

1965 No. 1105

## MERCHANT SHIPPING

## SAFETY

## The Merchant Shipping (Life-Saving Appliances) Rules 1965

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The Board of Trade in exercise of their 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 amended by Section 9 of the Merchant Shipping Act 1964(c) and as having effect by virtue of the Transfer of Functions (Shipping and Construction of Ships) Order 1965(d), and of all other powers enabling them in that behalf hereby make the following Rules:—

## PART I—PRELIMINARY

### *Interpretation and Repeal*

1.—(1) These Rules shall come into operation on the 26th May 1965 and may be cited as the Merchant Shipping (Life-Saving Appliances) Rules 1965.

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

“Board” means the Board of Trade;

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

“Certificated lifeboatman” means any member of the crew who holds a certificate issued by or under the authority of the Board in accordance with the conditions laid down in Rule 41(2) of these Rules or any member of the crew who holds a certificate issued by or under the authority of any government outside the United Kingdom which is accepted by the Board as being the equivalent of any certificate issued by or under the authority of the Board;

“Certified” means certified by a certificate issued under Section 274 of the Merchant Shipping Act 1894;

“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;

“Launching appliance” means an appliance complying with the provisions of Rule 38(2) of these Rules;

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

“Lifeboat” means a boat complying with the provisions of Rule 20 of these Rules;

“Liferaft” means a liferaft complying with the provisions of Rule 25 of these Rules;

“Mechanically propelled lifeboat” means a lifeboat (other than a motor lifeboat) complying with the provisions of Rule 23 of these Rules;

“Motor lifeboat” means a lifeboat complying with the requirements of Rule 22 of these Rules;

“Passenger steamer” means a steamer carrying more than 12 passengers;

“Passenger steamer’s certificate” means a passenger steamer’s certificate issued by the Board pursuant to Section 274 of the Merchant Shipping Act 1894;

(a) 57 & 58 Vict. c. 60.  
(c) 1964 c. 47.

(b) 12, 13 & 14 Geo. 6. c. 43.  
(d) S.I. 1965/145 (1965 I, p. 438).



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

"Sailing ship" includes a ship provided with sufficient sail area for navigation under sails alone, whether or not fitted with mechanical means of propulsion;

"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;

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

(3) These Rules apply to—

(a) British ships, except ships registered in a Dominion within the meaning of the Statute of Westminster 1931 or in India, Pakistan, Ceylon, Ghana, Malaysia, the Republic of Cyprus, Nigeria, Sierra Leone, Tanzania, Jamaica, Trinidad and Tobago, Uganda, Kenya, Malawi, Malta, Zambia, The Gambia, the Republic of Ireland or in any territory administered by Her Majesty's Government in any such Dominion;

(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 are of less than 45 feet in length.

(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 and as if these Rules and the Rules hereby revoked were Acts of Parliament.

(5) The Merchant Shipping (Life-Saving Appliances) Rules 1958(b) and the Merchant Shipping (Life-Saving Appliances) (Amendment) Rules 1959(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 (not being short international 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.

*Class II(A).* Passenger steamers in respect of which there is or should be in force a certificate entitled "Passenger Certificate Class II(A)" being a certificate for ships engaged on voyages of any kind other than international voyages.

*Class III.* Passenger steamers in respect of which there is or should be in force a certificate entitled "Passenger Certificate Class III" being a certificate for ships engaged only on voyages in the course of which they are at no time more than 70 miles by sea from their point of departure and not

(a) 52 & 53 Vict. c. 63.

(b) S.I. 1958/602 (1958 I, p. 1420).

(c) S.I. 1959/978 (1959 II, p. 1697).

more than 18 miles from the coast of the United Kingdom, and which are at sea only in fine weather and during restricted periods.

*Class IV.* Passenger steamers in respect of which there is or should be in force a certificate entitled "Passenger Certificate Class IV" being a certificate for ships engaged only on voyages in partially smooth waters, or in smooth and partially smooth waters.

*Class V.* Passenger steamers in respect of which there is or should be in force a certificate entitled "Passenger Certificate Class V" being a certificate for ships engaged only on voyages in smooth waters.

*Class VI.* Passenger steamers in respect of which there is or should be in force a certificate entitled "Passenger Certificate Class VI" being a certificate for ships engaged only on voyages with not more than 250 passengers on board, to sea, in smooth or in partially smooth waters, in all cases in fine weather and during restricted periods, in the course of which the ships are at no time more than 15 miles, exclusive of any smooth waters, from their point of departure nor more than 3 miles from land.

*Class VI(A).* Passenger steamers in respect of which there is or should be in force a certificate entitled "Passenger Certificate Class VI(A)" being a certificate for ships carrying not more than 50 passengers for a distance of not more than 6 miles on voyages to or from isolated communities on the islands or coast of Scotland, and which do not proceed for a distance of more than 3 miles from land.

#### *Ships other than Passenger Steamers*

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

*Class VII(A).* Steamers engaged in the whaling industry or employed as fish processing or canning factory ships, and steamers engaged in the carriage of persons employed in the whaling, fish processing or canning industries.

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

*Class IX.* Tugs and tenders (other than ships of Classes II, II(A), III, VI and VI(A)) which proceed to sea but are not engaged on long international voyages.

*Class IX(A).* Steamers (other than ships of Classes IV to VI inclusive) and other ships 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) of 45 feet in length or over.

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

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

"Partially smooth waters" means, as respects any period specified in Schedule 1 to these Rules, the waters of any of the areas specified in the third column of that Schedule in relation to that period;

“Restricted period” means a period falling wholly within the following limits:—

- (a) from 1st April to 31st October, both dates inclusive; and
- (b) between one hour before sunrise and one hour after sunset in the case of ships fitted with navigation lights conforming to the collision regulations, and between sunrise and sunset in the case of any other ships;

“Sea” does not include any partially smooth waters;

“Smooth waters” means any waters not being the sea or partially smooth waters, and in particular means waters of any of the areas specified in the second column of Schedule 1 to these Rules;

“Voyage” includes an excursion.

## PART II—PASSENGER STEAMERS

### *Ships of Class I*

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

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

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

(b) lifeboats and liferafts together providing sufficient aggregate capacity to accommodate the total number of persons which the ship is certified to carry, provided that there shall never be less than sufficient lifeboats on each side of the ship to accommodate 37½ per cent of the total number of persons which the ship is certified to carry, and provided that in the case of any ship, the keel of which was laid before the coming into operation of these Rules, these provisions shall apply only if the total number of persons on board shall not be increased as a result of the provision of liferafts.

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

Notwithstanding the provisions of Rule 37(13) of these Rules, skates or other suitable appliances are not required to be fitted to these lifeboats.

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

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

(5)(a) In every ship to which this Rule applies which is certified to carry 1500 persons or more each of the motor lifeboats carried in compliance with paragraph (4) of this Rule shall be provided with the equipment specified in Rule 33(1) of these Rules, and in every such ship which is certified to carry more than 199 but less than 1500 persons at least one of the motor lifeboats carried in compliance with paragraph (4) of this Rule shall be so provided.

(b) Every motor lifeboat carried in compliance with this Rule shall be provided with the equipment specified in Rule 33(2) of these Rules.

(6) Every ship to which this Rule applies which does not carry on each side of the ship a motor lifeboat provided with the equipment specified in Rule 33(1) of these Rules shall carry portable radio equipment which shall comply with the requirements of Rule 42 of these Rules.

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

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

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

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

(a) if liferafts are also carried in compliance with sub-paragraph (b) of paragraph (2) of this Rule, all liferafts carried shall be of a type capable of being launched by the appliances fitted in compliance with paragraph (9) of this Rule; and

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

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

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

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

(b) In addition to lifejackets carried in compliance with the preceding sub-paragraph, every ship shall carry lifejackets for at least 5 per cent of the number of persons which the ship is certified to carry and such lifejackets shall comply with the requirements of Part I of Schedule 12 to these Rules and shall be stowed on deck in a suitable place which shall be conspicuously marked.

(13) 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 (8) of this Rule and of Rule 46 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 Schedule 2 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 (8) of this Rule, together provide at least the capacity specified in Column C of the table set out in Schedule 2 to these Rules or the capacity required to accommodate the total number of persons which the ship is certified to carry if this is less.

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

Notwithstanding the provisions of Rule 37(13) of these Rules, skates or other suitable appliances are not required to be fitted to these lifeboats.

(5) Every ship to which this Rule applies shall carry on each side of the ship at least one motor lifeboat which shall be provided with the equipment specified in Rule 33(2) of these Rules;

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

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

(7) If in the opinion of the Board the volume of traffic so requires, the Board may permit any ship to which this Rule applies, being a ship which is subdivided in accordance with the requirements of Part III of Schedule 2 to the Merchant Shipping (Passenger Ship Construction) Rules 1965(a) 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 Board, in pursuance of Section 12(5) 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 affording accommodation for at least 75 per cent of the persons on board;
- (b) in all cases liferafts shall be carried so that the total number of lifeboats together with such liferafts shall be sufficient to accommodate the total number of persons which the ship is certified to carry; and
- (c) in any such ship in which a two-compartment standard of subdivision is not achieved throughout by virtue of the application of the provisions of paragraph (9) of Schedule 2 there shall be provided liferafts of sufficient aggregate capacity to accommodate 10 per cent of the total

number of persons which the ship is certified to carry, such liferafts being additional to those required to be provided in compliance with sub-paragraph (b) of this paragraph or with sub-paragraph (b) of paragraph (8) and with paragraph (12) of this Rule.

(8) Where it is shown to the satisfaction of the Board that it is impracticable in a ship engaged on a voyage which is not a long international voyage to stow satisfactorily the liferafts carried in that ship in pursuance of paragraph (7) of this Rule without reducing the number of lifeboats, the Board may permit the number of sets of davits required to be fitted under paragraph (2) of this Rule and Rule 46(2) 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 shall, in the case of ships of 190 feet in length or over, never be less than four, two of which shall be carried on each side of the ship, and in the case of ships of less than 190 feet in length, shall never be less than two, one of which shall be carried on each side of the ship;

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

(c) where the capacity of the lifeboats together provide less than that specified in Column C of the table set out in Schedule 2 to these Rules, there shall be provided liferafts of a type capable of being launched by the appliances referred to in Rule 38(2) of these Rules. The total carrying capacity of such liferafts shall be at least the number obtained by dividing by 10 the difference between the aggregate cubic capacity of the lifeboats and that specified in the said Column C, provided that such liferafts shall together be sufficient for at least forty persons and that at least one launching appliance shall be provided on each side of the ship and that the difference in the number of such appliances fitted on each side shall not exceed one.

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

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

(11) Every ship to which this Rule applies which does not carry on each side of the ship a motor lifeboat provided with the equipment specified in Rule 33(1) of these Rules shall carry portable radio equipment which shall comply with the requirements of Rule 42 of these Rules;

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

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

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

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

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

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

(b) In addition to lifejackets carried in compliance with the preceding subparagraph, every ship shall carry lifejackets for at least 5 per cent of the number of persons which the ship is certified to carry and such lifejackets shall comply with the requirements of Part I of Schedule 12 to these Rules and shall be stowed on deck in a suitable place which shall be conspicuously marked.

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

#### *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 46 of these Rules, be fitted with the number of sets of davits specified in the table set out in Schedule 3 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, liferafts or buoyant apparatus shall be carried as shall be sufficient, together with the lifeboats required by paragraph (3) of this Rule, for the total number of persons which the ship is certified to carry;

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

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

(6) Lifeboat davits required to be carried in compliance with this Rule shall be of the gravity type, except that luffing type davits may be fitted for operating lifeboats weighing not more than  $2\frac{1}{4}$  tons in their turning out condition.

