shall be provided with at least two fire pumps operated by power each of which shall be capable of delivering at least one jet of water from any fire hydrant, hose and nozzle provided in the ship and shall comply with the requirements of Rule 45.

(3) (a) If in any ship of Class V of 500 tons or over fire in any one compartment could put all fire pumps out of action, there shall be provided, in a position outside the machinery spaces an independently driven power operated emergency fire pump and its source of power and sea connection, provided that in any such ship of under 1,000 tons the emergency fire pump may be manually operated.

(b) In every such ship of 1,000 tons or over the emergency fire pump shall be capable of producing at least two jets of water from any of the fire hydrants and hoses through nozzles which shall comply with Rule 47 (4) (b) while simultaneously maintaining a pressure of at least 30 pounds per square inch at any hydrant in the ship.

(c) In every such ship of 500 tons or over but under 1,000 tons the emergency fire pump shall be capable of producing from any of the fire hydrants and hoses in the ship through a nozzle which shall comply with Rule 47 (4) (a) a jet of water having a throw of not less than 40 feet.

(4)—(a) In every ship of Class V of 500 tons or over there shall be provided a fire main, water service pipes and hydrants which shall comply with the requirements of Rule 46.

(b) (i) Every such ship of 1,000 tons or over shall, in addition to any fire hoses provided in the machinery spaces, be provided with at least one fire hose for each 100 feet length of the ship but in no case less than five hoses which shall have a total length of at least 60 per cent of the length of the ship. In addition to such hose there shall also be provided one spare fire hose.

(ii) Every such ship of 500 tons or over but under 1,000 tons shall in addition to any fire hoses provided in the machinery spaces, be provided with at least two fire hoses having a total length of at least 60 per cent of the length of the ship and one spare fire hose.

(c) In every such ship of 500 tons or over fitted with oil-fired boilers or internal combustion type propelling machinery, there shall be provided in each space containing such boilers or machinery at least two fire hydrants one on the port side and one on the starboard side and in addition where there is access to the machinery space of any such ship by way of a shaft tunnel, a fire hydrant shall be provided in the tunnel at the end adjacent to that space. A fire hose and spray nozzle shall be provided at every such fire hydrant.

Portable fire
extin-
guishers.

24. Every ship of Class V of 500 tons or over shall be provided with a sufficient number of portable fire extinguishers to ensure that at least one such extinguisher will be readily available for use in any part of the accommodation or service spaces. The number of such extinguishers shall not be less than five in a ship of 1,000 tons or over and not less than three in a ship of 500 tons or over but under 1,000 tons.

Fixed fire
smothering
arrange-
ments in
cargo spaces.

25.—(1) In every ship of Class V of 2,000 tons or over there shall be provided a fixed fire smothering gas installation complying with the requirements of Rule 52 which shall be so arranged as to protect every cargo space :

Provided that, subject to the provisions of Rule 44 (1) and Rule 52, steam may be substituted for fire smothering gas in any such installation and that in any tanker a fixed installation discharging foam externally and through suitable mobile sprayers internally to the liquid cargo tanks and complying with the requirements of Rule 52 (2) may be substituted for the fixed fire smothering gas installation required by the Rule.

(2) The appropriate authority may exempt any ship not being a tanker from the requirements of the preceding paragraph if satisfied that—

(a) the holds therein are provided with steel hatch covers and effective means of closing all ventilators and other openings leading to the holds ; or

(b) the ship is constructed for and employed solely in, the carriage of ore, coal or grain; or

(c) to require compliance with the requirements of the aforesaid paragraph would be unreasonable on account of the short duration of the voyages on which the ship is engaged.

26.—(1) In every ship of Class V of 500 tons or over there shall be provided, for the protection of any space containing any oil-fired boiler, oil fuel settling tank or oil fuel unit, at least one of the following fixed fire extinguishing installations:—

Machinery spaces containing oil-fired boilers or oil burning equipments.

(a) a pressure water spraying system complying with the requirements of Rule 51;

(b) a fire smothering gas installation complying with the requirements of Rule 52 of these Rules;

(c) a foam fire extinguishing installation complying with the requirements of Rule 53 of these Rules:

Provided that in any such ship of 500 tons or over but under 1,000 tons a fixed fire smothering steam installation complying with the requirements of Rule 52 of these Rules may be provided in lieu of any of the above installations.

If the engine room and boiler rooms are not entirely separated from each other by a bulkhead, or if fuel oil can drain from the boiler room into the engine room, the combined engine and boiler room shall, for the purpose of this paragraph, be regarded as a single space.

(2) In addition to the requirements of paragraph (1) of this Rule there shall be provided—

(a) in each boiler room one foam fire extinguisher of at least 10 gallons capacity or a carbon dioxide fire extinguisher of at least 35 lb capacity if the number of burners therein is five or more. If the number of burners in the boiler room is less than five there shall be provided for each burner therein one portable fire extinguisher suitable for extinguishing oil fires;

(b) in each firing space and in each space which contains any part of any oil fuel installation, at least two portable fire extinguishers suitable for extinguishing oil fires in addition to any which may be carried in compliance with the preceding sub-paragraph;

(c) in each firing space a receptacle containing, in a ship of 1,000 tons or over, 10 cubic feet, or in a ship of 500 tons or over but under 1,000 tons, 5 cubic feet of sand or other dry material suitable for quenching oil fires together with a scoop for its distribution, or alternatively an additional portable fire extinguisher suitable for extinguishing oil fires.

(3) If in any ship of Class V of 500 tons or over but under 1,000 tons a fixed fire smothering steam installation is fitted in compliance with the provision of paragraph (1) of this Rule and steam is supplied by water-tube boilers, there shall, in addition, be provided for the protection of the boiler room and spaces containing the oil fuel installation one foam fire extinguisher of at least 30 gallons capacity or a carbon dioxide fire extinguisher of at least 100 lb capacity.

27.—(1) In every ship of Class V of 500 tons or over there shall be provided for the protection of any space containing internal combustion type machinery used for main propulsion, or having in the aggregate a total power of not less than 1,000 b.h.p. for auxiliary purposes, at least one of the fixed fire extinguishing installations required by Rule 26 (1):

Machinery spaces containing internal combustion type machinery.

Provided that in any such ship of 500 tons or over but under 1,000 tons, a fixed fire smothering steam installation complying with the requirements of Rule 52 may be provided in lieu of any of the said installations.

(2) In addition to the requirements of paragraph (1) of this Rule there shall also be provided in any such space—

(a) one foam fire extinguisher of at least 10 gallons capacity or a carbon dioxide fire extinguisher of at least 35 lb capacity ;

(b) one portable fire extinguisher suitable for extinguishing oil fires for each 1,000 b.h.p. or part thereof of such machinery but in no case shall there be less than two extinguishers save that no more than six such extinguishers shall be required in any such space.

28. In every ship of Class V of 500 tons or over there shall be provided in spaces containing steam turbines or enclosed pressure lubricated steam engines used either for main propulsion or having in the aggregate a total power of not less than 1,000 b.h.p. for auxiliary purposes—

(a) foam fire extinguishers, each of at least 10 gallons capacity, or carbon dioxide fire extinguishers, each of at least 35 lb capacity, sufficient in number to enable foam or carbon dioxide to be directed on to any part of the pressure lubrication system and on to any part of the casings enclosing pressure lubricated parts of the turbines, engines or associated gearing, if any :

Provided that such extinguishers shall not be required if equivalent protection is provided in such spaces by a fixed fire extinguishing installation fitted in compliance with Rule 26 (1) or Rule 27 (1) ;

(b) one portable fire extinguisher, for each 1,000 b.h.p. or part thereof of such machinery, suitable for extinguishing oil fires, but in no case shall there be less than two such extinguishers :

Provided that no more than six such extinguishers shall be required in any one such space and no such extinguishers shall be required in addition to any extinguishers provided in compliance with Rule 27 (2).

29.—(1) Every ship of Class V of 500 tons or over shall carry firemen's outfit which shall comply with the requirements of Rule 55 in accordance with the following scale :—

<i>Tonnage of the ship</i>	<i>Number of outfits</i>
500 but under 2,500	1
2,500 but under 4,000	2
4,000 and over	3

(2) At least one such outfit carried in any such ship shall include a breathing apparatus of the air hose type.

(3) If in any such ship which carries firemen's outfits containing only breathing apparatus of the air hose type, an air hose exceeding 120 feet in length would be necessary to reach from the open deck well (clear of any hatch or doorway) to any part of the accommodation, service, cargo or machinery spaces; then, at least one breathing apparatus of the self-contained type shall be provided in addition.

Machinery
spaces con-
taining steam
engines.

Firemen's
outfits.

30. Every ship of Class V of 1,000 tons or over shall be provided with at least one international shore connection which shall comply with the requirements of Rule 48 to enable water to be supplied from another ship or from the shore to the fire main, and fixed provision shall be made to enable such a connection to be used on the port side and on the starboard side of the ship.

SHIPS OF CLASS V OF UNDER 500 TONS

31.—(1) This Rule applies to ships of Class V of under 500 tons.

Ships of
Class V under
500 tons.

(2) (a) Every such ship shall be provided with appliances in accordance with this Rule whereby at least one jet of water as required by these Rules can, while the ship is being navigated, reach any part of the ship normally accessible to the passengers or crew including any store room or any part of any cargo space when empty.

(b) Every such ship shall be provided with at least one fire pump operated by power which shall be capable of delivering at least one jet of water from any fire hydrant, hose and nozzle provided in the ship, and which shall comply with the requirements of Rule 45.

(c) In every such ship fitted with oil-fired boilers or internal combustion type propelling machinery there shall be provided in a position outside the space containing such boilers or machinery an additional fire pump and its source of power and sea connection. If such pump is operated by power, it shall comply with the requirements of the preceding sub-paragraph and if it is manually operated, it shall be provided with a hose and $\frac{3}{4}$ inch diameter nozzle through which it shall be capable of producing a jet of water having a throw of not less than 20 feet which can be directed on to any part of the ship.

(d) In every such ship there shall be provided a fire main, water service pipes and hydrants which shall comply with the requirements of Rule 46 and in addition there shall also be provided at least three fire hoses.

(e) In every such ship fitted with oil-fired boilers or internal combustion type propelling machinery there shall be provided a spray nozzle suitable for use with the fire hoses required by the preceding sub-paragraph.

(3) Every such ship shall be provided with at least three portable fire extinguishers so situated as to be readily available for use in the accommodation and service space.

(4) In every ship to which this Rule applies there shall be provided for the protection of any space containing any oil-fired boiler, oil fuel settling tank or oil fuel unit at least one of the following fixed fire extinguishing installations :—

(a) a pressure water spraying system complying with the requirements of Rule 51 ;

(b) a fire smothering gas or steam installation complying with the requirements of Rule 52 ;

(c) a foam fire extinguishing installation complying with the requirements of Rule 53.

If the engine and boiler room are not entirely separated from each other by a bulkhead, or if fuel oil can drain from the boiler room into the engine room, the combined engine room and boiler room shall, for the purpose of this paragraph, be regarded as a single space.

(5) In addition to the requirements of paragraph (4) of this Rule there shall be provided :—

(a) in each boiler room and in each space which contains any part of any oil fuel installation, at least two portable fire extinguishers suitable for extinguishing oil fires ;

(b) in each firing space, a receptacle containing at least 5 cubic feet of sand or other dry material suitable for quenching oil fires together with a scoop for its distribution, or alternatively an additional portable fire extinguisher suitable for extinguishing oil fires.

(6) In every ship to which this Rule applies there shall be provided in any space containing internal combustion type machinery one portable fire extinguisher suitable for extinguishing oil fires for each 100 b.h.p. or part thereof of such machinery, except that no more than seven such extinguishers shall be required in any one space and that alternatively there may be provided two such extinguishers together with either :—

(i) one foam fire extinguisher of at least 10 gallons capacity ; or

(ii) one carbon dioxide fire extinguisher of at least 35 lb. capacity.

(7) Every ship to which this Rule applies shall be provided with at least one fireman's outfit which shall comply with the requirements of Rule 55 and shall contain a breathing apparatus of the air hose type.

SHIPS OF CLASS VA

Class VA
ships of 500
tons or over.

32.—(1) Rules 23 to 30 shall apply to every ship of Class VA of 500 tons or over which is employed as a fish processing or canning factory ship, or which is engaged in the carriage of persons engaged in the fish processing or canning industries as they apply to ships of Class V of 500 tons or over.

(2) Rules 38 to 42 shall apply to ships of Class VA other than those ships specified in paragraph (1) of this Rule as they apply to ships of Class IX.

