1958 No. 602

The Merchant Shipping (Life-Saving Appliances) Rules, 1958

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The Minister of Transport and Civil Aviation, in exercise of his powers under Section 427 of the Merchant Shipping Act, 1894(*a*), as substituted by Section 2 of the Merchant Shipping (Safety Convention) Act, 1949(**b**), and of all other powers enabling him in that behalf, hereby makes the following Rules:—

Interpretation and Repeal

1.—(1) These Rules shall come into operation on the first day of May, 1958, and may be cited as the Merchant Shipping (Life-Saving Appliances) Rules, 1958.

(2) In these Rules, unless the context otherwise requires, the following expressions have the meanings hereby respectively assigned to them, that is to say:—

"Buoyant apparatus" means flotation equipment (other than lifebuoys and lifejackets) designed to support persons who are in the water.

"Certified" means certified by a certificate issued under Section 274 of the Merchant Shipping Act, 1894.

"Class A motor lifeboat" means a lifeboat complying with the requirements of paragraph (1) of Rule 22 of these Rules.

"Class B motor lifeboat" means a lifeboat complying with the requirements of paragraph (2) of Rule 22 of these Rules.

"Class C boat" means a boat complying with the provisions of Rule 24 of these Rules.

"Fishing boat" has the same meaning as in Section 370 of the Merchant Shipping Act, 1894.

(a) 57 & 58 Vict. c. 60. (b) 12, 13 & 14 Geo. 6. c. 43.

"Inflatable liferaft" means a liferaft complying with the provisions of paragraph (1) of Rule 25 of these Rules.

"Length" in relation to a registered ship means registered length.

"Lifeboat" means a boat complying with the provisions of Rule 20 of these Rules.

"Long international voyage" means an international voyage which is not a short international voyage within the meaning of the Merchant Shipping (Safety Convention) Act, 1949.

"Mechanically propelled lifeboat" means a lifeboat (other than a motor lifeboat) complying with the provisions of Rule 23 of these Rules.

"The Minister" means the Minister of Transport and Civil Aviation.

"Passenger steamer" means a steamer carrying more than 12 passengers.

"Passenger steamer's certificate" means a passenger steamer's certificate issued by the Minister pursuant to Section 274 of the Merchant Shipping Act, 1894.

"Person" means a person over the age of one year.

"Steamer" 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.

(3) These Rules apply to—

(*a*) British ships, except ships registered in Canada, the Commonwealth of Australia, New Zealand, the Union of South Africa, India, Pakistan, Ceylon, Ghana, the Federation of Malaya, the Republic of Ireland, or in any territory administered by the Government of any of the aforesaid countries;

(*b*) other ships while they are within any port in the United Kingdom.

Provided that these Rules shall not apply to—

(i) a ship by reason of her being within a port in the United Kingdom 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 steamers and do not exceed 15 tons burden.

(4) The Interpretation Act, 1889(a), shall apply to the interpretation of these Rules as it applies to the interpretation of an Act of Parliament.

(5) The Merchant Shipping (Life-Saving Appliances) Rules, 1952(b), and the Merchant Shipping (Life-Saving Appliances) (Amendment) Rules, 1956(c), are hereby revoked.

Classification of Ships

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

Passenger Steamers

Class I. Passenger steamers engaged on voyages any of which are long international voyages.

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

(a) 52 & 53 Vict. c. 63. (b) S.I. 1952/1949 (1952 II, p. 1889).
(c) S.I. 1956/645 (1956 I, p. 1200).

Class II(A). Passenger steamers in respect of which there is in force a passenger steamer's certificate entitled " Passenger Certificate, Class II(A) ".

Class III. Passenger steamers in respect of which there is in force a passenger steamer's certificate entitled " Passenger Certificate, Class III ".

Class IV. Passenger steamers in respect of which there is in force a passenger steamer's certificate entitled " Passenger Certificate, Class IV ".

Class V. Passenger steamers in respect of which there is in force a passenger steamer's certificate entitled " Passenger Certificate, Class V ".

Class VI. Passenger steamers in respect of which there is in force a passenger steamer's certificate entitled " Passenger Certificate, Class VI ".

Class VI(A). Passenger steamers in respect of which there is in force a passenger steamer's certificate entitled " Passenger Certificate, Class VI(A) ".

Other Ships

Class VII. Steamers (other than ships of Classes I, VII(A), X, and XII) engaged on voyages any of which are long international voyages.

Class VII(A). Steamers engaged only in the whaling industry.

Class VIII. Steamers (other than ships of Classes II, IX, X, and XII) engaged on voyages (not being long international voyages) any of which are short international voyages.

Class VIII(A). Steamers (other than ships of Classes II(A) to VI(A) inclusive, IX, IX(A), X, and XII) engaged only on voyages which are not international voyages.

Class IX. Tugs, tenders, launches, lighters, dredgers, barges and hoppers (other than ships of Classes II to VI(A) inclusive and XI), which proceed to sea but are not engaged on long international voyages.

Class IX(A). Tugs, tenders, launches, lighters, dredgers, barges and hoppers (other than ships of Classes III to VI(A) inclusive) which do not proceed to sea.

Class X. Fishing boats other than ships of Classes I to VI(A) inclusive.

Class XI. Sailing ships (other than fishing boats and ships of Class XII) which proceed to sea.

Class XII. Pleasure yachts (other than ships of Classes I to VI(A) inclusive) exceeding 15 tons burden.

(2) In this Rule " sea " has the same meaning as in Rule 2 of the Merchant Shipping (Construction) Rules, 1952(a).

Ships of Class I

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

(2) Every ship to which this Rule applies shall, subject to the provisions of Rule 48 of these Rules, be fitted, in accordance with its length, with the number of sets of davits specified in column A of the table set out in the First Schedule to these Rules;

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) Every ship to which this Rule applies shall carry two boats attached to davits—one on each side of the ship—for use in an emergency. These

(a) S.I. 1952/1948 (1952 II, p. 1743).

boats shall not be more than 26 feet in length. They may be counted as lifeboats for the purposes of this Rule if they comply with the requirements of these Rules applying to lifeboats, except that in ships in which the requirements of paragraph (11) of Rule 39 of these Rules are met by means of appliances fitted to the sides of the lifeboats, such appliances shall not be required to be fitted to the two boats provided to meet the requirements of this Rule.

(5) Where 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 lifeboats attached shall be fitted as far as is practicable in the circumstances to make up the deficiency in such accommodation. If it is impracticable to fit such additional sets of davits, additional lifeboats sufficient to make up the said deficiency shall be carried under each or any of the lifeboats attached to davits, but shall not be carried under the two emergency boats carried in compliance with paragraph (4) of this Rule.

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

(7) Where the number of lifeboats carried in compliance with this Rule is 20 or more, two of such lifeboats shall be Class A motor lifeboats.

(8) Where the number of lifeboats carried in compliance with this Rule is more than 13 but less than 20, one of such lifeboats shall be a Class A motor lifeboat and a second of such lifeboats shall be either a Class A motor lifeboat or a Class B motor lifeboat or a mechanically propelled lifeboat.

(9) Where the number of lifeboats carried in compliance with this Rule is 13 or less, one of such lifeboats shall be a Class A motor lifeboat or a Class B motor lifeboat or a mechanically propelled lifeboat.

(10) Every Class A motor lifeboat carried in compliance with this Rule shall be provided with the equipment specified in Rule 34 of these Rules.

(11) Every ship to which this Rule applies which does not carry two Class A motor lifeboats provided with the equipment specified in Rule 34 of these Rules shall carry portable radiotelegraph equipment which shall comply with the requirements of Rule 44 of these Rules.

(12) Every ship to which this Rule applies shall carry buoyant apparatus sufficient to support 25 per cent. of the total number of persons which the ship is certified to carry.

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

Length of ship in feet	*Minimum number of lifebuoys*
Under 200	8
200 and under 400	12
400 and under 600	18
600 and under 800	24
800 and over	30

(14) Every ship to which this Rule applies shall carry one lifejacket for each person the ship is certified to carry.

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

Ships of Class II

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

(2) Every ship to which this Rule applies shall, subject to the provisions of paragraph (7) of this Rule and of Rule 48 of these Rules, be fitted, in accordance with its length, with the number of sets of davits specified in Column A of the table set out in the First Schedule to these Rules;

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 (7) of this Rule, together provide at least the capacity specified in Column C of the table set out in the First Schedule to these Rules.

(4) Every ship to which this Rule applies shall carry two boats attached to davits—one on each side of the ship—for use in an emergency. These boats shall not be more than 26 feet in length. They may be counted as lifeboats for the purposes of this Rule if they comply with the requirements of these Rules applying to lifeboats, except that in ships in which the requirements of paragraph (11) of Rule 39 of these Rules are met by means of appliances fitted to the sides of the lifeboats, such appliances shall not be required to be fitted to the two boats provided to meet the requirements of this Rule.

(5) Subject to the provisions of paragraphs (6) and (7) of this Rule, where 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 lifeboats attached shall be fitted as far as is practicable in the circumstances to make up the deficiency in such accommodation. If it is impracticable to fit such additional sets of davits, additional lifeboats sufficient to make up the said deficiency shall be carried under each or any of the lifeboats attached to davits, but shall not be carried under the two emergency boats carried in compliance with paragraph (4) of this Rule.

(6) If in the opinion of the Minister the volume of traffic so requires, the Minister may permit any ship to which this Rule applies, being a ship which is subdivided in accordance with the requirements of Part III of the Second Schedule to the Merchant Shipping (Construction) Rules, 1952, 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 Minister, in pursuance of subsection (5) of section 12 of the Merchant Shipping (Safety Convention) Act, 1949, to proceed to sea from a port in the United Kingdom on a long international voyage, such a ship shall carry lifeboats attached to davits or stowed under lifeboats attached to davits affording accommodation for 75 per cent. of the persons on board; and

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

(7) Where it is shown to the satisfaction of the Minister that it is impracticable in a ship engaged on a voyage which is not a long international voyage to stow satisfactorily the inflatable liferafts carried in that ship in pursuance of paragraph (6) of this Rule without reducing the number of lifeboats, the

Minister may permit the number of sets of davits required to be fitted under paragraph (2) of this Rule and paragraph (2) of Rule 48 of these Rules, and the number of lifeboats attached to davits required under paragraph (3) of this Rule to be reduced;

Provided that—

(*a*) the number of lifeboats attached to davits shall never be less than two, of which one shall be carried on each side of the ship; and

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

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

(9) Where the number of lifeboats carried in compliance with this Rule is 20 or more, two of such lifeboats shall be Class A motor lifeboats.