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

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

(9) 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 46 of these Rules, be fitted with the number of sets of davits specified in the table set out in Schedule 3 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) Lifeboat davits required to be carried in compliance with this Rule shall be of the gravity type, except that luffing type davits may be fitted for operating lifeboats weighing not more than  $2\frac{1}{4}$  tons in their turning out condition.

(5) Such additional lifeboats, 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.

(6) 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 less than 200 feet in length shall carry at least four lifebuoys.

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

(8) 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 of 150 feet in length or over shall carry at least two boats, and every ship of 70 feet in length or over and of less than 150 feet in length shall carry at least one boat.

(3) 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 less than 150 feet in length shall carry at least four lifebuoys.

(4) Every ship to which this Rule applies, being a ship which is subdivided in accordance with the requirements of Part IV of Schedule 2 to the Merchant Shipping (Passenger Ship Construction) Rules 1965 shall carry subject to the requirements of paragraphs (2) and (3) of this Rule—

(a) such boats, liferafts or buoyant apparatus as shall be sufficient for 40 per cent of the total number of persons which the ship is certified to carry, and in addition for every person on board weighing 70 pounds or more a lifejacket which shall comply with the requirements of Part I



of Schedule 12 to these Rules and for every person on board weighing less than 70 pounds a lifejacket which shall comply with the requirements of Part II of the said Schedule; or

- (b) such boats, liferafts, buoyant apparatus and lifebuoys as shall be sufficient for the total number of persons which the ship is certified to carry, provided that lifebuoys in excess of 60 per cent of this number shall be discounted.

For the purposes of this paragraph, a lifebuoy shall be deemed sufficient to support two persons.

(5) Every ship to which this Rule applies other than a ship to which paragraph (4) of this Rule applies shall carry, subject to the requirements of paragraphs (2) and (3) of this Rule, the equipment specified in sub-paragraph (b) of paragraph (4) of this Rule.

(6) In every ship to which this Rule applies each boat shall be attached to separate davits.

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

Provided that, in the case of any ship to which this Rule applies of less than 150 feet in length, the Board may permit other types of davit if they are satisfied that the fitting of gravity or luffing type davits is impracticable.

#### *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 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 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 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 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:—

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

(6) In the case of ships to which this Rule applies not exceeding 30 feet in length the Board may permit lifebuoys to be carried in lieu of part or all of the liferafts or buoyant apparatus required to be carried in compliance with paragraphs (3) and (4) of this Rule.

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

#### *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 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 Rule 9(5) of these Rules, so, however, that the liferafts or buoyant apparatus, together with the lifebuoys, shall at all times be sufficient for the total number of persons which the ship is certified to carry during the aforesaid period.

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

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

#### *Ships of Class VII*

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

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

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

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

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

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

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

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

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

- (a) each lifeboat shall not exceed 26 feet in length;
  - (b) each lifeboat shall be stowed as far forward as practicable and at least so far forward that the after end of the lifeboat is one-and-a-half times the length of the lifeboat forward of the ship's propeller;
  - (c) each lifeboat shall be stowed as near the sea level as is safe and practicable; and
  - (d) there shall be carried in addition liferafts sufficient to accommodate at least one-half of the total number of persons on board.
- (7) Liferafts carried under this Rule shall be so stowed that they can be readily transferred to the water on either side of the ship.
- (8) In every ship to which paragraph (2) or (6) of this Rule applies each lifeboat shall be attached to a separate set of davits which shall be of the gravity type except that, in ships other than tankers of 1,600 tons or over, luffing davits may be fitted for operating lifeboats weighing not more than 2½ tons in their turning out condition.
- (9)(a) In every ship to which this Rule applies of 1,600 tons or over other than a tanker one of the lifeboats carried in compliance with paragraph (2) of this Rule shall be a motor lifeboat.
- (b) In every ship to which this Rule applies being a tanker of 1,600 tons or over at least one of the lifeboats carried on each side of the ship in compliance with paragraph (2) or paragraph (6) of this Rule shall be a motor lifeboat.
- (10) Every ship to which this Rule applies shall carry portable radio equipment which shall comply with the requirements of Rule 42 of these Rules;
- Provided that in the case of any ship engaged on voyages of such duration that, in the opinion of the Board, portable radio equipment is unnecessary, they may permit such equipment to be dispensed with.
- (11) Every ship to which this Rule applies of 500 tons or over shall carry at least eight lifebuoys.
- (12) Every ship to which this Rule applies of under 500 tons shall carry at least four lifebuoys.
- (13) Every ship to which this Rule applies shall carry for every person on board weighing 70 pounds or more a lifejacket which shall comply with the requirements of Part I of Schedule 12 to these Rules and for every person on board weighing less than 70 pounds a lifejacket which shall comply with the requirements of Part II of the said Schedule.
- (14) Every ship to which this Rule applies shall carry a line-throwing appliance.

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

12.—(1) Rule 17 of these Rules shall apply to ships of Class VII(A), other than those ships specified in paragraph (2) of this Rule, as it applies to ships of Class X.

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

- (a) lifeboats on each side of the ship of sufficient aggregate capacity to accommodate one half of the total number of persons on board; or
- (b) lifeboats and liferafts together providing sufficient aggregate capacity to accommodate the total number of persons on board, provided that there shall never be less than sufficient lifeboats on each side of the ship to accommodate  $37\frac{1}{2}$  per cent of the total number of persons on board.

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

Notwithstanding the provisions of Rule 37(13) of these Rules, skates or other suitable appliances are not required to be fitted to these lifeboats.

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

(5)(a) In every ship to which paragraph (2) of this Rule applies which is certified to carry 1,500 persons or more each of the motor lifeboats carried in compliance with paragraph (4) of this Rule shall be provided with the equipment specified in Rule 33(1) of these Rules, and in every such ship which is certified to carry more than 199 but less than 1,500 persons at least one of the motor lifeboats carried in compliance with paragraph (4) of this Rule shall be so provided.

(b) Every motor lifeboat carried in compliance with paragraph (4) of this Rule shall be provided with the equipment specified in Rule 33(2) of these Rules.

(6) Every ship to which paragraph (2) of this Rule applies which does not carry on each side of the ship a motor lifeboat provided with the equipment specified in Rule 33(1) of these Rules shall carry portable radio equipment which shall comply with the requirements of Rule 42 of these Rules.

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

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

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

(10) Every ship to which paragraph (2) of this Rule applies shall carry liferafts, which shall not be required to be served by launching devices, of sufficient aggregate capacity to accommodate at least half the total number of persons on board;

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

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

(12) Every ship to which paragraph (2) of this Rule applies shall carry for every person on board weighing 70 pounds or more a lifejacket which shall

comply with the requirements of Part I of Schedule 12 to these Rules and for every person on board weighing less than 70 pounds a lifejacket which shall comply with the requirements of Part II of the said Schedule.

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

#### *Ships of Class VIII*

13. Rule 11 of these Rules shall apply to ships of Class VIII as it applies to ships of Class VII.

#### *Ships of Class VIII(A)*

14.—(1) Paragraphs (2), (3), (4), (6) and (7) of Rule 11 of these Rules shall apply to ships of Class VIII(A) of 1,600 tons or over as they apply to ships of Class VII of 500 tons or over.

(2) Paragraphs (5) and (7) of Rule 11 of these Rules shall apply to ships of Class VIII(A) of under 1,600 tons as they apply to ships of Class VII of under 500 tons except that ships of 500 tons or over which carry lifeboats as prescribed by paragraph (2) of Rule 11 shall carry liferafts of sufficient aggregate capacity to accommodate at least half the total number of persons on board.

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

#### *Ships of Class IX*

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

(2) Paragraphs (2), (3), (4), (8), sub-paragraph (a) of paragraph (9) and paragraph (10) of Rule 11 of these Rules shall apply to ships to which this Rule applies of 500 tons or over engaged on an international voyage, as they apply to ships of Class VII of 500 tons or over.

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

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

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

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

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

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

#### *Ships of Class IX(A)*

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

(2) Every ship to which this Rule applies of 40 feet in length or over shall when in partially smooth waters carry the following equipment—

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

(b) in the case of ships of 70 feet in length or over, at least four lifebuoys and in the case of ships of less than 70 feet in length but of not less than 40 feet in length, at least two lifebuoys.

(3) Every ship to which this Rule applies of 40 feet in length or over when in smooth waters and every such ship of less than 40 feet in length shall carry lifebuoys at least equal in number to half the total number of persons on board provided that such ships of 70 feet in length or over shall carry at least four lifebuoys and ships of less than 70 feet in length shall carry at least two lifebuoys.

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

(5) Every ship to which this Rule applies of 40 feet in length or over shall carry for every person on board weighing 70 pounds or more a lifejacket which shall comply with the requirements of Part I of Schedule 12 to these Rules and for every person on board weighing less than 70 pounds a lifejacket which shall comply with the requirements of Part II of the said Schedule.

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

#### *Ships of Class X*

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

(2) Every ship to which this Rule applies of 150 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 half the total number of persons on board the ship; and at least two liferafts of sufficient aggregate capacity to accommodate not less than one-and-a-half times the total number of persons on board; or

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

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

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

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

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

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

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

(4)(a) In every ship to which this Rule applies of 150 feet in length or over which carries lifeboats in compliance with sub-paragraph (a) of paragraph

(2) of this Rule the lifeboat davits shall be of the gravity type except that davits which serve a lifeboat weighing not more than  $2\frac{1}{4}$  tons in the turning out condition may be of the luffing type.

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

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

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

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

(8)(a) Every ship to which this Rule applies of 60 feet in length or over shall carry portable radio equipment which shall comply with the requirements of Rule 26 of the Merchant Shipping (Radio) (Fishing Boats) Rules 1965(a) or with the Performance Specification for a Voluntarily-Fitted Radiotelephone Equipment for use solely for Distress, Urgency and Safety Purposes 1964, issued by the Postmaster General;

Provided that—

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

(ii) any equipment which complies with the said Performance Specification shall be provided with a device for generating the radiotelephone alarm signal specified in Part II of Schedule 3 of the Merchant Shipping (Radio) (Fishing Boats) Rules 1965 and shall be suitable for use in a liferaft and, if it is operated by batteries, shall be provided with new batteries annually.

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

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

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

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

(11) Every ship to which this Rule applies of 40 feet in length or over shall carry for every person on board weighing 70 pounds or more a lifejacket which shall comply with the requirements of Part I of Schedule 12 to these Rules and for every person on board weighing less than 70 pounds a lifejacket which shall comply with the requirements of Part II of the said Schedule.



(12) 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 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 one half of the total number of persons on board the ship and liferafts on the following scale—

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

Ships with fewer than 16 persons on board—at least one liferaft,

of sufficient aggregate capacity to accommodate the total number of persons on board; or

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

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

(4) In every ship to which this Rule applies which carries the equipment required by sub-paragraph (a) of paragraph (2) of this Rule, the lifeboat davits shall be of the gravity type except that in such ships davits which serve lifeboats weighing not more than  $2\frac{1}{4}$  tons in their turning out condition may be of the luffing type.

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

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

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

(b) at least four lifebuoys; and

(c) a line-throwing appliance;

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

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



- (a) one or more liferafts of sufficient aggregate capacity to accommodate the total number of persons on board; and
- (b) at least two lifebuoys.

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

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

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

(7) Every ship to which this Rule applies shall carry for every person on board weighing 70 pounds or more a lifejacket which shall comply with the requirements of Part I of Schedule 12 to these Rules and for every person on board weighing less than 70 pounds a lifejacket which shall comply with the requirements of Part II of the said Schedule or alternatively shall carry for every person on board, a lifejacket which shall comply with British Standards Specification No. BS3595: 1963 provided it does not depend wholly upon oral inflation.