SHIPS OF CLASS VI

Class VI
ships of 1,000
tons or over.

33. Rules 23 and 24 and Rules 26 to 30 shall apply to ships of Class VI of 1,000 tons or over as they apply to ships of Class V of 1,000 tons or over. In addition, Rule 25 shall apply to tankers of Class VI of 2,000 tons or over.

Class VI
ships of 500
tons or over
but under
1,000 tons.

34.—(1) This Rule applies to ships of Class VI of 500 tons or over but under 1,000 tons.

(2) (a) Every ship to which this Rule applies shall be provided with appliances in accordance with this Rule whereby at least two jets of water as required by these Rules can, while the ship is being navigated, reach any part of the ship normally accessible to the passengers or crew including any store room or any part of any cargo space when empty.

(b) Every such ship shall be provided with at least two fire pumps operated by power one of which may be driven by the main engine. Each such pump shall be capable of delivering at least one jet of water from any fire hydrant, hose and nozzle provided in the ship and shall comply with the requirements of Rule 45.

(c) If in any such ship fitted with oil-fired boilers or internal combustion type propelling machinery fire in any one compartment could put all the fire pumps out of action, there shall be provided, in a position outside the

machinery spaces, an emergency fire pump and its source of power and sea connection. Such pump may be operated by power or manually, and shall be capable of producing from any of the fire hydrants and hoses provided in the ship, through a nozzle which shall comply with Rule 45 (4) (a) of these Rules, a jet of water having a throw of not less than 40 feet.

(d) In every such ship there shall be provided a fire main, water service pipes and hydrants which shall comply with the requirements of Rule 46.

(e) Every such ship shall, in addition to any fire hose provided in the machinery spaces, be provided with at least two fire hoses having a total length of at least 60 per cent of the length of the ship and one spare fire hose.

(f) In every such ship fitted with oil-fired boilers or internal combustion type-propelling machinery there shall be provided in each space containing such machinery at least one fire hydrant, and at every such hydrant a fire hose and spray nozzle shall be provided.

(3) Every ship to which this Rule applies shall be provided with at least three portable fire extinguishers so situated as to be readily available for use in the accommodation and service spaces.

(4) In every ship to which this rule applies there shall be provided for the protection of any space containing any oil-fired boiler, oil fuel settling tank or oil fuel unit, at least one of the following fixed fire extinguishing installations :—

(a) a pressure water spraying system complying with the requirements of Rule 51 ;

(b) a fire smothering gas or steam installation complying with the requirements of Rule 52 ;

(c) a foam fire extinguishing installation complying with the requirements of Rule 53 .

If the engine room and boiler rooms are not entirely separated from each other by a bulkhead, or if fuel oil can drain from the boiler room into the engine room, the combined engine room and boiler room shall, for the purpose of this paragraph, be regarded as a single space. If a fixed fire smothering steam installation is fitted in compliance with the requirements of sub-paragraph (b) of this paragraph and steam is supplied only by water-tube boilers, there shall be provided for the protection of the boiler room and spaces containing the oil fuel installation one foam fire extinguisher of at least 30 gallons capacity or a carbon dioxide fire extinguisher of at least 100 lb. capacity.

(5) In addition to the requirements of paragraph (4) of this Rule there shall be provided—

(a) in each boiler room, if the number of burners therein is five or more, one foam fire extinguisher of at least 10 gallons capacity or a carbon dioxide fire extinguisher of at least 35 lb capacity. If the number of burners is less than five, there shall be provided for each burner therein one portable fire extinguisher suitable for extinguishing oil fires ;

(b) in each firing space, and in each space which contains any part of any oil fuel installation, at least two portable fire extinguishers suitable for extinguishing oil fires in addition to any such extinguishers which may be carried in compliance with the preceding sub-paragraph ;

(c) in each firing space, a receptacle containing at least 5 cubic feet of sand or other dry material suitable for quenching oil fires together with a scoop for its distribution, or alternatively an additional portable fire extinguisher suitable for extinguishing oil fires.

(6) In every ship to which this Rule applies there shall be provided in any space containing internal combustion type machinery used for main propulsion, or having in the aggregate a total power of not less than 250 b.h.p. for auxiliary purposes, one foam fire extinguisher of at least 10 gallons capacity or a carbon dioxide fire extinguisher of at least 35 lb capacity.

(7) In every ship to which this Rule applies there shall be provided in any space containing internal combustion type machinery one portable fire extinguisher suitable for extinguishing oil fires for each 100 b.h.p. or part thereof of such machinery, so however that no more than six such extinguishers shall be required in any such space.

(8) Every ship to which this Rule applies shall be provided with at least one fireman's outfit which shall comply with the requirements of Rule 55, and which shall contain a breathing apparatus of the air hose type.

Class VI
ships of 150
tons or over
but under
500 tons.

35.—(1) This Rule applies to ships of Class VI of 150 tons or over but under 500 tons.

(2)—(a) Every ship to which this Rule applies shall be provided with appliances in accordance with this Rule whereby at least one jet of water as required by these Rules can, while the ship is being navigated, reach any part of the ship normally accessible to the passengers or crew including any store room or any part of any cargo space when empty.

(b) Every such ship shall be provided with at least one fire pump operated by power which shall be capable of delivering at least one jet of water from any fire hydrant, hose and nozzle provided in the ship and which shall comply with the requirements of Rule 45.

(c) In every such ship fitted with oil-fired boilers or internal combustion type propelling machinery, if the pump required by the preceding sub-paragraph and its source of power and sea connection are not situated outside spaces containing such boilers or machinery, there shall be provided in a position outside such spaces an additional fire pump and its source of power and sea connection. If such pump is operated by power, it shall comply with the requirements of the preceding sub-paragraph and if it is manually operated, it shall be provided with a hose and a $\frac{3}{8}$ inch diameter nozzle through which it shall be capable of producing a jet of water having a throw of not less than 20 feet which can be directed on to any part of the ship.

(d) In every such ship there shall be provided a fire main, water service pipes and hydrants which shall comply with the requirements of Rule 46 and at least two fire hoses.

(e) In every such ship fitted with oil-fired boilers or internal combustion type propelling machinery there shall be provided a spray nozzle suitable for use with the fire hoses required by the preceding sub-paragraph.

(3) Every ship to which this Rule applies shall be provided with at least two portable fire extinguishers so situated as to be readily available for use in the accommodation and service spaces.

(4) In every ship to which this Rule applies there shall be provided for the protection of any space containing any oil-fired boiler, oil fuel settling tank or oil fuel unit at least one of the following fixed fire extinguishing installations :—

(a) a pressure water spraying system complying with the requirements of Rule 51 ;

(b) a fire smothering gas or steam installation complying with the requirements of Rule 52;

(c) a foam fire extinguishing installation complying with the requirements of Rule 53.

If the engine and boiler rooms are not entirely separated from each other by a bulkhead, or if fuel oil can drain from the boiler room into the engine room, the combined engine room and boiler room shall, for the purpose of this paragraph, be regarded as a single space.

(5) In addition to the requirements of paragraph (4) above, there shall be provided—

(a) in each boiler room and in each space which contains any part of any oil fuel installation, at least two portable fire extinguishers suitable for extinguishing fires;

(b) in each firing space, a receptacle containing at least 5 cubic feet of sand or other dry material suitable for quenching oil fires together with a scoop for its distribution, or alternatively an additional portable fire extinguisher suitable for extinguishing oil fires.

(6) In every ship to which this Rule applies there shall be provided in any space containing internal combustion type machinery one portable fire extinguisher suitable for extinguishing oil fires for each 100 b.h.p. or part thereof of such machinery, except that no more than seven such fire extinguishers shall be required in any one space and that alternatively there may be provided two such extinguishers together with either—

(a) one foam fire extinguisher of at least 10 gallons capacity; or

(b) one carbon dioxide fire extinguisher of at least 35 lb. capacity.

(7) Every ship to which this Rule applies shall be provided with at least one fireman's axe.

36.—(1) This Rule applies to ships of Class VI of under 150 tons.

Class VI
ships of
under 150
tons.

(2) (a) Rule 35 (2) of these Rules shall apply to every ship to which this Rule applies of 70 feet or over in length except that the fire pump required by Rule 35 (2) (b) may be driven by the main engine.

(b) Every ship to which this Rule applies of less than 70 feet in length shall be provided in a position outside the machinery spaces with a hand pump having a permanent sea connection, a hose with a $\frac{3}{4}$ inch diameter nozzle capable of producing a jet of water having a throw of not less than 20 feet which can be directed on to any part of the ship, and in addition a spray nozzle suitable for use with the hose, provided that in any ship of less than 30 feet in length or in any open ship of less than 70 feet in length, two fire buckets one of which shall be fitted with a lanyard may be substituted for such equipment but such buckets shall not be required in addition to buckets provided in compliance with paragraph (3) of this Rule.

(3) Every ship to which this Rule applies shall be provided with portable fire extinguishers or with fire buckets in accordance with the following:—

<i>Length of ship in feet</i>	<i>Maximum number of extinguishers or buckets</i>
Under 70 feet	2
70 feet or over	3

Where fire buckets are provided at least one shall be fitted with a lanyard.

(4) In addition to the requirements of paragraph (3) above, every ship to which this Rule applies which is fitted with oil-fired boilers or internal combustion type propelling machinery shall be provided with portable fire extinguishers suitable for extinguishing oil fires in accordance with the following table :—

<i>Length of ship in feet</i>	<i>Minimum number of extinguishers</i>
Under 20 feet	1
20 feet or over	2

(5) Every ship to which this Rule applies of 30 feet or over in length which is fitted with oil-fired boilers or internal combustion type propelling machinery shall, if it is mainly or wholly constructed of wood and is decked in any way of the machinery space, be provided with means outside the space for rapidly injecting into the machinery space a quantity of fire smothering gas equivalent to at least 60 per cent of the gross volume of that space, or in the case of any such ship where the machinery space is bounded by steel bulkheads the quantity of fire smothering gas shall be equivalent to at least 40 per cent of the gross volume of the space : provided that in such a ship to which this Rule applies of less than 70 feet in length there may be substituted a water spraying system supplied from a hand pump and a permanent sea connection situated outside the machinery space which may be the hand pump and the sea connection referred to in paragraph (2) (b) of this Rule. Such pump shall be connected by fixed piping to a sufficient number of water spraying nozzles suitably sited in the machinery space and capable of extinguishing oil fires.

(6) Every ship to which this Rule applies being a fully-decked ship of 70 feet in length or over shall be provided with a fireman's axe.

SHIPS OF CLASS VII, VIIA OR VIII

Ships of
Class VII,
VIIA or
VIII.

37.—(1) Rules 33 to 36 shall apply to ships of Class VII, VIIA or VIII as they apply to ships of Class VI.

(2) The appropriate authority may exempt any ship of Classes VII and VIII and any ship of Class VIIA which is under 500 tons or which is not engaged on an international voyage from any of the requirements of these Rules.

SHIPS OF CLASS IX

Class IX
ships of
1,000 tons or
over.

38. Rules 23 and 24 and Rules 26 to 29 shall apply to ships of Class IX of 1,000 tons or over as they apply to ships of Class V of 1,000 tons or over.

Class IX
ships of 500
tons or over
but under
1,000 tons.

39. Rule 34 shall apply to ships of Class IX of 500 tons or over but under 1,000 tons as it applies to ships of Class VI of 500 tons or over but under 1,000 tons.

Class IX
ships of 150
tons or over
but under
500 tons.

40.—(1) Subject to the provisions of paragraph (2) of this Rule, Rule 35 shall apply to ships of Class XI of 150 tons or over but under 500 tons, as it applies to ships of Class VI of 150 tons or over but under 500 tons.

(2) In every such ship of Class IX mainly or wholly constructed of wood there shall be provided for the protection of the machinery space a fixed fire smothering gas installation complying with the requirements of Rule 52 except that the quantity of fire smothering gas provided shall be equivalent to at least 60 per cent of the gross volume of the machinery space, or in the case of any such ship where the machinery space is bounded by steel bulk heads the quantity of fire smothering gas shall be equivalent to at least 40 per cent of the gross volume of that space.

41. Rule 34 of these Rules shall apply to ships of Class IX of under 150 tons as it applies to ships of Class VI of under 150 tons.

42. The appropriate authority may exempt any ship of Class IX from any of the requirements of these Rules.

Class IX
ships of
under 150
tons.

Power to
exempt class
IX ships
from the
provisions of
these Rules.