(10) Where the number of lifeboats carried in compliance with this Rule is more than 13 but less than 20, one of such lifeboats shall be a Class A motor lifeboat and a second shall be a Class A motor lifeboat or a Class B motor lifeboat or a mechanically propelled lifeboat.

(11) Where the number of lifeboats carried in compliance with this Rule is 13 or less and the ship is fitted with at least the minimum number of sets of davits determined by column B of the First Schedule to these Rules, one of such lifeboats shall be a Class A motor lifeboat or a Class B motor lifeboat or a mechanically propelled lifeboat.

(12) Where the number of lifeboats carried in compliance with this Rule is 13 or less and the ship is, under paragraph (7) of this Rule, fitted with fewer than the minimum number of sets of davits determined by column B of the First Schedule to these Rules, one of such lifeboats shall be a Class A motor lifeboat or a Class B motor lifeboat and a second shall be a Class A motor lifeboat or a Class B motor lifeboat or a mechanically propelled lifeboat.

(13) Every Class A motor lifeboat carried in compliance with this Rule shall be provided with the equipment specified in Rule 34 of these Rules.

(14) Every ship to which this Rule applies which does not carry two Class A motor lifeboats provided with the equipment specified in Rule 34 of these Rules shall carry portable radiotelegraph equipment which shall comply with the requirements of Rule 44 of these Rules;

Provided that in the case of any ship engaged on voyages of such duration that, in the opinion of the Minister, portable radiotelegraph equipment is unnecessary, he may allow such equipment to be dispensed with.

(15) Every ship to which this Rule applies shall carry in addition to any inflatable liferafts that may be carried in pursuance of paragraphs (6) and (7) of this Rule, inflatable liferafts sufficient to accommodate 10 per cent. of the total number of persons for whom there is accommodation in lifeboats.

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

Length of ship in feet	*Minimum number of lifebuoys*
Under 200	8
200 and under 400	12
400 and under 600	18
600 and under 800	24
800 and over	30

(17) Every ship to which this Rule applies shall carry one lifejacket for each person the ship is certified to carry.

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

Ships of Class II(A)

5. Rule 4 of these Rules shall apply to ships of Class II(A) as it applies to ships of Class II.

Ships of Class III

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

(2) Every ship to which this Rule applies, shall, subject to the provisions of Rule 48 of these Rules, be fitted with the number of sets of davits specified in the table set out in the Second Schedule to these Rules ;

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, inflatable liferafts, or buoyant apparatus shall be carried as shall be sufficient, together with the lifeboats required by paragraph (3) of this Rule, for 70 per cent. of the total number of persons which the ship is certified to carry.

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

(6) Every ship to which this Rule applies shall carry at least eight lifebuoys.

(7) Every ship to which this Rule applies shall carry one lifejacket for each person the ship is certified to carry.

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

Ships of Class IV

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

(2) Every ship to which this Rule applies shall, subject to the provisions of Rule 48 of these Rules, be fitted with the number of sets of davits specified in the table set out in the Second Schedule to these Rules ;

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, inflatable liferafts, or buoyant apparatus shall be carried as shall be sufficient, together with the lifeboats required by paragraph (3) of this Rule, for 60 per cent. of the total number of persons which the ship is certified to carry.

(5) Every ship to which this Rule applies of 200 feet in length or over shall carry at least eight lifebuoys, and every such ship of under 200 feet in length shall carry at least four lifebuoys.

(6) Every ship to which this Rule applies shall carry one lifejacket for each person the ship is certified to carry.

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

Ships of Class V

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

(2) Every ship to which this Rule applies shall carry such boats, inflatable liferafts, or buoyant apparatus as shall be sufficient, together with any boats required to be carried in compliance with paragraph (3) of this Rule, for 40 per cent. of the total number of persons which the ship is certified to carry.

(3) Every ship to which this Rule applies of 150 feet in length or over shall carry at least two boats, and every such ship of 70 feet in length or over and under 150 feet in length shall carry at least one boat. The boats shall be attached to davits.

(4) Every ship to which this Rule applies of 150 feet in length or over shall carry at least six lifebuoys, and every such ship of under 150 feet in length shall carry at least four lifebuoys.

(5) Every ship to which this Rule applies shall carry one lifejacket for each person the ship is certified to carry, unless the boats, inflatable liferafts, buoyant apparatus and lifebuoys carried in the ship are sufficient for the total number of persons which the ship is certified to carry.

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

Ships of Class VI

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

(2) Rule 8 of these Rules shall apply to ships of Class VI, being ships of 70 feet in length or over, as it applies to ships of Class V.

(3) 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 inflatable 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 (5) of this Rule, so, however, that the inflatable 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.

(4) 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 inflatable liferafts or buoyant apparatus sufficient for at least 40 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 (5) of this Rule, so, however, that the inflatable 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.

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

Length of ship in feet	*Minimum number of lifebuoys*
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

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

(7) In the case of ships to which this Rule applies not exceeding 30 feet in length the Minister may allow lifebuoys to be carried in lieu of part or all of the inflatable liferafts or buoyant apparatus required to be carried in pursuance of paragraphs (3) and (4) of this Rule.

Ships of Class VI(A)

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

(2) Rule 7 of these Rules shall apply to ships of Class VI(A), being ships of 70 feet in length or over, 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 inflatable liferafts 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 during the period between 1st April and 31st October inclusive, together with lifebuoys not less in number than is specified in paragraph (5) of Rule 9 of these Rules, so, however, that the inflatable 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 during the aforesaid period.

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

(5) In the case of ships not exceeding 30 feet in length to which this Rule applies the Minister may allow lifebuoys to be carried in lieu of part or all of the inflatable liferafts or buoyant apparatus required to be carried in pursuance of paragraph (3) of this Rule.

Ships of Class VII

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

(2) Every ship to which this Rule applies shall carry on each side of the ship lifeboats, not less than 24 feet in length, attached to davits, and of sufficient aggregate capacity to accommodate all persons on board. In the case of tankers of 3,000 tons gross tonnage or over the number of such lifeboats on board shall not be less than four, two of which shall be carried aft and two amidships.

(3) In every ship to which this Rule applies of 1,600 tons gross tonnage or over, one of the lifeboats carried in compliance with paragraph (2) of this Rule shall be a Class A motor lifeboat or a Class B motor lifeboat or a mechanically propelled lifeboat.

(4) Every ship to which this Rule applies shall carry portable radio-telegraph equipment which shall comply with the requirements of Rule 44 of these Rules.

(5) Every ship to which this Rule applies shall carry at least eight lifebuoys.

(6) Every ship to which this Rule applies shall carry one lifejacket for each person on board.

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

Ships of Class VII(A)

12.—(1) Subject to the provisions of paragraph (2) of this Rule, Rule 11 of these Rules shall apply to ships of Class VII(A) as it applies to ships of Class VII.

(2) Every ship employed as a whale factory ship and every ship engaged in the carriage of persons employed in the whaling industry shall carry lifeboats attached to davits on each side of the ship of such aggregate capacity as will accommodate every member of the crew engaged to work the ship. In addition, every such ship shall carry lifeboats of an aggregate capacity sufficient to accommodate the total number of additional persons which the ship carries. These additional lifeboats shall, where practicable, be attached to davits. If not attached to davits, they shall be stowed under lifeboats attached to davits.

Ships of Class VIII

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

(2) Every ship to which this Rule applies of 500 tons gross tonnage or over shall carry on each side of the ship one or more lifeboats, attached to davits, which shall either be lifeboats of 24 feet in length or over of sufficient aggregate capacity to accommodate the total number of persons on board, or lifeboats of under 24 feet in length of sufficient aggregate capacity to accommodate a number of persons equal to the total number of persons on board plus four. In the case of tankers of 3,000 tons gross tonnage or over the number of such lifeboats shall never be less than four, two of which shall be carried aft and two amidships.

(3) Every ship to which this Rule applies of 500 tons gross tonnage or over shall carry inflatable liferafts of sufficient aggregate capacity to accommodate the total number of persons on board and so stowed that they can be readily transferred to the water on either side of the ship. Ships with 16 or more persons on board shall carry at least two inflatable liferafts.

(4) Every ship to which this Rule applies of under 500 tons gross tonnage shall carry either the equipment required by paragraphs (2) and (3) of this Rule to be carried by ships of 500 tons gross tonnage or over or—

(*a*) a lifeboat or Class C boat so stowed that it can readily be placed in the water on either side of the ship, or, if the ship has a list, on the side which is lower in the water; and

(*b*) at least two inflatable liferafts of sufficient aggregate capacity to accommodate twice the total number of persons on board and so stowed that they can readily be transferred to the water on either side of the ship.

(5) In every ship to which this Rule applies of 1,600 tons gross tonnage or over, one of the lifeboats carried in compliance with paragraph (2) of this Rule shall be a Class A motor lifeboat or a Class B motor lifeboat or a mechanically propelled lifeboat.

(6) Every ship to which this Rule applies of 500 tons gross tonnage or over shall carry portable radiotelegraph equipment which shall comply with the requirements of Rule 44 of these Rules;

Provided that, in the case of any ship engaged on voyages of such duration that, in the opinion of the Minister, portable radiotelegraph equipment is unnecessary, he may allow such equipment to be dispensed with.

(7) Every ship to which this Rule applies of 100 feet in length or over shall carry at least eight lifebuoys.

(8) Every ship to which this Rule applies of under 100 feet in length shall carry at least one lifebuoy for each two persons on board;

Provided that the number of lifebuoys so carried need never be more than eight and shall in no case be less than two.

(9) Every ship to which this Rule applies shall carry one lifejacket for each person on board.

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

Ships of Class VIII (A)

14.—(1) Paragraph (4) of Rule 13 of these Rules shall apply to ships of Class VIII(A) as it applies to ships of Class VIII of under 500 tons gross tonnage.

(2) Paragraphs (7), (8), (9), and (10) of Rule 13 of these Rules shall apply to ships of Class VIII(A) as they apply to ships of Class VIII.

Ships of Class IX

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

(2) Paragraphs (2), (3), (5), and (6) of Rule 13 of these Rules shall apply to ships to which this Rule applies, being ships of 500 tons gross tonnage or over engaged on an international voyage, as they apply to ships of Class VIII of 500 tons gross tonnage or over.

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

(*a*) a lifeboat or Class C boat attached to a davit or davits ; and

(*b*) an inflatable liferaft of sufficient capacity to accommodate the total number of persons on board and so stowed that it can readily be transferred to the water on either side of the ship.

(4) Every tug and every tender to which this Rule applies, not being a ship to which paragraph (2) of this Rule applies, shall carry buoyant apparatus sufficient to support the total number of persons on board.

(5) Paragraphs (7), (8), (9), and (10) of Rule 13 of these Rules shall apply to every ship to which this Rule applies as they apply to ships of Class VIII.

