
STATUTORY INSTRUMENTS

1980 No. 538

MERCHANT SHIPPING

SAFETY

The Merchant Shipping
(Life-saving Appliances)
Regulations 1980

<i>Made - - - -</i>	<i>17th April 1980</i>
<i>Laid before Parliament</i>	<i>2nd May 1980</i>
<i>Coming into Operation</i>	<i>25th May 1980</i>



LONDON
HER MAJESTY'S STATIONERY OFFICE

S T A T U T O R Y I N S T R U M E N T S

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The Secretary of State, after consultation with the persons referred to in section 22(2) of the Merchant Shipping Act 1979(a), in exercise of the powers conferred on him by subsections (1), (3)(a)(d)(f)(g) and (l), (5), (6)(a) and (b) or section 21 and by section 22(1) (a) and (c) of that Act and of all other powers enabling him in that behalf, hereby makes the following Regulations:

PART I—PRELIMINARY

Citation, commencement, interpretation, application and revocation

1.—(1) These Regulations may be cited as the Merchant Shipping (Life-Saving Appliances) Regulations 1980 and shall come into operation on 25th May 1980.

(2) In these Regulations:

“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 Secretary of State in accordance with the conditions laid down in regulation 47(2) of these Regulations 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 Secretary of State as being the equivalent of any certificate issued by or under the authority of the Secretary of State;

“Certified” means certified by a certificate issued under section 274 of the Merchant Shipping Act 1894(b);

“Class C boat” means a boat complying with the provisions of regulation 28 of these regulations;

“Date of expiry” in relation to any product referred to in Schedules 12, 14, 15, 20 and 21 of these Regulations means a date within three years from the date of manufacture of that product;

“Fishing vessel” means a vessel as defined in section 9(1) of the Fishing Vessels (Safety Provisions) Act 1970(c);

“Inflatable boat” means a boat complying with the provisions of regulation 29 of these Regulations;

“Launching appliance” means an appliance complying with the provisions of regulation 44(2) of these Regulations;

(a) 1979 c. 39.
(c) 1970 c. 27.

(b) 1894 c. 60.

“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 regulation 24 of these Regulations;

“Liferaft” means a liferaft complying with the provisions of regulation 30 of these Regulations;

“Mechanically propelled lifeboat” means a lifeboat (other than a motor lifeboat) complying with the provisions of regulation 27 of these Regulations;

“Mile” means 1,852 metres;

“Motor lifeboat” means a lifeboat complying with the requirements of regulation 26 of these Regulations;

“Near continental trading area” means the area defined in Schedule 2 to the Merchant Shipping (Certification of Deck Officers) Regulations 1977(a);

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

“Passenger ship certificate” means a passenger ship certificate issued pursuant to section 274 of the Merchant Shipping Act 1894;

“Person” means a person over the age of one year;

“Pleasure craft” means a vessel primarily used for sport or recreation;

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

“Tanker” means a cargo ship constructed or adapted for the carriage in bulk of liquid cargoes of an inflammable nature;

“Tons” means gross tons and the gross tonnage of a ship having alternative gross tonnages shall be taken to be the larger of those tonnages;

“United Kingdom ship” means a ship as defined in section 21(2) of the Merchant Shipping Act 1979.

(3) These Regulations apply in relation to:

(a) United Kingdom ships; and

(b) other ships which are either 1948 Safety Convention ships, 1960 Safety Convention ships or 1974 Safety Convention ships while they are within the United Kingdom or the territorial waters thereof:

Provided that these Regulations 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) could have prevented;

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

(iii) mechanically-propelled sea-going fishing vessels registered in the United Kingdom under Part I or entered in the fishing boat register under Part IV of the Merchant Shipping Act 1894.

For the purpose of this paragraph:

(a) S.I. 1977/1152; to which there are amendments not relevant to these Regulations.

- (aa) “a 1948 Safety Convention ship” means a ship registered in a country to which the Safety of Life at Sea Convention 1948 applies;
- (bb) “a 1960 Safety Convention ship” means a ship registered in a country to which the Safety of Life at Sea Convention 1960 applies;
- (cc) “a 1974 Safety Convention ship” means a ship registered in a country to which the Safety of Life at Sea Convention 1974 applies;

(4) The Merchant Shipping (Life-Saving Appliances) Rules 1965(a) are hereby revoked to the extent that they apply to United Kingdom ships and to other Safety Convention ships while they are within the United Kingdom or the territorial waters thereof.

Classification of ships

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

Passenger Ships

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

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

Class II(A). Passenger ships 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 ships in respect of which there is or should be in force a certificate entitled “Passenger Certificate Class III”, being a certificate for ships engaged 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 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 ships 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 ships 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 ships 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 ships 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

(a) S.I. 1965/1105, as amended by S.I. 1966/744; S.I. 1969/409; S.I. 1977/229, S.I. 1978/1874.

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 ships

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

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

Class VII(T). Tankers engaged on voyages any of which are long international voyages.

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

Class VIII(T). Tankers engaged on voyages (not being long international voyages) any of which are short international voyages.

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

Class VIII(A)(T). Tankers 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). Ships (other than ships of Classes IV to VI inclusive) which do not proceed to sea.

Class IX(A)(T). Tankers which do not proceed to sea.

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

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

Class XII. Pleasure craft (other than ships of Classes I to VI(A) inclusive) of 13.7 metres in length or over.

(2) For the purposes of this regulation;

“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(a);

“Partially smooth waters” means, as respects any period specified in Schedule 2 to the Merchant Shipping (Smooth and Partially Smooth Waters) Rules 1977(b), the waters of any of the areas specified in column 3 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 ship;

(a) 1949 c. 43.

(b) S.I. 1977/252; the relevant amending instrument is S.I. 1978/801.

“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 column 2 of Schedule 2 to the Merchant Shipping (Smooth and Partially Smooth Waters) Rules 1977;

“Voyage” includes an excursion.

PART II—PASSENGER SHIPS

Ships of Class I

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

(2) Every ship to which this regulation 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 25th May 1980, 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 regulation applies two of the lifeboats required by paragraph (2) of this regulation 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 8.5 metres 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 regulation.

Notwithstanding the provisions of regulation 43(14), of these Regulations, skates or other suitable appliances are not required to be fitted to these lifeboats.

(4) Every ship to which this regulation 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 regulation applies which is certified to carry 1500 persons or more each of the motor lifeboats carried in compliance with paragraph (4) of this regulation shall be provided with the equipment specified in regulation 39(1) of these Regulations 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 regulation shall be so provided.

(b) Every motor lifeboat carried in compliance with this regulation shall be provided with the equipment specified in regulation 39(2) of these Regulations.

(6) Every ship to which this regulation applies which does not carry on each side of the ship a motor lifeboat provided with the equipment specified in regulation 39(1) of these Regulations shall carry portable radio equipment which shall comply with the requirements of regulation 48 of these Regulations.

(7) The lifeboats carried in compliance with this regulation shall be not less than 7.3 metres in length.

(8) In every ship to which this regulation 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 2300 kilogrammes in their turning out condition.

(9) The liferafts carried in compliance with sub-paragraph (b) of paragraph (2) of this regulation 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 regulation 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 regulation all liferafts carried shall be of a type capable of being launched by the appliances fitted in compliance with paragraph (9) of this regulation; 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 regulation applies shall carry at least the number of lifebuoys determined in accordance with the following table:—

Length of ship in metres	Minimum number of lifebuoys
Under 61	8
61 and under 122	12
122 and under 183	18
183 and under 244	24
244 and over	30

(12)(a) Every ship to which this regulation applies shall carry for every person on board weighing 32 kilogrammes or more a lifejacket which shall comply with the requirements of Part I of Schedule 13 to these Regulations and for every person on board weighing less than 32 kilogrammes 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 13 to these Regulations and shall be stowed on deck in a suitable place which shall be conspicuously marked.

(13) Every ship to which this regulation applies shall carry a line-throwing appliance, complying with the requirements of Schedule 14 to these Regulations.

Ships of Class II

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

(2) Every ship to which this regulation applies shall, subject to the provisions of paragraph (8) of this regulation and of regulation 52 of these Regulations, 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 1 to these Regulations:

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 regulation together provide at least the capacity specified in Column C of the table set out in Schedule 1 to these Regulations 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 regulation applies two of the lifeboats required by paragraph (3) of this regulation 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 8.5 metres 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 regulation.

Notwithstanding the provisions of regulation 43(14) of these Regulations, skates or other suitable appliances are not required to be fitted to these lifeboats.

(5) Every ship to which this regulation applies shall carry on each side of the ship at least one motor lifeboat which shall be provided with the equipment specified in Rule 39(2) of these Regulations:

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 regulation when the lifeboats carried in compliance with the foregoing provisions of this regulation 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 Secretary of State the volume of traffic so requires, the Secretary of State may permit any ship to which this regulation applies, being a ship which is subdivided in accordance with the requirements of Part III of Schedule 1 to the Merchant Shipping (Passenger Ship Construction) Regulations 1980(a) to carry persons in excess of the lifeboat capacity provided on board that ship in compliance with paragraph (3) of this regulation:

Provided that—

- (a) if such a ship is permitted by the Secretary of State 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 1 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 regulation.