SHIPS OF CLASS X

43.—(1) Rules 33 to 35 shall apply to ships of Class X of 150 tons or over as they apply to ships of Class VI of 150 tons or over.

Class X ships
of 150 tons
or over.

(2) (a) Every ship of Class X of under 150 tons and of 70 feet or over in length shall be provided with appliances in accordance with this Rule whereby at least one jet of water as required by these Rules can, while the ship is being navigated, reach any part of the ship normally accessible to the passengers or crew including any store room or any part of any cargo space when empty.

(b) Every such ship shall be provided with at least one fire pump operated by power which may be driven by the main engine and which shall be capable of delivering at least one jet of water from any fire hydrant, hose and nozzle provided in the ship and which shall comply with the requirements of Rule 45.

(c) In every such ship fitted with oil-fired boilers or internal combustion type propelling machinery, if the pump required by the preceding sub-paragraph and its source of power and sea connection are not situated outside spaces containing such boilers or machinery, there shall be provided in a position outside such spaces an additional fire pump and its source of power and sea connection. If such pump is operated by power, it shall comply with the requirements of the preceding sub-paragraph and if it is manually operated, it shall be provided with a hose and a $\frac{3}{4}$ inch diameter nozzle which shall be capable of producing a jet of water having a throw of not less than 20 feet which can be directed on to any part of the ship.

(d) In every such ship there shall be provided a fire main, water service pipes and hydrants which shall comply with the requirements of Rule 46 and at least two fire hoses.

(e) In every such ship fitted with oil-fired boilers or internal combustion type propelling machinery there shall be provided a spray nozzle suitable for use with the fire hoses required by the preceding sub-paragraph.

(3) Every ship of Class X of under 150 tons and of less than 70 feet in length shall be provided in a position outside the machinery spaces with a hand pump with a permanent sea connection a hose with a nozzle of at least $\frac{1}{2}$ inch in diameter capable of producing a jet of water having a throw of not less than 20 feet which can be directed on to any part of the ship, and in addition, a spray nozzle suitable for use with the hose, save that in any such

ship of less than 50 feet in length and in any open ship of less than 70 feet in length two fire buckets one of which shall be fitted with a lanyard may be substituted for such equipment but such buckets shall not be required in addition to buckets provided in compliance with paragraph (4) below.

(4) Every ship of Class X of under 150 tons shall be provided with portable fire extinguishers or with fire buckets in accordance with the following table:—

<i>Length of Ship in feet</i>	<i>Minimum number of extinguishers or buckets</i>
Under 70 feet	2
70 feet or over	3

Where fire buckets are provided at least one shall be fitted with a lanyard.

(5) In addition to the requirements of paragraph (4) above, every ship of Class X of under 150 tons which is fitted with oil-fired boilers or internal combustion type propelling machinery shall be provided with two portable fire extinguishers suitable for extinguishing oil fires.

(6) Every ship of Class X under 150 tons being a fully decked ship of 70 feet in length or over shall be provided with a fireman's axe.

(7) The appropriate authority may exempt any ship of Class X from any of the requirements of these Rules.

PART IV—SUPPLEMENTAL

Additional
requirements
for ships
carrying
explosives.

44.—(1) Where any ship to which these Rules apply, other than a ship carrying more than 12 passengers, carries explosives of such nature or in such quantity as are not permitted to be carried in a passenger ship by Rule 7 of the Merchant Shipping (Dangerous Goods) Rules 1963, steam shall not be used for fire smothering purposes in any compartment containing explosives; and in any such compartment containing explosives as well as in every adjacent cargo compartment there shall be provided a fire detection system complying with the requirements of Rule 54, or a smoke detection system.

(2) For the purposes of this Rule, "compartment" means all spaces contained between two adjacent permanent bulkheads and includes the lower hold and all cargo spaces above it. The whole of any shelter deck space not subdivided by steel bulkheads the openings in which can be closed by steel closing plates shall, for the purposes of this Rule, be considered as a single space. Where steel bulkheads with openings closed by steel closing plates are fitted, the enclosed spaces in the shelter deck shall be considered as part of the compartment or compartments below.

Fire pumps.

45.—(1) (a) In every passenger ship to which these Rules apply which is required by these Rules to be provided with fire pumps operated by power, such fire pumps (other than any emergency fire pump) shall together be capable of delivering for fire fighting purposes a quantity of water, under the conditions and at the pressure specified in Rule 46 of not less than two thirds of the quantity required to be dealt with by the bilge pumps provided in the ship in compliance with Construction rules under the Act.

(b) In every ship, other than a passenger ship, to which these Rules apply which is required by these Rules to be provided with fire pumps operated by power, such fire pumps (other than any emergency fire pump) shall together be capable of delivering for fire fighting purposes a quantity of water, under the conditions and at the pressure specified in Rule 46, which shall not be less than the quantity obtained from the following formula:—

Quantity of water in tons per hour = Cd^2

Where—

(i) $C=5$ for ships required to be provided with more than one fire pump (excluding any emergency fire pump) or $C=2.5$ for ships required to be provided with only one fire pump; and

(ii) $d=1+\sqrt{\frac{L(B+D)}{2500}}$ to the nearest $\frac{1}{4}$

Where —

L = length of the ship in feet on the summer load waterline from the foreside of the stem to the afterside of the rudder post. Where there is no rudder post, the length is measured from the foreside of the stem to the axis of the rudder stock. For ships with cruiser sterns, the length shall be taken as 96 per cent of the total length on the designed summer load waterline or as the length from the foreside of the stem to the axis of the rudder stock if that be the greater;

B = greatest moulded breadth of the ship in feet; and

D = moulded depth of the ship in feet measured to the bulkhead deck amidships:

Provided that the total capacity of the fire pumps for fire fighting purposes shall not in any such ship be required to exceed 180 tons per hour.

(2) Every fire pump required by these Rules to be operated by power shall, except as otherwise provided in these Rules, be operated by a means other than the ship's main engines. Such fire pump provided in compliance with these Rules may be sanitary ballast, bilge or general service pump provided that it is not normally used for pumping oil and that it is subject to occasional duty for the transfer or pumping of oil, suitable change over equipment is fitted and operating instruction is conspicuously displayed, at the changeover position.

(3) (a) In every ship to which these Rules apply which is required by these Rules to be provided with more than one fire pump operated by power (other than any emergency pump) every such fire pump shall have a capacity of not less than 80 per cent of the total capacity of the fire pumps required by paragraph (1) above divided by the number of fire pumps required by these Rules to be provided in the ship except that when more fire pumps operated by power than are required by these Rules are provided in any ship, the appropriate authority may permit the capacity of any such additional fire pumps to be less than the said 80 per cent.

(b) Every fire pump required by these Rules which is operated by power shall be capable of producing from any fire hydrant or hydrants in the ship, at least the minimum number of jets of water required by these Rules as appropriate to the class and tonnage of the ship, while maintaining the pressure required by Rule 46 (2).

(4) Relief valves shall be provided in conjunction with all fire pumps if the pumps are capable of developing a pressure exceeding the design pressure of the fire main, water service pipes, hydrants and hoses. Such valves shall be so placed and adjusted as to prevent excessive pressure in any part of the fire main system.

(5) Every centrifugal pump which is connected to the fire main shall be fitted with a non-return valve.

(6) In every ship of Class I, II or III to which these Rules apply, any emergency fire pump shall be situated in positions aft on the ship's collision bulkhead.

Fire main,
water service
pipes and
hydrants.

46.—(1) In every ship which is required by these Rules to be provided with fire pumps operated by power, the diameter of the fire main and of the water service pipes connecting the hydrants thereto shall be suitable for the effective distribution of the maximum discharge required by these Rules from—

(a) where only one pump is required by the Rules, that pump, or

(b) where two such pumps are so required, both pumps operating simultaneously, or

(c) where more than two such pumps are so required, the two largest of such pumps operating simultaneously :

Provided that in any ship other than a passenger ship the diameter of the fire main and of the water service pipes shall be required to be sufficient only for the discharge of 140 tons per hour.

(2) When the fire pumps required by these Rules are discharging the quantity of water required by paragraph (1) above through adjacent fire hydrants in any part of the ship from nozzles of the sizes specified in Rule 47 of these Rules, the following minimum pressure shall be capable of being maintained at any hydrant :—

(a) in any passenger ship,

(i) of 4,000 tons and upwards—

45 pounds per square inch ; or

(ii) of 1,000 tons and upwards but under 4,000 tons—

40 pounds per square inch ; or

(iii) of under 1,000 tons—

30 pounds per square inch ;

(b) in any ship other than a passenger ship,

(i) of 6,000 tons and upwards—

40 pounds per square inch ; or

37 pounds per square inch ; or

(ii) of 1,000 tons and upwards but under 6,000 tons—

(iii) of under 1,000 tons—

30 pounds per square inch.

(3) (a) Where any ship is required by these Rules to provide two jets of water under the conditions required by these Rules, hydrants sufficient in number shall be so positioned as to enable at least two jets of water not emanating from the same hydrant one of which shall be from a single length of hose, to reach any part of the ship normally accessible to the passengers or crew, including any store room or any part of any cargo space when empty, while the ship is being navigated.

(b) Where any ship is required by these Rules to provide one jet of water under the conditions required by these Rules, hydrants sufficient in number shall be so positioned as to enable one jet of water from a single length of hose to reach any part of the ship normally accessible to the passengers or crew, including any store room or any part of any cargo space when empty, while the ship is being navigated.

(4) (a) The fire main shall have no connections other than those necessary for fire-fighting and washing down.

(b) Materials readily rendered ineffective by heat shall not be used for fire mains unless adequately protected. The pipes and fire hydrants shall be so placed that the fire hoses could be easily coupled to them. In ships which carry deck cargo the fire hydrants shall be so placed that they are always readily accessible and the pipes shall be arranged as far as practicable to avoid risk of damage by such cargo. Unless there is provided one fire hose and nozzle for each fire hydrant in the ship there shall be complete interchangeability of fire hose couplings and nozzles.

(c) Valves of the screw lift type or cocks shall be fitted in such positions on the pipes that any of the fire hoses may be removed while the fire pumps are operating.

(d) The water pipes shall not be made of cast iron, and if made of iron or steel shall be galvanised.

(e) Where wash deck line are not self-draining suitable drain cocks shall be fitted to avoid damage by frost.

47.—(1) Fire hoses provided in compliance with these Rules shall not exceed 60 feet in length except that in ships having a moulded breadth of 90 feet or more the length of the fire hoses for exterior locations and for cargo spaces shall not exceed 90 feet in length. Such hoses shall be made of closely woven flax canvas or other suitable material and shall be provided with couplings, branch-pipes and other necessary fittings, and with a plain nozzle in addition to any spray nozzle required by these Rules.

Fire hoses,
nozzles, etc.

(2) Every fire hose provided in compliance with these Rules, together with the tools and fittings necessary for its use, shall be kept in a conspicuous position near the hydrants or connections with which it is intended to be used.

(3) Except in partially decked ships of Classes IV and IVA and in ships of Classes IX and X, fire hoses provided in compliance with these Rules shall not be used for any purpose other than extinguishing fire or testing with fire appliances.

(4) (a) Every ship which is required by these Rules to be provided with fire pumps operated by power shall be provided with nozzles of $\frac{1}{4}$ inch, $\frac{5}{8}$ inch or $\frac{3}{4}$ inch in diameter or as near thereto in diameter as possible. Nozzles larger in diameter may be provided if the requirements of these Rules relating to the provision of water for fire fighting purposes are otherwise complied with.

(b) For machinery spaces and exterior locations the diameter of the nozzles shall be such as to obtain the maximum possible discharge from the minimum number of jets of water and at the pressure required by Rule 45 (3) (a) of these Rules except that the diameter of the nozzles shall not be required to be greater than $\frac{3}{4}$ inch.

(c) For accommodation and service spaces the diameter of the nozzles shall not be required to be greater than $\frac{1}{2}$ inch.

(d) Every spray nozzle provided in compliance with these Rules shall be capable of producing a water spray suitable for extinguishing oil fires and shall be provided in addition to any plain nozzle required by paragraph (1) of this Rule; except that a dual-purpose nozzle capable of producing alternately such a spray and a plain water jet may be provided in substitution.

International
shore connec-
tion.

48. Any international shore connection provided in compliance with these Rules shall be constructed in accordance with the requirements of Schedule 2.

Fire extin-
guishers.

49.—(1) Non-portable foam and carbon dioxide fire extinguisher provided in compliance with these Rules shall be constructed in accordance with the requirements of Schedules 3 and 4 respectively.