Ships of Class IX(A)

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

(2) Every ship to which this Rule applies shall, when in partially smooth waters as defined in paragraph (2) of Rule 2 of the Merchant Shipping (Construction) Rules, 1952, carry a boat or an inflatable liferaft in either case sufficient to accommodate all persons on board.

(3) Every tug and every tender to which this Rule applies shall carry buoyant apparatus sufficient to support all persons on board.

(4) Every ship to which this Rule applies shall carry two lifebuoys.

(5) Every ship to which this Rule applies shall carry one lifejacket for each person on board.

Ships of Class X

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

(2) Every ship to which this Rule applies of 145 feet in length or over 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 all persons on board the ship ; and at least two inflatable liferafts of sufficient aggregate capacity to accommodate all persons on board and so stowed that they can readily be transferred to the water on either side of the ship ; or

(*b*) a Class C boat attached to a davit; and at least two inflatable liferafts of sufficient aggregate capacity to accommodate twice the number of persons on board and so stowed that they can readily be transferred to the water on either side of the ship.

(3) Every ship to which this Rule applies of under 145 feet in length but not under 100 feet in length shall carry either—

(*a*) a lifeboat of sufficient capacity to accommodate all persons on board the ship, attached to a davit; and inflatable liferafts on the following scale—

Ships with 13 or more persons on board	...	at least two inflatable liferafts
Ships with fewer than 13 persons on board	...	at least one inflatable liferaft,

of sufficient aggregate capacity to accommodate all persons on board and so stowed that they can readily be transferred to the water on either side of the ship; or

(*b*) a Class C boat attached to a davit; and at least two inflatable liferafts of sufficient aggregate capacity to accommodate not less than one-and-a-half times the number of persons on board and so stowed that they can readily be transferred to the water on either side of the ship;

Provided that in the case of a ship of under 115 feet in length, if at least two inflatable liferafts of sufficient aggregate capacity to accommodate twice the number of persons on board are carried, and are stowed in accordance with the provisions of this sub-paragraph, the Class C boat carried in that ship shall not be required to be attached to a davit but shall be so stowed that it can readily be placed in the water on either side of the ship, or, if the ship has a list, on the side which is lower in the water.

(4) Every ship to which this Rule applies of under 100 feet in length but not under 70 feet in length shall carry either—

(*a*) a lifeboat of sufficient capacity to accommodate all persons on board the ship, attached to a davit; and inflatable liferafts on the following scale—

Ships with 13 or more persons on board	...	at least two inflatable liferafts
Ships with fewer than 13 persons on board	...	at least one inflatable liferaft,

of sufficient aggregate capacity to accommodate all persons on board and so stowed that they can readily be transferred to the water on either side of the ship; or

(*b*) a Class C boat so stowed that it can readily be placed in the water on either side of the ship, or, if the ship has a list, on the side which is lower in the water; and at least two inflatable liferafts of sufficient aggregate capacity to accommodate not less than one-and-a-half times the number of persons on board and so stowed that they can readily be transferred to the water on either side of the ship.

(5) Every ship to which this Rule applies of under 70 feet in length but not under 50 feet in length which proceeds on a voyage north of latitude 61°N. or south of latitude 48° 30′N. or west of longitude 12°W. shall

carry a boat so stowed that it can readily be placed in the water; and inflatable liferafts on the following scale—

Ships with 13 or more persons on board	...	at least two inflatable liferafts
Ships with fewer than 13 persons on board	...	at least one inflatable liferaft,

of sufficient aggregate capacity to accommodate all persons on board and so stowed that they can readily be transferred to the water on either side of the ship.

(6) Every ship to which this Rule applies of under 70 feet in length but not under 50 feet in length which proceeds only on voyages which do not extend north of latitude 61°N. or south of latitude 48° 30′N. or west of longitude 12°W. shall carry inflatable liferafts on the following scale—

Ships with 13 or more persons on board	...	at least two inflatable liferafts
Ships with fewer than 13 persons on board	...	at least one inflatable liferaft,

of sufficient aggregate capacity to accommodate all persons on board and so stowed that they can readily be transferred to the water on either side of the ship.

(7) Every ship to which this Rule applies of under 50 feet in length but not under 40 feet in length which proceeds on a voyage north of latitude 61°N. or south of latitude 48° 30′N. or west of longitude 12°W. shall carry a boat so stowed that it can readily be placed in the water; and inflatable liferafts or buoyant apparatus of sufficient aggregate capacity to accommodate or support as the case may be all persons on board and so stowed that the liferafts or apparatus can readily be transferred to the water on either side of the ship.

(8) Every ship to which this Rule applies of under 50 feet in length but not under 40 feet in length which proceeds only on voyages which do not extend north of latitude 61°N. or south of latitude 48° 30′N. or west of longitude 12°W. shall carry inflatable liferafts or buoyant apparatus of sufficient aggregate capacity to accommodate or support as the case may be all persons on board and so stowed that the liferafts or apparatus can readily be transferred to the water on either side of the ship.

(9) Every ship to which this Rule applies of 100 feet in length or over shall carry at least four lifebuoys, and every such ship of under 100 feet in length shall carry at least two lifebuoys.

(10) Every ship to which this Rule applies shall carry one lifejacket for each person on board.

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

Ships of Class XI

18.—(1) This Rule applies to ships of Class XI.

(2) Every ship to which this Rule applies shall carry one or more lifeboats attached to davits, or boats, of sufficient aggregate capacity to accommodate all persons on board.

(3) Every ship to which this Rule applies shall carry at least four lifebuoys.

(4) Every ship to which this Rule applies shall carry one lifejacket for each person on board.

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

Ships of Class XII

19.—(1) This Rule applies to ships of Class XII

(2) Every ship to which this Rule applies of 70 feet in length or over shall carry a boat or boats of sufficient aggregate capacity to accommodate all persons on board. Such boat or boats shall be so stowed that they can readily be placed in the water on either side of the ship, and unless they are lifeboats the ship shall carry inflatable liferafts or buoyant apparatus sufficient for all persons on board.

(3) Every ship to which this Rule applies of under 70 feet in length shall carry inflatable liferafts or buoyant apparatus sufficient for all persons on board;

Provided that lifebuoys may be substituted for inflatable liferafts or buoyant apparatus on the basis of one lifebuoy for each two persons on board.

(4) Every ship to which this Rule applies shall carry at least two lifebuoys.

(5) Every ship to which this Rule applies shall carry one lifejacket for each person on board.

REQUIREMENTS FOR LIFE-SAVING APPLIANCES

General Requirements for Lifeboats

20. Lifeboats shall comply with the requirements specified in the Third Schedule to these Rules.

Carrying Capacity of Lifeboats

21.—(1) Subject to the provisions of paragraphs (2) and (3) 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 dividing by ten the cubic capacity of the boat in cubic feet, determined in accordance with the provisions of the Fourth Schedule to these Rules.

(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.

(3) No lifeboat shall be deemed fit to accommodate more than 60 persons unless

(*a*) it is a motor lifeboat or a mechanically propelled lifeboat; and

(*b*) it is fitted with means to enable persons in the water to climb into the lifeboat.

Motor Lifeboats

22.—(1) Subject to the provisions of paragraph (3) of this Rule, every Class A motor lifeboat shall, in addition to complying with the requirements specified in the Third Schedule to these Rules, comply with the following requirements:—

(*a*) it shall be fitted with a compression ignition engine which shall comply with the provisions of Part I of the Fifth Schedule to these Rules;

(*b*) it shall be provided with fuel sufficient for 24 hours continuous operation ;

(*c*) it shall be capable of going astern ; and

(*d*) it shall be capable of going ahead at a speed of at least six knots in smooth water when the lifeboat is loaded with its full complement of persons and equipment.

(2) Every Class B motor lifeboat shall, in addition to complying with the requirements specified in the Third Schedule to these Rules, comply with the following requirements :—

(*a*) it shall be fitted with an internal combustion engine which shall comply with the provisions of Part II of the Fifth Schedule to these Rules ;

(*b*) it shall be adequately provided with fuel ;

(*c*) it shall be capable of going astern ; and

(*d*) it shall be capable of going ahead at a speed of at least four knots in smooth water when the lifeboat is loaded with its full complement of persons and equipment.

(3) Where in these Rules it is required that either a Class A motor lifeboat or a Class B motor lifeboat or a mechanically propelled lifeboat shall be carried and a Class A motor lifeboat is in these circumstances provided, the fuel supply of that lifeboat shall be required to comply only with the requirement of sub-paragraph (*b*) of paragraph (2) of this Rule.

Mechanically Propelled Lifeboats

23. Mechanically propelled lifeboats shall, in addition to complying with the requirements specified in the Third Schedule to these Rules, be fitted with machinery which shall comply with the requirements specified in the Sixth Schedule to these Rules.

Class C Boats

24. Class C boats shall comply with the requirements specified in the Seventh Schedule to these Rules.

Inflatable Liferafts

25.—(1) Inflatable liferafts shall comply with the requirements specified in the Eighth Schedule to these Rules.

(2) The number of persons which an inflatable liferaft shall be deemed fit to accommodate shall be equal to

(*a*) 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

(*b*) 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 the less.

Buoyant Apparatus

26.—(1) Buoyant apparatus shall comply with the provisions of the Ninth Schedule to these Rules.

(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, Inflatable Liferafts, and Buoyant Apparatus

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

(2) The number of persons which an inflatable liferaft is fit to accommodate, and the number of persons which buoyant apparatus is fit to support, shall be clearly marked in permanent characters on the liferaft or apparatus as the case may be and in the case of an inflatable liferaft on the valise or other container in which the liferaft is contained when not in use.

Lifebuoys

28. Lifebuoys shall comply with the provisions of the Tenth Schedule to these Rules.

Lifebuoy Lights and Lines

29.—(1) Lifebuoys carried in ships (except ships of Classes III and VI) in accordance with these Rules shall be provided with self-igniting lights which cannot be extinguished in water on the following scale :—

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

(*b*) ships of Classes IV, V, and VI(A) (except ships which are engaged on daylight voyages only), two lifebuoys (one on each side of the ship) ;

(*c*) ships of Classes VII to XI inclusive, at least half the lifebuoys and in no case less than two ;

(*d*) ships of Class XII, one lifebuoy.

(2) Lights provided on lifebuoys carried in tankers shall be electrically operated.

(3) In every ship to which these Rules apply one lifebuoy on each side of the ship shall be fitted with a line at least 15 fathoms in length.