(a) S.I. 1980/535.

(8) Where it is shown to the satisfaction of the Secretary of State 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 regulation without reducing the number of lifeboats, the Secretary of State may permit the number of sets of davits required to be fitted under paragraph (2) of this regulation and regulation 52(2) of these Regulations and the number of lifeboats attached to davits required under paragraph (3) of this regulation to be reduced:

Provided that

- (a) the number of lifeboats shall, in the case of ships of 58 metres 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 58 metres 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 1 to these Regulations there shall be provided liferafts of a type capable of being launched by the appliances referred to in regulation 44(2) of these Regulations. 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 regulation shall not be less than 7.3 metres in length.

(10) In every ship to which this regulation applies the lifeboat davits required to be carried in compliance with this regulation shall be of the gravity type, except that luffing type davits may be fitted for operating lifeboats weighing not more than 2300 kilogrammes in their turning out condition.

(11) Every ship to which this regulation applies which does not carry on each side of the ship a motor lifeboat provided with the equipment specified in regulation 39(1) of these Regulations shall carry portable radio equipment which shall comply with the requirements of Rule 48 of these Regulations:

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

(12) Every ship to which this regulation applies shall carry in addition to any liferafts that may be carried in pursuance of paragraphs (7) and (8) of this regulation 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 regulation 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 regulation applies shall carry at least the number of lifebuoys determined in accordance with the following table:—

Length of ship in metres	Minimum number of lifebuoys
Under 61	8
61 and under 122	12
122 and under 183	18
183 and under 244	24
244 and over	30

(15)(a) Every ship to which this regulation applies shall carry for every person on board weighing 32 kilogrammes or more a lifejacket which shall comply with the requirements of Part I of Schedule 13 to these Regulations and for every person on board weighing less than 32 kilogrammes 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 13 to these Regulations and shall be stowed on deck in a suitable place which shall be conspicuously marked.

(16) Every ship to which this regulation applies shall carry a line-throwing appliance, complying with the requirements of Schedule 14 to these Regulations.

Ships of Class II(A)

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

Ships of Class III

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

(2) Every ship to which this regulation applies shall, subject to the provisions of regulation 52 of these Regulations, be fitted with the number of sets of davits specified in the table set out in Schedule 2 to these Regulations:

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 regulation, 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 regulation shall, where reasonable and practicable, be not less than 6.1 metres in length.

(6) Lifeboat davits required to be carried in compliance with this regulation shall be of the gravity type, except that luffing type davits may be fitted for operating lifeboats weighing not more than 2300 kilogrammes in their turning out condition.

(7) Every ship to which this regulation applies shall carry at least eight lifebuoys, two of which shall have self-activating smoke signals attached complying with the requirements of Schedule 12 to these Regulations.

(8) Every ship to which this regulation applies shall carry for every person on board weighing 32 kilogrammes or more a lifejacket which shall comply with the requirements of Part I of Schedule 13 to these Regulations and for every person on board weighing less than 32 kilogrammes a lifejacket which shall comply with the requirements of Part II of the said Schedule.

(9) Every ship to which this regulation applies shall carry a line-throwing appliance complying with the requirements of Schedule 14 to these Regulations.

Ships of Class IV

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

(2) Every ship to which this regulation applies shall, subject to the provisions of regulation 52 of these Regulations be fitted with the number of sets of davits specified in the table set out in Schedule 2 to these Regulations;

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 regulation shall be of the gravity type, except that luffing type davits may be fitted for operating lifeboats weighing not more than 2300 kilogrammes 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 regulation, for 60 per cent of the total number of persons which the ship is certified to carry.

(6) Every ship to which this regulation applies of 61 metres in length or over shall carry at least eight lifebuoys, and every such ship of less than 61 metres in length shall carry at least four lifebuoys.

(7) Every ship to which this regulation applies shall carry for every person on board weighing 32 kilogrammes or more a lifejacket which shall comply with the requirements of Part I of Schedule 13 to these Regulations and for every person on board weighing less than 32 kilogrammes a lifejacket which shall comply with the requirements of Part II of the said Schedule.

(8) Every ship to which this regulation applies shall carry a line-throwing appliance complying with the requirements of Schedule 14 to these Regulations.

Ships of Class V

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

(2) Every ship to which this regulation applies of 45.7 metres in length or over shall carry at least two boats, and every ship of 21.3 metres in length or over and of less than 45.7 metres in length shall carry at least one boat.

(3) Every ship to which this regulation applies of 45.7 metres in length or over shall carry at least six lifebuoys, and every such ship of less than 45.7 metres in length shall carry at least four lifebuoys.

(4) Every ship to which this regulation applies, being a ship which is subdivided in accordance with the requirements of Part IV of Schedule 1 to the Merchant Shipping (Passenger Ship Construction) Regulations 1980 shall carry subject to the requirements of paragraphs (2) and (3) of this regulation:

- (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 32 kilogrammes or more a lifejacket which shall comply with the requirements of Part I of Schedule 13 to these Regulations and for every person on board weighing less than 32 kilogrammes 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 regulation applies other than a ship to which paragraph (4) of this regulation applies shall carry, subject to the requirements of paragraphs (2) and (3) of this regulation the equipment specified in subparagraph (b) of paragraph (4) of this regulation.

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

(7) Davits serving lifeboats carried in compliance with this regulation shall be of the gravity type, except that luffing type davits may be fitted for operating lifeboats weighing not more than 2300 kilogrammes in their turning out condition.

Provided that, in the case of any ship to which this regulation applies of less than 45.7 metres in length, the Secretary of State may permit other types of davit if he is 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) Regulation 8 of these Regulations shall apply to ships of Class VI, being ships of 21.3 metres in length or over, as it applies to ships of Class V.

(3) Every ship to which this regulation applies of less than 21.3 metres in length and plying more than three 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 regulation 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 regulation applies of less than 21.3 metres in length and plying not more than three 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 regulation 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.

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

Length of ship in metres	Minimum number of lifebuoys
Not over 9	2
Over 9 and not over 11	4
Over 11 and not over 12	6
Over 12 and not over 15	8
Over 15 and not over 21	10

(6) In the case of ships to which this regulation applies not exceeding 9.1 metres in length the Secretary of State 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 regulation.

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

Ships of Class VI(A)

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

(2) Regulation 7 of these Regulations shall apply to ships of Class VI(A), being ships 21.3 metres length or over, as it applies to ships of Class IV.

(3) Every ship to which this regulation applies of less than 21.3 metres 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 regulation 9(5) of these Regulations 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 9.1 metres in length to which this regulation applies the Secretary of State 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 regulation.

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

PART III—SHIPS OTHER THAN PASSENGER SHIPS

Ships of Class VII

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

(2) Every ship to which this regulation 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 regulation applies of 1,600 tons or over the lifeboats shall be not less than 7.3 metres in length.

(4) Every ship to which this regulation applies of 500 tons or over but under 1600 tons, shall carry liferafts of sufficient aggregate capacity to accommodate

at least the total number of persons on board. Ships with 16 or more persons on board shall carry at least two liferafts of approximately equal capacity.

(5) Every ship to which this regulation applies of 1600 tons or over shall carry liferafts of sufficient aggregate capacity to accommodate at least half the total number of persons on board.

(6) Every ship to which this regulation applies of 500 tons or over but under 1600 tons, shall carry either—

(a) the lifeboats prescribed in paragraph (2) of this regulation for ships of 500 tons or over together with the liferafts prescribed in paragraph (4) of this regulation; or

(b) (i) liferafts on each side of the ship of sufficient aggregate capacity to accommodate the total number of persons on board, the liferafts on each side being of approximately equal capacity:

Provided that when these liferafts can be readily launched on each side of the ship, the following requirements of sub-paragraph (ii) below need not be complied with; and

(ii) the liferafts prescribed in paragraph (4) of this regulation stowed as described in paragraph (10) of this regulation; and

(iii) (1) a lifeboat fitted with a motor and complying with the requirements of regulation 26 of and Schedule 5 Part 1 to these Regulations; or

(2) a class C boat fitted with a motor complying:

(aa) with Schedule 5 Part 1 of these Regulations if over 4.3 metres in length; or

(bb) with Schedule 5 Part II if under 4.3 metres in length, or

(3) an inflatable boat fitted with a motor complying with Schedule 5 Part II to these Regulations; and

(iv) the boat prescribed in paragraph (b)(iii) of this regulation shall be capable of being launched on one side of the ship with its equipment and a launching crew of two persons when the ship is upright or listed up to 15° towards the side on which the boat is fitted and shall be launched and recovered by a davit complying with the requirements of Schedule 16 or Schedule 17 to these Regulations; where a winch is provided, it shall comply with Schedule 16 to these Regulations.

(7) In every ship provided with the liferafts prescribed in paragraph (6)(b)(i) of this regulation where the distance from the embarkation position to the water in the lightest sea going condition exceeds 4.5 metres, the rafts shall be of a type designed for use with a launching appliance. The launching appliances shall comply with the requirements of regulation 44 of and Schedule 19 to these Regulations; at least one launching appliance shall be provided on each side of the ship and not more than two liferafts shall be allocated to each launching appliance.