(2) (a) Portable fire extinguishers (other than carbon dioxide fire extinguishers) provided in compliance with these Rules shall, if they are of a type discharging fluid, have a capacity of not more than 3 and not less than 2 imperial gallons.

(b) Portable carbon dioxide fire extinguishers provided in compliance with these Rules shall have a capacity of not less than 7 lb of carbon dioxide.

(c) Portable dry powder fire extinguishers provided in compliance with these Rules shall have a capacity of not less than 10 lb of dry power.

(d) Portable fire extinguishers of other types provided in compliance with these Rules shall be of not less than the fire extinguishing equivalent of a 2 gallon fluid fire extinguisher.

(e) Portable fire extinguishers provided in compliance with these Rules shall not exceed 56 lb in weight in the fully charged service condition and shall be as portable as a 3 gallon fluid fire extinguisher.

(3) Portable fire extinguishers provided in compliance with these Rules for use in accommodation or service spaces of any ship shall so far as practicable have a uniform method of operation.

(4) Portable fire extinguishers provided in compliance with these Rules shall, subject to the limitations of paragraphs (2) and (3) of this Rule, be constructed in accordance with the following specifications of the British Standards Institution :—

<i>Type of Extinguisher</i>	<i>Specification Number</i>
Water type (Soda-acid)	B.S. 138 : 1948.
Water type (Gas-pressure)	B.S. 1382 : 1948.
Foam type (Chemical)	B.S. 740 Part 1 : 1948.
Foam type (Gas-pressure)	B.S. 740 Part 2 : 1952.
Carbon dioxide	B.S. 3326 : 1960.
Dry powder	B.S. 3465 : 1962.

(5) Where portable dry powder fire extinguishers are provided in compliance with these Rules in either accommodation and service spaces or in machinery spaces their number shall not exceed one-half of the total number of extinguishers provided in either of those spaces.

(6) Fire extinguishers provided for use in any ship to which these Rules apply shall not contain an extinguishing medium which either of itself, or when in use, gives off gases harmful to a person.

(7) For the purposes of these Rules the capacity of any fire extinguisher other than a carbon dioxide fire extinguisher shall be taken to be the greatest volume or weight of extinguishing medium which it can contain when sufficient space is left to ensure the proper operation of the extinguisher.

(8) For the purposes of these Rules the capacity of a carbon dioxide fire extinguisher shall be taken to be the greatest weight of carbon dioxide which it can safely contain in a tropical climate.

(9) Every fire extinguisher provided in compliance with these Rules shall be kept fully charged at all times.

(10) A spare charge shall be provided for every portable fire extinguisher provided in compliance with these Rules, except that for each such fire extinguisher which is of a type that cannot readily be recharged while the ship is at sea, an additional portable fire extinguisher of the same type, or its equivalent, shall be provided in lieu of a spare charge.

50.—(1) Every fire bucket provided in compliance with these Rules shall be painted red and shall be clearly and permanently marked with the word "FIRE". Except in open ships every such fire bucket shall be kept filled with sand or water.

Fire buckets.

(2) Except in open ships fire buckets provided in compliance with these Rules shall not be used for any purpose other than extinguishing fire.

51.—(1) Every fixed pressure water spraying system fitted in compliance with these Rules shall be provided with a pump, piping system, control valves, and spraying nozzles.

Fixed pressure water spraying systems for machinery spaces.

(2) The spraying nozzles shall be of such type, sufficient in number and so arranged as to ensure distribution of water spray as will be suitable for extinguishing oil fires in the spaces to be protected. Spraying nozzles shall be fitted above bilge tank tops and other areas over which oil fuel is liable to spread and above other main fire hazards in the spaces to be protected.

(3) The water spraying system may be divided into sections and shall be controlled from distribution manifolds the valves of which shall be capable of being operated from easily accessible positions outside the spaces to be protected and which will not be readily cut off by an outbreak of fire.

(4) The water spraying system shall be kept charged at the necessary pressure and the pump supplying the water for the system shall be automatically put into action by a pressure drop in the system.

(5) The pump shall be capable of supplying water at the necessary pressure simultaneously to all sections of the water spraying system in any one compartment to be protected. The pump and its controls shall be installed outside the space or spaces to be protected. It shall not be possible for a fire in the space or spaces protected by the water spraying system to put the system out of action.

(6) Means shall be provided which will prevent nozzles from becoming clogged by impurities in the water or corrosion of piping, nozzles, valves or pump.

(7) The water spraying system shall include mobile sprayers ready for immediate use in the firing area of the boiler or in the vicinity of the oil fuel unit.

(8) No part of the water spraying system shall be situated forward of the collision bulkhead in any passenger steamer.

(9) Operating instructions in clear and permanent lettering shall be affixed to every water spraying system or in a position adjacent thereto.

Fixed fire
smothering
gas and
steam instal-
lations.

52.—(1) This Rule applies to every fixed fire smothering gas or steam installation fitted in compliance with these Rules other than an installation fitted in a ship of Class VII or of Class IX of under 150 tons in compliance with Rule 36 (5).

(2) In every such installation provided for the injection of gas or steam into machinery or cargo spaces for fire extinguishing purposes, the pipes for conveying the gas or steam shall be provided with control valves or cocks which shall be so placed that they will be easily accessible and not readily cut off from use by an outbreak of fire. Such control valves or cocks shall be permanently marked to indicate clearly the compartments to which the pipes are led. Suitable provision shall be made to prevent inadvertent admission of the gas or steam to any compartment. Where cargo spaces fitted with a gas or steam smothering system for fire protection are used as passenger spaces the smothering gas or steam pipe connection shall be blanked during service as a passenger space.

(3) (a) The piping shall be so arranged as to provide effective distribution of fire smothering gas or steam. When steam is used in any hold exceeding 60 feet in length there shall be at least two pipes one of which shall be fitted in the forward part and one in the after part of the hold. Except in tankers and ships used for conveyance of coal, pipes for conveying steam shall be fitted with outlets as low as practicable in the space which they serve and as nearly as possible to the centre line of the space.

(b) In tankers the piping shall be so arranged that the steam or fire smothering gas will be distributed over the surface of the cargo.

(4) (a) When carbon dioxide is used as the extinguishing medium in cargo spaces, the quantity of gas available shall be sufficient to give a minimum volume of free gas equal to 30 per cent of the gross volume of the largest cargo compartment in the ship which is capable of being sealed.

(b) When carbon dioxide is used as an extinguishing medium for spaces containing boilers or machinery, the quantity of gas carried shall be sufficient to give a minimum quantity of free gas equal to the larger of the following quantities, either—

(i) 40 per cent of the gross volume of the largest space containing boilers or machinery, such volume being measured up to the level at which the horizontal area of the casing is 40 per cent or less of the gross area of such space; or

(ii) 35 per cent of the gross volume of the largest space containing boilers or machinery including the casing:

Provided that the aforesaid percentages may be reduced to 35 per cent and 30 per cent respectively for ships of under 2,000 tons, not being passenger ships, and that if two or more spaces containing boilers or machinery are not entirely separate they shall, for the purposes of this Rule, be considered as forming one compartment.

(c) When carbon dioxide is used as the extinguishing medium for a space containing any oil-fired boiler or oil fuel installation, a quantity of gas which can be discharged without danger to the operator shall be available for manual application, by means of a suitable applicator, in the firing area of the boiler and in the vicinity of the oil fuel unit.

(d) When carbon dioxide is used as the extinguishing medium both for cargo spaces and for spaces containing boilers or machinery the quantity of gas shall not be required to be more than the maximum required either for the largest cargo compartment or machinery space.

(e) For the purposes of this paragraph the volume of gas shall be calculated at 9 cubic feet to the pound.

(f) When carbon dioxide is used as the extinguishing medium for any space containing boilers or machinery the fixed piping system shall be such that 85 per cent of the gas required to provide the concentration referred to in sub-paragraph (b) of this paragraph when applied to the space concerned can be discharged into that space within two minutes.

(g) Means shall be provided for giving audible warning to persons within the space when carbon dioxide other than that specified in sub-paragraph (c) of this paragraph is about to be released into any working space.

(5) When a system producing inert gas is used to provide smothering gas in a fixed fire smothering installation for cargo spaces, it shall be capable of producing hourly a volume of free gas at least equal to 25 per cent of the gross volume of the largest compartment protected in this way for a period of 72 hours.

(6) When steam is used as the extinguishing medium in cargo spaces the boiler or boilers available for supplying steam shall have an evaporation of at least 1 pound of steam per hour for each 12 cubic feet of the gross volume of the largest cargo compartment. The arrangements shall be such that steam will be available immediately and will not be dependent on the lighting of boilers and that it can be supplied continuously until the end of the voyage in the quantity required by this paragraph in addition to any steam necessary for the normal requirement of the ship including propulsion and that provision is made for extra feed water necessary to meet this requirement.

(7) No part of the control, storage or generating arrangement of any fixed fire smothering gas or steam installation shall be situated forward of the collision bulkhead in any passenger ship.

(8) Operating instructions in clear and permanent lettering shall be affixed to every fixed fire smothering gas installation or in a position adjacent thereto.

53.—(1) Every fixed foam fire extinguishing installation fitted in compliance with these Rules shall be capable of discharging through fixed discharge outlets in not more than 5 minutes, a quantity of foam sufficient to cover to a depth of 6 inches the largest single area over which oil fuel is liable to spread. Such installation shall be capable of generating foam suitable for extinguishing oil fires and means shall be provided for the effective distribution of the foam through a permanent system of piping and control valves or cocks to discharge outlets, and for foam to be effectively directed by fixed sprayers on other main oil fire hazards in the protected space either simultaneously or separately. Such installation shall include mobile sprayers ready for immediate use in the firing area of the boiler and in the vicinity of the oil fuel unit.

Fixed foam
fire extin-
guishing
installations.

(2) Every fixed foam fire extinguishing installation fitted in lieu of a fixed fire smothering gas installation required by these Rules to be provided in the oil cargo spaces of any tanker shall be capable of distributing on the decks over the oil cargo tanks through fixed discharge outlets in not more than 15 minutes a quantity of foam sufficient to cover to a depth of at least 2 inches the whole of the tank deck area. Such installation shall be capable of generating foam suitable for extinguishing oil fires and means shall be provided for the effective distribution of the foam through a permanent system of piping and control valves or cocks to discharge outlets. There

shall be sufficient mobile foam sprayers capable of being connected to the installation whereby foam can be directed into any tank.

For the purpose of this paragraph, "tank deck area" means an area equivalent to the extreme length of the cargo tanks multiplied by the breadth of the ship.

(3) Every fixed foam fire extinguishing installation shall be so arranged that a fire in any of the spaces it protects will not render the controls inaccessible nor put the installation out of action.

(4) Operating instructions in clear and permanent lettering shall be affixed to every fixed foam fire extinguishing installation or in a position adjacent thereto.

Fire detection systems.

54.—(1) Every fire detection system fitted in compliance with these Rules shall be capable of automatically indicating the presence or indication of fire and its location. The indicators shall be centralised either on the navigating bridge or at other control stations which are provided with direct communication with the navigating bridge, provided that the appropriate authority may in any ship permit the indicators to be distributed among several stations if satisfied that such arrangements are at least as effective as if the indicators were so centralised.

(2) In any passenger ship electrical equipment used in the operation of any fire detection system fitted in compliance with these Rules shall be capable of being supplied from two sources of electric power one of which shall be the emergency source of power required by Construction rules under the Act.

(3) The indicating system of any fire detection system fitted in compliance with these Rules shall operate both audible and visible alarms at the stations referred to in paragraph (1) of this Rule.

Firemen's outfits.

55.—(1) Every fireman's outfit carried in compliance with these Rules shall consist of :—

(a) a breathing apparatus complying with the requirements specified in Schedule 5 ;

(b) a portable self-contained electric battery operated safety lamp capable of functioning efficiently for a period of at least three hours ; and

(c) a fireman's axe.

(2) Where more than one such outfit is provided they shall be kept in readily accessible and widely separated positions which are not likely to be cut off in the event of fire.

Means for stopping machinery, shutting off oil fuel suction pipes and closing of openings.

56.—(1) In every ship to which these Rules apply there shall be provided means for stopping ventilating fans serving machinery, accommodation and cargo spaces. For machinery and cargo spaces there shall be provided means for closing all skylights, doorways, ventilators, annular spaces around funnels and other openings to such spaces. Such means shall be capable of being operated from positions outside the said spaces which would not be made inaccessible by a fire within such spaces.