#### PART IV—GENERAL

##### REQUIREMENTS FOR LIFE-SAVING APPLIANCES

##### *General Requirements for Lifeboats*

20. Lifeboats shall comply with the requirements specified in Schedule 4 to these Rules.

##### *Carrying Capacity of Lifeboats*

21.—(1) Subject to the provisions of paragraphs (2), (3), (4) and (5) of this Rule, the number of persons which a lifeboat shall be deemed fit to accommodate shall be equal to the greatest whole number obtained by the formula  $\frac{V}{x}$

where V is the cubic capacity of the lifeboat in cubic feet determined in accordance with the provisions of Schedule 5 to these Rules; and x is the volume in cubic feet for each person and which shall be 10 for a lifeboat of 24 feet in length or over and 16 for a lifeboat of 12 feet in length. For intermediate lengths of lifeboats, the value of x shall be determined by interpolation.

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

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

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

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

### *Motor Lifeboats*

**22.** Every motor lifeboat shall in addition to complying with the requirements of Schedule 4 to these Rules, comply with the following requirements:—

- (a) it shall be fitted with a compression ignition engine and such engine and its accessories shall comply with the requirements of Schedule 6 to these Rules and shall be kept so as to be at all times ready for use;
- (b) it shall be provided with sufficient fuel for 24 hours continuous operation at the speed specified in sub-paragraphs (d) or (e) of this Rule;
- (c) it shall be capable of going astern;
- (d) if it is a lifeboat provided in accordance with Rule 3(4), Rule 4(5), Rule 11(9)(b) or Rule 12(4) it shall be capable of going ahead in smooth water when loaded with its full complement of persons and equipment at a speed of 6 knots;
- (e) if it is a lifeboat other than a lifeboat provided in accordance with the Rules referred to in the preceding sub-paragraph it shall be capable of going ahead under the conditions specified in the preceding sub-paragraph at a speed of 4 knots.

### *Mechanically Propelled Lifeboats*

**23.** Mechanically propelled lifeboats shall, in addition to complying with the requirements of Schedule 4 to these Rules, be fitted with machinery which shall comply with the requirements of Schedule 7 to these Rules.

### *Class C Boats*

**24.** Class C boats shall comply with the requirements of Schedule 8 to these Rules.

### *Liferafts*

**25.**—(1) Liferafts shall comply with the requirements of either Part I or Part II of Schedule 9 to these Rules.

(2) Liferafts which are required to comply with Part I of Schedule 9 to these Rules shall be surveyed at a servicing station approved by the Board or at the works of the manufacturers at intervals of not more than twelve months provided that in any case where this is impracticable, such interval may be extended by a period not exceeding three months.

### *Buoyant Apparatus*

**26.**—(1) Buoyant apparatus shall comply with the requirements of Schedule 10 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, Liferafts and Buoyant Apparatus*

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

which the lifeboat or Class C boat belongs shall be painted on each side of the bow.

(2) The number of persons which a liferaft which complies with Part I of Schedule 9 to these Rules is deemed fit to accommodate shall be clearly marked in permanent characters on the liferaft and on the valise or other container in which the liferaft is contained when not in use. Every such liferaft shall also bear a serial number and the manufacturer's name.

(3) Every liferaft which complies with Part II of Schedule 9 to these Rules shall be marked with the name and port of registry of the ship in which it is carried, and with the number of persons it is deemed fit to accommodate.

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

### *Lifebuoys*

**28.** Lifebuoys shall comply with the requirements of Schedule 11 to these Rules.

### *Lifebuoy Lights, Smoke Signals and Lines*

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

- (a) in ships of Classes I, II and II(A), on at least half the lifebuoys and in no case on less than six;
- (b) in ships of Class IV, and in ships of Classes V and VI(A) of 30 feet in length or over (except ships which are engaged in daylight voyages only), on two lifebuoys;
- (c) in ships of Classes VII, VIII, VIII(A), IX and XI and in ships of Class VII(A) of 70 feet in length or over, on at least half the lifebuoys and in no case on less than two;
- (d) in ships of Classes IX(A), X and XII of 70 feet in length or over, on two lifebuoys;
- (e) in ships of Classes V and VI(A) of less than 30 feet in length (except ships which are engaged in daylight voyages only) and in ships of Classes VII(A), IX(A), X and XII of less than 70 feet in length, on one lifebuoy;

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

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

(4)(a) In every ship to which these Rules apply (except ships of Classes V and VI(A) of less than 30 feet in length, and ships of Classes VII(A), IX(A), X and XII of less than 70 feet in length) one lifebuoy on each side of the ship shall have attached to it a buoyant line of at least 15 fathoms in length.

(b) In ships of Classes V and VI(A) of less than 30 feet in length and in ships of Classes VII(A), IX(A) and X of less than 70 feet in length, one lifebuoy shall have attached to it a buoyant line of at least 10 fathoms in length.

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

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

(6) The lifebuoys provided with self-activating smoke signals in accordance with Rule 6(7) of these Rules and two of the lifebuoys provided with self-igniting lights in accordance with sub-paragraphs (a), (b), (c) and (d) of paragraph (1) of this Rule and self-activating smoke signals in accordance with paragraph (5) of this Rule shall be carried one on each side of the navigating bridge, if any, and so fitted as to be capable of quick release.

The lifebuoys so carried and other lifebuoys in positions where the release of a self-igniting light depends upon the weight of the lifebuoy shall each weigh not less than  $9\frac{1}{2}$  pounds.

### *Line-throwing Appliances*

30. Line-throwing appliances shall comply with the requirements of Schedule 13 to these Rules.

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

### *Equipment for Lifeboats, Class C Boats and Other Boats*

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

- (a) a single banked complement of buoyant oars, two spare buoyant oars, and a buoyant steering oar; one set and a half of crutches, attached to the lifeboat by lanyard or chain; a boat hook;
- (b) two plugs for each plug hole (except where proper automatic valves are fitted) attached to the lifeboat by lanyards or chains; a bailer and two buckets;
- (c) a rudder attached to the lifeboat and a tiller;
- (d) a lifeline becketed round the outside of the lifeboat; means to enable persons to cling to the lifeboat if upturned in the form of bilge keels or keel rails, together with grab lines secured from gunwale to gunwale under the keel;
- (e) a locker conspicuously marked as such, suitable for the stowage of small items of equipment;
- (f) two hatchets, one at each end of the lifeboat;
- (g) a lamp with oil sufficient for 12 hours;
- (h) a watertight box containing two boxes of matches not readily extinguished by wind;
- (i) a mast or masts, with galvanised wire stays together with orange coloured sails which shall be marked for identification purposes with the first and last letter of the name of the ship to which the lifeboat belongs;
- (j) a compass in binnacle complying with the requirements of Part I of Schedule 14 to these Rules;
- (k) a sea anchor complying with the requirements of Part II of Schedule 14 to these Rules;

- (l) two painters of sufficient length and size. One shall be secured to the forward end of the lifeboat with strop and toggle so that it can be released and the other shall be firmly secured to the stem of the lifeboat and be ready for use;
- (m) a vessel containing one gallon of vegetable, fish or animal oil. A means shall be provided to enable the oil to be easily distributed on the water, and shall be so arranged that it can be attached to the sea anchor;
- (n) four parachute distress rocket signals complying with the requirements of Part III of Schedule 14 to these Rules, and six hand-held distress flare signals complying with the provisions of Part IV of Schedule 14 to these Rules;
- (o) two buoyant smoke signals complying with the requirements of Part V of Schedule 14 to these Rules;
- (p) a first aid outfit complying with the requirements of Part VI of Schedule 14 to these Rules;
- (q) a waterproof electric torch suitable for morse-signalling together with one spare set of batteries and one spare bulb in a waterproof container;
- (r) a daylight-signalling mirror;
- (s) a jack-knife fitted with a tin opener to be kept attached to the lifeboat with a lanyard;
- (t) two light buoyant heaving lines;
- (u) a manual pump complying with the requirements of Part VII of Schedule 14 to these Rules;
- (v) a whistle;
- (w) a fishing line and six hooks;
- (x) a cover of a highly visible colour capable of protecting the occupants against injury by exposure;
- (y) a copy of the Ministry of Transport Rescue Signal Table published by Her Majesty's Stationery Office; and
- (z) means to enable persons in the water to climb into the lifeboat.

Provided that—

- (i) In ships of Classes II, II(A), VIII, VIII(A) and IX, and ships of Class XI which do not proceed outside Home-trade limits, such lifeboats shall not be required to carry the equipment specified in sub-paragraphs (i), (r) and (w); and
- (ii) In ships of Classes III, IV and VI(A) such lifeboats shall not be required to carry the equipment specified in sub-paragraphs (i), (j), (m), (o), (r), (v), (w), (x) and (y) nor the parachute distress rocket signals specified in sub-paragraph (n) of this paragraph.

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

(3) Every motor lifeboat shall carry at least two portable fire extinguishers capable of discharging foam or other substance suitable for extinguishing oil fires, a receptacle containing a sufficient quantity of sand and a scoop for distributing the sand. Such portable fire extinguishers shall be of a type complying with the requirements of Rule 57 of the Merchant Shipping (Fire Appliances) Rules 1965(a), except that the capacity of each extinguisher shall not be required to exceed one gallon of fluid or its equivalent.

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

- (a) a single banked complement of buoyant oars and a buoyant 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.

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

- (a) a single banked complement of buoyant oars and a buoyant 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 Schedule 14 to these Rules; and
- (h) a hatchet.

(6) Every lifeboat or Class C boat which is carried in compliance with sub-paragraph (b) of Rule 11(5), sub-paragraph (a) of Rule 15(3), sub-paragraph (b) of Rule 17(2), sub-paragraph (b) of Rule 17(3), sub-paragraph (b) of Rule 18(2) or Rule 19(2) shall be equipped as follows:—

- (a) a single complement of buoyant oars and one spare buoyant oar provided that there shall never be less than three oars; one set of crutches attached to the boat by lanyard or chain; a boat hook;
- (b) two plugs for each plug hole (except where proper automatic valves are fitted) attached to the boat by lanyards or chains; a bailer and a bucket;
- (c) a rudder attached to the boat and a tiller;
- (d) a lifeline becketed round the outside of the boat;
- (e) a locker, conspicuously marked as such, suitable for the stowage of small items of equipment;
- (f) a painter of sufficient length and size secured to the forward end of the boat with strop and toggle so that it can be released;
- (g) means to enable persons to cling to the boat if upturned in the form of bilge keels or keel rails;
- (h) a waterproof electric torch suitable for morse signalling together with one spare set of batteries and one spare bulb in a waterproof container; and
- (i) two light buoyant heaving lines.

#### *Rations for Lifeboats*

32.—(1) Every lifeboat carried in a ship of Class I, every lifeboat carried in a ship of Class VII in compliance with Rule 11(2), every lifeboat carried in

a ship of Class VII(A) in compliance with Rule 12(2) and every lifeboat carried in a ship of Class XI in compliance with sub-paragraph (a) of Rule 18(2) shall be provided with at least the rations specified in the following scale for each person it is deemed fit to accommodate:—

- (a) 16 ounces of biscuits;
- (b) 16 ounces of barley sugar; and
- (c) 16 ounces of sweetened condensed milk of first quality;

Provided that this paragraph shall not apply to any lifeboat carried in a ship of Class XI which does not proceed outside Home-trade limits.

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

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

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

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

#### *Special Equipment for certain Motor Lifeboats*

**33.**—(1) In every ship of Classes I and VII(A) the motor lifeboats which are required to comply with Rule 3 (5)(a) or Rule 12(5)(a) of these Rules shall be provided with the following equipment:—

(a) radio equipment which shall comply with the requirements of the Merchant Shipping (Radio) Rules 1965(a) and in addition the following provisions shall apply thereto:—

- (i) it shall be installed in a cabin large enough to accommodate both the apparatus and the person using it;
- (ii) the arrangements shall be such that the efficient operation of the transmitter and receiver shall not be impaired through interference from the engine of the motor lifeboat whether a battery is on charge or not; and
- (iii) the radio battery shall not be used to supply power to any engine starting motor or ignition system.