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

(a) the lifeboats prescribed in paragraph (2) of this regulation 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 or inflatable 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.

(9) Every ship with no amidship superstructure having a registered length of 150 metres or over shall carry, in addition to the liferafts required under paragraph (5) of this regulation, a liferaft capable of accommodating at least six persons which shall be stowed as far forward or aft as is reasonable and practicable.

(10) Liferafts carried under this regulation, except those liferafts fitted in compliance with paragraph (6)(b)(i) of this regulation shall be so stowed that they can be readily transferred to the water on either side of the ship.

(11) In every ship to which paragraph (2) of this regulation applies each lifeboat shall be attached to a separate set of davits which shall be of the gravity type except that luffing davits may be fitted for operating lifeboats weighing not more than 2300 kilogrammes in their turning out condition.

(12) In every ship to which this regulation applies of 1,600 tons or over one of the lifeboats carried in compliance with paragraph (2) of this regulation shall be a motor lifeboat.

(13) Every ship to which this regulation applies shall carry portable radio equipment which shall comply with the requirements of regulation 48 of these Regulations: provided that in the case of any ship engaged on voyages of such duration that in opinion of the Secretary of State portable radio equipment is unnecessary, he may permit such equipment to be dispensed with.

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

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

(16) Every ship to which this regulation applies shall carry for every person on board weighing 32 kilogrammes or more, a lifejacket which shall comply with the requirements of Part I of Schedule 13 to these Regulations and for every person on board weighing less than 32 kilogrammes, a lifejacket which shall comply with the requirements of Part II of the said Schedule.

(17) Every ship to which this regulation applies shall carry a line-throwing appliance complying with the requirements of Schedule 14 to these Regulations.

Ships of Class VII(A)

12.—(1) Regulation 21 of these Regulations shall apply to ships of Class VII(A), other than those ships specified in paragraph (2) of this regulation, 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 37½ per cent of the total number of persons on board.

(3) On every ship to which paragraph (2) of this regulation 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 8.5 metres 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 regulation.

Notwithstanding the provisions of regulation 43(14) of these regulations, skates or other suitable appliances are not required to be fitted to these lifeboats.

(4) Every ship to which paragraph (2) of this regulation 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 regulation applies which is certified to carry 1,500 persons or more each of the motor lifeboats carried in compliance with paragraph (4) of this regulation shall be provided with the equipment specified in regulation 39(1) of these Regulations, 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 regulation shall be so provided.

(b) Every motor lifeboat carried in compliance with paragraph (4) of this regulation shall be provided with the equipment specified in Rule 39(2) of these Regulations.

(6) Every ship to which paragraph (2) of this regulation applies which does not carry on each side of the ship a motor lifeboat provided with the equipment specified in regulation 39(1) of these Regulations shall carry portable radio equipment which shall comply with the requirements of regulation 48 of these Regulations.

(7) In every ship to which paragraph (2) of this regulation applies of 1,600 tons or over the lifeboats shall be not less than 7.3 metres in length.

(8) In every ship to which paragraph (2) of this regulation 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 regulation 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 regulation 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 regulation, all liferafts carried shall be of a type capable of being launched by the appliances fitted in compliance with paragraph (9) of this regulation.

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

(12) Every ship to which paragraph (2) of this regulation applies shall carry for every person on board weighing 32 kilogrammes or more, a lifejacket which shall comply with the requirements of Part I of Schedule 13 to these Regulations, and for every person on board weighing less than 32 kilogrammes 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 complying with the requirements of Schedule 14 to these Regulations.

Ships of Class VII(T)

13.—(1) Paragraphs (2), (3), (4), (5), (8), (9), (10,) (13), (14), (15), (16) and (17), of regulation 11 of these Regulations shall apply to ships of class VII(T) as they apply to ships of Class VII.

(2) Every ship to which this regulation applies 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 ships which have no amidships superstructure all lifeboats shall be carried aft:

Provided that, if in the case of ships with no amidships superstructure it is impracticable to carry four lifeboats aft, the Secretary of State 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 8.5 metres 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;

(3) In every ship to which paragraph (2) of regulation 11 or paragraph (2) of this regulation applies each lifeboat shall be attached to a separate set of davits which shall be of the gravity type except that in ships of less than 1,600 tons luffing davits may be fitted for operating lifeboats weighing not more than 2300 kilogrammes in their turning out condition.

(4) In every ship to which this regulation applies of 1,600 tons or over at least one of the lifeboats carried on each side of the ship in compliance with paragraph (2) of regulation 11 or paragraph (2) of this regulation shall be a motor lifeboat.

Ships of Class VIII

14. Regulation 11 of these Regulations shall apply to ships of Class VIII as it applies to ships of Class VII.

Ships of Class VIII(T)

15. Regulation 13 of these Regulations shall apply to ships of Class VIII(T) as it applies to ships of Class VII(T).

Ships of Class VIII(A)

16.—(1) Paragraphs (2), (3), (5), (9) and (10) of regulation 11 of these Regulations 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 (8) and (10) of regulation 11 of these Regulations 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.

(3) Paragraphs (14,) (15), (16) and (17) of regulation 11 of these Regulations shall apply to ships of Class VIII(A) as they apply to ships of Class VII and

paragraph (11) of regulation 11 shall apply to such ships which carry lifeboats as prescribed by paragraph (2) thereof.

Ships of Class VIII (A)(T)

17.—(1) Paragraphs (2), (3), (5), (9) and (10) of regulation 11 of these Regulations shall apply to ships of Class VIII(A)(T) of 1,600 tons or over as they shall apply to ships of Class VII of 500 tons or over.

(2) Paragraphs (8) and (10) of regulation 11 of these Regulations shall apply to ships of Class VIII(A)(T) of under 1,600 tons as they apply to ships of Class VII of under 500 tons.

(3) Paragraphs (2), (3) and (4) of regulation 13 of these Regulations shall apply to ships of Class VIII(A)(T) as they apply to ships of Class VII(T).

(4) Paragraphs (14), (15), (16) and (17) of regulation 11 of these Regulations shall apply to ships of Class VIII(A)(T) as they apply to ships of Class VII.

Ships of Class IX

18.—(1) This regulation applies to ships of Class IX.

(2) Paragraphs (2), (3), (4), (5), (6), (7), (11), (12) and (13) of regulation 11 of these Regulations shall apply to ships to which this regulation 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 regulation applies other than a ship of 500 tons or over engaged on an international voyage shall carry—

- (a) a lifeboat or Class C boat or inflatable 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; and
- (c) buoyant apparatus sufficient to support the total number of persons on board.

(4) In every ship to which this regulation applies liferafts (other than those fitted in compliance with regulation 11(6)(b)(i) of these Regulations) shall be so stowed that they can be readily transferred to the water on either side of the ship.

(5) Paragraphs (14), (15), (16) and (17) of regulation 11 of these Regulations shall apply to every ship to which this regulation applies as they apply to ships of Class VII.

Ships of Class IX(A)

19.—(1) This regulation applies to ships of Class IX(A).

(2) Every ship to which this regulation applies of 12.2 metres 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 21.3 metres in length or over at least four lifebuoys and in the case of ships of less than 21.3 metres in length but of not less than 12.2 metres in length at least two lifebuoys.

(3) Every ship to which this regulation applies of 12.2 metres in length or over when in smooth waters and every such ship of less than 12.2 metres in

length shall carry lifebuoys at least equal in number to half the total number of persons on board provided that such ships of 21.3 metres in length or over shall carry at least four lifebuoys and ships of less than 21.3 metres in length shall carry at least two lifebuoys.

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

(5) Every ship to which this regulation applies of 12.2 metres in length or over shall carry for every person on board weighing 32 kilogrammes or more a lifejacket which shall comply with the requirements of Part I of Schedule 13 to these Regulations and for every person on board weighing less than 32 kilogrammes a lifejacket which shall comply with the requirements of Part II of the said Schedule.

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

Ships of Class IX(A)(T)

20.—(1) This regulation applies to ships of Class IX(A)(T)

(2) Regulation 19 of these Regulations shall apply to ships of Class IX(A)(T) as it applies to ships of Class IX(A).

Ships of Class X

21.—(1) This regulation applies to ships of Class X.

(2) Every ship of Class X shall carry lifesaving equipment in accordance with the requirements appropriate to their length pursuant to Part IIIA of the Fishing Vessels (Safety Provisions) Rules 1975(a).

Ships of Class XI

22.—(1) This regulation applies to ships of Class XI.

(2) Every ship to which this regulation 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 or inflatable 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) Liferrafts carried in accordance with this regulation 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 regulation applies which carries the equipment required by sub-paragraph (a) of paragraph (2) of this regulation, the lifeboat

(a) S.I. 1975/330; relevant amending instrument is S.I. 1978/1873.

davits shall be of the gravity type except that in such ships davits which serve lifeboats weighing not more than 2,300 kilogrammes in their turning out condition may be of the luffing type.