Lifejackets

30. Lifejackets shall comply with the provisions of the Eleventh Schedule to these Rules.

Line-throwing Appliances

31. Line-throwing appliances shall comply with the provisions of the Twelfth Schedule to these Rules.

PROVISION OF EQUIPMENT AND RATIONS IN LIFEBOATS, BOATS, AND INFLATABLE LIFERAFTS

Equipment for Lifeboats and Boats (other than Class C Boats)

32.—(1) Subject to the provisions of paragraphs (2), (3), (4), (5), (9), and (10) of this Rule the equipment of every lifeboat carried in a ship of Class I, II, II(A), III, IV, VI(A), VII, VII(A), VIII, VIII(A), or IX, and the

equipment of every lifeboat or boat (other than a Class C boat) carried in a ship of Class X or XI shall be as follows :—

(*a*) a single banked complement of oars, two spare oars, and a steering oar ; one set and a half of crutches, attached to the lifeboat or 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 lifeboat or boat by lanyards or chains ; a bailer and two buckets ;

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

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

(*e*) a locker suitable for the stowage of small items of equipment ;

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

(*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 or boat belongs ;

(*j*) a compass in binnacle complying with the provisions of Part I of the Thirteenth Schedule to these Rules ;

(*k*) a sea anchor complying with the provisions of Part II of the Thirteenth Schedule to these Rules ;

(*l*) two painters of sufficient length and size. One shall be secured to the forward end of the lifeboat or boat with strop and toggle so that it can be released and the other shall be firmly secured to the stem of the lifeboat or boat 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*) two parachute distress signals complying with the provisions of Part III of the Thirteenth Schedule to these Rules, and six hand flares complying with the provisions of Part IV of the Thirteenth Schedule to these Rules ;

(*o*) two buoyant smoke signals complying with the provisions of Part V of the Thirteenth Schedule to these Rules ;

(*p*) 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 ;

(*q*) a first aid outfit complying with the provisions of Part VI of the Thirteenth Schedule to these Rules ;

(*r*) an electric torch suitable for morse-signalling together with two spare sets of batteries and two spare bulbs ;

(*s*) a daylight-signalling mirror ;

(*t*) a jack-knife fitted with a tin opener to be kept attached to the lifeboat or boat with a lanyard ;

(*u*) two light buoyant heaving lines ; and

(*v*) a manual pump complying with the provisions of Part VII of the Thirteenth Schedule to these Rules.

(2) In ships of Class X, the lifeboats or boats shall not be required to carry the equipment specified in sub-paragraph (*s*) of paragraph (1) of this Rule.

(3) In ships of Classes II, II(A), VIII, and VIII(A), ships of Class X which do not proceed north of latitude 61°N. or south of latitude 48° 30′N or west of longitude 12°W. and ships of Class XI which do not proceed outside Home-trade limits, the lifeboats or boats shall not be required to carry the equipment specified in sub-paragraphs (*i*) and (*s*) of paragraph (1) of this Rule.

(4) In ships of Classes III, IV, and VI(A), the lifeboats shall not be required to carry the equipment specified in sub-paragraphs (*i*), (*j*), (*m*), (*n*), (*o*), and (*s*) of paragraph (1) of this Rule.

(5) In ships of Class IX, the lifeboats shall not be required to carry the equipment specified in sub-paragraphs (*i*), (*j*), (*m*), (*o*), and (*s*) of paragraph (1) of this Rule.

(6) The equipment of every boat carried in ships of Classes V and IX(A) shall be as follows:—

(*a*) a single banked complement of oars and a steering oar; one set of crutches attached to the boat by lanyard or chain; a boat hook;

(*b*) two plugs for each plug hole;

(*c*) a bailer;

(*d*) a rudder attached to the boat and a tiller;

(*e*) a lifeline becketed round the outside of the boat; and

(*f*) a painter of sufficient length and size.

(7) The equipment of every boat carried in a ship of Class VI shall be as follows:—

(*a*) a single banked complement of oars and a steering oar; one set of crutches attached to the boat by lanyard or chain; a boat hook;

(*b*) two plugs for each plug hole;

(*c*) a bailer;

(*d*) a rudder attached to the boat and a tiller;

(*e*) a lifeline becketed round the outside of the boat;

(*f*) a painter of sufficient length and size;

(*g*) a sea anchor complying with the provisions of Part II of the Thirteenth Schedule to these Rules; and

(*h*) a hatchet.

(8) The equipment of every lifeboat or boat carried in a ship of Class XII shall be as follows:—

(*a*) four oars, with crutches; a boat hook;

(*b*) two plugs for each plug hole;

(*c*) a bucket and a bailer;

(*d*) a rudder attached to the lifeboat or boat and a tiller;

(*e*) a lifeline becketed round the outside of the lifeboat or boat;

(*f*) a sea anchor complying with the provisions of Part II of the Thirteenth Schedule to these Rules;

(*g*) a painter;

(*h*) six hand flares complying with the provisions of Part IV of the Thirteenth Schedule to these Rules; and

(*i*) an electric torch suitable for morse-signalling, together with two spare sets of batteries and two spare bulbs.

(9) 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.

(10) Every motor lifeboat shall carry two portable fire extinguishers capable of discharging froth, or other substance suitable for quenching oil fires, a receptacle containing a sufficient quantity of sand and a scoop for distributing the sand.

Rations for Lifeboats and Boats (other than Class C Boats)

33.—(1) Every lifeboat carried in a ship of Class I, VII or VII(A) and every lifeboat or boat (other than a Class C boat) carried in a ship of Class X or XI shall be provided with at least the rations specified in the following scale for each person whom it is fit to accommodate :—

(*a*) 3 quarts of fresh water, the quantity to be increased as far as is practicable ;

(*b*) 16 ounces of biscuits ;

(*c*) 16 ounces of barley sugar ;

(*d*) 16 ounces of sweetened condensed milk of first quality ;

Provided that the rations specified in sub-paragraphs (*b*), (*c*), and (*d*) of this paragraph shall not be required to be provided in any lifeboat or boat carried in a ship of Class X which is equipped with one or more inflatable liferafts in accordance with the provisions of these Rules, or carried in a ship of Class XI which does not proceed outside Home-trade limits.

(2) Every lifeboat carried in a ship of Class II, II(A), III, IV, VIII, VIII(A), or IX shall be provided with at least 3 quarts of fresh water for each person whom it is fit to accommodate, the quantity to be increased as far as is practicable.

(3) The water shall be kept in the lifeboat or boat in suitable containers and there shall be provided at least one dipper, which shall be attached to the container by a lanyard, and three rust-proof drinking vessels (one graduated in ½, 1, and 2 ounces). The water shall be frequently changed so as to ensure that it is always clean and fit for drinking.

(4) All the foods specified shall be packed in suitable watertight containers labelled to indicate the contents.

Special Equipment for certain Class A Motor Lifeboats

34.—(1) Class A motor lifeboats carried in compliance with Rule 3 or Rule 4 of these Rules shall be provided with the following equipment:—

(*a*) radiotelegraph equipment, which shall comply with the provisions of paragraph (2) of this Rule ;

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

(*c*) 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.

(2) Radiotelegraph equipment carried in compliance with sub-paragraph (*a*) of paragraph (1) of this Rule, in addition to complying with such of the

requirements of the Merchant Shipping (Radio) Rules, 1952(a), as apply thereto, shall comply with the following requirements:—

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

(*b*) the arrangements shall be such that the efficient operation of the transmitter and receiver shall not be interfered with by the motor lifeboat engine, whether a battery is on charge or not; and

(*c*) the radiotelegraph battery shall not be used to supply power to any engine-starting motor or ignition system.

Equipment and Rations for Class C Boats

35. The equipment and rations provided in every Class C boat shall be as follows:—

(*a*) a single banked complement of four oars and two spare oars; six crutches attached to the boat by lanyards or chains; 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 suitable for the stowage of small items of equipment;

(*f*) a hatchet;

(*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 compass in binnacle complying with the provisions of Part I of the Thirteenth Schedule to these Rules;

(*j*) a sea anchor complying with the provisions of Part II of the Thirteenth Schedule to these Rules;

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

(*l*) two parachute distress signals complying with the provisions of Part III of the Thirteenth Schedule to these Rules and six hand flares complying with the provisions of Part IV of the Thirteenth Schedule to these Rules;

(*m*) two buoyant smoke signals complying with the provisions of Part V of the Thirteenth Schedule to these Rules;

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

(*o*) an electric torch suitable for morse-signalling together with two spare sets of batteries and two spare bulbs;

(*p*) a jack-knife fitted with a tin-opener to be kept attached to the boat with a lanyard;

(*q*) two light buoyant heaving lines; and

(*r*) two gallons of fresh water, which shall be kept in the boat in a suitable container and frequently changed so as to ensure that it is

(a) S.I. 1952/1956 (1952 II, p. 1932.)

always clean and fit for drinking; a dipper, which shall be attached to the container by a lanyard; and a rust-proof drinking vessel, graduated in ½, 1, and 2 ounces.

Security of Equipment and Rations in Lifeboats and Boats

36.—(1) All items of equipment provided in a lifeboat or boat which are not kept in the locker shall, with the exception of the boat hook which shall be kept free for fending off purposes, be lightly lashed within the lifeboat or boat. The 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 loading of, or impede ready entry into, the lifeboat or boat.

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

Equipment and Rations for Inflatable Liferafts

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

(*a*) two sea anchors, one permanently attached to the liferaft and one spare with line;

(*b*) for liferafts which are fit to accommodate not more than twelve persons: one bailer, one sponge, and one safety-knife;

for liferafts which are fit to accommodate thirteen persons or more but not more than twenty-five persons: two bailers, two sponges, and two safety-knives;

for liferafts which are fit to accommodate twenty-six persons or more: three bailers, three sponges, and two safety-knives.

(*c*) one topping-up pump or bellows;

(*d*) one repair kit capable of repairing punctures in the buoyancy compartments;

(*e*) one rescue quoit attached to at least 100 feet of line;

(*f*) two paddles;

(*g*) two parachute distress signals complying with the provisions of Part III of the Thirteenth Schedule to these Rules;

(*h*) six hand flares complying with the provisions of Part IV of the Thirteenth Schedule to these Rules;

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

(*j*) one daylight-signalling mirror and one signalling whistle;

(*k*) one fishing line and six hooks;

(*l*) 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 whom the liferaft is fit to accommodate;

(*m*) three one-pound rust-proof containers of fresh water for each person whom the liferaft is fit to accommodate, of which one container per person may be replaced by a suitable de-salting apparatus capable of producing an equal amount of fresh water;

(*n*) one rust-proof drinking vessel, graduated in ½, 1, and 2 ounces;

(*o*) three safety tin-openers ;

(*p*) six seasickness tablets for each person whom the liferaft is fit to accommodate ;

(*q*) a first aid outfit complying with the provisions of Part VIII of the Thirteenth Schedule to these Rules ; and

(*r*) instructions printed in the English language on how to survive in the liferaft.