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

(2) In every ship of Classes I, II and VII(A) the motor lifeboats which are required to comply with Rule 3 (5)(b), Rule 4(5) and Rule 12(5)(b) of these Rules shall be provided with a searchlight which shall include a lamp of at least 80 watts, an efficient reflector and a source of power which will give

effective illumination of a light-coloured object having a width of about 60 feet at a distance of 200 yards for a total period of six hours. The searchlight shall be capable of working for at least three hours continuously.

*Security of Equipment and Rations in Lifeboats, Class C Boats and Other Boats*

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

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

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

*Equipment and Rations for Liferafts*

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

- (a) one buoyant rescue quoit, attached to at least 100 feet of buoyant line;
- (b) for liferafts which are fit to accommodate not more than 12 persons; one safety knife and one bailer;  
for liferafts which are fit to accommodate 13 persons or more; two safety knives and two bailers;
- (c) two sponges;
- (d) two sea anchors, one permanently attached to the liferaft and one spare with line;
- (e) two paddles;
- (f) one repair outfit capable of repairing punctures in buoyancy compartments unless the liferaft complies with the requirements of Part II of Schedule 9 to these Rules;
- (g) one topping-up pump or bellows, unless the liferaft complies with Part II of Schedule 9 to these Rules;
- (h) three safety tin openers;
- (i) a first aid outfit complying with the requirements of Part VIII of Schedule 14 to these Rules;
- (j) one rust-proof drinking vessel, graduated in  $\frac{1}{2}$ , 1 and 2 ounces;
- (k) one waterproof electric torch suitable for morse-signalling together with one spare set of batteries and one spare bulb in a waterproof container;
- (l) one daylight signalling mirror and one signalling whistle;
- (m) two parachute distress rocket signals complying with the requirements of Part III of Schedule 14 to these Rules;
- (n) six hand-held distress flare signals complying with the requirements of Part IV of Schedule 14 to these Rules;
- (o) one fishing line and six hooks;
- (p) 12 ounces of suitable non-thirst-provoking food providing at least 2,200 calories per pound weight and 6 ounces of barley sugar or other



equally suitable sweets for each person the liferaft is deemed fit to accommodate;

- (q) watertight receptacles containing 3 pints (or  $1\frac{1}{2}$  litres) of fresh water for each person the liferaft is deemed fit to accommodate, of which 1 pint (or  $\frac{1}{2}$  litre) per person may be replaced by a suitable de-salting apparatus capable of producing an equal amount of fresh water;
- (r) six anti-seasickness tablets for each person which the liferaft is deemed fit to accommodate;
- (s) instructions printed in the English language on how to survive in the liferaft; and
- (t) one copy of the Ministry of Transport Rescue Signal Table published by Her Majesty's Stationery Office.

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

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

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

- (a) one sea anchor which shall be permanently attached to the liferaft;
- (b) two safety tin-openers;
- (c) three hand-held distress flare signals complying with the requirements of Part IV of Schedule 14 to these Rules, and
- (d) watertight receptacles containing 1 pint (or  $\frac{1}{2}$  litre) of fresh water for each person which the liferaft is deemed fit to accommodate.

#### STOWAGE AND HANDLING OF LIFE-SAVING APPLIANCES

##### *General Provisions relating to the Stowage and Handling of Life-saving appliances*

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

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

*Stowage and Handling of Lifeboats, Class C Boats and Other Boats*

37.—(1) Subject to the provisions of paragraphs (2), (3) and (4) of this Rule every lifeboat attached to a set of davits, other than a lifeboat which is carried as an alternative to a Class C boat or other boat, shall be so arranged that even under unfavourable conditions of trim and of up to 15 degrees of list either way it can be put into the water when loaded with its full complement of persons and equipment required by these Rules except that in ships of under 150 feet in length of Classes IV and VI(A) such lifeboats may be so arranged that in the aforesaid conditions they can be put into the water when loaded with their required equipment and a launching crew of at least two persons.

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

(3) Every lifeboat, Class C boat or other boat attached to a mechanically controlled single-arm davit shall be so arranged that when loaded with its equipment required by these Rules and a launching crew of two persons it can be put into the water on one side of the ship when the ship is upright or is listed up to 15 degrees towards that side, except that in ships of Class X which carry a lifeboat in compliance with sub-paragraph (a) of Rule 17(3) of these Rules, the lifeboat shall be so arranged that when loaded with its required equipment and a launching crew of two persons it can be put into the water on either side of the ship, or, if the ship has a list, on the side to which the ship is listed.

(4) Every lifeboat or Class C boat carried in compliance with sub-paragraph (b) of Rule 11(5), Rule 14(2), sub-paragraph (a) of Rule 15(3), sub-paragraph (b) of Rule 17(2), sub-paragraph (b) of Rule 17(3), sub-paragraph (b) of Rule 18(2) or Rule 19(2) and every boat carried in compliance with Rule 16(2) if not attached to a davit or set of davits, shall be attached to a device which shall be provided primarily for the purpose of launching the boat and which shall be capable of putting the boat into the water on one side of the ship when it is loaded with its equipment required by these Rules and a launching crew of two persons and when the ship is upright or is listed up to 15 degrees towards that side.

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

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

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

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

(9) Davits, winches, falls, blocks and all other launching gear provided in accordance with these Rules shall comply with the requirements of Schedule 15 to these Rules.

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

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

- (ii) when they are attached to mechanically controlled single arm davits; or,
- (iii) when they are fitted in any ship of Classes I or II, or in any ship of Class VII(A) in compliance with Rule 12(2); or
- (iv) when they are fitted in any ship of Classes VII, VIII or IX in compliance with Rule 11(2) or sub-paragraph (a) of Rule 11(5); or
- (v) when the weight of the attached lifeboat, Class C boat or other boat in the lowering condition exceeds  $2\frac{1}{4}$  tons.

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

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

(c) Emergency lifeboats carried in compliance with Rule 3(3), Rule 4(4) or Rule 12(3) of these Rules, shall be served by winches which are capable of recovering them at a speed of not less than 60 feet per minute when the lifeboat is loaded with its equipment required by these Rules and a distributed load equal to 2240 pounds.

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

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

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

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

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

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

(17) Every emergency lifeboat carried in compliance with Rule 3(3), Rule 4(4) and Rule 12(3) of these Rules shall be provided with means for facilitating

the attachment of the lower fall blocks to the lifting arrangements of the boat when the boat is recovered from the sea in adverse weather conditions. For this purpose a pendant of adequate strength and suitable length shall be provided for each davit, and the one end of the pendant shall be attached to the lower fall block and the other end to the lifting arrangement on the boat. Means shall in addition be provided for hanging off the boat after hoisting to enable the lower fall block to be attached directly to the lifting hook.

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

#### MISCELLANEOUS PROVISIONS

##### *Stowage and Handling of Liferafts, Buoyant Apparatus, Lifebuoys and Lifejackets*

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

(2)(a) In every ship of Classes I, II, II(A) and VII(A) which carry liferafts in accordance with sub-paragraph (b) of Rule 3(2) or sub-paragraph (c) of Rule 4(8) or sub-paragraph (b) of Rule 12(2) of these Rules there shall be provided for such liferafts launching appliances complying with the requirements of Schedule 17 to these Rules.

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

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

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

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

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

##### *Embarkation into Lifeboats, Class C Boats and Other Boats, and Liferafts*

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

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

(3) (a) In ships of Classes VII, VIII, VIII(A) and IX, in ships of Class X of 150 feet in length or over and in ships of Classes XI and XII one ladder shall be carried at each set of lifeboat davits where the davits are capable of lowering the lifeboat when loaded with its full complement of persons and its equipment required by these Rules. Such provision shall also be made for ships of Classes I, II, II(A) and III and for those ships of Class VII(A) to which Rule 12(2) refers, except that in such ships the Board may permit such ladders to be replaced by suitable mechanical devices provided that there shall not be less than one ladder on each side of the ship.

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

(c) In ships of Classes I, II, II(A) and III, in ships of Class VII(A) to which Rule 12(2) refers and in ships of Classes VII, VIII and IX of 500 tons or over sufficient ladders shall be provided to facilitate embarkation into the liferafts when waterborne except that in such ships the Board may permit the replacement of some or all of such ladders by suitable mechanical devices.

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

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

#### *Manning of Lifeboats and Liferafts*

40.—(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 persons placed under his orders are acquainted with their several duties.

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

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

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

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

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

#### *Certificated Lifeboatmen*

41.—(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:—

<i>Prescribed Complement of Lifeboat</i>	<i>Minimum number of certificated lifeboatmen</i>
Less than 41 persons .....	2
From 41 to 61 persons .....	3
From 62 to 85 persons .....	4
More than 85 persons .....	5

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

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

#### *Portable Radio Equipment*

42.—(1) The portable radio equipment required to be carried in compliance with Rule 3(6), Rule 4(11), Rule 11(10) and Rule 12(6) of these Rules shall comply with such of the requirements of the Merchant Shipping (Radio) Rules 1965 as apply thereto and shall be kept in a suitable place ready to be moved into a lifeboat or a liferaft in case of emergency.

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

#### *Electrically Operated Signals*

43. 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*

44.—(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 from which lifeboats and liferafts are embarked. Provision shall also be made in every such ship for the electric lighting of the launching gear and of the lifeboats, and of the liferaft launching appliances where provided and the liferafts which they serve, during the preparation for and process of launching and also for illuminating the water into which the lifeboats and liferafts served by launching appliances are launched until the process of launching is completed, and for lighting the stowage position of liferafts for which launching appliances are not provided. The lighting shall be operated from the ship's main generating plant and shall be so arranged that power may be supplied from the emergency source of power referred to in Rule 40 of the Merchant Shipping (Passenger Ship Construction) Rules 1965.

(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 40 of the Merchant Shipping (Passenger Ship Construction) Rules 1965.

(3) (a) In every ship of Classes VII, VII(A) and VIII of 500 tons or over and in every ship of Class IX of such tonnage engaged on international voyages provision shall be made for the electric lighting of the launching gear and of the lifeboats and of the liferaft launching appliances.

where provided, and of the liferafts which they serve, during the preparation for and process of launching and also for lighting the water into which the lifeboats, and the liferafts served by launching appliances, are launched until the process of launching is completed, and for the lighting of the stowage position of liferafts for which launching appliances are not provided.

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

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

(i) in every such ship of 5,000 tons or over from an emergency source of electric power which shall be provided for such lighting or in the case of any ship to which Rule 6 of the Merchant Shipping (Cargo Ship Construction and Survey) Rules 1965(a) applies from the emergency source of electric power required by that Rule;

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

(d) In every such ship of 500 tons or over but of under 1,600 tons the lighting required by sub-paragraph (a) of this paragraph shall be operated from the ship's main electric generating plant and in addition shall be capable of being operated from an emergency source of electric power which shall be provided for such lighting or in the case of any such ship to which Rule 8 of the Merchant Shipping (Cargo Ship Construction and Survey) Rules 1965 applies from the emergency source of electric power required by that Rule or, if the Board so permit, the reserve source of electrical energy required by Rule 12(2) or by Rule 22(1) of the Merchant Shipping (Radio) Rules 1965 on condition that the lighting circuits can be readily disconnected and the said reserve source is capable of supplying the additional load or loads without falling below the capacity required by the aforesaid Rules.

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

#### *Ships' Distress Signals*

45.—(1) Every ship to which these Rules apply, except ships of Classes V, VI and IX(A), ships of Class X of less than 40 feet in length and ships of Class XII, shall carry not less than twelve parachute distress rocket signals which shall comply with the requirements of Schedule 18 to these Rules.