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

(6) Every ship to which this regulation applies shall carry for every person on board weighing 32 kilogrammes or more a lifejacket which shall comply with the requirements of Part I of Schedule 13 to these Rules and for every person on board weighing less than 32 kilogrammes a lifejacket which shall comply with the requirements of Part II of the said Schedule.

(7) Every ship to which this regulation applies shall carry a line-throwing appliance complying with the requirements of Schedule 14 to these Regulations.

Ships of Class XII

23.—(1) This regulation applies to ships of Class XII.

(2) Every ship to which this regulation applies of 21.3 metres 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 regulation applies of 25.9 metres in length or over shall carry in addition a lifeboat or Class C boat or inflatable boat which shall be capable of being launched on one side of the ship.

(3) Every ship to which this regulation applies of less than 21.3 metres 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 regulation applies of less than 21.3 metres 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 regulation applies of less than 21.3 metres in length shall be provided with a buoyant line of at least 18 metres in length.

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

(7)(a) Every ship to which this regulation applies shall carry for every person on board weighing 32 kilogrammes or more, a lifejacket which shall comply with the requirements of Part I of Schedule 13 to these Regulations and for every person on board weighing less than 32 kilogrammes, a lifejacket which shall comply with the requirements of Part II of the said Schedule; or

(b) alternatively, every ship to which this regulation applies shall carry for every person on board, a lifejacket which shall comply with British Standard Specification BS 3595: 1969, provided it does not depend wholly upon oral inflation. If such lifejacket is of the partially inherent buoyant type, the buoyancy shall be not less than 89 newtons for every lifejacket for a person weighing 32 kilogrammes or more.

PART IV—GENERAL

REQUIREMENTS FOR LIFE-SAVING APPLIANCES

General requirements for lifeboats

24. Lifeboats shall comply with the requirements specified in Schedule 3 to these Regulations.

Carrying capacity of lifeboats

25.—(1) Subject to the provisions of paragraphs (2), (3), (4) and (5) of this regulation, the number of persons which a lifeboat shall be permitted to accommodate shall be equal to the greatest whole number obtained by dividing the capacity in cubic metres by:

In the case of a lifeboat of 7.3 metres in length or over	... ..	0.283
In the case of lifeboats of 3.7 metres in length	... ..	0.453
In the case of lifeboats of 3.7 metres in length or over but under 7.3 metres	... ..	a number between 0.453 and 0.283 to be obtained by interpolation.

The calculation of the cubic capacity of the lifeboat shall be determined in accordance with Schedule 4 to these Regulations.

(2) The number of persons which a lifeboat shall be permitted to accommodate shall in no case exceed the number of adult persons wearing life jackets which can be seated without in any way interfering with the use of 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

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

- (a) it shall be fitted with a compression ignition engine and such engine and its accessories shall comply with the requirements of Schedule 5 Part I to these Regulations 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 regulation;
- (c) it shall be capable of going astern;
- (d) if it is a lifeboat provided in accordance with regulation 3(4), regulation 4(5), regulation 12(4) or regulation 13(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 regulations 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

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

Class C boats

28. Class C boats shall comply with the requirements of Schedule 7 to these Regulations.

Inflatable boats

29.—(1) Inflatable boats shall comply with the requirements of Part I of Schedule 8 to these Regulations.

(2) Where inflatable boats are permitted to be carried in these Regulations the boats shall be stowed in the inflated condition.

(3) Inflatable boats shall be surveyed at a servicing station approved by the Secretary of State 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.

(4) Engines fitted to inflatable boats shall be of a type complying with the requirements of Part II of Schedule 5 to these Regulations, and of such power as may be considered suitable by the Secretary of State.

(5) Engines shall be permanently attached to the boats they are intended to propel unless they weigh less than 40 kilogrammes and the total weight of engine, fuel tank and fuel does not exceed 60 kilogrammes.

(6) The lifting arrangements fitted on inflatable boats shall comply with the requirements of Part II of Schedule 8 to these Regulations.

Liferafts

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

(2) Liferafts which are required to comply with Part I of Schedule 9 to these Regulations shall be surveyed at a servicing station approved by the Secretary of State 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

31.—(1) Buoyant apparatus shall comply with the requirements of Schedule 10 to these Regulations.

(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 14.5 the number of kilogrammes of iron which the apparatus is capable of supporting from its grab lines in fresh water, or

- (b) the greatest whole number obtained by dividing the perimeter in metres by 0·3, whichever number shall be the less.

Marking of lifeboats, Class C boats, inflatable boats, liferafts, and buoyant apparatus

32.—(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 transom of an inflatable boat shall be marked with the number of persons the boat is deemed fit to accommodate, its date of manufacture, makers name and trade mark, serial number and name and port of registry of the ship on which it is carried.

(3) The number of persons which a liferaft which complies with Part I of Schedule 9 to these Regulations is deemed fit to accommodate shall be clearly marked in permanent characters on the liferaft on the outside of the liferaft canopy 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. The name and port of registry of the ship on which the raft is for the time being carried or a serial number to enable that ship to be identified shall also be marked on the liferaft and its valise or other container.

(4) Every liferaft which complies with Part II of Schedule 9 to these Regulations 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.

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

Lifebuoys

33.—(1) Lifebuoys carried in every vessel to which these Regulations apply shall comply with the requirements of Part I of Schedule 11 to these Rules, except in those vessels described in paragraph (2) below.

(2) Lifebuoys carried in ships of less than 16·8 metres in length, of Classes VIIIA, VIII(A)(T), IX, IXA, IX(A)(T), XI and XII, to which these Regulations apply, shall comply with the requirements of either Part I or Part II of Schedule 11 to these Regulations. The lifebuoys carried shall not be so mixed as to comprise at any one time lifebuoys complying with Part I and lifebuoys complying with Part II of the said Schedule.

(3) If a ship described in paragraph (2) of this regulation complies with Part II of Schedule 11 to these Regulations and is one to which the provisions of regulations 19(3), or 23(4) apply, then notwithstanding any provision therein to the contrary, lifebuoys shall be carried equal in number to the total number of persons on board, but at no time less than two lifebuoys.

(4) Lifebuoys carried in every vessel to which these Regulations apply shall weigh not less than 4·3 kilogrammes where the release of a self-igniting light depends upon the weight of the lifebuoy.

Lifebuoy lights, smoke signals and lines

34.—(1) Lifebuoys carried in ships (except ships of Classes III and VI and ships of Classes IX(A) and IX(A)(T)) in accordance with these Regulations 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 9.1 metres in length or over (except ships which are engaged in daylight voyages only), on two lifebuoys;
- (c) in ships of Classes VII, VII(T), VIII, VIII(T), VIII(A), VIII(A)(T), IX and XI and in ships of Class VII(A) of 21.3 metres 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), IX(A)(T) and XII of 21.3 metres in length or over, on two lifebuoys;
- (e) in ships of Classes V and VI(A) of less than 9.1 metres in length (except ships which are engaged in daylight voyages only) and in ships of Classes VII(A), IX(A), IX(A)(T) and XII of less than 21.3 metres in length, on one lifebuoy.

(2) Self-igniting lights attached to lifebuoys carried in any vessel to which these Regulations apply 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 luminous intensity of not less than 2 candelas in all directions of the upper hemisphere and comply with the following minimum ranges of light visibilities in the given atmospheric conditions:—

Atmospheric transmissivity factor	Meteorological range of visibility (miles)	Range of visibility of the light (miles)
0.3	2.4	0.96
0.4	3.3	1.05
0.5	4.3	1.15
0.6	5.8	1.24
0.7	8.4	1.34
0.8	13.4	1.45
0.9	28.9	1.57

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

(4) (a) In every ship to which these Regulations apply (except ships of Classes V and VI(A) of less than 9.1 metres in length, and ships of Classes VII(A), IX(A), IX(A)(T), and XII of less than 21.3 metres in length) one lifebuoy on each side of the ship shall have attached to it a buoyant line of at least 27.3 metres in length.

(b) In ships of Classes V and VI(A) of less than 9.1 metres in length and in ships of Classes VII(A), IX(A) and IX(A)(T), of less than 21.3 metres in length, one lifebuoy shall have attached to it a buoyant line of at least 18.3 metres in length.

(c) The lifebuoys having lines attached to them in compliance with this regulation 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 regulation and the lifebuoy to which a self-igniting light is attached in accordance with paragraph (1)(e) of this regulation shall be provided with a self-activating smoke signal complying with the requirements of Schedule 12 to these Regulations: provided that vessels of Class V under 15.2 metres in length need not comply with this paragraph.

(6) The lifebuoys provided with self-activating smoke signals in accordance with regulation 6(7) of these Regulations 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 regulation and self-activating smoke signals in accordance with paragraph (5) of this regulation shall be carried on each side of the ship and be capable of quick release from the navigating bridge.

Line-throwing appliances

35.—(1) Ships of less than 12 metres in length need not comply with the requirements for the carriage of line throwing appliances contained in regulations 3(13), 4(16), 6(9), 7(8), 11(17), 12(13) and 22(7) of these Regulations.

(2) Line-throwing appliances shall comply with the requirements of Schedule 14 to these Regulations.