(2) In every ship to which these Rules apply machinery driving forced and induced draught fans, oil fuel transfer pumps, oil fuel unit pumps and other similar fuel pumps shall be fitted with remote controls situated outside the spaces in which such machinery or pumps are situated and such controls shall be capable of stopping such machinery or pumps in the event of fire in the said spaces.

(3) In every ship to which these Rules apply, every pipe connected to any oil fuel storage, settling, or daily service tank, not being a double bottom tank, which if damaged would permit discharge of the contents so as to cause a fire hazard, shall be fitted with a valve or cock which shall be secured to the tank to which it is connected and which shall be capable of being closed from a readily accessible position outside the space in which the tank is situated, provided that in the case of any inlet pipe to such a tank non-return valve similarly secured to the tank may be substituted. In the case of an oil fuel deep tank traversed by any shaft or pipe tunnel, a valve shall be fitted on the tank but an additional valve or valves may be fitted on the pipe line or lines outside the tunnel or tunnels to enable control to be exercised in the event of fire.

57.—(1) In every ship of Class I, II, or III of 70 feet or over in length, there shall be permanently exhibited for the guidance of the master and officers of the ship general arrangement plans showing clearly for each deck the position of the control stations, the sections of the ship which are enclosed by fire resisting bulkheads, the sections of the ship which are enclosed by fire retarding bulkheads, together with particulars of the fire alarms, fire detection systems, the sprinkler installations, the fixed and portable fire extinguishing appliances and firemen's outfits, the means of access to the various compartments and decks in the ship, the ventilating system including particulars of the master fan controls, the position of dampers and identification numbers of the ventilating fans serving each section of the ship, the location of the international shore connection and the position of all means of control referred to in Rule 54.

Fire control
plans.

(2) In every ship of 500 tons or over, other than a ship of Class I or II or ship of Class III of 70 feet or over in length, there shall be permanently exhibited for the guidance of the master and officers of the ship general arrangement plans showing clearly the information referred to in paragraph (1) of this Rule where it is applicable to the ship.

(3) The general arrangement plans required by this Rule shall be kept up-to-date, any alterations being recorded thereon without delay.

58. Fire appliances carried in any ship to which these Rules apply shall be maintained in good order and shall be kept available for immediate use at all times. All movable fire appliances, other than firemen's outfits, carried in compliance with these Rules shall be stowed where they will be readily accessible from the spaces in which they are intended to be used, and, in particular, one of the portable fire extinguishers intended for use in any space shall be stowed near the entrance to that space.

Availability
of fire fight-
ing
appliances.

59.—(1) Where these Rules require that a particular fitting, material, appliance or apparatus, or type thereof, shall be fitted or carried in a ship, or that any particular provision shall be made, the appropriate authority may allow any other fitting, material appliance or apparatus, or type thereof, to be fitted or carried, or any other provision to be made in that ship, if satisfied that that other fitting, material, appliance or apparatus, or type thereof, or provision, is at least as effective as that required by these Rules.

Equivalents
and exemp-
tions.

(2) The appropriate authority may, on such conditions as it thinks fit, exempt any ship constructed before the coming into operation of these Rules from any of the requirements of these Rules if it is satisfied that any of such requirements is either impracticable or unreasonable in the case of that ship.

Rule 4(2)

SCHEDULES

SCHEDULE I

INLAND TIDAL WATERS AREAS

1. The area bounded by the border with Dahomey in the West, the meridian of 5° East longitude in the East and the parallel of 7° North latitude in the North.

2. The area bounded by the meridian of 5° East longitude in the West, the meridian of 6° East longitude, in the East, and the parallel of $6^{\circ} 5'$ North latitude in the North.

3. The area bounded by the meridian of 6° East longitude in the West, the border with the Cameroons in the East, and the parallel of 5° North latitude in the North.

SCHEDULE 2

Rule 13 and Rule 30

INTERNATIONAL SHORE CONNECTION

1. The International Shore connection, as hereinafter illustrated, which is required by these Rules to be carried in the ship shall be in accordance with the following specification :—

Outside diameter : 7 inches

Inner diameter : $2\frac{1}{2}$ inches

Bolt circle diameter : $5\frac{1}{4}$ inches

Holes : 4 holes of $\frac{3}{8}$ inch diameter equidistantly placed, slotted to the flange periphery.

Flange thickness : $\frac{9}{16}$ inch minimum.

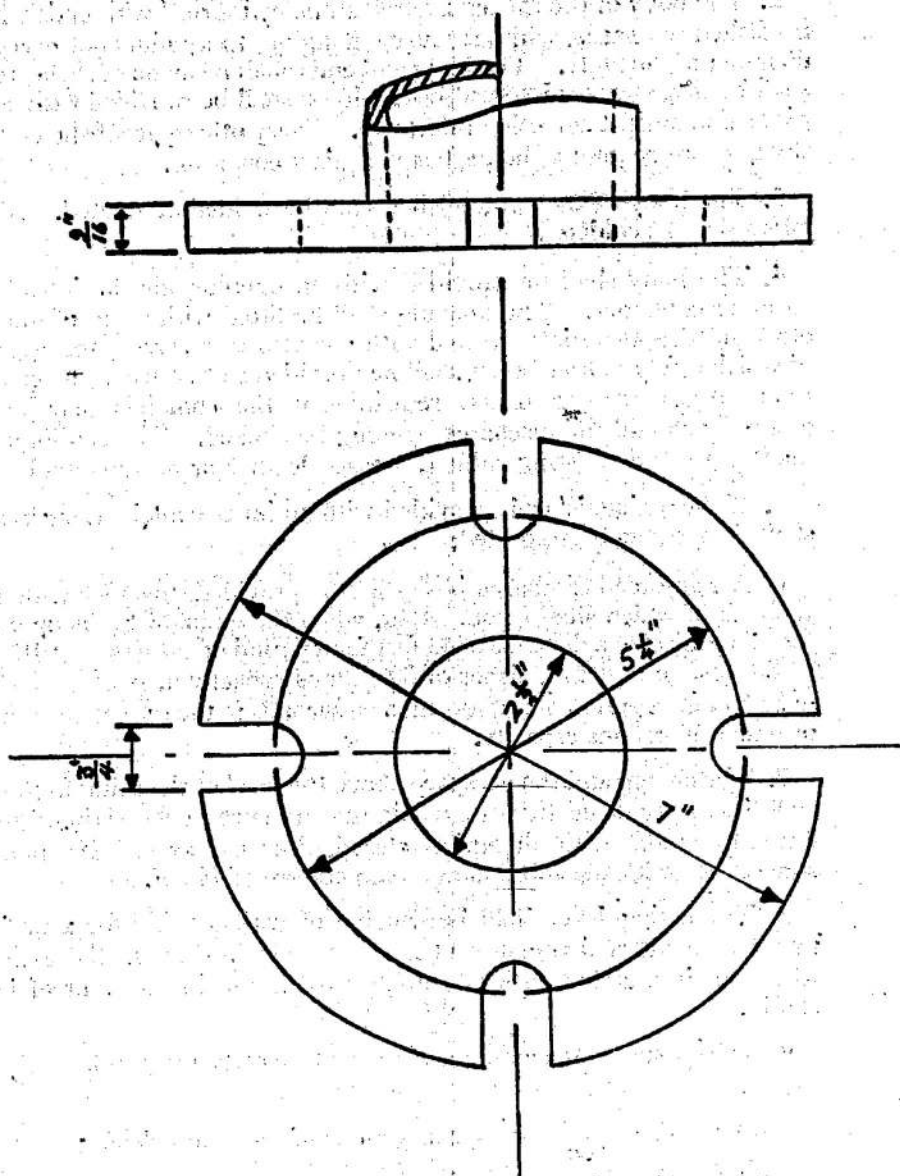
Bolts : 4, each of $\frac{5}{8}$ inch diameter, 2 inches in length with eight washers.

Flange surface : flat face.

Material : any suited to 150 pounds per square inch service.

Gasket : any suited to 150 pounds per square inch service.

2. The connection shall be constructed of material suitable for 150 pounds per square inch service. The flange shall have a flat face on one side, and to the other there shall be permanently attached a coupling which will fit the ship's hydrants and hose. The connection shall be kept aboard the ship together with its gasket, bolts and washers.



SCHEDULE 3

NON-PORTABLE FOAM FIRE EXTINGUISHERS

Rule 49 (1)

1. Every foam fire extinguisher, other than a portable fire extinguisher, provided in compliance with these Rules shall be so designed and constructed that the interior of the extinguisher can be examined.

2. The body of the extinguisher shall be cylindrical with ends which shall be dished outwards, without reverse flanging, to a radius not exceeding the diameter of the body. The body and ends shall be made of sheet steel which shall be tinned or lead-coated internally or shall be provided with equivalent protection against corrosion internally. Every other part of the extinguisher shall, where necessary, be protected against corrosion.

3. The body of the extinguisher shall be welded or riveted. All riveted joints shall be soldered.

4. The body shall be provided with an opening for the introduction of an inner container. The opening shall be fitted with a cap of gunmetal or other suitable material, screwed with a continuous thread, through the side of which safety holes or slots shall be provided so that when the cap is being removed any pressure of gas remaining in the container may be released gradually should the discharge opening be choked. The cap joint shall be made with acid-resisting rubber, greased leather or other suitable material.

5. If the extinguisher is provided with an inner container, such container shall be adequately supported.

6. A reinforced discharge hose shall be provided, together with a nozzle, the area of which shall be such that, when the extinguisher is operated, the foam is projected a distance of 45 feet for a period of not less than 100 seconds in the case of an extinguisher of 30 gallons capacity or over, and a distance of 35 feet for a period of not less than 90 seconds in the case of an extinguisher of under 30 gallons capacity.

7. The charge and the air space above the level of the solution in the body shall be so regulated that the maximum pressure in the extinguisher when put into action, with all outlets closed, does not exceed 280 pounds per square inch with the solution at a temperature of 100°F.

8. The extinguisher shall be capable of withstanding for a period of 5 minutes an internal pressure of $1\frac{1}{2}$ times the pressure in the extinguisher when put into action with all outlets closed, and in no event of less than 350 lb.

9. The outside of the extinguisher shall be clearly and permanently marked with :—

- (a) the name of the maker or vendor of the extinguisher ;
- (b) the capacity of the extinguisher ;
- (c) the level of the solution, when the extinguisher is filled to its working capacity ;
- (d) the pressure under which the extinguisher was tested ;
- (e) instruction for operating the extinguisher ;
- (f) the year in which the extinguisher was manufactured.

SCHEDULE 4

Rule 49 (1)

NON-PORTABLE CARBON DIOXIDE FIRE EXTINGUISHERS

1. Every carbon dioxide fire extinguisher, other than a portable fire extinguisher, provided in compliance with these Rules shall be provided with cylinders constructed in accordance with any one of the following specifications of the British Standards Institution :—

Numbers B.S.401 : 1931. B.S. 1287 : 1946. B.S. 1288 : 1946.

2. Each cylinder shall be provided with an internal discharge tube and a valve to release the gas,

3. The extinguisher shall be provided with a discharge hose which shall be reinforced so as to withstand a pressure of at least 1,800 pounds per square inch when the necessary couplings are fitted. The bore of the discharge hose shall not be less than the sizes respectively set forth in the following table :—

<i>Capacity of extinguisher</i>							<i>Minimum bore of discharge hose</i>
35 lb.	..	..	..	..	..	..	$\frac{3}{8}$ inch
100 lb.	..	..	..	..	..	..	$\frac{1}{2}$ inch

The discharge hose shall be provided with a horn which shall be of electrically non-conducting material and of a design which will reduce the velocity of the gas discharged. The metal part of the operating handle shall be suitably sheathed to protect the hands of the operator from extreme cold.

4. At any temperature between 60°F (15°C) and 65°F (18°C) inclusive, the extinguisher shall discharge gas at such a rate that carbon dioxide equal in weight to $\frac{2}{3}$ of the capacity of the container will be discharged in the periods respectively set forth in the following table :—

<i>Capacity of extinguisher</i>							<i>Period</i>
35 lb.	..	..	..	..	..	..	30 to 45 seconds
100 lb.	..	..	..	..	..	..	60 to 90 seconds

5. The outside of the extinguisher shall be clearly and permanently marked in accordance with Section Four of the specification of the British Standards Institution Number B.S. 3326 : 1960.

SCHEDULE 5

Rule 55 (1)

BREATHING APPARATUS

1. Every breathing apparatus provided in compliance with these Rules may be either—

(a) a smoke helmet or a smoke mask, each of which shall be provided with an air pump or bellows and an air hose ; or

(b) a self-contained breathing apparatus.