(2) Ships of Class VI shall carry at least two buoyant smoke signals which shall comply with the requirements of Part V of Schedule 14 to these Rules.

(3) Ships of Class IX(A) operating in partially smooth waters and ships of Class X of less than 40 feet in length shall carry not less than six red star distress signals which shall comply with the requirements of paragraph (5) of this Rule.



(4) Ships of Class XII operating in partially smooth waters or which proceed to sea shall carry not less than six pyrotechnic distress signals which shall be either parachute distress rocket signals of a type which complies with the requirements of Schedule 18 to these Rules or red star distress signals which shall comply with the requirements of paragraph (5) of this Rule.

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

(6) 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*

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

(2) If it appears to the Board, 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 they may permit one or more sets of davits to be dispensed with in that ship subject to such conditions, if any, as they think fit;

Provided that, in the case of ships of Classes II and II(A) the number of sets of davits fitted shall, subject to the provisions of Rules 4(2) and 4(8) of these Rules, in no case be less than the minimum number determined by Column B of the table set out in Schedule 2 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 Board may, subject to such conditions as they think fit, permit as regards the part of the voyage between such specified ports or places, modifications of the provisions of Rules 3(2) and 3(10) of these Rules (which relate to lifeboats, liferafts and buoyant apparatus);

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

(4) The Board 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 their 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 Board may permit a smaller lifeboat or boat to be carried by that ship.

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

*Roy Mason,*  
Minister of State,  
Board of Trade.

11th May 1965.



## Rule 2

## SCHEDULE 1

## LIMITS OF SMOOTH WATER AND PARTIALLY SMOOTH WATER AREAS

DISTRICT	Smooth Water Areas	Partially Smooth Water Areas*†
<b>Shetland Isles:—</b> Blue Mull Sound	—	Between Gutcher and Belmont.
Yell Sound	—	Between Tofts Voe and Ulsta.
Lerwick	—	In winter in the area bounded by a line from Point of Scotland to Heogan to the northward, and from Holm of Mel to the light-house situated some 3 cables to the eastward of the Nabb to the southward. In summer in the area bounded by a line from Easter Rova Head to Score Head to the northward, and from the south end of Ness of Sound to Kirkabisterness to the southward.
<b>Orkney Isles:—</b> Kirkwall	—	Between Kirkwall and Rousay not east of a line between Point of the Grand (Egilsay) and Galt Ness (Shapinsay) or between Work Head (Mainland) through Helliær Holm light to the shore of Shapinsay; not north west of the south east tip of Eynhallow Island, or north of the southern tip of Holm of Scockness.
Stromness	—	To Scapa but not outside Scapa Flow.
<b>Scotland E. Coast</b> Cromarty	In Cromarty Firth within a line between North Sutor and South Sutor.	Within a line from North Sutor to Nairn Breakwater.
Inverness	Within a line from Fort George to Chanonry Point to Fort William.	Within a line from North Sutor to Nairn Breakwater.
Aberdeen	Within a line from South Jetty to Abercromby Jetty.	No partially smooth waters.

\* The outer limits of the smooth water areas specified in the second column of this Schedule shall be taken to be the corresponding inner limits of the partially smooth water areas specified in the third column of this Schedule.

† Unless otherwise indicated these limits apply at all times of the year. In this Schedule "summer" means the months of April to October, inclusive, and "winter" means the months of November to March, inclusive.

## SCHEDULE 1 (continued)

DISTRICT	Smooth Water Areas	Partially Smooth Water Areas*†
Dundee	Within a line from Fish Dock, Dundee to Craig Head, East Newport.	Within a line from Broughty Castle to Tayport.
Queensferry	Within the Firth of Forth but not east of the Forth railway bridge.	Within a line from Kirkcaldy to Portobello.
Leith	Within the Breakwaters.	Within a line from Kirkcaldy to Portobello.
England E. Coast Berwick-on-Tweed	Within a line from Spittal Point to the inner end of Breakwaters.	No partially smooth waters.
Amble	Within the Breakwaters.	No partially smooth waters.
Blyth	Within the Pier Heads.	No partially smooth waters.
Newcastle, North and South Shields.	Within the Tyne Pier Heads.	No partially smooth waters.
Sunderland	Within the Sunderland Pier Heads.	No partially smooth waters.
Hartlepool, East	Within the Breakwaters	No partially smooth waters.
Stockton, Middles- brough	Not eastward of No. 8 Beacon.	No partially smooth waters.
Whitby	Within Whitby Pier Heads	No partially smooth waters.
Hull	—	In winter within a line from New Holland to Paull. In summer within a line from Cleethorpes Pier to Patrington Church.
Goole	Within a line from North Ferriby to South Ferriby.	In winter within a line from New Holland to Paull. In summer, within a line from Cleethorpes to Patrington Church.
Grimbsy	—	In winter no partially smooth waters. In summer within a line from Cleethorpes Pier to Patrington Church.
Boston	Inside the New Cut.	No partially smooth waters.

\* The outer limits of the smooth water areas specified in the second column of this Schedule shall be taken to be the corresponding inner limits of the partially smooth water areas specified in the third column of this Schedule.

† Unless otherwise indicated these limits apply at all times of the year. In this Schedule "summer" means the months of April to October, inclusive, and "winter" means the months of November to March, inclusive.

SCHEDULE 1 (*continued*)

DISTRICT	Smooth Water Areas	Partially Smooth Water Areas*†
Wisbech	Inside Wisbech Cut.	No partially smooth waters.
King's Lynn	Inside Lynn Cut.	No partially smooth waters.
Yarmouth and Lowestoft	On all inland navigation within the Harbour Entrances at Yarmouth or Lowestoft.	No partially smooth waters.
Woodbridge	On the River Deben to the Mouth.	No partially smooth waters.
Harwich, Ipswich or Felixstowe Railway Pier	On the River Orwell or on the River Stour, and within a line from Dovercourt Breakwater to Landguard Point.	No partially smooth waters.
Maldon	On the River Blackwater within a line from West Mersea Point to Sales Point.	In summer within a line from Clacton Pier to Reculvers. In winter within a line from Colne Point to Whitstable.
Burnham-on-Crouch	On the River Crouch within a line from Hollywell Point to Foulness Point.	In summer within a line from Clacton Pier to Reculvers. In winter within a line from Colne Point to Whitstable.
London	River Thames, westward of a N/S line through P.H.A. Isolation Hospital, Gravesend.	In summer within a line from Clacton Pier to Reculvers. In winter within a line from Colne Point to Whitstable.
Rochester	Sheerness and Whitstable inside Sheppey.	In summer within a line from Clacton Pier to Reculvers. In winter within a line from Colne Point to Whitstable.
England S. Coast Dover	Within a line drawn across the East and West entrances to the Harbour.	No partially smooth waters.
Rye	On the River Rother above Coastguard Cottages.	No partially smooth waters.
Littlehampton	On the River Arun above Littlehampton Pier.	No partially smooth waters.

\* The outer limits of the smooth water areas specified in the second column of this Schedule shall be taken to be the corresponding inner limits of the partially smooth water areas specified in the third column of this Schedule.

† Unless otherwise indicated these limits apply at all times of the year. In this Schedule "summer" means the months of April to October, inclusive, and "winter" means the months of November to March, inclusive.

SCHEDULE 1 (*continued*)

DISTRICT	Smooth Water Areas	Partially Smooth Water Areas*†
Chichester	Within a line drawn between Eastoke Point and West Wittering (Tower).	No partially smooth waters.
Langston Harbour	Within a line drawn between Eastney Point and Gunner Point.	Inside the Isle of Wight within an area bounded by lines drawn between Gunner Point and Trinity Church, Bembridge to the eastward, and the Needles and Hurst Point to the westward.
Portsmouth	Within Portsmouth Harbour.	Inside the Isle of Wight within an area bounded by lines drawn between Gunner Point and Trinity Church, Bembridge to the eastward, and the Needles and Hurst Point to the westward.
Bembridge, Isle of Wight	Within Brading Harbour	Inside the Isle of Wight within an area bounded by lines drawn between Gunner Point and Trinity Church, Bembridge to the eastward, and the Needles and Hurst Point to the westward.
Cowes, Isle of Wight	The River Medina within a line joining East and West Cowes.	Inside the Isle of Wight within an area bounded by lines drawn between Gunner Point and Trinity Church, Bembridge to the eastward, and the Needles and Hurst Point to the westward.
Southampton	Within a line from Calshot Castle to Hook Beacon.	Inside the Isle of Wight within an area bounded by lines drawn between Gunner Point and Trinity Church, Bembridge to the eastward, and the Needles and Hurst Point to the westward.
Beaulieu	Within Beaulieu River not eastward of a N/S line through Needs Oar Point.	Inside the Isle of Wight within an area bounded by lines drawn between Gunner Point and Trinity Church, Bembridge to the eastward and the Needles and Hurst Point to the westward.

\* The outer limits of the smooth water areas specified in the second column of this Schedule shall be taken to be the corresponding inner limits of the partially smooth water areas specified in the third column of this Schedule.

† Unless otherwise indicated these limits apply at all times of the year. In this Schedule "summer" means the months of April to October, inclusive, and "winter" means the months of November to March, inclusive.

SCHEDULE 1 (*continued*)

DISTRICT	Smooth Water Areas	Partially Smooth Water Areas*†
Christchurch	Within Christchurch Harbour excluding the Run.	No partially smooth waters.
Poole	Inside the Harbour not seaward of the line of the Chain Ferry between Sandbanks and S. Haven Point.	No partially smooth waters.
Weymouth	—	Within Portland Harbour and between River Wey and Portland Harbour.
Exeter	Within a line from Warren Point to the Coast-guard Flag Staff at Exmouth.	No partially smooth waters.
Teignmouth	Within the Harbour.	No partially smooth waters.
Dartmouth	River Dart within a line from Kettle Point to Battery Point.	No partially smooth waters.
Salcombe and Kingsbridge.	River Salcombe not seaward of a line Splat Point to Lambury Point.	No partially smooth waters.
Plymouth	Within a line from Mount Batten Pier to Riveness Point through Drake's Island. The River Yealm within a line from Warren Point to Misery Point.	Within a line from Cawsand to the Breakwater to Staddon Pier.
Fowey	Inside the Harbour.	No partially smooth waters.
Falmouth	Within a line from St. Anthony Head to Pen-dennis Point.	In winter within a line from St. Anthony Head to Rosemullion Point.  In summer within a line from St. Anthony Head to Nare Point.
England and Wales W. Coast	Coast	
Padstow	Padstow Harbour within a line from Gun Point to Brae Hill.	Within a line from Stepper Point to Trebetherick Point.
Barnstaple	Within the Bar.	No partially smooth waters.

\* The outer limits of the smooth water areas specified in the second column of this Schedule shall be taken to be the corresponding inner limits of the partially smooth water areas specified in the third column of this Schedule.

† Unless otherwise indicated these limits apply at all times of the year. In this Schedule "summer" means the months of April to October, inclusive, and "winter" means the months of November to March, inclusive.