PROVISION OF EQUIPMENT AND RATIONS IN LIFEBOATS, BOATS AND LIFERAFTS

Equipment for lifeboats, Class C boats and other boats (other than inflatable boats)

36.—(1) Subject to the provisions of paragraphs (2), (3), (4), (5) and (6) of this regulation 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 15 to these Regulations;
- (k) a sea anchor complying with the requirements of Part II of Schedule 15 to these Regulations;
- (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 stern of the lifeboat and be ready for use;
- (m) a vessel containing 4.5 litres 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 15 to these Regulations and six hand-held distress flare signals complying with the provisions of Part IV of Schedule 15 to these Regulations and packed in a watertight container;
- (o) two buoyant smoke signals complying with the requirements of Part V of Schedule 15 to these Regulations and packed in a watertight container.
- (p) (i) a first aid outfit complying with the requirements of Part VI of Schedule 15 to these Regulations;
- (ii) six anti-seasickness tablets for each person which the boat is deemed fit to accommodate;
- (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 15 to these Regulations;
- (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 Department of Trade Rescue Signal Table published by Her Majesty's Stationery Office,
- (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(T), VIII(A), VIII(A)(T) and IX, and ships of Class XI which do not proceed outside the Near Continental trading area 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 regulation 69 of the Merchant Shipping (Fire Appliances) Regulations 1980(a) except that the capacity of each extinguisher shall not be required to exceed 4.5 litres of fluid or its equivalent.

(4) The equipment of every boat carried in ships of Classes V, IX(A) and IX(A)(T) 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;

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- (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 15 to these Regulations; and
- (h) a hatchet.

(6) Every lifeboat or Class C boat which is carried in compliance with sub-paragraph 6(b)(iii) or 8(b) of regulation 11, sub-paragraph (a) of regulation 18(3) sub-paragraph (b) of regulation 22(2) or regulation 23(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;
- (i) two light buoyant heaving lines;
- (j) a hatchet;
- (k) 6 distress flares complying with the provisions of Part IV of Schedule 15 to these Regulations; and
- (l) 2 buoyant smoke signals complying with the requirements of Part V of Schedule 15 to these Regulations.

Equipment for inflatable boats

37.—(1) The equipment of every inflatable boat carried in a ship of V, IX(A) and IX(A)(T) shall be as follows:—

- (a) at least two buoyant oars and two buoyant paddles;

- (b) a bailer and two sponges;
- (c) a crutch or steering grommet on the transom;
- (d) a grab line secured round the outside of the boat and a grab line fitted round the inside of the boat;
- (e) a painter of adequate size and length;
- (f) hand holds or straps for the purpose of righting the boat from the inverted position;
- (g) an efficient manually operated bellows or pump;
- (h) bridle slinging arrangements to allow the boat to be lowered into or raised from the water complying with the requirements of Part II of Schedule 8 to these Regulations;
- (i) a repair kit in a suitable container for repairing punctures in the buoyancy compartments.

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

- (a) at least two buoyant oars and two buoyant paddles;
- (b) a bailer and two sponges;
- (c) a crutch or steering grommet on the transom;
- (d) a grab line secured round the outside of the boat and a grab line fitted round the inside of the boat;
- (e) a painter of adequate size and length;
- (f) hand holds or straps for the purpose of righting the boat from the inverted position;
- (g) an efficient manually operated bellows or pump;
- (h) bridle slinging arrangements to allow the boat to be lowered into or raised from the water complying with the requirements of Part II of Schedule 8 to these Regulations;
- (i) a repair kit in a suitable container for repairing punctures in the buoyancy compartments;
- (j) a sea anchor capable of preventing the loaded boat drifting at more than one knot in a wind of force 5 or 6, attached to the boat by a line of adequate strength at least 9.0 metres in length;
- (k) a safety knife.

(3) Every inflatable boat carried in compliance with sub-paragraph 6(b)(iii) or 8(b) of regulation 11, sub-paragraph (a) of regulation 15(3), sub-paragraph (b) of regulation 22(2) or regulation 23(2) of these Regulations shall be equipped as follows:—

- (a) at least two buoyant oars and two buoyant paddles;
- (b) a bailer and two sponges;
- (c) a crutch or steering grommet on the transom;
- (d) a grab line secured round the outside of the boat and a grab line fitted round the inside of the boat;
- (e) a painter of adequate size and length;
- (f) hand holds or straps for the purpose of righting the boat from the inverted position;
- (g) an efficient manually operated bellows or pump;

- (h) bridle slinging arrangements to allow the boat to be lowered into or raised from the water complying with the requirements of Part II of Schedule 8 to these Regulations;
- (i) a repair kit in a suitable container for repairing punctures in the buoyancy compartments;
- (j) a sea anchor capable of preventing the loaded boat drifting at more than one knot in a wind of force 5 or 6, attached to the boat by a line of adequate strength at least 9.0 metres in length;
- (k) a safety knife;
- (l) two buoyant rescue quoits attached to 18.0 metres of light buoyant line;
- (m) a waterproof electric torch suitable for morse signalling together with one spare set of batteries and one spare bulb in a waterproof container;
- (n) a container or pocket for loose equipment.

Rations for lifeboats

38.—(1) Every lifeboat carried in a ship of Class 1, every lifeboat carried in a ship of Class VII in compliance with regulation 11(2), every lifeboat carried in a ship of Class VII(A) in compliance with regulation 12(2) and every lifeboat carried in a ship of Class XI in compliance with sub-paragraph (a) of regulation 22 shall be provided with at least the rations specified in the following scale for each person it is deemed fit to accommodate:—

- (a) 450 grams of biscuits;
- (b) 450 grams of barley sugar; and
- (c) 450 grams 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 the Near Continental trading area.

(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), VII(T), VIII, VIII(A), VIII(A)(T), IX and XI shall be provided with at least 3 litres of fresh water for each person whom it is deemed fit to accommodate, or at least 2 litres of fresh water for each such person together with a de-salting apparatus capable of providing at least 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(T), VII(A), VIII, VIII(T), VIII(A), VIII(A)(T), IX, XI.

(4) The water shall be kept in the lifeboat in suitable containers and there shall be provided at least one rust proof dipper, which shall be attached to the containers by a lanyard, and three rust-proof drinking vessels (one graduated in 10, 20 and 50 cubic centimetres, provided that a container of not more than 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

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

- (a) a motor lifeboat fixed radiotelegraph installation which shall comply

with the relevant requirements of Part V of the Merchant Shipping (Radio Installation) Regulations 1980(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 regulation 3 (5)(b), regulation 4(5) and regulation 12(5) (b) of these Regulations 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 18 metres at a distance of 180 metres 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, inflatable boats and other boats

40.—(1) All items of equipment provided in a lifeboat, Class C boat, inflatable 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

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

- (a) one buoyant rescue quoit, attached to at least 30 metres 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 Regulations;

(a) S.I. 1980/529.

- (g) one topping-up pump or bellows, unless the liferaft complies with Part II of Schedule 9 to these Regulations;
- (h) three safety tin openers;
- (i) a first aid outfit complying with the requirements of Part VI of Schedule 15 to these Regulations;
- (j) one rust-proof drinking vessel, graduated in 10, 20 and 50 cubic centimetres;
- (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 15 to these Regulations;
- (n) six hand-held distress flare signals complying with the requirements of Part IV of Schedule 15 to these Regulations;
- (o) one fishing line and six hooks;
- (p) 340 grammes of suitable non-thirst-provoking food providing at least 4.8 calories per gramme weight and 170 grammes of barley sugar or other equally suitable sweets for each person the liferaft is deemed fit to accommodate;
- (q) watertight receptacles containing $1\frac{1}{2}$ litres of fresh water for each person the liferaft is deemed fit to accommodate, of which $\frac{1}{2}$ 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 English on how to survive in the liferaft; and
- (t) one copy of the Department of Trade 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 regulation, 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), IX(A) and IX(A)(T) 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 regulation together with one sea-anchor which shall be permanently attached to the liferaft.

(4) In ships of Class XII of less than 21.3 metres 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 regulation 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 15 to these Regulations; and

- (d) watertight receptacles containing $\frac{1}{2}$ 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

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

(2) Lifeboats, Class C boats, inflatable boats, other boats, liferaft 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, inflatable boats and other boats

43.—(1) Subject to the provisions of paragraphs (2), (3) and (4) of this regulation every lifeboat attached to a set of davits, other than a lifeboat which is carried as an alternative to a Class C boat, inflatable 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 Regulations except that in ships of under 45.7 metres 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, inflatable boat or other boat, and any Class C boat inflatable 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 Regulations 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, inflatable 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 Regulations 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.

(4) Every lifeboat or Class C boat carried in compliance with sub-paragraph 6(b)(iii) or 8(b) of regulation 11, regulation 16(2), sub-paragraph (a) of regulation 18(3) sub-paragraph (b) of regulation 22(2) or regulation 23(2) and every boat carried in compliance with regulation 19(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 Regulations and a launching crew of two persons and when the ship is upright or is listed up to 15 degrees towards that side.