2. Every smoke helmet or smoke mask provided in compliance with these Rules shall be provided with a hose for the supply of air from the outside atmosphere. An air pump or bellows shall be provided which shall be suitable for pumping air through the hose. The hose shall be of the non-collapsing type and shall be sufficient in length to enable the air pump

or bellows to be on the open deck in clean air well clear of any hatch or doorway while the wearer of the helmet or mask is in any part of the accommodation, service, cargo or machinery spaces. Efficient couplings shall be provided if two or more lengths of hose are to be joined in order to reach the aforesaid spaces. The air inlet to the pump or bellows shall be so protected as to ensure that the supply of air cannot be obstructed.

3.—(a) Every self-contained breathing apparatus provided in compliance with these Rules shall be of the open circuit compressed air type.

(b) The storage capacity of the compressed air cylinder or cylinders attached to the apparatus and carried by the wearer shall be at least 1,200 litres (42 cubic feet) of free air. The storage cylinders shall be constructed of suitable material and shall be of efficient design and of sufficient strength to withstand with an adequate factor of safety the internal air pressure to which they may be subjected, and each cylinder shall be capable of withstanding a test by hydraulic pressure suitably in excess of the maximum working pressure.

(c) Means shall be provided for the automatic regulation of the air supply to the wearer of the apparatus in accordance with his breathing requirements when he is breathing any volume of free air of up to 85 litres (3 cubic feet) per minute at any time when the pressure in the supply cylinder or cylinders is above 150 pounds per square inch. Means shall be provided for overriding the automatic air supply valve.

(d) A pressure gauge with an anti-bursting orifice shall be incorporated in the high-pressure air supply system to enable the wearer to read directly and easily the pressure of air in the supply cylinder or cylinders.

(e) Means shall be provided for warning the wearer audibly when 80 per cent of the usable capacity of the apparatus has been consumed.

(f) The maximum weight of any such apparatus shall not exceed 35 lb excluding any lifeline and, if they do not form an integral part of the apparatus, any safety belt or harness.

(g) Every self-contained breathing apparatus shall be provided with fully charged spare cylinders having a spare storage capacity of at least 2,400 litres (84 cubic feet) of free air except that:—

(i) If the ship is carrying five sets or more of such apparatus the total spare storage capacity of free air shall not be required to exceed 9,600 litres (336 cubic feet) or

(ii) If the ship is equipped with means for re-charging the air cylinders to full pressure with air free from contamination, the spare storage capacity of the fully charged spare cylinders of each such apparatus shall be of at least 1,200 litres (42 cubic feet) of free air, and the total spare storage capacity of free air provided in the ship shall not be required to exceed 4,800 litres (168 cubic feet).

(h) A servicing and instruction manual shall be kept with each such apparatus.

4. (a) Every breathing apparatus shall be constructed of materials having adequate mechanical strength, durability and resistance to deterioration by heat or by contact with water and such materials shall be resistant to fire and shall not allow the breathing circuit to be penetrated by smoke or chemical fumes likely to be encountered in service. The fabric used in the construction of any harness provided with such apparatus shall be resistant to shrinkage. Exposed metal parts of the apparatus, harness and fittings shall be of materials so far as practicable resistant to frictional sparking.

(b) The following equipment shall be provided for use with each set of breathing apparatus :—

- (i) a fire-proof life-and-signalling-line at least 10 feet longer than is required to reach from the open deck in clean air well clear of any hatch or doorway to any part of the accommodation, service, cargo or machinery spaces. The one shall be made of copper or galvanised steel wire rope having a breaking strength of at least 1,200 lb and shall be overlaid up to at least $1\frac{1}{2}$ inches in circumference by hump or other covering to provide a surface which can be firmly gripped when wet ;
 - (ii) an adjustable safety belt or harness to which such line shall be capable of being securely attached by the wearer by means of a snap-hook ;
 - (iii) means for protecting the eyes and face of the wearer against smoke ;
 - (iv) plates of suitable non-inflammable material bearing a clearly legible code of signals to be used between the wearer and the attendant, one of which shall be attached to the safety belt or harness and another attached to the free end of the life-line ;
 - (v) (for every apparatus other than a smoke helmet) a light-weight safety helmet with lining and adjustable head-band.
- (c) Every breathing apparatus shall be clearly marked with the name of the maker or vendor and the year of manufacture. Operating instructions in clear and permanent lettering shall be affixed to such apparatus.

MADE by the Supreme Military Council at Lagos this 8th day of May 1967.

H. A. EJUEYITCHIE,
Secretary to the Federal Military
Government

EXPLANATORY NOTE

(This note is not part of the Rules but is intended to explain their purpose)

These Rules supersede the Merchant Shipping (Fire Appliances) Rules 1963. They include such requirements as appear to the Supreme Military Council to implement the provisions of the International Convention for the Safety of life at Sea 1960 relating to the provision of fire appliances in merchant ships engaged on international voyages.

The principal changes are :—

- (a) The introduction of more detailed requirements, including an extension to most ships of the requirement for an emergency pump outside the machinery spaces, to secure the maximum availability of water for fire-fighting purpose throughout the ship.
- (b) The provision of a standard hose coupling on passenger ships of Classes I, II and III and on non-passenger ships (other than fishing vessels) of 1,000 tons or more to enable the fire mains of ships to be readily supplied in an emergency with water from other ships or from land.
- (c) The provision of a fixed fire-fighting installation for the protection of the engine room in most of the motor passenger ships of Classes I, II and III and in the larger non-passenger motor ships.

(d) The provision of a non-portable fire extinguisher for the protection of any machinery spaces containing steam engines in most passenger ships of Classes I, II and III and in the large non-passenger ships.

(e) The prohibition of the use of steam in the fixed installation protecting boiler rooms and oil-firing installations in non-passenger ships of 1,000 tons except where the use of steam is provided in addition to the protective measures required by the Rules.

(f) Special measures for the protection of the machinery spaces of ships of wooden construction.

L.N. 77 of 1967

MERCHANT SHIPPING ACT 1962

(1962 No. 30)

The Examination for Certificates of Competency (Deck) (Off Shore)
Regulations 1967

Commencement : 25th July 1967

In exercise of the powers conferred by section 427 of the Merchant Shipping Act 1962 and of all other powers enabling it in that behalf, the Federal Executive Council hereby makes the following regulations :—

PART I—CERTIFICATE : MASTER (OFF SHORE) AND MATE (OFF SHORE)

Introductory

1.—(1) These regulations may be cited as the Examination for Certificates of Competency (Deck) (Off Shore) Regulations 1967 and shall apply throughout the Federation.

Citation,
extent etc.

(2) These regulations shall come into force on the date of publication in the *Gazette*.

(3) Where not inconsistent with these regulations the Examination for Certificates of Competency (Deck) Regulations 1963 shall be read with and form part of these regulations, and where there is any inconsistency these regulations shall prevail ; and in the interpretation thereof as so to be read, references to "off shore" or to "off shore limits" shall be construed as references to those seaward limits wherein vessels are engaged on voyages (other than international voyages) during the course of which they do not proceed more than fifty miles out from the coast of Nigeria.

L.N. 79
of 1963.

(4) In these regulations—

"the Act" means the Merchant Shipping Act 1962 ;

"candidate" means an applicant for examination for a certificate as Master (Off shore) or Mate (Off shore), as the case may be, under these regulations ;

"certificate of competency" means the evidence that a candidate has satisfied an examiner of his qualification for the position mentioned in the certificate ;

"certificate of service" means the evidence that a candidate has the necessary minimum sea service in support of his application for a certificate for competency as Master (Off Shore) or Mate (Off Shore) as the case may be ;

"certificate in final form" means a certificate of competency given to replace an interim certificate, and includes a certificate issued in replacement of or substitution for any certificate in final form ;

"interim certificate" means the certificate given to a candidate upon passing his examination ;

"sea service" includes service afloat ;

"shipping inspector" means the Government Inspector of Shipping.

General

Nationality
of candi-
dates.

Exemptions.

2.—(1) Subject to the following provisions of this regulation, only Commonwealth citizens with a knowledge of the English language sufficient to enable their efficient performance of necessary duties as Masters or Mates, as the case may be, may offer themselves as candidates for examination under these regulations.

(2) In the application of this regulation—

(a) the onus of proof of Commonwealth citizenship shall lie upon a candidate, and

(b) where a person otherwise appearing to be qualified by experience and with an adequate knowledge of the English language as aforesaid is not a Commonwealth citizen, the shipping inspector may, after consultation with the diplomatic representative of the country of which such person claims to be a national, waive the requirement of this regulation, and such person may thereafter offer himself as a candidate for examination under these regulations as if he were in fact a Commonwealth citizen as aforesaid.

(3) Nothing in this regulation shall be construed so as to require the holder of a foreign going or home trade certificate of any grade to offer himself as a candidate as Master (Off Shore) or Mate (Off Shore) if he is a Commonwealth citizen or otherwise is a person in respect of whom the shipping inspector waives that requirement; and possession of any such certificate as aforesaid shall entitle the holder to act as master of an off shore limits vessel without further examination accordingly.

Application
for examina-
tion.

L.N. 25-of
1965.

3.—(1) Application for examination under these regulations shall be made on the prescribed form obtainable from any examiner; and when duly completed by an intending candidate, the form shall be lodged as directed by the examiner, together with the relevant fee as for home made under the Merchant Shipping (Fees) Regulations 1965 and copies of testimonials, and other relevant documents (accompanied if the examiner so requires by the originals thereof).

(2) Where candidates are required to produce evidence of qualification (other than of sea service) and that qualification relates—

(a) to Radar, candidates will be advised as to facilities available to obtain them, and the shipping inspector may, if satisfied that facilities are not available at the time of the intended examination, by writing under his hand exempt any candidates or candidate affected, and the examination shall in any such case proceed on production to the examiner of the evidence of exemption:

(b) to First Aid to the Injured, the certificate shall be one issued by an association or society approved for the purpose by the shipping inspector, and shall have been obtained by the candidate not more than three years before the date of examination under these regulations and when the candidate at the time of examination in first aid was at least 16 years of age:

(c) to sight, the candidate shall produce a certificate to the effect that he has, not later than three months before examination for the purposes of these regulations passed the eyesight tests prescribed by the Federal Ministry of Transport for seamen for purposes mentioned in Schedule 1 of these regulations; and if for any reason the examination in navigation

and seamanship is completed before such sight test is taken, any certificate of competency to which the candidate is entitled shall be withheld until the result is known.

(3) If the examiner is satisfied, he shall fix a time and place for the examination.

(4) If the examiner is not satisfied, or the intending candidate so requires, the application form with testimonials and other relevant documents (if any) shall be sent by the examiner for consideration by the shipping inspector, whose decision shall be final.

(5) For the purposes of this regulation, "other relevant documents" includes Discharges, First Aid Certificates, Watchkeeping Certificates, Radar Observer Certificates, and Sight Rest Certificates.

4.—(1) Sea service to the extent mentioned in these regulations as applicable to Masters or Mates as the case may be, shall be a pre-requisite to eligibility as a candidate, and the failure to make sufficient disclosure of such service in the form of application for examination shall be sufficient ground for refusal of the application by an examiner.

Sufficiency
of sea
service.

(2) In computing sea service for the purposes of this regulation, if a candidate has been guilty of gross misconduct aboard he shall satisfy the shipping inspector as to his subsequent good conduct; and the shipping inspector may, in addition, require satisfactory proof that the candidate has had up to two years sea service since the last conviction, or logging, as the case may be, for any such offence.

(3) The amount of sea service respectively prescribed for examination in home trade service as Master or as Mate shall be the minimum qualification for the position; and in no case shall a candidate with less sea service offer himself or be examined under these regulations.

(4) If after examination it is found that the sea service of a candidate at the time of his examination was less than the minimum prescribed, a certificate of competency shall be refused or, if already issued, the certificate shall be recalled; and, save as provided in paragraph (5) below, no certificate or other certificate, as the case may be, shall be issued thereafter.

(5) Where it appears that a candidate for a master's certificate has sea service qualification sufficient only for a mate's certificate, a certificate of competency in the lower grade may, in proper case, be issued to him; but otherwise he shall be required to present himself again for examination on completion of the requisite period of sea service, unless the shipping inspector, in his discretion, thereafter dispenses with such re-examination.

(6) If the shipping inspector is satisfied that the error in computation of sea service occurred without the fault of the candidate and,

(a) the candidate has accepted a certificate in the lower grade of Mate (Off Shore), the shipping inspector in his discretion may authorise the difference in the fee paid for the examination to be returned to the candidate, or be credited towards any future examination of that candidate under these regulations;

(b) the candidate has not accepted a certificate in the lower grade of Mate (Off Shore), the shipping inspector in his discretion, may authorise the fee paid for the examination to be returned to the candidate, or be credited towards any future examination of that candidate under these regulations;

and the difference in, or the amount of, the fee so paid shall, as the case may require, be paid or credited accordingly.