SCHEDULE 1 (*continued*)

DISTRICT	Smooth Water Areas	Partially Smooth Water Areas*†
Bridgwater	Inside Stert Point.	Within the Bar.
Bristol	Within a line from Avonmouth Pier to Wharf Point.	In winter within a line from Blacknore Point to Caldicot Pill, Portskewett. In summer within a line from Barry Dock Pier to Steephholm thence to Brean Down.
Gloucester	River Severn or Avon to Sharpness Point via Gloucester Canal.	In winter within a line from Blacknore Point to Caldicot Pill, Portskewett. In summer within a line from Barry Dock Pier to Steephholm thence to Brean Down.
Chepstow	River Wye, above Chepstow.	In winter within a line from Blacknore Point to Caldicot Pill, Portskewett. In summer within a line from Barry Dock Pier to Steephholm thence to Brean Down.
Cardiff	Within a line from Low Water Pier Head to Penarth Head.	In winter no partially smooth waters. In summer within a line from Barry Dock Pier to Steephholm thence to Brean Down.
Barry Dock	Inside the Docks.	In winter no partially smooth waters. In summer within a line from Barry Dock Pier to Steephholm thence to Brean Down.
Neath	In the River Neath.	No partially smooth waters.
Swansea	Inside the Dock.	No partially smooth waters.
Llanelli and Burry Port	Within an area bounded by a line drawn from Burry Port Western Pier to Whiteford Point on the west and Loughor Railway Bridge on the east.	No partially smooth waters.
Milford	Within a line from South Hook Point to Thorn Point.	No partially smooth waters.

\* The outer limits of the smooth water areas specified in the second column of this Schedule shall be taken to be the corresponding inner limits of the partially smooth water areas specified in the third column of this Schedule.

† Unless otherwise indicated these limits apply at all times of the year. In this Schedule "summer" means the months of April to October, inclusive, and "winter" means the months of November to March, inclusive.

SCHEDULE 1 (*continued*)

DISTRICT	Smooth Water Areas	Partially Smooth Water Areas*†
Fishguard	In the Harbour within a line joining the North and East Breakwater Heads.	No partially smooth waters.
Cardigan	Inside the Bar.	No partially smooth waters.
Aberdovey	Within a line from Aberdovey Station to Trwyn Bach.	No partially smooth waters.
Barmouth	Within a line from Barmouth to Penrhyn Point.	No partially smooth waters.
Portmadoc	Within a line from Harlech Point to Graig Ddu.	No partially smooth waters.
Holyhead	Within an area bounded by the main breakwater and a line drawn from the head of the breakwater to Brynglas Point Towyn Bay.	No partially smooth waters.
Caernarvon, Bangor	Within the Menai Straits between Aber Menai Point and Beaumaris.	Within the Menai Straits from Caernarvon Bar to Puffin Island.
Conway	Within a line from Mussel Hill to Tremlyd Point.	No partially smooth waters.
Chester	River Dee not below Connah's Quay.	In winter within a line from Hilbre Point to Point of Air. In summer within a line from Formby Point to Point of Air.
Liverpool	Above the Rock Light House.	In winter no partially smooth waters. In summer within a line from Formby Point to Point of Air.
Preston	Within a line from Lytham to Southport.	Within a line from Southport to Blackpool inside the banks.
Fleetwood	Within a line from Low Light to Knott End pier.	In winter no partially smooth waters. In summer within a line from Rossal Point to Humphrey Head.

\* The outer limits of the smooth water areas specified in the second column of this Schedule shall be taken to be the corresponding inner limits of the partially smooth water areas specified in the third column of this Schedule.

† Unless otherwise indicated these limits apply at all times of the year. In this Schedule "summer" means the months of April to October, inclusive, and "winter" means the months of November to March, inclusive.

SCHEDULE 1 (*continued*)

DISTRICT	Smooth Water Areas	Partially Smooth Water Areas*†
Lancaster	Within a line from Sunderland Point to Chapel Hill.	In winter no partially smooth waters. In summer within a line from Rossal Point to Humphrey Head.
Heysham	—	In winter no partially smooth waters. In summer within a line from Rossal Point to Humphrey Head.
Morecambe	—	In winter no partially smooth waters. In summer within a line from Rossal Point to Humphrey Head.
Barrow	Between Walney Island and the mainland.	No partially smooth waters.
Douglas, Isle of Man	From Battery Pier to Victoria Pier.	No partially smooth waters.
Carlisle	Above Port Carlisle.	Within a line from Southernness Point to Silloth.
Scotland W. Coast Dumfries	Within a line from Airds Point to Scar Point.	Within a line from Southernness Point to Silloth.
Stranraer	Within a line from Cairn Ryan to Kirkcolm Point.	Loch Ryan within a line from Finnart's Point to Milleur Point.
Ayr	Inside the Bar.	No partially smooth waters.
Glasgow	Above partially smooth waters.	<i>Outer limit:</i> a line from Skipness to a position one mile south of Garroch Head thence to Farland Head. <i>Inner limit in winter:</i> a line from Cloch Lighthouse to Dunoon Pier. <i>Inner limit in summer:</i> a line from Bogany Point, Isle of Bute to Skelmorlie Castle, and a line drawn from Ardlamont Point to the southern extremity of Etterick Bay, inside the Kyles of Bute.

\* The outer limits of the smooth water areas specified in the second column of this Schedule shall be taken to be the corresponding inner limits of the partially smooth water areas specified in the third column of this Schedule.

† Unless otherwise indicated these limits apply at all times of the year. In this Schedule "summer" means the months of April to October, inclusive, and "winter" means the months of November to March, inclusive.



SCHEDULE 1 (*continued*)

DISTRICT	Smooth Water Areas	Partially Smooth Water Areas*†
		<p><b>Note:</b> The above inner summer limit is extended between 5th June and 5th September (both dates inclusive) by a line drawn from a point two miles off the Ayrshire Coast at Skelmorlie Castle to Tormont End, Cumbræ, and a line drawn from Portachur Point, Cumbræ to Green Point, Ayrshire.</p>
Colintraive	Between Colintraive and Rhudhabodach.	No partially smooth waters.
Campbeltown	Inside the harbour within a line from Macringan's Point to Ottercharach Point.	No partially smooth waters.
Oban	—	Within an area bounded on the north by a line from Dunollie Point Light to Ard na Chruidh and to the south by a line from Rudha Seanach to Ard na Cuile.
Ballachulish	Within Loch Leven and not outside Peter Straits.	No partially smooth waters.
Fort William	In Loch Linnhe north of Corran Point Light, and including Loch Eil and the Canal to Inverness.	No partially smooth waters.
Kyle of Lochalsh	Within Kyle Akin not westward of Eilean Ban light or eastward of Eileanan Dubha.	Through Loch Alsh to the Head of Loch Duich.
Strome	Between Stromemore and Strome Ferry.	No partially smooth waters.
Ullapool	In Loch Broom within a line drawn between Ullapool Point light and Aultnaharrie.	No partially smooth waters.

\* The outer limits of the smooth water areas specified in the second column of this Schedule shall be taken to be the corresponding inner limits of the partially smooth water areas specified in the third column of this Schedule.

† Unless otherwise indicated these limits apply at all times of the year. In this Schedule "summer" means the months of April to October, inclusive, and "winter" means the months of November to March, inclusive.

## SCHEDULE 1 (continued)

DISTRICT	Smooth Water Areas	Partially Smooth Water Areas*†
Kylesku	Across Loch Cairnbawn in the area between the eastern-most point of Garbh Eilean and the western-most point of Eilean na Rainich.	No partially smooth waters.
Northern Ireland Carlingford Lough	Within a line from Greenore to Greencastle Point.	No partially smooth waters.
Strangford Lough	Within Strangford Lough but not seaward of Rue Point.	No partially smooth waters.
Larne	Within a line from Larne pier to the ferry pier on Island Magee.	No partially smooth waters.
Belfast	Within a line from Holywood to Macedon Point.	In winter no partially smooth waters. In summer within a line from Carrickfergus to Bangor.
Lough Erne	Upper or Lower Lough Erne.	No partially smooth waters.
Lough Neagh	Within two miles of the shore.	At a greater distance than two miles from the shore.
Londonderry	Within a line from Magiligan Point to Greencastle.	No partially smooth waters.

\* The outer limits of the smooth water areas specified in the second column of this Schedule shall be taken to be the corresponding inner limits of the partially smooth water areas specified in the third column of this Schedule.

† Unless otherwise indicated these limits apply at all times of the year. In this Schedule "summer" means the months of April to October, inclusive, and "winter" means the months of November to March, inclusive.

## SCHEDULE 2

Table showing the minimum numbers of sets of davits to be provided and the minimum cubic capacity of lifeboats in ships of Classes II and II(A). Rules 4 and 46

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

## SCHEDULE 3

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

Rules 6 and 7

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

## SCHEDULE 4

## GENERAL REQUIREMENTS FOR LIFEBOATS

Rule 20

- (1) Every lifeboat shall be constructed with rigid sides.
- (2) In any lifeboat fitted with a rigid shelter, the shelter shall be capable of being readily opened from both inside and outside and shall not impede rapid embarkation and disembarkation or the launching and handling of the lifeboat. Such a shelter where fitted may be accepted as complying with the requirements of sub-paragraph (x) of Rule 31(1).
- (3) Every lifeboat, except wooden lifeboats made of planks, shall have a block coefficient of the cubic capacity as determined in accordance with Schedule 5 of not less than 0.64.
- (4) Every lifeboat shall be of such form and proportions that it shall have ample stability in a seaway, and sufficient freeboard when loaded with its full complement of persons and equipment.
- (5) Every lifeboat shall be so constructed that it shall be capable of maintaining positive stability when open to the sea and loaded with its full complement of persons and equipment.
- (6) Every lifeboat shall be properly constructed for the purpose for which it is intended and shall be of sufficient strength to permit its being safely lowered into the water when loaded with its full complement of persons and equipment. It shall be of such strength that it will not suffer residual deflection if subjected to an overload of at least 25 per cent.
- (7) No lifeboat shall be less than 16 feet in length except that where these Rules permit a lifeboat to be carried as an alternative to a Class C boat, the length of such lifeboat shall not be less than that of the Class C boat as determined in accordance with paragraph (3) of Schedule 8 to these Rules.
- (8) No lifeboat when laden with its full complement of persons (calculated at 165 pounds per person) and equipment shall weigh more than 20 tons.
- (9) In every lifeboat all thwart and side seats shall be fitted as low in the lifeboat as practicable and bottom boards shall be fitted.
- (10) Every lifeboat shall have a mean sheer at least equal to 4 per cent of its length. The sheer shall be approximately parabolic in form.
- (11) Every lifeboat shall be fitted with internal buoyancy appliances which shall consist either of air cases or buoyant material which shall not be adversely affected by oil or oil products and which shall not adversely affect the boat.
- (12) In every lifeboat the total volume of the internal buoyancy appliances shall be such that it will be at least equal to the sum of the volumes of

- (a) that required to float the lifeboat and its full equipment when the lifeboat is flooded and open to the sea so that the top of the gunwale amidships is not submerged; and
- (b) that equal to 10 per cent of the cubic capacity of the lifeboat.
- (13) In the case of lifeboats which accommodate 100 or more persons, the volume of the buoyancy appliances required by sub-paragraph (b) of the preceding paragraph of this Schedule shall be increased as follows:—

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

In lifeboats which accommodate over 130 persons by an amount equal to 1.5 per cent of the cubic capacity of the lifeboat.

## SCHEDULE 5

### 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, which may be considered as given by the following formula:—

Cubic Capacity =  $\frac{L}{12}(4A+2B+4C)$ , where L denotes the length of the lifeboat in feet from the inside of the shell at the top of the stem to the corresponding point at the top of the stern post; in the case of a lifeboat with a square stern the length is measured to the inside of the top of the transom;

and

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

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

Area =  $\frac{h}{12}(a+4b+2c+4d+e)$ , where h denotes the depth measured in feet inside the shell from the keel to the level of the gunwale, or, in certain cases, to a lower level as determined hereafter; and 3, b, c, d, e denote the horizontal breadths of the lifeboat measured in feet inside the shell at the upper and lower points of the depth and at the three points obtained by dividing h into four equal parts (a and e being the breadths at the extreme points, and c at the middle point of h).