(5) Every inflatable boat carried in compliance with sub-paragraph 6(b)(iii) or 8(b) of regulation 11, regulation 16(2), sub-paragraph (a) of regulation 18(3), sub-paragraph (b) of regulation 22(2) or regulation 23(2) of these Regulations

shall be attached to a launching device, which shall comply with the requirements of Schedule 17 to these Regulations, which shall be capable of launching and recovering the inflatable boat when the ship is upright or listed to 15 degrees towards the side on which the appliance is fitted provided that the boat shall be so stowed that it is capable of being manhandled over board without the use of the launching device.

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

(7) 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.

(8) Lifeboats shall if possible be positioned as close to accommodation and service spaces as possible. They shall be stowed in such positions as to ensure safe launching having particular regard to clearance from the propeller and steeply overhanging portions of the hull, with the object of ensuring so far as practicable that they can be launched down the straight side of the ship. If positioned forward they shall be stowed abaft the collision bulkhead in a sheltered position approved by the Secretary of State having regard to the strength of the davits.

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

(10) Davits, winches, falls, blocks and all other launching gear provided in accordance with these regulations shall comply with the requirements of Schedule 16 or 17 to these Regulations as the case may be.

(11) (a) All lifeboats, Class C boats, inflatable 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 regulation 12(2); or
- (iv) when they are fitted in any ship of Classes VII, VII(T), VIII, VIII(T) or IX in compliance with regulation 11(2) or sub-paragraph (a) of regulation 11(6) or 11(8); or
- (v) when the weight of the attached lifeboat, Class C boat, inflatable boat or other boat in the lowering condition exceeds 2300 kilogrammes:

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

(b) In every ship to which these Regulations apply in which lifeboats, Class C boats, inflatable 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 regulations 3(3), regulation 4(4) or regulation 2(3) of these Regulations, shall be served by winches which are capable of recovering them at a speed of not less than 0.3 metres per second when the lifeboat is loaded with its equipment required by these Regulations and a distributed load equal to 1000 kilogrammes.

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

(13) Where davits or other launching devices 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 if necessary to ensure that the wire rope falls or davits are not over-stressed.

(14) 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 Regulations.

(15) 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.

(16) In ships other than ships in which the lifeboat, Class C boat, inflatable 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.

(17) Lifeboats, Class C boats, inflatable 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, inflatable boats or other boats from the falls. Lower fall blocks if provided 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 18 to these Regulations is fitted. The points of attachment of the lifeboats, Class C boats inflatable 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, inflatable boats or other boats.

(18) Every emergency lifeboat carried in compliance with regulation 3(3), 4(4) and regulation 12(3) of these Regulations 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.

(19) In any ship to which these Regulations 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 Regulations under the conditions of trim and of list specified in these Regulations for the class of ship, or when any Class C boat, inflatable 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 Regulations 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 15 millimetres wide painted on a white back-ground.

Stowage and handling of liferafts, buoyant apparatus, lifebuoys and lifejackets

44.—(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 regulation 3(2) or sub-paragraph (c) of regulation 4(8) or sub-paragraph (b) of regulation 12(2) of these Regulations there shall be provided for such liferafts launching appliances complying with the requirements of Schedule 19 to these Regulations.

(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) The requirements of regulation 43(8) of these Regulations shall apply to liferafts for which approved launching devices are required to be carried and to such launching devices, as they apply to lifeboats.

(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.

MISCELLANEOUS PROVISIONS

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

45.—(1) Arrangements shall be made to ensure that it is possible to effect embarkation into the lifeboats, Class C boats, inflatable 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, VII(T), VIII, VIII(T), VIII(A), VIII(A)(T), IX, 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 Regulations. 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 regulation 12(2) refers, except that in such ships the Secretary of State 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), VII(T), VIII, VIII(A), VIII(A)(T), IX, 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 Regulations 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 regulation 12(2) refers and in ships of Classes VII, VII(T), VIII, VIII(T) 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 Secretary of State 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 regulation 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), VII(T), VIII, VIII(A), VIII(A)(T) and IX shall be provided with means situated outside the engine room whereby any discharge of water into the lifeboats or into liferafts at fixed launching positions, including those under launching appliances, can be prevented.

Manning of lifeboats and liferafts

46.—(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

47.—(1) (a) The crew of every ship of Class I, II, II(A) or III shall include, for each lifeboat carried in compliance with these Regulations, 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

(b) The allocation of the certificated lifeboatmen to each lifeboat shall be within the discretion of the master.

(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 Secretary of State who, on being satisfied that he has had suffi-

cient 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 regulation, "prescribed complement" means the number of persons which the lifeboat is deemed fit to accommodate under these Regulations.

Portable radio equipment

48.—(1) The portable radio equipment required to be carried in compliance with regulations 3(6), regulation 4(11), regulation 11(13) and regulation 12(6) of these Regulations shall comply with the relevant requirements of Part V of the Merchant Shipping (Radio Installation) Regulations 1980 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

49. 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

50.—(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 Regulation 43 of the Merchant Shipping (Passenger Ship Construction) Regulations 1980.

(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 Regulation 43 of the Merchant Shipping (Passenger Ship Construction) Regulations 1980.

(3) (a) In every ship of Classes VII, VII(A), VII(T), VIII and VIII(T) 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), VII(T), VIII and VIII(T) 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 regulation 60 of the Merchant Shipping (Cargo Ship Construction and Survey) Regulations 1980(a) applies from the emergency source of electric power required by that regulation;
- (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 regulation 7 of the said Regulations applies from the emergency source of electric power required by that regulation

(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 regulation 8 of the Merchant Shipping (Cargo Ship Construction and Survey) Regulations 1980 applies from the emergency source of electric power required by that regulation or, if the Secretary of State permits, the reserve source of electrical energy required by regulations 17 or 25 of the Merchant Shipping (Radio Installations) Regulations 1980 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 Regulations.

(4) In every ship of Classes VII, VII(A), VII(T), VIII, VIII(T) and IX to which paragraph (3) of this regulation does not apply and in every ship of Classes VIII(A), VIII(A)(T), IX(A) 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

51.—(1) Every ship to which these Regulations apply, except ships of Classes V, VI, IX(A), and IX(A)(T) and ships of Class XII, shall carry not less than twelve parachute distress rocket signals which shall comply with the requirements of Schedule 20 to these Regulations.

(2) Ships of Class VI shall carry at least two buoyant smoke signals which shall comply with the requirements of Part V of Schedule 5 to these Regulations.

(3) Ships of Class IX(A) and IX(A)(T) operating in partially smooth waters shall carry not less than six red star distress signals which shall comply with the requirements of Schedule 21 to these Regulations.

(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 20 to these Regulations or red star distress signals which shall comply with the requirements of Schedule 21 to these Regulations. 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

52.—(1) Where these Regulations 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 Secretary of State 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 he is satisfied by trial thereof or otherwise that such other fitting, material, appliance or apparatus, or type thereof, or provision, is at least as effective as that required by these Regulations.

(2) If it appears to the Secretary of State, 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 Regulations he may permit one or more sets of davits to be dispensed with in that ship subject to such conditions, if any, as he thinks fit:

Provided that, in the case of ships of Classes II and II(A) the number of sets of davits fitted shall, subject to the provisions of regulations 4(2) and 4(8) of these Regulations in no case be less than the minimum number determined by Column B of the table set out in Schedule 1 to these Regulations.

(3) The Secretary of State may exempt any ship of Class I or Class II employed in special trades for the carriage of large numbers of special trade passengers, such as the pilgrim trade, from any of the provisions of regulations 3(1) or (10) or 4(2), (3), (6), (7), (8), (12), and (13) of these Regulations, provided that she complies fully with the provisions of :

- (i) the Final Act of the International Conference on Special Trade Passengers 1971 (Cmnd. 5103) and
- (ii) the Protocol on Space Requirements for Special Trade Passenger Ships 1973 (Cmnd. 5530).

(4) The Secretary of State 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 Regulations, provided that she complies with safety requirements which in his opinion are adequate for the voyage which is to be undertaken by the ship.

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

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

Penalties

53. If a ship to which these Regulations apply proceeds on any voyage or excursion without complying with the requirements of these Regulations, the

owner or master of the ship shall each be guilty of an offence and liable on summary conviction to a fine not exceeding £1000 or on conviction on indictment, to imprisonment for a term not exceeding two years and a fine.

Power to detain

54. In any case where a ship does not comply with the requirements of these Regulations, the ship shall be liable to be detained and section 692 of the Merchant Shipping Act 1894 (which relates to the detention of a ship) shall have effect in relation to the ship, subject to the modification that for the words "this Act" wherever they appear, there were substituted "the Merchant Shipping Acts 1894 to 1979 or any Regulations made thereunder."

Norman Tebbit,

Parliamentary Under-Secretary of State,
Department of Trade.

17th April 1980.

SCHEDULE 1

Regulation 4(2) and 52

TABLE SHOWING THE MINIMUM NUMBERS OF DAVITS TO BE PROVIDED AND THE MINIMUM CUBIC CAPACITY OF LIFEBOATS IN SHIPS OF CLASSES II AND II(A).