(2) In ships of Classes II and II(A), one or more inflatable 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 (*f*) inclusive, (*i*), and (*r*) of paragraph (1) of this Rule, and with one-half of the equipment specified in sub-paragraphs (*g*) and (*h*) of the said paragraph, and the remainder of the inflatable liferafts carried shall be provided with the equipment specified in paragraphs (*a*) to (*f*) inclusive and (*r*) of the said paragraph.

(3) In ships of Classes III, IV, V, VI, VI(A), and IX(A), inflatable liferafts shall be provided with the equipment specified in sub-paragraphs (*a*) to (*f*) inclusive and (*r*) of paragraph (1) of this Rule.

Stowage of Life-Saving Appliances

General Provisions relating to Stowage

38. The arrangement of each lifeboat, boat, inflatable liferaft, and article of buoyant apparatus shall be such that it will not interfere with the operation of other lifeboats, boats, inflatable liferafts, or buoyant apparatus.

Stowage and Handling of Lifeboats and Boats

39.—(1) Lifeboats and other boats shall be so stowed that:—

(*a*) they can be put into the water safely and in the shortest possible time ;

(*b*) they will not impede in any way the marshalling of the persons on board at the launching stations or their embarkation.

(2) Lifeboats and boats attached to davits, other than mechanically controlled single-arm davits, and lifeboats stowed under lifeboats attached to davits shall be so arranged that even under unfavourable conditions of list and trim they can be launched and as large a number of persons as possible can be embarked in them.

(3) Lifeboats and boats attached to mechanically controlled single-arm davits shall be so stowed that they can readily be placed in the water on either side of the ship, or, if the ship has a list, on the side which is lower in the water ;

Provided that this paragraph shall not apply to lifeboats or boats attached to mechanically controlled single-arm davits fitted in ships of Class IX of under 500 tons gross tonnage and of less than 150 feet in length in accordance with paragraph (3) of Rule 15 of these Rules.

(4) In passenger steamers not more than one lifeboat shall be served by a single set of davits ;

Provided that, in any ship in which this arrangement is impracticable, the lifeboats may, subject to any other provisions of these Rules relating to stowage, be stowed one above the other, or, if the Minister permits in the case of any ship and subject to such conditions as he may impose, they may be fitted one within another.

(5) If in a passenger steamer a lifeboat is stowed underneath another lifeboat there shall be provided removable supports or other appliances to secure that the weight of the upper lifeboat is not unduly supported by the lifeboat underneath it.

(6) Lifeboats may 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.

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

(9) Davits, falls, blocks, and all other gear provided in accordance with this Rule or the Fourteenth Schedule to these Rules shall comply with the provisions of the said Fourteenth Schedule.

(10) (*a*) in ships of over 150 feet in length of Classes I, II, II(A), III, VII, VII(A), VIII, VIII(A), and IX, in ships of 500 tons gross tonnage or over of Classes VIII and IX and in ships of 145 feet in length or over of Class X, the davits shall be of the following types :—

(i) luffing or gravity type for operating lifeboats weighing not more than four tons in their turning out condition ;

(ii) gravity type for operating lifeboats weighing more than four tons in their turning out condition ;

Provided that this sub-paragraph shall not apply to ships of Class VIII, VIII(A), or X which carry either a lifeboat or a Class C boat in accordance with sub-paragraph (*a*) of paragraph (4) of Rule 13 of these Rules or sub-paragraph (*b*) of paragraph (2) of Rule 17 of these Rules or to ships of Class IX which carry a lifeboat or Class C boat attached to a mechanically controlled single-arm davit so that it can be placed in the water on either side of the ship, or, if the ship has a list, on the side which is lower in the water.

(*b*) In ships of Class X which carry a lifeboat in accordance with sub-paragraph (*a*) of paragraph (3) or sub-paragraph (*a*) of paragraph (4) of Rule 17 of these Rules or a Class C boat in accordance with sub-paragraph (*b*) of paragraph (2) or sub-paragraph (*b*) of paragraph (3) of the said Rule 17, the davit shall be of the mechanically controlled single-arm type.

(11) In ships (other than those ships in which the lifeboat is attached to a mechanically controlled single-arm davit) in which the boat deck is more than 15 feet above the load line indicating the deepest submersion of the ship permitted by the Merchant Shipping (Safety and Load Line Conventions) Act, 1932(**a**), arrangements shall be made to facilitate launching the lifeboats against an adverse list.

(12) (*a*) In ships of Classes I, II, VII, VII(A), and VIII, which are fitted with davits, and in ships fitted with mechanically controlled single-arm davits, the lifeboats or boats shall be served by wire rope falls and by winches ;

Provided that the Minister may allow other types of falls to be fitted to any emergency boat carried in compliance with paragraph (4) of Rule 3 or paragraph (4) of Rule 4 of these Rules, and in ships where, having regard to the height of the boat deck above the lightest sea-going draught or to other circumstances, he is satisfied that such other falls are adequate.

(*b*) In ships of Classes II(A), III, VIII(A), and IX which are fitted with davits, wire rope falls, together with winches, shall be fitted for operating lifeboats weighing more than four tons in fully loaded condition.

(**a**) 22 & 23 Geo. 5. c. 9.

(13) In ships other than those ships in which the lifeboat or boat is attached to a mechanically controlled single-arm davit, two life lines shall be fitted to the davit spans of all lifeboats and the falls and life lines shall be long enough to reach the water with the ship at her lightest seagoing draught and listed to 15 degrees either way. 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 provisions of the Fifteenth Schedule to these Rules is fitted.

(14) Lifeboats and boats attached to davits shall have the falls ready for service, and means shall be provided for speedily detaching the lifeboats or boats from the falls. The points of attachment of the lifeboats or boats to the falls shall be so situated as to ensure that the lifeboats or boats can be easily swung clear of the davits.

(15) Where more than one lifeboat is served by the same set of davits, separate falls shall be provided to serve each lifeboat unless the falls are of wire rope. The appliances used shall be such as to ensure lowering the lifeboats rapidly and in turn. Where power appliances are fitted for the recovery of the falls, efficient hand gear shall also be provided.

Stowage of Inflatable Liferafts, Buoyant Apparatus, Lifebuoys, and Lifejackets

40.—(1) Inflatable liferafts and buoyant apparatus shall be so stowed that they are at all times fit for use and can be put into the water safely and rapidly even under unfavourable conditions of list and trim.

(2) 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.

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

Miscellaneous Provisions

Embarkation into Lifeboats

41.—(1) In every ship which carries lifeboats arrangements shall be made to ensure that it is possible to effect embarkation into the lifeboats 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) In ships of Classes I, II, II (A), III, VII, VII (A), VIII, VIII (A), IX, and XI one ladder shall be carried at each set of davits. The ladders 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.

(4) Ships of Classes I, II, II (A), III, VII, VII (A), VIII, VIII (A) and IX shall be provided with means situated outside the engine room whereby any discharge of water into the lifeboats can be prevented.

Manning of Lifeboats

42.—(1) In ships of Classes I, II II(A), 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 men placed under his orders are acquainted with their several duties.

(2) In ships of Classes I, II, and II(A) a man capable of working the radiotelegraph and searchlight equipment shall be assigned to each lifeboat carrying such equipment.

(3) In ships of Classes I, II, II (A), VII, VII (A), and VIII a man capable of working the motor shall be assigned to each motor lifeboat.

Certificated Lifeboatmen

43.—(1) The crew of every ship of Class I, II, II (A), or 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 :—

Prescribed complement of lifeboat	*Minimum number of Certificated Lifeboatmen*
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 Minister who, on being satisfied that he has had sufficient service at sea and has been trained in all the operations connected with launching lifeboats and the use of oars, that he is acquainted with the practical handling of the boats themselves and, further, that he is capable of understanding and answering the orders relative to lifeboat service, may issue a certificate to him.

(3) In this Rule,

" certificated lifeboatmen " means any members of the crew who hold a certificate issued by or under the authority of the Minister in accordance with the conditions laid down in paragraph (2) of this Rule ; and

" prescribed complement " means the number of persons which a lifeboat is fit to accommodate under these Rules.

Portable Radiotelegraph Equipment

44. The portable radiotelegraph equipment required to be carried by paragraph (11) of Rule 3, paragraph (14) of Rule 4, paragraph (4) of Rule 11, paragraph (6) of Rule 13, or paragraph (2) of Rule 15 of these Rules shall comply with such of the requirements of the Merchant Shipping (Radio) Rules, 1952, as apply thereto, and shall be kept in the chart room of the ship or other suitable place, ready to be moved into a lifeboat in case of emergency.

Electrically Operated Signals

45. 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.

Electric Lighting

46.—(1) In every ship of Class I, II, or II (A) an electric lighting system shall be provided throughout the ship and in particular upon the decks on which the lifeboats are stowed. Provision shall also be made in every such ship for the electric lighting of the launching gear and of the lifeboats in process of and immediately after being launched. The lighting shall be 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 Rule 36 of the Merchant Shipping (Construction) Rules, 1952.

(2) In every ship of Class I, II, or II(A) 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 Rule 36 of the Merchant Shipping (Construction) Rules, 1952.

(3) In every ship of Class VII, VII(A), VIII, VIII(A), IX, IX(A), X, or XI means shall be provided for the electric lighting of the launching gear and lifeboats or boats during the process of launching.

Ships' Distress Signals

47.—(1) Every ship of Class I, II, II(A), III, VII, VII(A), or VIII and every ship of 50 feet in length or over of Class VIII(A), IX, X, or XI shall be provided with not less than twelve parachute distress rocket signals which shall comply with the provisions of the Sixteenth Schedule to these Rules.

(2) Every ship of Class IV or VI(A), every ship of less than 50 feet in length of Class VIII(A), IX, X, or XI, and every ship of Class XII shall be provided with not less than twelve pyrotechnic distress signals which shall be either parachute distress rocket signals of a type which complies with the provisions of the Sixteenth Schedule to these Rules or red hand flares capable of emitting five red stars into the air to a height of not less than 150 feet.

(3) Every ship of Class VI shall carry at least two buoyant smoke signals complying with the provisions of Part V of the Thirteenth Schedule to these Rules.

(4) All pyrotechnic distress signals shall be packed in a watertight container and shall be clearly and indelibly labelled to indicate their purpose.