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

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

(3) If the depth of the lifeboat amidships exceeds 45 per cent of the breadth, the depth employed in calculating the area of the amidship cross-section B shall be deemed to be equal 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 of a lifeboat constructed of wooden planks may be assumed to be the product of the length, the breadth and the depth multiplied by 0.6 if this formula does not give a greater capacity than that obtained by the formula set out in paragraph (1) of this Schedule. The dimensions shall be measured in the following manner:—

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

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

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

(5) The cubic capacity of a motor lifeboat or a lifeboat fitted with other propelling gear shall be obtained from the gross capacity by deducting a volume equal to that occupied by the motor and its accessories or the gearbox of the other propelling gear, and any equipment with which the lifeboat may be provided in compliance with Rule 33 of these Rules.

## SCHEDULE 6

### MACHINERY OF MOTOR LIFEBOATS

#### Rule 22(a)

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

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

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

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

(5) The fuel tank shall be substantially constructed, securely fixed in position with a metal tray underneath and fitted with suitable filling, vapour venting and relief arrangements. No part of the tank or its connections nor any part of the fuel piping or fittings shall depend on soft solder for tightness, and tanks made of steel shall be protected externally against corrosion by sea water by metal spraying or similar means. The tank and its connections shall be capable of

withstanding hydraulic pressure corresponding to a head of at least 15 feet. A cock shall be fitted at each end of the fuel pipe.

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

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

### SCHEDULE 7

#### 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 into the lifeboat.

(2) If the propelling gear is manually operated it shall be capable of being operated by persons untrained in its use and shall be capable of being operated when the lifeboat is flooded.

(3) The propelling gear shall not require adjustment to enable it to be worked by persons of different stature. It shall be effective in propelling the lifeboat partially or fully loaded.

(4) The propelling gear shall be substantially constructed and fitted to the lifeboat in an efficient manner. The metal part of any operating handle shall be suitably sheathed by material other than wood to ensure that the hands of the operators are protected in conditions of extreme cold.

(5) The propelling gear shall be of sufficient power to enable the lifeboat when loaded with its equipment required by these Rules and a distributed weight equal to the full number of persons which it is fit to carry, to be propelled at a speed ahead of at least 3.5 knots in smooth water over a distance of  $\frac{1}{4}$  mile.

(6) The propelling gear shall be capable of propelling the lifeboat ahead or astern and a device shall be fitted by means of which the helmsman can cause the lifeboat to go astern or ahead at any time when the propelling gear is in operation.

### SCHEDULE 8

#### 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 its equipment and the number of persons specified in Column (3) of paragraph (3) of this Schedule.

(3) The length of the boat and the number of persons for whom seating shall be provided in the boat shall be determined in accordance with the following table:—

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

(4) All thwart and side seats in the boat shall be fitted as low in the boat as practicable and bottom boards shall be fitted.

(5) The boat shall be square-sterned and shall have a mean sheer at least equal to five per cent of its length.

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

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

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

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

(b) that equal to 7.5 per cent of the cubic capacity of the boat which shall be determined in the same manner as that prescribed for lifeboats in Schedule 5 to these Rules.

## SCHEDULE 9

### REQUIREMENTS FOR LIFERAFTS

#### PART I

##### INFLATABLE LIFERAFTS

##### Rule 25

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

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

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

(c) The construction of the liferaft shall include a cover of a highly visible colour which shall automatically be set in place when the liferaft is inflated. This cover 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 and a similar lamp shall also be fitted inside the liferaft;

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

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

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

(g) The liferaft shall be contained in a valise or other container so constructed as to be capable of withstanding hard wear under conditions



encountered at sea. The liferaft in its valise or other container shall be inherently buoyant;

- (h) The buoyancy of the liferaft shall be so arranged as to ensure by a division into an even number of separate compartments, half of which shall be capable of supporting out of the water the number of persons which the liferaft is fit to accommodate, or by some other equally efficient means, that there is a reasonable margin of buoyancy if the raft is damaged or partially fails to inflate;
- (i) The total weight of the liferaft, its valise or other container and its equipment shall not exceed 400 pounds;
- (j) The number of persons which a liferaft shall be deemed fit to accommodate shall be equal to—
  - (i) the greatest whole number obtained by dividing by 3.4 the volume, measured in cubic feet, of the main buoyancy tubes (which for this purpose shall include neither the arches nor the thwart or thwarts if fitted) when inflated; or
  - (ii) the greatest whole number obtained by dividing by 4 the area, measured in square feet, of the floor (which for this purpose may include the thwart or thwarts if fitted) of the liferaft when inflated, whichever number shall be the less;
- (k) The floor of the liferaft shall be waterproof and shall be capable of being sufficiently insulated against cold either
  - (i) by means of one or more compartments which the occupants can inflate if they so desire, or which inflate automatically and can be deflated and re-inflated by the occupants; or
  - (ii) by other equally efficient means not dependent on inflation;
- (l) The liferaft shall be inflated by a gas which is not injurious to the occupants and the inflation shall take place automatically either on the pulling of a line or by some other equally simple and efficient method. Means shall be provided whereby a topping-up pump or bellows may be used to maintain pressure;
- (m) The liferaft shall be of suitable material and construction, and shall be so constructed as to be capable of withstanding exposure for 30 days afloat in all sea conditions;
- (n) Every liferaft which is designed for use with a launching appliance shall be properly constructed for the purpose for which it is intended and shall be of sufficient strength to permit it to be safely lowered into the water when loaded with its full complement of persons and equipment;
- (o) The liferaft shall have a carrying capacity calculated in accordance with sub-paragraph (j) of this paragraph of not less than six persons or more than twenty-five persons;
- (p) The liferaft shall be capable of operating throughout a temperature range of 150°F. to minus 22°F. (or 66°C. to minus 30°C.);
- (q) The liferaft shall be fitted with arrangements enabling it to be readily towed;
- (r) Every liferaft carried on a ship which is provided with portable radio equipment which complies with the specification set forth in Part II of Schedule 5 to the Merchant Shipping (Radio) Rules 1965 or in Schedule 11 to the Merchant Shipping (Radio) (Fishing Boats) Rules 1965 shall be provided with arrangements for accommodating properly in the

operating position the aerial referred to in those Schedules to the said Rules.

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

- (a) the height of 60 feet referred to in the said sub-paragraph (b) may be the height equivalent to that of the deck on which the liferaft is stowed above the ship's light water line, but in no case less than 20 feet;
- (b) means for collecting rain referred to in the said sub-paragraph (c) shall not be required to be provided;
- (c) the method for insulating the floor of the liferaft against cold as referred to in the said sub-paragraph (k) shall not be required to be complied with;
- (d) the minimum carrying capacity of liferafts required by the said sub-paragraph (o) as six persons may be four persons, provided that liferafts which are deemed fit to accommodate less than six persons shall only be carried on such ships on which the total number of persons on board is less than six;
- (e) the temperature of minus 22°F. (minus 30°C.) referred to in the said sub-paragraph (p) may be 0°F. (minus 18°C.);
- (f) the arrangements for towing referred to in the said sub-paragraph (q) shall not be required to be provided.

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

## PART II

### RIGID LIFERAFTS

Every rigid liferaft shall comply with the following requirements:—

- (a) The liferaft shall be so constructed that if it is dropped into the water from its stowed position neither the liferaft nor its equipment will be damaged;
- (b) Any liferaft which is designed for use with a launching appliance shall be properly constructed for the purpose for which it is intended and shall be of sufficient strength to permit it to be safely lowered into the water when loaded with its full complement of persons and equipment;
- (c) The liferaft shall be so constructed that its air cases or buoyant material are placed as near as possible to its sides;
- (d) The deck area of the liferaft shall be situated within that part of the liferaft which affords protection to its occupants. The nature of the deck shall be such as to prevent so far as practicable the ingress of water and it shall effectively support the occupants out of the water;
- (e) The liferaft shall be fitted with a cover or equivalent arrangement of a highly visible colour, which shall be capable of protecting the occupants against injury whichever way up the liferaft is floating;
- (f) The equipment of the liferaft shall be so stowed as to be readily available whichever way up the liferaft is floating;

- (g) The total weight of any liferaft and its equipment carried in passenger ships shall not exceed 400 pounds. Liferafts carried in cargo ships may exceed 400 pounds in weight if they are capable of being launched from both sides of the ship or if means are provided for putting them into the water mechanically on either side of the ship;
- (h) The liferaft shall at all times be effective and stable when floating either way up;
- (i) The number of persons which the liferaft shall be deemed fit to accommodate shall be equal to—
  - (i) the greatest whole number obtained by dividing by 3.4 the volume, measured in cubic feet, of the air cases or buoyant material; or
  - (ii) the greatest whole number obtained by dividing by 4 the deck area of the liferaft measured in square feet, whichever number shall be the less;
- (j) The liferaft shall have a painter attached and a lifeline securely becketed round the outside. A lifeline shall also be fitted round the inside of the liferaft;
- (k) The liferaft shall be fitted at each opening with efficient means to enable persons in the water to climb on board;
- (l) The liferaft shall be so constructed as not to be affected by oil or oil products;
- (m) A buoyant light of the electric battery type shall be attached to the liferaft by a lanyard;
- (n) The liferaft shall be fitted with arrangements enabling it to be readily towed;
- (o) Liferafts shall be so stowed as to float free in the event of the ship sinking;
- (p) Every liferaft carried on a ship which is provided with portable radio equipment which complies with the specification set forth in Part II of Schedule 5 to the Merchant Shipping (Radio) Rules 1965 or in Schedule 11 to the Merchant Shipping (Radio) (Fishing Boats) Rules 1965 shall be provided with arrangements for accommodating properly in the operating position the aerial referred to in those Schedules to the said Rules.

## SCHEDULE 10

### 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. Buoyant material shall not be adversely affected by oil or oil products nor shall it adversely affect the buoyant apparatus.

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

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

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

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

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

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

## SCHEDULE 11

### REQUIREMENTS FOR LIFEBOOYS

#### Rule 28

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

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

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

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

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

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

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

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

## SCHEDULE 12

### REQUIREMENTS FOR LIFEJACKETS

Rules 3(12), 4(15), 7(7), 8(4), 11(13), 12(12), 16(5), 17(11), 18(6) and 19(7).

#### PART I

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- (b) the kapok shall be of good flotation quality, well teased, evenly packed and free from seeds and other foreign matter;
  - (c) the kapok shall be protected from the effects of oil or oil products so that the loss of buoyancy in the lifejacket, after floating in disturbed water containing a layer of not less than 3 millimetres in depth of a mixture of gas oil for a period of 48 hours, shall not exceed 2 per cent of the initial buoyancy and for the purpose of this test the lifejacket shall be loaded with weights equal to half its initial buoyancy; and
  - (d) the covering shall be of pre-shrunk cotton material, the weight of which in loomstate per linear yard shall be not less than 6 ounces for a width of 27 inches and in proportion for other widths. The fabric shall be free from admixture of sizing or other foreign matter. The threads per inch in loomstate shall be warp 44 two-fold threads and weft 34 two-fold threads. The sewing shall be carried out with linen thread of not less quality than No. 25a fine cord Whittemore Cord.
- (6) Every such lifejacket using a buoyant material other than kapok shall in addition to complying with the requirements of paragraphs (1) to (4) and (5)(d) of this Part of this Schedule comply with the following requirements:—
- (a) the material shall not weigh more than 12 pounds per cubic foot, and shall be of good quality and clean. If the material is in pieces, the size of each piece shall be not less than 10 cubic inches, unless such pieces are in layer form and are fastened together with an approved adhesive; and
  - (b) the material shall be chemically stable.
- (7) Every lifejacket the buoyancy of which depends on inflation, which may be carried for use by members of the crews of ships, other than tankers, of Classes VII, VIII, VIII(A), IX, IX(A), X and XI, shall comply with the requirements of paragraph (3) of this Part of this Schedule and in addition shall comply with the following requirements:—
- (a) it shall have two separate buoyancy compartments in either of the following forms—
    - (i) one compartment of inherent buoyancy equal to at least 20 pounds and one air compartment of at least 15 pounds, or
    - (ii) two separate air compartments each of at least 20 pounds buoyancy;
  - (b) it shall be marked indelibly on both sides in letters not less than one inch in size with the words "CREW ONLY" and on one side only with the maker's name or other identification mark in smaller letters; and
  - (c) it shall be capable of being inflated both mechanically and by mouth.