Registered Length of Ship in metres	(A) Minimum number of sets of davits	(B) Smaller number of sets of davits authorised exceptionally	(C) Minimum capacity of lifeboats in cubic metres
Under 37	2	2	11
37 and under 43	2	2	18
43 " " 49	2	2	26
49 " " 53	3	3	33
53 " " 58	3	3	38
58 " " 63	4	4	44
63 " " 67	4	4	50
67 " " 70	5	4	52
70 " " 75	5	4	61
75 " " 78	6	5	68
78 " " 82	6	5	76
82 " " 87	7	5	85
87 " " 91	7	5	94
91 " " 96	8	6	102
96 " " 101	8	6	110
101 " " 107	9	7	122
107 " " 113	9	7	135
113 " " 119	10	7	146
119 " " 125	10	7	157
125 " " 133	12	9	171
133 " " 140	12	9	185
140 " " 149	14	10	202
149 " " 159	14	10	221
159 " " 168	16	12	238
168 " " 177	16	12	—
177 " " 186	18	13	—
186 " " 195	18	13	—
195 " " 204	20	14	—
204 " " 213	20	14	—
213 " " 222	22	15	—
222 " " 232	22	15	—
232 " " 241	24	17	—
241 " " 250	24	17	—
250 " " 261	26	18	—
261 " " 271	26	18	—
271 " " 282	28	19	—
282 " " 293	28	19	—
293 " " 303	30	20	—
303 " " 314	30	20	—

SCHEDULE 2

Regulation 6(2) and 7(2)

TABLE SHOWING THE MINIMUM NUMBER OF SETS OF DAVITS TO BE PROVIDED IN SHIPS OF CLASSES III AND IV.

<i>Length of ship in metres</i>	<i>Minimum numbers of sets of davits</i>
Under 61	2
61 and under 73	3
73 and under 85	4
85 and under 98	5
94 and over	6

SCHEDULE 3

GENERAL REQUIREMENTS FOR LIFEBOATS

Regulation 24

- (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 regulation 36(1).
- (3) Every lifeboat, except wooden lifeboats made of planks, shall have a block coefficient of the cubic capacity as determined in accordance with Schedule 4 of not less than 0.64 provided that any such lifeboat may have a block coefficient of less than 0.64 if the Secretary of State is satisfied with the sufficiency of the metacentric height and freeboard when the lifeboat is loaded with its full complement of persons and equipment.
- (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 4.9 metres in length except where these Regulations permit a lifeboat to be carried as an alternative to a Class C boat.
- (8) No lifeboat when laden with its full complement of persons (calculated at 75 kilogrammes per person) and equipment shall weigh more than 20,300 kilogrammes.
- (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 4

CALCULATION OF CUBIC CAPACITY OF LIFEBOATS

Regulation 25

(1) Subject to the provisions of paragraph (4) of this Schedule, the cubic capacity of a lifeboat for the purposes of these Regulations shall be measured in cubic metres 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 metres 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 metres 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 metres inside the shell from the keel to the level of the gunwale, or, in certain cases, to a lower level as determined hereafter; and a, b, c, d, e denote the horizontal breadths of the lifeboat measured in metres 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 regulation 39 of these Regulations.

SCHEDULE 5

MACHINERY OF MOTOR LIFEBOATS

PART I

Regulation 26(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 45 kilonewtons per metre squared. 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.

PART II

MACHINERY OF INFLATABLE BOATS

Regulation 29(4)

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

(2) The engine and its accessories, including the fuel tank, pipes and fittings shall be protected to ensure reliable operation under conditions likely to arise at sea during adverse weather conditions.

(3) The fuel tank shall be substantially constructed, securely fixed in position and fitted with suitable filling vapour venting and relief arrangements. Tanks made of steel shall be protected externally against corrosion by sea water by metal spraying or similar means. The tank and its fittings shall be capable of withstanding a hydraulic pressure corresponding to 45 kiloPascals. A cock shall be fitted at each end of any fixed fuel pipe, and where portable pipes are provided a means of preventing leakage of fuel on disconnection of the pipes shall be fitted.

SCHEDULE 6

MACHINERY OF MECHANICALLY PROPELLED LIFEBOATS

Regulation 27

(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 Regulations and a distributed weight equal to the full number of persons which it is fit to carry, to be propelled at a speed ahead of at least 3.5 knots in smooth water over a distance of $\frac{1}{4}$ mile.

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

SCHEDULE 7

REQUIREMENTS FOR CLASS C BOATS

Regulation 28

(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 (2) 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>Length of boat in metres</i>	(2) <i>Minimum Seating Capacity of boat (persons)</i>
4.8	9
4.5	8
4.2	7
3.9	5
3.6	4

(4) All thwart and sides 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 4 to these Regulations.

SCHEDULE 8

REQUIREMENTS FOR INFLATABLE BOATS

PART I

GENERAL REQUIREMENTS

Regulations 29(1)

Every inflatable boat shall comply with the following requirements:—

(1) The overall length of the boat shall be not less than 3.8 metres and the boat shall be of such form and proportions as to have ample stability in a seaway when afloat in the empty, laden or swamped condition. The boat shall be suitable for the accommodation of at least six persons.

(2) The boat shall be of sufficiently robust construction to survive when fully loaded, without such deterioration as would involve any loss of seaworthiness, for 30 days afloat under extremes of temperatures (60°C to minus 30°C) and in weather likely to be encountered at sea anywhere in the world.

(3) All materials and components used in the construction of the boat and its accessories shall be able to withstand the worldwide seagoing climatic conditions referred to in paragraph 2 above. The boat and its accessories shall be resistant to the effects of humidity when stowed on board a vessel and all fabrics, cordage, webbing and thread shall be rotproof. The boat shall be so constructed that it is not adversely affected by oil or oil products.

(4) The boat shall possess a sufficient margin of durability to ensure that its performance will not be affected after 24 months' stowage on board a vessel in a weather deck stowage with a minimum of additional protection.

(5) The main buoyancy chambers forming the boundary of the boat shall on inflation provide at least 0.17 cubic metres of volume for each person the boat is certified to accommodate. The diameter of the main buoyancy chambers of single tube boats shall be at least 0.43 metres.

(6) The main buoyancy chambers shall be divided into at least two compartments along each side and one compartment in the bow, making a minimum total of five compartments.

(7) In boats of more than one tube the volume of either tube shall not exceed 60 per cent of the total volume.

(8) At least one thwart shall be fitted so that the boat can be rowed satisfactorily.

(9) The floor of the boat shall be waterproof and shall provide an efficient working platform.

(10) A transom which shall not be inset by more than 20 per cent of the overall length of the boat shall be provided.

(11) A bow cover of a highly visible colour and extending for at least 15 per cent of the overall length of the boat shall be provided.

(12) A non-return valve shall be fitted to each buoyancy chamber for manual inflation.

(13) A safety relief valve designed to operate at a pressure not exceeding 125 per cent of the designed working pressure of the buoyancy chamber shall be fitted in each buoyancy chamber. Means for deflating shall be fitted in each chamber.

(14) Drainage arrangements shall be fitted capable of draining the boat within 2½ minutes when flooded. To the extent that the water levels inside and outside the boat are the same it shall not be possible accidentally to flood the boat through these drainage arrangements.

PART II

LIFTING ARRANGEMENTS

Regulation 29(6)

(1) Bridle slinging arrangements shall be fitted to all inflatable boats to enable the boat to be lowered or raised from the water. The bridle sling shall comprise four legs or more which should be joined at the top in the form of an eye or be connected to a lifting ring or shackle. The arrangement shall be such that the boat is stable when suspended and—

- (a) with a four-legged sling the legs should be at equal length, or
- (b) the bridle shall be permanently attached, or
- (c) the arrangements shall be such that it is not possible to connect any of the bridle legs to the wrong position on the boat.

(2) The bridle shall be manufactured of a material which will not adversely affect the material of the boat and, if necessary, shall be sheathed to prevent abrasion of the fabric.

(3) The forward lifting attachments shall be securely fastened to the hull and may be bands passing under the hull to the tops of the buoyancy tubes terminating in D rings or eyes to take bridle slings.

(4) The after lifting attachments shall be similar to the forward attachments or may be made direct to the transom.

(5) The bridle slinging arrangements used for lowering and recovering the boat shall be such that their breaking tensile strength is at least 6 times the maximum working load as defined in paragraph (1) of Schedule 17 to these Regulations excluding the weight of the blocks and falls.

(6) The bridle sling lifting arrangements shall be proof tested to not less than 2.5 times their respective working loads. The proof testing can be carried out either:

- (a) individually on each item associated with the lifting arrangements, or
- (b) on the assembly of a structurally completed boat with its lifting arrangements and particular bridle sling. In each case fabric, webbings and cordages forming part of the lifting arrangements shall have a breaking strength of not less than six times their respective working loads.