Equivalents and Exemptions

48.—(1) Where these Rules require that a particular fitting, appliance or apparatus, or type thereof, shall be fitted or carried in a ship, or that any particular provision shall be made, the Minister may allow any other fitting, appliance or apparatus, or type thereof to be fitted or carried, or any other provision to be made in that ship if he is satisfied by trial thereof that such other fitting, 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 Minister, 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, he may allow one or more sets of davits to be dispensed with in that ship subject to such conditions, if any, as he thinks fit;

Provided that, in the case of ships of Classes I, II, and II (A) the number of sets of davits fitted shall, subject to the provisions of paragraph (7) of Rule 4 of these Rules, in no case be less than the minimum number determined by Column B of the table set out in the First Schedule to these Rules.

(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 the United Kingdom, the Minister may, subject to such conditions as he thinks fit, allow as regards the part of the voyage between such specified ports or places, modifications of the provisions of paragraphs (5) and (12) of Rule 3 of these Rules (which relate respectively to lifeboats and buoyant apparatus);

Provided that where such modifications are allowed the total number of lifeboats carried shall together provide at least the capacity specified in Column C of the table set out in the First Schedule to these Rules, the total number of lifeboats together with such buoyant apparatus as is carried shall be always sufficient for the total number of persons which the ship is certified to carry and in addition buoyant apparatus shall be carried sufficient to support 10 per cent. of that number of persons.

(4) The Minister 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 it complies with safety requirements which in his opinion 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 Minister may allow a smaller lifeboat or boat to be carried by that ship.

(6) The Minister may, subject to such conditions as he thinks fit, exempt any ship of Class II the keel of which was laid before the coming into operation of these Rules from any of the requirements of Rule 4 of these Rules relating to the carriage of inflatable liferafts if he is satisfied that compliance with that requirement is either impracticable or unreasonable in the case of that ship.

(7) The Minister may, either absolutely or subject to such conditions as he thinks fit, exempt from any of the requirements of these Rules—

(*a*) any ship the keel of which was laid before 19th November, 1952, and

(*b*) any ship the keel of which was laid before the coming into operation of these Rules, other than ships of Classes I and II, ships of 500 tons gross tonnage or over of Classes VII, VII(A), and VIII, and ships of Class IX which are of 500 tons gross tonnage or over and engaged on international voyages,

if he is satisfied that compliance with that requirement is either impracticable or unreasonable in the case of that ship.

Given under the Official Seal of the Minister of Transport and Civil Aviation this third day of April, 1958.

(L.S.)

Harold Watkinson,
The Minister of Transport and Civil Aviation.

FIRST SCHEDULE

Table showing the minimum numbers of sets of davits to be provided and the minimum cubic capacity of lifeboats in ships of Classes I, II, and II (A).

Rules 3, 4, and 48.

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

SECOND SCHEDULE

Table showing the minimum number of sets of davits to be provided in ships of Classes III and IV.

Rules 6 and 7

Length of ship in feet	*Minimum numbers of sets of davits*
Under 200	2
200 and under 240	3
240 „ „ 280	4
280 „ „ 320	5
320 and over	6

THIRD SCHEDULE

Requirements for Lifeboats

Rule 20

(1) Every lifeboat shall be an open boat constructed with rigid sides.

(2) The 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. It 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 a full complement of persons and equipment.

(3) No lifeboat shall be less than 16 feet in length.

(4) No lifeboat, when fully laden with persons (calculated at 165 pounds per person) and equipment, shall weigh more than 20 tons.

(5) In every lifeboat all thwart and side seats shall be fitted as low in the lifeboat as practicable, and bottom boards shall be fitted so that the thwarts shall not be more than 2 feet 9 inches above them.

(6) Every lifeboat shall have a mean sheer at least equal to 4 per cent. of its length.

(7) Every lifeboat shall be fitted with internal buoyancy appliances, which shall be so placed as to secure stability when the lifeboat is fully laden under adverse weather conditions.

(8) The internal buoyancy appliances shall consist either of air cases constructed of copper or muntz metal of not less than 18 ounces to the superficial foot, or of other equally suitable material.

(9) The total volume of the internal buoyancy appliances in a wooden lifeboat shall be at least equal to one-tenth of the cubic capacity of the lifeboat.

(10) The buoyancy of a lifeboat which is made of any material other than wood shall be not less than that required for a wooden lifeboat of the same cubic capacity, and the volume of the internal buoyancy appliances shall be increased accordingly.

(11) The volume of the internal buoyancy appliances of a motor lifeboat shall be at least equal to that of the buoyancy appliances which would be required under these Rules if the lifeboat were not a motor lifeboat and shall be increased above that volume to the extent that such increase is necessary to compensate for the difference between (*a*) the weight of the motor and its accessories and any equipment with which the lifeboat may be provided in compliance with Rule 34 of these Rules, and (*b*) the weight of the additional persons which the lifeboat could accommodate if the motor and its accessories and any equipment with which the lifeboat may be provided in compliance with Rule 34 of these Rules were removed.

The volume of the internal buoyancy appliances of a mechanically propelled lifeboat shall similarly be increased to compensate for the weight of the propelling gear.

(12) In the case of lifeboats which accommodate 100 or more persons the volume of the buoyancy appliances shall be increased beyond the volume required by paragraph (11) of this Schedule to such extent as will ensure the seaworthiness of the lifeboat.

FOURTH SCHEDULE

Calculation of Cubic Capacity of Lifeboats

Rule 21

(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, that is to say, by the following formula :—

$$\text{Cubic Capacity} = \frac{L}{12}(4A + 2B + 4C), \text{ where}$$

L denotes the length of the boat in feet from the inside of the planking or plating at the stem to the corresponding point at the stern post; in the case of a boat with a square stern the length is measured to the inside 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 boat 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 :—

$$\text{Area} = \frac{h}{12}(a + 4b + 2c + 4d + e), \text{ where}$$

h denotes the depth measured in feet inside the planking or plating 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 planking or plating 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 to 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.

(4) Unless the owner of the lifeboat requires the cubic capacity to be determined by exact measurement, the cubic capacity 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 stem to the corresponding point at the stern post, or in the case of a square-sterned lifeboat, to the after side 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 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 shall be obtained from the gross capacity by deducting a volume equal to that occupied by the motor and its accessories, and any equipment with which the lifeboat may be provided in compliance with Rule 34 of these Rules.

FIFTH SCHEDULE

MACHINERY OF MOTOR LIFEBOATS

PART I

Class A motor lifeboats

Rule 22 (1)

(1) The engine shall be capable of being started readily 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 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 heavy weather.

(4) 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 and relief arrangements. No part of the tank or its connections shall depend on soft solder for tightness, and tanks made of steel shall be galvanised or metal sprayed externally. The tank and its connections shall be capable of withstanding hydraulic pressure corresponding to a head of at least 15 feet.

(6) The engine shall be covered in and the casing shall be of steel or be fireproofed.

(7) The engine and fuel tank spaces shall be efficiently ventilated.

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

PART II

Class B motor lifeboats

Rule 22 (2)

(1) The engine shall be capable of being started readily 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 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 heavy weather.

(4) In a wooden lifeboat a metal tray shall be fitted under the engine.

(5) The magneto, carburettor, and air inlet of any electric ignition engine installed in the lifeboat shall be placed as high as possible. If an electric ignition engine is not fitted in a watertight casing, provision shall be made to protect the magneto, sparking plugs, and other electric ignition fittings from the sea.

(6) The fuel tank shall be substantially constructed, securely fixed in position with a metal tray underneath, and fitted with suitable filling and relief arrangements. No part of the tank or its connections shall depend on soft solder for tightness, and tanks made of steel shall be galvanised or metal sprayed externally. The tank and its connections shall be capable of withstanding hydraulic pressure corresponding to a head of at least 15 feet.

(7) The engine shall be covered in and the casing shall be of steel or be fireproofed.

(8) The engine and fuel tank spaces shall be efficiently ventilated.

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

SIXTH SCHEDULE

Machinery of Mechanically Propelled Lifeboats

Rule 23

(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 in 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.

(5) The propelling gear shall be of sufficient power to enable the lifeboat, when loaded with the usual equipment 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 3·5 knots in smooth water over a distance of ½ mile.

(6) The propelling gear shall be capable of propelling the lifeboat ahead and astern.

SEVENTH SCHEDULE

Requirements for Class C Boats

Rule 24

(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 the greatest number of persons for whom seating is provided and with its full equipment.

(3) The length of the boat shall be at least

18 feet for a ship whose length is 145 feet or over;

17 feet for a ship whose length is 115 feet or over and less than 145 feet;

16 feet for a ship whose length is 70 feet or over and less than 115 feet.

(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) The internal buoyancy appliances shall consist either of air cases constructed of copper or muntz metal of not less than 18 ounces to the superficial foot, or of other equally suitable material.

(8) The total volume of the internal buoyancy appliances in a wooden Class C boat shall be at least equal to seven and one-half per cent. of the cubic capacity of the boat which shall be determined in accordance with paragraph (4) of the Fourth Schedule to these Rules.

(9) The buoyancy of a Class C boat which is made of any material other than wood shall be not less than that required for a wooden Class C boat of the same cubic capacity, and the volume of the internal buoyancy appliances shall be increased accordingly.

(10) The minimum number of persons for whom seating shall be provided shall be equal to the greatest whole number obtained by dividing by thirteen and one-third the cubic capacity of the boat in cubic feet.

EIGHTH SCHEDULE

Requirements for Inflatable Liferafts

Rule 25

(1) Every inflatable liferaft shall be so constructed that, when fully inflated and floating with the cover uppermost, it shall be stable in a seaway.

(2) 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.

(3) The liferaft shall be fitted with a cover which shall be capable of protecting the occupants against injury from exposure, and means shall be provided for collecting rain. The top of the cover shall be fitted with a lamp which derives its luminosity from a sea-activated cell.

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

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

(*b*) by other equally efficient means not dependent on inflation.

(5) The liferaft shall be contained in a valise or other container so constructed as to be capable of withstanding hard wear under conditions met with at sea.

(6) The liferaft shall be inflated by a suitable gas and the inflation shall take place automatically either on the pulling of a line or by some other equally simple and efficient method.

(7) The liferaft shall be fitted with a painter and shall have a line securely becketed round the outside.

(8) The liferaft shall be capable of being readily righted if it inflates in an inverted position.

(9) The liferaft shall be fitted with efficient means to enable persons in the water to climb on board.

(10) The buoyancy of the liferaft shall be so arranged as to ensure by a division into two separate compartments each 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.

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

NINTH SCHEDULE

Requirements for Buoyant Apparatus

Rule 26

(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 the following :—

Apparatus carried in ships of Class I	60 feet
Apparatus carried in ships of Class III	20 feet

(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. If the buoyancy is provided by metal air cases, such air cases shall be of copper, muntz metal, or other durable material, and not more than 4 feet in length. If the air cases are more than 2 feet 6 inches in length or breadth they shall be efficiently stiffened by divisions or stays. The air cases shall not be pierced for the attachment of wood divisions or stays. They shall be protected from damage by properly fitted wood casing or sparring and be secured against movement within the casing. No iron work shall be placed in contact with metal air cases.