## PART II

- (1) Every lifejacket for use by a person weighing less than 70 pounds shall provide a minimum buoyancy of 15 pounds in fresh water for 24 hours.
- (2) Every such lifejacket shall be marked indelibly on both sides in letters not less than half an inch in size with the words "FOR PERSON UNDER 70 lb." and on one side only with the maker's name or other identification mark.
- (3) Every such lifejacket shall comply with the requirements of paragraphs (3) and (4) of Part I of this Schedule.

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

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

### SCHEDULE 13

#### REQUIREMENTS FOR LINE-THROWING APPLIANCES

##### Rule 30

(1) Every line-throwing appliance shall include 4 rockets and 4 lines, each line being  $\frac{1}{2}$  inch in circumference and of suitable length, and having a breaking strain of not less than 250 pounds.

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

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

(4) Every line-throwing appliance carried in ships of 75 feet in length or over, shall be capable of throwing a line  $\frac{1}{2}$  inch in circumference a minimum distance of 250 yards in calm weather.

(5) Every line-throwing appliance carried in ships of less than 75 feet in length, but not less than 50 feet in length, shall be capable of throwing a line  $\frac{1}{2}$  inch in circumference a minimum distance of 200 yards in calm weather.

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

### SCHEDULE 14

#### SPECIFICATIONS OF EQUIPMENT FOR LIFEBOATS, BOATS AND LIFERAFTS

##### PART I

##### COMPASSES FOR LIFEBOATS

##### Rule 31(1)(j)

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

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

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

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

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

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

(7) The arrangements made to allow for the expansion and contraction of the liquid shall enable the compass to withstand a temperature range of  $-10^{\circ}\text{F}$ . to  $+120^{\circ}\text{F}$ . 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 gimbaling 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 or fitted with suitable means of illumination. The card system shall remain free when the bowl is tilted by 10 degrees.

(9) The direction of the lubber line or point from the centre of the card shall lie in the same vertical plane as the outer gimbal axis or other fore and aft datum 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  $\frac{3}{8}$  inch by  $\frac{1}{8}$  inch. Gimbal pins shall be of naval brass or other hard non-magnetic material of  $\frac{1}{4}$  inch diameter; both they and the bearings in which they engage shall be perfectly smooth.

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

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

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

## PART II

### SEA ANCHORS FOR LIFEBOATS AND BOATS OTHER THAN CLASS C BOATS

#### Rule 31(1)(k) and (5)(g)

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

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



- ## PART III

**Rule 35(1)(m)**

(2) When the rocket is fired approximately vertically, the star and parachute shall be ejected at or before the top of the trajectory, at a minimum height of

600 feet. The rocket shall also be capable of functioning when fired at an angle of 45 degrees to the horizontal.

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

(4) The parachute shall be of such a size as to provide the required control of the rate of fall of the burning star. It shall be attached to the star by means of 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 AND LIFERAFTS

Rule 31(1)(n), Rule 35(1)(n) and (4)(c)

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

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

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

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

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

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

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

#### PART V

##### BUOYANT SMOKE SIGNALS FOR LIFEBOATS

Rule 31(1)(o) and Rule 45(2)

(1) Every buoyant smoke signal shall be fitted with a self-contained means of ignition.

(2) The signals shall be capable, while floating on the water, of emitting a dense volume of orange-coloured smoke for a period of not less than two minutes and not more than four minutes.

(3) The signal shall be waterproofed and capable of satisfactory functioning after immersion in water for one minute.

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

(5) The signal shall be stamped indelibly with the date on which it is filled.

(6) Clear and concise directions for use in the English language shall be printed indelibly on the signal.

## PART VI

### FIRST AID OUTFITS FOR LIFEBOATS

#### Rule 31(1)(p)

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

<i>Article</i>	<i>Quantity</i>
(a) Collapse Revivers (6 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 $\frac{1}{4}$ gr. in 1 c.c. or Papaveretum B.P.C. $\frac{1}{2}$ gr. in 1 c.c. in screw capped metal drum with directions for use ...	1 Drum
(d) Standard Dressings No. 14, Medium B.P.C., 6" 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 2 $\frac{1}{2}$ yds.	3
(i) Roller Bandages, compressed, 2 $\frac{1}{2}$ " 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:—

- It shall be durable, damp-proof, and effectively sealed. It shall also be sealed with a device to indicate that the contents are intact.
- It shall be packed in a room from which atmospheric moisture has been removed as far as possible.
- Where the container is made of metal, it shall be well tinned and lacquered, and a handle shall be fitted to the lid.
- An itemized list of contents shall be given on the outside of the container.

## PART VII

## MANUAL PUMPS FOR LIFEBOATS

Rule 31(1)(u)

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

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

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

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

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

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

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

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

## PART VIII

## FIRST AID OUTFITS FOR LIFERAFTS

Rule 35(1)(i)

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

<i>Article</i>	<i>Quantity</i>
(a) Standard Dressing 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 yds. ... ..	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 morphine salt equivalent to Anhydrous Morphine $\frac{1}{4}$ gr. in 1 c.c. or Papaveretum B.P.C. $\frac{1}{2}$ gr. in 1 c.c. in screw capped metal drum with directions for use ... ..	1 Drum
(h) Instructions in the English language printed on linen or waterproof paper.	

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

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

## SCHEDULE 15

### DAVITS AND LIFEBOAT LAUNCHING GEAR

#### PART I

##### GENERAL

#### Rule 37(9)

*Definition of "Working Load".* In this Schedule the expression "working load" means

- (a) in relation to davits to which sub-paragraph (a) of paragraph (1) of Part II of this Schedule applies, the sum of the weight of the lifeboat, its full equipment, the blocks and falls, and the maximum number of persons which the lifeboat is deemed fit to carry, the weight of each person being taken to be 165 pounds;
- (b) in relation to davits and other means of launching to which sub-paragraph (b) or (c) of paragraph (1) of Part II of this Schedule applies, the sum of the weight of the lifeboat, Class C boat or other boat, its full equipment, the blocks and falls, and a launching crew consisting of two persons, the weight of each person being taken to be 165 pounds;
- (c) in relation to winches the maximum pull exerted by the fall or falls at the winch drum during lowering, hoisting or stowing which in any case is to be taken as not less than the working load on the davit or davits divided by the velocity ratio of the lowering tackle.

#### PART II

##### CONSTRUCTION

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

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

(c) Every set of davits, davit or other means of launching to which a lifeboat, Class C boat or other boat is attached, other than a davit the strength of which is specified in sub-paragraph (a) or (b) of this paragraph, shall to-

gether with its winch, falls, blocks and all other associated lowering gear be of such strength that the lifeboat, Class C boat or other boat with its full equipment and manned by a launching crew of two members, can be turned out and then safely lowered into the water when the ship has a trim of 10 degrees and is listed up to 15 degrees either way.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(b) Winch brakes shall be of robust construction and afford complete control and limitation of speed in the operation of lowering. The hand brake shall be so arranged that it is normally in the "ON" position and returns to the "ON" position when the control handle is not being operated. The weight on the brake lever shall be sufficient to operate the brake effectively without additional pressure. The brake gear shall include means for automatically controlling the speed of lowering to ensure that the lifeboat, Class C boat or other boat is lowered expeditiously without exceeding a rate of lowering consistent with safety. For this purpose, the automatic brake shall be set to give a speed of lowering of the lifeboat of between 60 and 120 feet per minute. Ratchet gear shall be incorporated in the hand brake mechanism of lifeboat winches. Where practicable the brake gear shall be so situated as to enable the man operating the winch to have the lifeboat, Class C boat or other boat under observation during the whole process of its being launched into the water, provided that winches serving emergency lifeboats shall in any case be so placed.

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

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

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

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

### PART III

#### TESTS AFTER INSTALLATION ON BOARD

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

(2) *Lowering tests.* (a) Each pair of davits to which sub-paragraph (a) of paragraph (1) of Part II of this Schedule applies and any associated lifeboat winches and their brakes shall be capable of withstanding the following test:— the lifeboat at each set of davits shall be lowered from the embarkation deck into the water loaded with the equipment required by these Rules and a distributed weight equal to the full number of persons which it is deemed fit to accommodate plus 10 per cent of the working load. Winch brakes exposed to the weather shall be capable of withstanding the foregoing test with the braking surface wetted.

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

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

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

### SCHEDULE 16

#### LIFEBOAT DISENGAGING GEARS

Rule 37(16)

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



- (2) The means of effecting release shall be placed aft.
- (3) The gear shall be of a type which will permit the release of the lifeboat only when it is waterborne.
- (4) The gear shall be of a type which will permit release should there be a towing strain on the link or falls.
- (5) The hooks shall be suitable for instant unhooking by hand.
- (6) The point of attachment of the hook to the eye, ring or link of the block shall not be lower than when ordinary fixed hooks are fitted.
- (7) The gear and mechanism for effecting release shall be so constructed and arranged as to ensure the safety of the lifeboat independently of any safety pins.
- (8) The means for effecting release shall be by hauling on or letting go a line or by using a lever. If release is effected by a pull 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  $2\frac{1}{2}$  times the weight of the heaviest loaded lifeboat in which the gear is intended to be fitted.

## SCHEDULE 17

### LIFERAFT LAUNCHING APPLIANCES

#### Rule 38(2)

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

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

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

(3) *Construction*. Each part of every liferaft launching appliance shall be such that when the appliance is operating under the working load and unfavourable conditions of list and trim it shall have an adequate factor of safety having regard to the material used, the method of construction and the nature

of its duty. Except for lead sheaves and block sheaves, all parts of the appliance and its associated gear which are subjected to the working load or on which the safety of the appliance or the liferaft while in the process of launching depends shall be constructed of ductile material and no part, other than lead sheaves and block sheaves, shall be constructed of cast metal unless the Board shall so permit.

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

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

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

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

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

(e) When liferaft launching appliances incorporate winches, the winches shall be constructed in accordance with paragraph (10) of Part II of Schedule 15 to these Rules.

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

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

## SCHEDULE 18

### SHIPS' PARACHUTE DISTRESS ROCKET SIGNALS

#### Rule 45(1) and (4)

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

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

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

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

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

(6) The match composition, the striker composition, the ferrule, and the whole of the external surface of the rocket shall be 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 in the English language shall be printed indelibly on the rocket.

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### EXPLANATORY NOTE

*(This Note is not part of the Rules.)*

These Rules supersede the Merchant Shipping (Life-Saving Appliances) Rules 1958 and the Merchant Shipping (Life-Saving Appliances) (Amendment) Rules 1959. They include such requirements as appear to the Board of Trade to implement the provisions of the International Convention for the Safety of Life at Sea 1960 relating to the provision of life-saving appliances in merchant ships engaged on international voyages.

The principal changes are:—

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

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

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

(d) The introduction of provisions to ensure that whale factory ships and analogous ships of Class VII(A) of 500 tons or over shall comply with require-

ments which are broadly similar to those applicable to ships of Class I.

(e) An increase in the provision of liferafts and/or buoyant apparatus in ships of Class III so that they shall carry lifeboats, liferafts and/or buoyant apparatus to accommodate all persons on board.

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

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