Certificate
of sea
service.

5.—(1) Where an officer in any Commonwealth Navy with not less than four years navy service afloat has attained the rank of lieutenant therein, he may apply for and obtain without examination, a certificate of sea service sufficient for the purpose of examination as Master (Off Shore); and the holder of any such certificate may at any time thereafter be examined for a certificate of competency as Master (Off Shore) without further evidence of sea service, and without prior examination as Mate (Off Shore).

(2) Any rating who during his engagement with the Nigerian Navy passes the Fleet Board Examination as Chief Petty Officer shall, on the completion of his engagement and without further examination, be entitled to a certificate of competency as Mate (Off Shore).

(3) Application forms for the purpose of this regulation may be obtained from the shipping inspector and they shall be completed by intending applicants as directed therein.

(4) Where before or during the examination of a candidate an examiner, having regard to the grade of certificate required, is satisfied as to its sufficiency, he may accept as qualifying sea service, evidence of the service of the candidate in sea going ships of any of the navies of the Commonwealth, whether as an officer or as a rating, offered on the prescribed form by the candidate, (including in the case of a former rating, his naval service certificate).

(5) For the avoidance of doubt it is stated that the provisions of paragraph (1) above as to certificates of sea service shall not apply to naval officers of temporary rank or to naval officers posted to the reserve; and possession of any such certificate by a naval officer as aforesaid shall not be evidence of sea service so as to entitle the holder, if otherwise qualified, to act as Master or Mate, as the case may be, of a foreign going or home trade ship.

Special
provision
where
successful
candidate
unqualified.

6.—(1) The provisions of paragraph (5) of regulation 4 (which allows for a certificate of a lower grade to issue by reason of insufficiency of sea service) shall extend and apply where a candidate passes the examination for a Master (Off Shore) but under these regulations at the time of the examination his qualifications as a candidate (irrespective of his sea service) entitled him to examination only as a Mate (Off Shore).

(2) Nothing in regulation 4 of these regulations shall be construed so as to entitle a candidate to any allowance for fees paid in respect of the examination.

Interim
certificates
of compe-
tency, and
partial
passes.

7.—(1) If a candidate passes an examination under these regulations the examiner shall prepare an interim certificate of competency in such number of copies as the shipping inspector may prescribe; and the certificate shall be valid for the period stated therein (not exceeding in any case two months from the date of the certificate); and the examiner shall deliver to the successful

candidate the original thereof (unless under these regulations for any reason it is to be retained) and shall thereafter deal with the copies made as aforesaid (including in proper case, the original) as directed by the shipping inspector. Any interim certificate so prepared shall indicate on its face the address, as given by the successful candidate, to which the certificate in its final form is to be delivered, or at which it is to be made available, to such candidate.

(2) The shipping inspector shall, during the currency of an interim certificate, prepare a certificate in final form in substitution for the interim certificate; and the certificate in final form when signed shall, unless for any reason it is to be retained, be posted to the person entitled or be made available to him, as the case may require, at the address stated in the interim certificate.

(3) If a candidate fails to pass any such examination or passes it only in part, the examiner shall in writing certify the fact with such relevant information as the circumstances may require; and the failure by any such candidate who offers himself within six months thereafter for any subsequent examination as master or mate, as the case may be, under these regulations, to produce the certificate or to account satisfactorily for his failure to produce it, shall entitle the examiner, at that subsequent date to require the candidate to sit the whole examination again.

(4) Before a certificate in final form is issued under this regulation, the holder of the relevant interim certificate of competency shall if the shipping inspector so requires, surrender the interim certificate aforesaid to the shipping inspector.

8. In respect of examinations under these regulations, the following provisions as to grades of certificates, age limits and incidental qualifications (in addition to proof of sea service) shall, without prejudice to navy service afloat which may count as sea service, and to the requirements in Schedules 1, 2 and 3, apply to candidates as Masters (Off Shore) or Mates (Off Shore) as the case may be, that is to say—

Certificates
of service
etc. of
candidates.

(a) For Master (Off Shore) a candidate must be—

(i) not less than 22 years of age, and be the holder of a certificate of competency as Mate (Off Shore), with not less than 2 years sea service thereafter; or as such

(ii) not less than 27 years of age and be the holder of an inland waters certificate of competency as Rivermaster, with not less than 2 years in command experience of a vessel over 100 tons gross, at the date of the examination:

(b) for Mate (Off Shore) a candidate at the date of examination must be—

(i) not less than 20 years of age, and have served four years at sea on off-shore, coastal, or sea-going vessels, on deck; or

(ii) not less than 25 years of age, and be the holder of an inland waters certificate of competency as Quartermaster (with, after such qualification, not less than 4 years service as Quartermaster in inland waters vessels or, as the case may be, on deck in coastal, sea-going or off-shore vessels); or

(iii) be not less than 25 years of age, and be the holder of an inland waters certificate of competency as Boatswain, (with after such qualification, not less than 2 years sea service either as Quartermaster or Boatswain in inland waters vessels or, as the case may be, on deck in coastal, sea-going or off-shore vessels); or

(iv) not less than 25 years of age, and be the holder of an inland waters certificate of competency as Rivermaster :

(c) if a candidate for examination under these regulations wishes to undergo voluntary examination in signalling, the provisions of regulation 26 of the Examination for Certificates of Competency (Deck) Regulations 1963 (as extended by the provisions of Schedule 2 or 3 as the case may be, of these regulations) shall apply.

L.N. 79 of
1963.

Replace-
ment of
certificate.

9.—(1) A certificate of service or of competency issued under these regulations may be replaced on application—

(a) to the shipping inspector in the case of a certificate in final form,

(b) to the examiner in the case of an interim certificate ;

L.N. 25 of
1965.

and the application shall in any event be accompanied by payment of the fee prescribed in the Merchant Shipping (Fees) Regulations 1965.

(2) If the certificate is claimed to have been lost or stolen, the application shall show that the loss or theft was reported to the police, and a certified extract from the police station diary shall accompany the application.

(3) If the certificate is claimed to have been destroyed the applicant for a certificate in substitution therefor shall satisfy the shipping inspector or the examiner, as the case may require, as to the circumstances under which it was destroyed.

(4) If the certificate has been defaced or is otherwise mutilated, it shall be produced with the application ; and if it appears to the shipping inspector or to the examiner, as the case may be, that the defacement or mutilation was not accidental, the person aforesaid to whom it is produced may take such further action, including the institution of a prosecution, as he thinks fit.

(5) If the holder of a certificate under these regulations changes his name for any reason, he shall produce his certificate to the shipping inspector or to the examiner, as the case may require ; and upon satisfactory proof of identity, the appropriate authority shall issue a new certificate in the name as changed, in substitution for the certificate as produced, and the person issuing the new certificate shall thereupon destroy, or by endorsement thereon cancel, the former certificate.

(6) No fee shall be charged under the fees regulations mentioned in paragraph (1) above where the shipping inspector or the examiner, as the case may be, is satisfied that a certificate was lost through shipwreck or fire on board ship.

Power to
endorse
awards on
certificates
of compe-
tency.

10.—(1) The holder of a certificate of competency under these regulations who receives any government award thereafter, may supply evidence thereof with the certificate to the shipping inspector by any convenient means ; and if the shipping inspector is satisfied, he shall endorse the certificate to the extent necessary and return the certificate as so endorsed, with the original evidence of such award (if submitted by the holder) to the person entitled.

(2) The shipping inspector on such evidence as he may require in any other case may endorse the relevant certificate of competency where he is satisfied that the holder has qualifications additional to those prescribed for the certificate of competency; and without restricting the generality of the foregoing, the following shall be deemed to be additional qualifications, that is to say possession of—

- (a) a certificate of competency in radio telegraphy or radio telephony,
- (b) a radar maintenance or radar observers certificate,
- (c) a qualification in compass adjustment,
- (d) a qualification in signalling additional to that prescribed for the relevant certificate of competency.

11. Any candidate or intending candidate under these regulations who gives or offers, or attempts to give or offer, anything by way of inducement to any person connected with the Federal Ministry of Transport (whether or not with intent to influence the decision of an examiner) shall in addition to liability to any other penalty prescribed for such an offence, be precluded from examination for a certificate of competency until the expiration of not less than 12 months thereafter; and if the examination has been completed, the shipping inspector may take such further or other action as he considers necessary in any particular case.

Offering
bribe.

PART II—EXAMINATIONS

12.—(1) Examinations shall be conducted as provided in the relevant appendices to these regulations and in two divisions namely, practical and theoretical; and the shipping inspector shall prepare a list of instructions for the conduct of examinations which are required to be observed by candidates.

Conduct of
examina-
tions.

(2) An examiner shall, before commencing any examination, read to candidates the instructions so prepared by the shipping inspector; and the failure to comply with such instructions or any of them by a candidate or candidates in the course of an examination shall, as the case may require, entitle the examiner to refuse to carry on with the examination, or to fail any offending candidate or candidates.

(3) Paper, ink and blotting paper will be supplied for any necessary written work, as well as instruments (other than drawing instruments and slide rules) required for such purpose; and in addition the following will be made available for use by candidates in the examination room, namely—

<i>Names of Tables</i>	<i>Author (where applicable)</i>
(a) Nautical Tables (with logarithms)	Norrie (full edition), or Burton
(b) Alt-Azimuth Tables	Burwood, or Davis
(c) Admiralty Tide Tables	(i) European, (ii) Pacific Ocean
(d) Abridged Nautical Almanac	

(4) Other tables (if any) produced by a candidate may be used if the examiner is satisfied after inspection by him, but if books and papers (other than tables) are brought into an examination room by a candidate, they shall be impounded for the duration of the examination; and answers given by a candidate (including those obtained by slide rules, if used), in any applicable case, must indicate the special source.

(5) A candidate may be required to sit again if he fails to satisfy an examiner as to his understanding of the theoretical basis of any tables used by the candidate.

Pass marks
in written
papers.

13. To pass any written paper, a candidate must obtain not less than the percentage pass appropriate to the subject taken as set out in the table below and, in addition must obtain not less than 70 per cent of the total marks for all subjects taken. The time and marks allotted to each written part of the examination are as follows—

<i>Mate (Off Shore)</i>	<i>Time</i>	<i>Marks</i>	<i>Percentage Pass</i>
(a) Elementary Ship Knowledge ..	2 hours	200	70
(b) Chart Work	2 hours	200	70
(c) Practical Navigation	3 hours	200	70

Master (Off Shore)

(a) Ship Knowledge	2 hours	200	60
(b) Chart Work	2 hours	150	70
(c) Practical Navigation	2 hours	150	70

Partial
passes.

14.—(1) A pass in either the written, or practical (including signals) part of the examinations will remain valid for a period of six months, and if a candidate passes in all parts during this period, he will be granted a certificate of competency. If more than six months have elapsed since the candidate passed any part of the examinations, or if having previously obtained a partial pass in the examination he fails to produce evidence of it at a subsequent examination, the candidate will be required to take that part again.

(2) Any candidate who fails in the oral part of an examination for a certificate of competency under these regulations because of inadequate practical knowledge may, in the discretion of an examiner, be required to perform further sea service before being examined again; but any such sea service performed shall not, for any subsequent examination, exceed six months, and may be performed in any capacity on deck.

(3) In the case of a second or any subsequent failure in the written or oral part of an examination or in both of those parts, a candidate shall not be re-examined before the expiry of at least two months after the date of the last examination failed by the candidate.

Signalling.

15. A candidate for any grade of certificate in which signalling is required as part of the examination, may take the signalling examination at any time up to six months before or after the date on which he presents himself for the written and oral parts of the examination. If he passes before taking the main part of the examination, such pass will be valid for six months, but if he does not pass until after taking the main part of the examination he will not be granted a certificate of competency until he obtains a pass in signalling. If the signalling portion of the examination is taken separately, a special fee of £3-0s-0d shall be paid for each attempt.

Candidates
may use own
method.

16. Candidates will be allowed to work out the various problems according to any method which they have been accustomed to use, provided that such method is correct in principle.

17.—(1) When making calculations for obtaining a ship's position, candidates are expected to work to 0.2 of a minute of an arc and to the nearest second of time.

Degree of precision required.

(2) The method of calculation used in obtaining a position line must be capable of giving an answer within one nautical mile.