(5) The framework of buoyant apparatus shall be of hardwood, but the wood casing or sparring may be of softwood. The method of securing the corners shall be such as to avoid fastenings into end grain timber. The interior of the apparatus shall be well ventilated. There shall be no projections from the apparatus which would prevent it from sliding easily over a ship's rail during launching.

(6) 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 1¼ 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.

(7) Buoyant apparatus shall be fitted with a painter.

(8) 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.

(9) Buoyant apparatus carried in ships of Class I shall not be less than 3 feet 6 inches in breadth.

TENTH SCHEDULE

Requirements for Lifebuoys

Rule 28

(1) Every lifebuoy shall be constructed of cork, evenly formed, and securely plugged, or other equally efficient buoyant material, and shall be capable of floating in fresh water for at least 24 hours with 32 pounds of iron suspended from it.

(2) The buoyant material shall be covered with good quality material, the sewing of which shall be carried out with thread of not less strength than No. 25A cord.

(3) The 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 requiring inflation.

(4) The inside diameter of the 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) The completed lifebuoy shall be well coated with paint.

(6) The lifebuoy shall be fitted with grab lines which shall be of good quality unkinkable line, well secured to the cover by sewing or seizing, and, in addition, by bands of a double thickness of the covering material 3 inches wide around the section of the lifebuoy at four equidistant points, providing four loops of line each not less than 2 feet 4 inches long.

(7) The weight of the lifebuoy shall not exceed 13 pounds 8 ounces.

ELEVENTH SCHEDULE

Requirements for Lifejackets

Rule 30

(1) Every lifejacket shall be capable of being fitted on the body and shall be reversible, so that if it is worn back-to-front or inside out, it will satisfy the requirements of sub-paragraphs (*a*), (*b*), and (*c*) of paragraph (3) of this Rule.

(2) Every lifejacket shall be suitable for both children and adults.

(3) The distribution of buoyancy in the lifejacket shall be such as to ensure that when worn by a person in the water it will comply with the following conditions:—

(*a*) when the wearer is inert the position of the body shall be as near the vertical as possible;

(*b*) when the wearer is inert his head shall be kept clear of the water; and

(*c*) the head shall be so supported that if the wearer becomes unconscious it cannot fall forward and the face become submerged.

(4) The buoyancy of the lifejacket shall not depend on air compartments.

(5) The buoyancy shall be provided by cork, kapok, or other equally efficient buoyant material.

(6) Every cork lifejacket shall be capable of supporting 16 pounds 8 ounces of iron in fresh water for twenty-four hours. The cork shall not weigh more than 12 pounds per cubic foot, and shall be of good quality, cleaned, and in pieces the size of which shall not be less than 10 cubic inches.

(7) Every kapok lifejacket shall be capable of supporting at least 20 pounds of iron in fresh water after floating in fresh water for twenty-four hours with 16 pounds 8 ounces of iron attached. The kapok shall be of the best flotation quality, well teased, evenly packed, and free from seeds and other foreign matters. At least 24 ounces of such kapok shall be in each lifejacket.

(8) The covering of cork lifejackets shall be either:—

(*a*) of cotton material, the weight of which per lineal yard shall be not less than 7½ ounces for a width of 27 inches and in proportion for other widths, and in this case the threads per inch shall be warp 42 two-fold threads, weft 29 two-fold threads; or

(*b*) of linen material, the weight of which per lineal yard shall be not less than 6 ounces for a width of 27 inches and in proportion for other widths, and in this case the threads per inch shall be 28 in both the warp and weft.

(9) The weight of the covering per lineal yard of kapok lifejackets shall be not less than 5 ounces for a width of 27 inches and in proportion for other

widths. The threads per inch shall be warp 38 two-fold threads, weft 54 single threads. The sewing shall be carried out with thread not less strong than No. 25 thread.

(10) The tapes of every lifejacket shall be of linen web 1¼ inches wide capable of bearing a strain of 200 pounds. The tapes shall be securely attached to the lifejacket cover. The method of fixing and tying of the tapes shall be such as to be easily understood and capable of being readily carried out.

(11) Every lifejacket shall be marked indelibly on one side with a name indicating the design of the lifejacket in letters not less than one inch in size, and on the other side with the maker's name or other identification mark in smaller letters.

TWELFTH SCHEDULE

REQUIREMENTS FOR LINE-THROWING APPLIANCES

Rule 31

(1) Every line-throwing appliance shall include 4 rockets and 4 lines, each line being ¼ 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 length of flight of the rocket.

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

(4) Every line-throwing appliance carried in ships of Classes I, II, II(A), III, IV, VII, and VII(A) and in ships of Classes VIII, VIII(A), IX, X, and XI of 75 feet in length or over, shall be capable of throwing a line ½ inch in circumference a minimum distance of 250 yards in calm weather.

(5) Every line-throwing appliance carried in ships of Classes VIII, VIII(A), IX, X, and XI under 75 feet in length, but not under 50 feet in length, shall be capable of throwing a line ½ inch in circumference a minimum distance of 200 yards in calm weather.

THIRTEENTH SCHEDULE

SPECIFICATIONS OF EQUIPMENT FOR LIFEBOATS, BOATS, AND INFLATABLE LIFERAFTS

PART I

Compasses for lifeboats, Class C boats, and other boats

Rules 32 (1) (*j*)
Rule 35 (*i*)

(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 − 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 ¼ inch. It shall be marked to half points, the eight principal points being distinctively marked. The card shall be luminised.

(5) The centre shall be of sapphire or equally hard jewel, and shall be removable from the float.

(6) The pivot 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 a fore and aft and thwartship action. The gimballing shall be in the 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. 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 line. 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 rigid non-magnetic metal ⅜ inch by ¼ inch. Gimbal pins shall be of naval brass or other hard non-magnetic material of ¼ 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 mark.

PART II

Sea anchors for lifeboats, Class C boats, and other boats

Rule 32 (1) (*k*), (7) (*g*), and (8) (*f*)
Rule 35 (*j*)

(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 1¼ 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″ upper edge, 27″ lower edge, 27″ each side. Area of mouth 770 square inches.
Length of canvas bag—4′ 6″.
Hawser—3″ in circumference.
Tripping line—2″ in circumference.

(*b*) For lifeboats over 22 feet in length, but not over 30 feet in length—
Circular sea anchors—Mouth 27″ diameter.
Non-circular folding sea anchors—Mouth 24″ each side.
Length of canvas bag—4′.
Hawser—3″ in circumference.
Tripping line—2″ in circumference.

(*c*) For lifeboats not over 22 feet in length, Class C boats, and other boats—
Circular sea anchors—Mouth 24″ diameter.
Non-circular folding sea anchors—Mouth 21½″ each side.
Length of canvas bag—3′ 6″.
Hawser—2½″ in circumference.
Tripping line—1½″ in circumference.

PART III

Parachute distress rocket signals for lifeboats, Class C boats, other boats, and inflatable liferafts

Rule 32 (1) (*n*)
Rule 35 (*l*)
Rule 37 (1) (*g*)

(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 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 such as to enable the rocket to be discharged from a lifeboat, boat, or inflatable 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 10,000 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 a 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 on 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, Class C boats, other boats, and inflatable liferafts

Rule 32 (1) (*n*) and (8) (*h*)
Rule 35 (*l*)
Rule 37 (1) (*h*)

(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 such as to enable the flare to be displayed from a lifeboat, boat, or inflatable liferaft without harm to the occupants.

(2) Where the flare is carried in an inflatable 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, Class C boats, and other boats

Rule 32 (1) (*o*)
Rule 35 (*m*)
Rule 47 (3)

(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 orange-coloured smoke for a period of not less than two minutes and not more than four minutes. The weight of the composition contained in the signal shall be at least 20 ounces.

(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 and boats (other than Class C boats)

Rule 32 (1) (*q*)

(1) The contents of every first aid outfit provided in a lifeboat or boat 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*) Collapse Revivers (6 Capsules 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 ¼ gr. in 1 c.c. or Papaveretum B.P.C. ¼ gr. in 1 c.c.—e.g. "Omnopon"—in screw capped metal drum with directions for use	1 Drum
(*d*) Standard Dressings No. 14, Medium B.P.C., 6″ x 4″	2
(*e*) Standard Dressings No. 15, Large B.P.C., 8″ x 6″	2
(*f*) Elastic Adhesive Dressings, 2″ x 3″, packets of three ...	2 Packets
(*g*) Bandages, Triangular, illustrated, not less than 38″ side, 54″ base	5
(*h*) Gauze, white, absorbent, compressed, 36″ x 2½ yds.	3
(*i*) Roller Bandages, compressed, 2½″ x 4 yds.	4
(*j*) Bandage, unbleached Calico 6″ x 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 and boats (other than Class C boats)

Rule 32 (1) (*v*)

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

(*b*) 5 gallons per minute in lifeboats of under 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 non-corrodible material unaffected by 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 1½ inches bore rubber hose connections. The metal part of the operating handle shall be suitably sheathed by material other than wood so as to protect the hands of the operator 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 inflatable liferafts

Rule 37 (1) (*q*)

(1) The contents of every first aid outfit provided in an inflatable 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 Dressings No. 14, Medium B.P.C., 6″ x 4″	4
(*b*) Standard Dressings No. 15, Large B.P.C., 8″ x 6″	4
(*c*) Bandages, Triangular, illustrated, not less than 38″ side, 54″ base	4
(*d*) Open Wove Bandages, B.P.C., 3″ x 4 yards	10
(*e*) Antiseptic Burn or Wound Cream, Cetrimide B.P., 0·5 % 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 a morphine salt equivalent to Anhydrous Morphine ¼ gr. in 1 c.c. or Papaveretum B.P.C. ¼ gr. in 1 c.c.—e.g. "Omnopon"—in screw capped metal drum with directions for use	1 Drum
(*h*) Instructions in the English language printed on linen or waterproof paper.	

(2) 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.

FOURTEENTH SCHEDULE

DAVITS AND LIFEBOAT LAUNCHING GEAR

PART I

Construction

Rule 39 (9)

(1) *Definition of "Working Load"*. In this Part of this Schedule the expression "working load" means

(*a*) in relation to davits to which sub-paragraph (*a*) of paragraph (2) of this Part of this Schedule applies, the sum of the weight of the lifeboat, the equipment, the block 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, provided, however, that if two lifeboats are served by the same set of davits, the working load in relation to these davits shall be the maximum load that may be imposed on them at any time;

(*b*) in relation to davits to which sub-paragraph (*b*) or (*c*) of paragraph (2) of this Part of this Schedule applies, the sum of the weight of the lifeboat or boat, the equipment, the blocks and falls, and a launching crew consisting of two members, the weight of each member being taken to be 165 pounds.

(2) *Strength.* (*a*) In ships of Classes I, II, II(A), III, VII, VII(A), VIII, VIII(A), X, and XI and in ships of Class IX of 500 tons gross tonnage or over engaged on international voyages, the davits, falls, blocks, and all other gear shall be of such strength that the lifeboats can be safely lowered when fully loaded with persons and equipment with the ship listed to 15 degrees either way;

Provided that this paragraph shall not apply to davits to which Class C boats are attached or to mechanically controlled single-arm davits fitted in accordance with these Rules;

(*b*) In ships which carry lifeboats or boats attached to mechanically controlled single-arm davits, the davits, falls, blocks, and all other gear shall be of such strength and the operating gear shall be of such power that the lifeboats or boats when fully equipped and manned with a launching crew of two members can be safely lowered on the side which is lower in the water with the ship listed to 25 degrees.

(*c*) In ships of Class IX, other than those of 500 tons gross tonnage or over engaged on international voyages, and in ships in which davits or launching appliances not required by these Rules are provided for lifeboats or boats, such davits or appliances shall be of such strength that the lifeboats or boats when fully equipped and manned with a launching crew of two members can be safely lowered.

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

(*b*) Gravity davits of other types 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 listed up to 25 degrees either way.

(*c*) Where gravity type davits are fitted with means for recovering the lifeboats by power, automatic cutouts shall be fitted and arranged to operate before the davits come against the stops in order to avoid overstressing the wire rope falls or davits.

(4) *Luffing davits.* The operating gear of luffing type davits shall be of sufficient power to ensure that the lifeboats 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.

(5) *Radial davits.* Where radial davits are provided they shall be fitted with means to prevent them from being jerked from their sockets.

(6) *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 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.

(7) *Static load test.* In the case of all davits made of cast steel, or of wrought steel or other material fabricated by a welding process, each davit with its

arm at full outreach 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.

(8) *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 2½ times the load on the attachments.

(9) *Blocks.* (*a*) Lifeboat and boat blocks shall be of ample strength having regard to the working load upon the davits.

(*b*) In the case of metal blocks the material used shall be of ductile quality and adequate strength. No part of gear intended to bear the weight of a lifeboat or boat shall be constructed of cast metal unless the Minister shall so allow in the case of any ship. Each metal block shall be capable of withstanding a proof load test of not less than 2½ times the load on the block. There shall be ample clearance between the cheeks of blocks in which cordage rope is used. The width between the cheeks shall be half an inch greater than the diameter of new cordage ropes when those ropes are 3¼ inches in circumference, and less in proportion in the circumference of the ropes when they are smaller.

(10) *Wire ropes.* (*a*) The breaking tensile load of each wire rope used for lowering lifeboats or other boats shall be not less than six times the load on the wire rope.

(*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 is to be suspended shall be capable of withstanding a proof load of not less than 2½ times the load on such attachments and other parts.

(*c*) Where wire splices are used they shall be capable of withstanding a proof test of not less than 2½ times the load on the splice unless sample splices of each size of wire, when tested to destruction, give a factor of safety at the splice of not less than 5.

(11) *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*) The brakes of lifeboat and boat winches 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 or 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 or boat under observation during the whole process of its being launched into the water.

(*c*) When more than one lifeboat is served by the same wire falls the winches shall be fitted with quick return hand gear to enable the falls to be rapidly recovered, the lower blocks, when fitted, shall be non-toppling, and, where necessary, provision shall be made to prevent the falls from cabling.

(12) *Cordage rope falls.* (*a*) Cordage ropes used for falls shall be durable, unkinkable, firm laid, and pliable. They shall be able to pass freely under any conditions through a hole ⅛ inch larger than the nominal diameter of the rope.

(*b*) The breaking loads of cordage ropes shall be not less than:—

Size of Rope	Breaking Load
3¾ inches	6 tons
3½ „	5·25 „
3¼ „	4·5 „
3 „	3·85 „
2¾ „	3·25 „
2½ „	2·7 „
2¼ „ (" Ordinary quality ") ...	2·2 „

(*c*) Cordage ropes of less than 2¼ inches shall not be used for lifeboat falls. Winding reels or flaking boxes for the falls shall be provided.

(*d*) Where cordage rope falls are used to serve two lifeboats stowed one above another under one pair of davits, a separate set of blocks and falls shall be provided for each lifeboat. The falls for the first lifeboat to be launched shall be attached to the davits and to the lifeboat ready for service. The falls for the second lifeboat to be launched shall be kept in position attached to the davits, but not necessarily attached to the lifeboat, provided that the lower blocks are taken to suitable ring bolts on deck or to strops on the davit or are otherwise arranged in such a manner that the falls will not interfere with the launching of the first lifeboat and will be immediately available for attachment to the second lifeboat.

(13) *Wood blocks for cordage rope falls.* Wood blocks for lifeboats of standard proportions shall be as follows:—

Length of boat not over	Davits in ships of Classes I, II, II (A), III, VII, VII (A), VIII, VIII (A), IX, X, and XI			Davits in ships of Classes IV, V, VI, VI (A), and IX (A)		
	Block	Purchase of falls*	Size of cordage rope	Block	Purchase of falls*	Size of cordage rope
Feet	Ins.		Ins.	Ins.		Ins.
30	13	T & T	3¾	12	T & T	3½
29	13	„	3¾	12	„	3¼
28	13	„	3¾	12	„	3¼
27	12	„	3½	11	„	3
26	12	„	3½	11	T & D	3
25	12	„	3¼	11	„	3
24	11	„	3	10	„	2¾
23	11	T & D	3	10	„	2½
22	10	„	2¾	9	D & D	2½
21	10	„	2½	9	„	2½†
20	9	D & D	2½	9	„	2½†
19	9	„	2½	8	D & S	2½†
18	9	„	2½†	8	„	2½†
17	8	„	2½†	8	„	2½†
16	8	„	2½†	8	„	2½†

* T=Triple D=Double S=Single. † Ordinary quality breaking load 2·2 tons.

(14) *Bollards.* Suitable bollards or other equally effective appliances for lowering lifeboats shall be provided in all cases where cordage rope falls are used. For lifeboats not exceeding 20 feet in length, horn cleats attached to

the davits may be fitted in lieu of bollards. For lifeboats over 20 feet but not exceeding 25 feet in length, a double bollard may be fixed to each davit. For lifeboats over 25 feet in length, bollards of the cruciform type shall be attached to the deck, and in the case of lifeboats not over 27 feet in length the horizontal arms shall be not less than 5 inches in diameter, and sufficiently long to take at least four turns of the largest rope with which they will be used. In the case of lifeboats over 27 feet in length the arms shall be 6 inches in diameter and not less than 6 inches in length from the side of the column. Ample lips or flanges shall be provided at the ends of the arms to prevent the fall from jumping off. Fairleads shall be fitted and be arranged so as to ensure that the lifeboat is not lifted during the process of swinging out.

PART II

Lowering tests

Rule 39 (9)

(1) Each pair of davits to which sub-paragraph (*a*) of paragraph (2) of Part I of this Schedule applies and, where fitted, the lifeboat winches including their hand and automatic brakes shall be capable of withstanding the following test:— if not more than one lifeboat is suspended from the davits when in the outboard position the lifeboat at each set of davits shall be lowered from the embarkation deck into the water loaded with the usual equipment and a distributed weight equal to the full number of persons which it is fit to accommodate plus 10 per cent. of the total load, including blocks and falls; if two lifeboats are suspended from the davits when in the outboard position, the heavier lifeboat loaded as indicated above shall be lowered from the embarkation deck into the water while the other lifeboat, with its blocks and falls and loaded with the usual equipment, plus 10 per cent. of the weight of the lifeboat, equipment, blocks and falls is suspended from the davits. Winch breaks exposed to the weather shall be capable of withstanding the foregoing test with the braking surface wetted.

(2) In the case of davits to which sub-paragraph (*b*) or (*c*) of paragraph (2) of Part I of this Schedule applies, the lifeboat or boat shall be lowered into the water with the usual equipment and a distributed weight equal to the weight of a launching crew of two members, each weighing 165 pounds, plus 10 per cent. of the total working load.

FIFTEENTH SCHEDULE

LIFEBOAT DISENGAGING GEARS

Rule 39 (13)

(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 upon 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 2½ times the weight of the heaviest loaded lifeboat in which the gear is intended to be fitted.

SIXTEENTH SCHEDULE

Ships' Parachute Distress Rocket Signals

Rule 47 (1) and (2)

(1) Every ships' 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 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 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 25,000 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 water-proofed.

(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 shall be printed indelibly on the rocket.

EXPLANATORY NOTE

(This Note is not part of the Rules, but is intended to indicate their general purport.)

(1) These Rules revoke and consolidate with amendments the Merchant Shipping (Life-Saving Appliances) Rules, 1952, and the Merchant Shipping (Life-Saving Appliances) (Amendment) Rules, 1956.

(2) The Rules arrange ships into classes and provide for the life-saving appliances to be carried by ships of each class. They include such requirements as appear to the Minister of Transport and Civil Aviation to implement the provisions of the International Convention for the Safety of Life at Sea, 1948, relating to life-saving appliances.

(3) The principal amendments to the Rules previously in force are :—

(*a*) New scales of life-saving appliances are introduced for ships of Classes II, II(A), VIII, VIII(A), IX, and IX(A). These scales require the carriage of inflatable liferafts by ships of Classes II, II(A), VIII, VIII(A), and IX and permit their carriage by ships of Class IX(A) in lieu of a boat, and make a number of other modifications in the requirements for life-saving appliances on these ships.

(*b*) New scales of life-saving appliances are introduced for fishing boats of 145 feet or over in length and new alternative scales for other fishing boats not under 70 feet in length. These scales require the provision of inflatable liferafts in all such ships and permit the carriage of a boat known as a Class C boat in lieu of a lifeboat.

(*c*) Requirements are laid down for the construction and equipment of Class C boats.

(*d*) Specifications are introduced for the hand-held distress flare signals included in the equipment of lifeboats, boats, and inflatable liferafts and for the buoyant smoke signals included in the equipment of lifeboats and boats.

(*e*) Provision is made for certain lifeboats and Class C boats carried in fishing boats to be attached to mechanically controlled single-arm davits. Requirements for the construction and testing of such davits are specified.

(*f*) Alterations and additions are made to the equipment required to be carried in inflatable liferafts.