(3) Answers must be worked out to within 0.5 of a degree, in calculations involving compass errors, bearing and courses.

(4) In calculating the correction to apply to soundings, the allowable margin of error is six inches.

18.—(1) An examiner shall test candidates in respect of their knowledge on how to avoid collisions between vessels (known as the Rule of the Road), contained in the Merchant Shipping (Collision) Rules 1965; and if they satisfy the examiner of their grasp of the significance, content and practical application of the aforesaid rules, the mode of reproducing such rules shall be immaterial.

Knowledge of rule of the road and avoidance of collisions.
L.N. 133 of 1965.

(2) In the application of this regulation, questions shall be framed by reference to subject-matter and not by reference to the content of the rules by their respective numbers; and without requiring candidates to handle a sailing ship, an examiner shall frame his questions to candidates in such a way as to demonstrate to his satisfaction, the ability of candidates to recognise the lights of a sailing ship, and their knowledge of possible manoeuvres of such a ship, according to the direction of the wind.

19. A candidate shall not undergo examination for the same grade of certificate in successive weeks. If a candidate fails, the examiner shall inform him when it will be convenient for the examiner to re-examine him.

Re-examination.

SCHEDULES

Reg. 12 (1).

SCHEDULE 1

Reg. 3 (2) (c).

SIGHT TESTS

1. The purpose of these tests is to ensure that the candidate's eyesight is sufficiently good to enable him to pick up and identify the lights of distant ships at sea. Experience has shown that for this purpose he must be able to reach certain minimum standards both of form and colour vision.

2. The tests employed shall be identical with those laid down in Appendix 2 of the Examination for Certificates of Competency (Deck) Regulations 1963.

L.N. 79 of 1963.

SCHEDULE 2

Reg. 8.

SIGNALLING

1. The examination in Signalling will in all cases begin with an examination in the International Code, including Morse Flashing and Semaphore.

2.—(1) *Morse Flashing and Semaphore Speeds and Tests for Voluntary Examination.* Candidates for Voluntary examination in Signalling will be required to attain a minimum speed of 12 words a minute in Semaphore and 10 words a minute in Morse Flashing; and the average length of a word is taken as 5 letters.

(2) The Morse Flashing test will consist of a test message, followed by a spelling message of 25 words.

(3) In the examination Morse Flashing, the candidate will first be required to make a Test message, followed by a spelling message of 25 words to be read by the candidate.

(4) The same procedure will be observed in the Semaphore test, except that, as a test message is not given, the candidate will be required to make a spelling message of 50 words and then to read a message of 50 words made by the examiner.

Reg. 8.

SCHEDULE 3

EXAMINATION SYLLABUS

PART A : GENERAL

1. The syllabus for examination for Mate (Off Shore) is set out in Part B of this Schedule, and that for examination for Master (Off Shore) is set out in Part C of this Schedule; and the provisions of paragraphs 6 and 7 of this Schedule shall apply equally to both examinations, unless otherwise indicated.

2. In any paper to be answered by a candidate, questions within the scope of the paper may be combined.

3. The syllabus for examination as Master (Off Shore), written or oral, includes the syllabus of that subject (if any) for examination as Mate (Off Shore).

4. Sketches illustrating a candidate's understanding of his work must be made wherever practicable; and the drawings shall be reasonably accurate. Answers to problems involving practical navigation shall, where appropriate, be illustrated by figures drawn to scale or as nearly as may be to scale; and tables may be used to effect total correction of altitudes.

Part B : Syllabus for mate (Off Shore)

(In charge of vessels up to 100 tons gross)

5. Navigation (*Total time allowed 3 hours*)

Two papers (written)

Paper 1—Candidates will be required—

(a) to use an Admiralty chart or plan and have a sound knowledge of the information to be derived from it, e.g., abbreviations, depth of water, nature of bottom, navigation lights and marks, variation therein and other relevant matter,

(b) to set a course to steer from a position to any harbour or other position, being given the set and drift of the tide or current, the first position being fixed either by cross bearings or by plotting the courses and distances run from a previous position making due allowances for a given tide or current,

(c) to take a bearing by compass and, by using a card of deviations, convert it to a magnetic and thence to a true direction to lay off on the chart:

Paper 2—Candidates will be required—

- (a) to find the latitude from an observation of the sun when on the meridian,
- (b) to understand the difference between compass direction, magnetic direction and true direction,
- (c) to find the deviation of the compass by the following methods—
 - (i) transit bearings,
 - (ii) bearing of the sun at noon and on rising or setting, and
 - (iii) approximately by bearing of the Pole Star.

Ship Knowledge

One Paper (written) (*Time allowed 2 hours*)

6. Candidates must—

- (a) demonstrate practical acquaintance, of an elementary nature, with ship construction in so far as it relates to framing, shell plating, deck, watertight bulkheads, sounding pipes and air pipes ;
- (b) know what is meant by the terms, displacement and deadweight ;
- (c) know how to use displacement and tons per inch scales to determine weights of cargo, etc., from draughts of vessels ;
- (d) know the effect of density of water on draught ;
- (e) be able to make appropriate allowance for fresh water in proper case ;
- (f) have a general understanding of the terms, centre of gravity and centre of buoyancy, and in particular, the effect thereon of adding or removing weights, and the danger of slack ballast tanks.

Oral and Practical

7. Candidates must, in the oral and practical parts of examination under these regulations, understand and give satisfactory answers to questions on any of the following, that is to say—

- (a) the use of the sextant and the finding of index error,
- (b) the use and reading of the Aneroid barometer,
- (c) the marking and use of the lead line,
- (d) the contents and application of the Collision Rules,
- (e) life-saving and fire appliances required to be carried in vessels of Classes III and VII (A), including care and maintenance of lifeboats and their equipment, buoyant apparatus, inflatable liferafts, lifebuoys, life-jackets, line throwing appliances and fire appliances,
- (f) the uniform system of buoyage and wreck marking system,
- (g) the distress and pilot signals and penalties for misuse,
- (h) the use of the line-throwing apparatus in the event of stranding,
- (i) the man overboard procedure,
- (j) the rigging and use of a jury rudder,
- (k) manoeuvring, getting under way, coming to anchor, etc.,

(l) the requirements of the Merchant Shipping Act 1962 relating to strandings, collisions or other casualties,

(m) the definition of latitude, longitude, true altitude, zenith distance, and declination,

(n) other duties of a practical nature which a person in charge of an off shore vessel up to 100 tons is expected to know in the course of his work.

SIGNALLING

8. Candidates must be able—

(a) to send and receive only in Morse and at the rate of not less than 4 words a minute ;

(b) to recognise the flags of the International Code and know the meanings of the following single flag urgent and important signals, namely—

A, D, F, K, L, O, R, U, V.

Part C : Syllabus for Master (Off Shore)

NAVIGATION

One paper (written) (*Time allowed 2 hours*)

9. Candidates will be required—

(a) to find the latitude by meridian altitude of the sun,

(b) to find the deviation of the compass by time azimuth of the sun by means of tables, diagrams or any other method the candidate may select,

(c) to answer elementary questions in nautical astronomy dealing with solar meridional observations, including the definitions of latitude, longitude, mean and apparent time, equation of time, dip, refraction, semi-diameter, true altitude, zenith distance, declination, and polar distance.

CHARTWORK

One paper (written) (*Time allowed 2 hours*)

10. Candidates will be required—

(a) to use a chart or plan and understand the meaning of all the signs, marks and abbreviations thereon,

(b) to find the compass course (or courses) and distance (or distances) between two positions on the chart,

(c) to find the ship's position by cross bearings of two objects, and the set and drift experienced,

(d) to find the ship's position from two bearings of the same object, the course and distance run between taking the bearings being given, making due allowance for a given tide or current, and the distance of the ship from any given position at the time of taking the second bearing,

(e) to find on a chart or plan, the course to steer by compass in order to counteract the effect of a given tide or current, and find the distance the vessel will make good towards a given position in a given time.

SHIP KNOWLEDGE

One paper (written) (*Time allowed 2 hours*)

11. Candidates will be examined as for Mate (Off Shore) with, in addition, questions aimed at finding out what candidates know about—

(a) the meaning of Metacentre, Metacentric height, Moment to Change Trim,

(b) the effect on the Centre of Gravity of adding, removing or shifting weights,

(c) stiff and tender ships,

(d) precautions to be taken to prevent cargoes from shifting,

(e) deck cargoes,

(f) ballasting,

(g) solution of simple trim problems,

(h) damage affecting seaworthiness, and temporary repairs relating thereto,

(i) the provisions of the Factories Act in so far as it applies to ship's requirements.

Cap. 66.

ORAL AND PRACTICAL

12. Candidates must in the oral and practical parts of examination under these regulations, understand and give satisfactory answers to questions on any of the following, that is to say—

(a) the use and adjustments of the sextant, and how to observe with it, read on and off the arc, and find the index error by the horizon,

(b) the marking and use of the lead line,

(c) the rigging and masting of off shore vessels,

(d) accidents and how to deal with them, including fire-fighting on board and measures for fire prevention,

(e) man overboard procedure,

(f) management of vessel's boat in heavy weather,

(g) the Collision Rules with regard to both steamers and sailing vessels, their regulation lights and sound and fog signals,

(h) the use and management of the Rocket Apparatus in the event of stranding,

(i) distress and pilot signals and penalties for their misuse,

(j) uniform system of buoyage and wreck marking system,

(k) local seamarks, lights, etc.,

(l) life-saving and fire appliances required to be carried in off-shore vessels, including care and maintenance of lifeboats and their equipment, buoyant apparatus and inflatable liferafts, lifebuoys, lifejackets, line throwing and fire appliances,

(m) any other duties of a Master (Off Shore) which he is expected to know, and the examiner may ask.

SIGNALLING

13. Candidates must be able—

(a) to send and receive Morse at the rate of not less than 4 words a minute;

(b) to send and receive Semaphore at the rate of not less than 6 words a minute;

(c) to recognise the flags of the International Code and to know their single letter meanings.

MADE at Lagos this 25th day of July 1967.

MUSA DAGGASH,
Permanent Secretary,
Federal Ministry of Transport

EXPLANATORY NOTE

(This note does not form part of the above Regulations, but it is intended to explain their purpose)

These regulations make provision for the examination for certificates of competency required to be held by deck officers in responsible posts on board ships plying within off shore limits, that is within 50 miles out from the coast of Nigeria, if not otherwise qualified in deep sea work. They are to be read so as not to conflict with other regulations applicable to deck officers operating outside the aforesaid limits, and they make special provision for cases not provided for in such other deck officer regulations.

Supplement to Official Gazette Extraordinary No. 62, Vol. 54, 25th July,
1967—Part B

L.N. 78 of 1967

CUSTOMS TARIFF ACT 1965

(1965 No. 3)

Customs Tariff (Duties and Exemptions) (No. 2) Order 1967

Commencement : 13th July 1967

In exercise of the powers conferred by section 7 of the Customs Tariff Act 1965 and of all other powers enabling it in that behalf, the Federal Executive Council hereby makes the following Order :—

1.—(1) This Order may be cited as the Customs Tariff (Duties and Exemptions) (No. 2) Order 1967 and shall apply throughout the Federation.

(2) This Order shall be deemed to have come into force on 13th July 1967.

2. Schedule 3 of the Customs Tariff Act 1965 as the same was replaced by the Customs Tariff (Duties and Exemptions) (No. 4) Order 1965 is hereby amended as indicated in the Schedule appended to this Order.

Citation,
extent and
commence-
ment.

Amendment
of
Schedule 3
of Act 1965
No. 3.
L.N. 131 of
1965.

SCHEDULE

SCHEDULE 3

Schedule 3 to the Customs Tariff Act 1965 (Which relates to export duties of Customs) is amended by the deletion of all the expressions in the column "Tariff Description" and "Rate of Duty" for Item 12 and the substitution thereof of—

"Hide, Cattle :

(1) Dry—

(a) Dressed or tanned	the ton	..	£6-5s-0d
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(b) Undressed	the ton	..	£27-10s-0d
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(2) Wet—

dressed or tanned	the ton	..	£2-1s-8d
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MADE at Lagos this 25th day of July 1967.

H. A. EJUEYITCHIE,
*Secretary to the
Federal Military Government*

EXPLANATORY NOTE

This Order has the following effects :

1. It reduces the rate of export duty on dry dressed or tanned cattle hide from £27-10s-0d the ton to £6-5s-0d the ton.

2. It reduces the rate of export duty on wet dressed or tanned cattle hide from £9-3s-4d the ton to £2-1s-8d the ton.