SCHEDULE 9

REQUIREMENTS FOR LIFERAFTS

PART I

INFLATABLE LIFERAFTS

Regulation 30

(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 18 metres neither the liferaft nor its equipment will be damaged. If the raft is to be stowed on the ship at a height above the water of more than 18 metres it shall be of a type which has been satisfactorily drop-tested from a height at least equal to the height at which it is to be stowed.
- (c) The construction of the liferaft shall include a cover 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. The cover of the liferaft shall be of a highly visible colour.
- (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 met with 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 180 kilogrammes (400 pounds).
- (j) The number of persons which an inflatable liferaft shall be permitted to accommodate shall be equal to:
 - (i) the greatest whole number obtained by dividing by 96 the volume, measured in cubic decimetres 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 3.720 the area measured in square centimetres 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 for 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 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 relevant requirements of Part V of the Merchant Shipping (Radio Installations) Regulations 1980 shall be provided with arrangements for accommodating properly in the operating position the aerial referred to in those Schedules to the said Regulations.
- (s) (i) The liferaft shall be so stowed as to be readily available in case of emergency. It shall be stowed in such a manner as to permit it to float free from its stowage, inflate and break free from the vessel in the event of sinking.
- (ii) If used, lashings shall be fitted with an automatic release system of a hydrostatic or equivalent nature approved by the Secretary of State.
- (iii) The liferaft required by paragraph (9) of regulation 11 of these Regulations may be securely fastened.

(2) In ships of Classes III, IV, V, VI and IX(A), IX(A)(T) and in ships of Class XII of less than 21.3 metres 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 18 metres 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 6 metres;
- (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 30°C. referred to in the said sub-paragraph (p) may be 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), VIII(A)(T) 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 21.3 metres 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 shall not exceed 180 kilogrammes. Liferafts carried in cargo ships may exceed 180 kilogrammes 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 96 the volume, in cubic decimetres, of the air cases or buoyant material; or
 - (ii) the greatest whole number obtained by dividing by 0.3720 the deck area of the liferaft measured in square metres 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 relevant requirements of Part V of the Merchant Shipping (Radio Installations) Regulations 1980 shall be provided with arrangements for accommodating properly in the operating position the aerial referred to in those Schedules to the said Regulations.

SCHEDULE 10

REQUIREMENTS FOR BUOYANT APPARATUS

Regulation 31

(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	...	...	...	...	18 metres
Apparatus carried in ships of Class III	...	...	...	...	6 metres

(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 22.5 kilogrammes per metre of length along any edge (subject to a minimum of 29 kilogrammes) 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 150 millimetres and not more than 200 millimetres on apparatus exceeding 305 millimeters 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 305 millimetres 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 14 millimetres in diameter. 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 180 kilogrammes in weight unless suitable means are provided to enable it to be launched without lifting by hand. If the weight of the apparatus exceeds 136 kilogrammes suitable handles or rungs shall be fitted for this purpose.

(8) Buoyant apparatus carried in ships of Class I shall not be less than 1070 millimetres in breadth.

SCHEDULE 11

REQUIREMENTS FOR LIFEBOUYS

PART I

Regulation 33

(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 14.5 kilogrammes 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 any world wide variation of temperature or climatic changes.

(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 compartments which require to be inflated.

(4) The inside diameter of a lifebuoy shall be 455 millimetres and the outside diameter 760 millimetres. The major axis of the section shall be 150 millimetres. The minor axis of the section shall be 100 millimetres.

(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 beackets securely seized, and with grab lines which shall be of good quality uninkable line and well secured at four equidistant points providing four loops of line each not less than 700 millimetres long.

(8) The weight of a lifebuoy shall not exceed 6.15 kilogrammes when newly constructed.

(9) Lifebuoys shall always be capable of being rapidly cast loose and shall not be permanently secured in any way.

PART II

Regulation 33(2)

(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 10.45 kilogrammes 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 any world wide variation of temperature or climatic change.

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

(4) The inside diameter of the lifebuoy shall be 355 millimetres and the outside diameter 610 millimetres. The major axis of the section shall be 125 millimetres and the minor axis from 89 to 100 millimetres.

(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 beackets securely seized, and with grablines of good quality uninkable line and well secured at four equidistant points providing four loops of line each not less than 510 millimetres long.

(8) The weight of a lifebuoy shall not exceed 3.40 kilogrammes when newly constructed.

(9) Lifebuoys shall always be capable of being rapidly cast loose and shall not be permanently secured in any way.

SCHEDULE 12

REQUIREMENTS FOR LIFEBOUY MARKER SMOKE SIGNALS

Regulation 34(5)

(1) Every smoke signal shall be fitted with a self-contained means of ignition, and with means for being efficiently attached to a lifebuoy.

(2) The signal shall be capable of emitting dense orange-coloured smoke for at least 15 minutes while floating in water.

(3) The signals shall be water proofed and capable of functioning after immersion for 2 hours in water under 1 metre of water.

(4) After completion of the ignition cycle the signal shall continue to function after immersion for 10 seconds under 10 cm of water.

(5) The signal shall be capable of quick release from the stowed position.

(6) The signal shall be capable of functioning after being dropped into water from a height of 25 metres at a speed of 30 knots.

(7) The signal shall be safe to operate in oil covered waters.

(8) Lifebuoy marker smoke signals may also be provided with self igniting lights which are required under regulation 34.

(9) All components, composition and ingredients of the signals shall be of such character and quality as to enable them to maintain their serviceability under good average storage conditions in the marine environment for a period of at least three years.

(10) The date of manufacture and the date of expiry shall be marked indelibly on the signal.

(11) Clear and concise directions for use in English supported by illustrations shall be printed indelibly on the signal.

SCHEDULE 13

REQUIREMENTS FOR LIFEJACKETS

PART I

Regulations 3(12), 4(15), 7(7), 8(4), 11(16), 12(12), 19(5), 22(6) and 23(7)

(1) Subject to the provisions of paragraph (7) of this Part of this Schedule, every life-jacket for use by a person weighing 32 kilogrammes or more shall provide a minimum of 155 newtons buoyancy in fresh water for 24 hours, after which time the performance detailed paragraph (3) below shall not be reduced by more than 5 per cent.

(2) Every such lifejacket shall be marked indelibly on both sides in letters not less than 12 millimetres in size with the words "PERSON OF 32 KILOGRAMMES OR MORE" and, on one side only with the maker's name or other identification mark, together with the words "ACCEPTED BY THE DEPARTMENT OF TRADE".

(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 from any position 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 150 millimetres 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 which comply with British Standards Specification No. B.S. 3F. 49:1972 and are capable of taking a load of 140 kilogrammes. 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 6 metres into the water without injury and without dislodgement 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 1 kilogramme 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 lifejackets, 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 or a suitable synthetic material the weight of which in loom state per linear metre shall be not less than 186 grammes for a width of 685 millimetres and in proportion for other widths. The fabric shall be free from admixture of sizing or other foreign matter. The threads per 10 cm in loomstate shall be warp 173 two-fold threads and weft 133 two-fold threads. The sewing shall be carried out with thread of undyed linen yarn having a count of 25 lea, 3 cord reverse twist (resultant Tex count 66), satin finish and complying with the specifications in Clauses 2, 3 and 4 (except subparagraph 4(a)) of British Standards Specification No. B.S. 4F. 34: 1960: for thread of that count.
- (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 190 kilogrammes per cubic metre, and shall be of good quality and clean. If the material is in pieces, the size of each piece shall be not less than 165 cubic centimetres, 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, of Classes VII, VIII, VIII(A), IX, IX(A) 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 88.3 newtons and one air compartment of at least 58 newtons or
 - (ii) two separate air compartments each of at least 88.3 newtons buoyancy;
 - (b) it shall be marked indelibly on both sides in letters not less than 25 millimetres in size the words "CREW ONLY" and on one side only with the maker's name or other identification mark in smaller letters together with the words "ACCEPTED BY THE DEPARTMENT OF TRADE"; 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 32 kilogrammes shall provide a minimum buoyancy of 66.7 newtons in fresh water for 24 hours, after which time the performance detailed in paragraph (3) of Part I of the Schedule shall not be reduced by more than 5 per cent.

(2) Every such lifejacket shall be marked indelibly on both sides in letters not less than 12 millimetres in size with the words "FOR PERSON UNDER 32 KILOGRAMMES" and on one side only with the makers's name and other identification mark, together with the words "ACCEPTED BY THE DEPARTMENT OF TRADE".

(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 425 grammes 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 14

REQUIREMENTS FOR LINE-THROWING APPLIANCES

Regulation 35

(1) Every line-throwing appliance shall consist of a rocket pistol and four individual rockets with four lines, or four separate self-contained units each of which contains a rocket and line ready for use.

(2) The appliance shall be so constructed that the end from which the rocket is ejected can be positively identified by day or night.

(3) The lines used in line-throwing appliances shall have a breaking load of not less than 2,000 newtons.

(4) Every line-throwing appliance shall be capable of throwing a line a minimum of 4 millimetres in diameter a distance of 230 metres in calm weather.

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

(6) The rocket (in the case of a pistol fired rocket) or the assembly (in the case of an integral rocket and line) shall function after immersion for 1 minute under 10 cm of water.

(7) The lines and the rockets together with the means of igniting them, shall be kept in suitable cases to afford protection from the weather.

(8) All components, compositions and ingredients of the rockets and the means of igniting them shall be of such character and quality as to enable them to maintain their serviceability under good average storage conditions in the marine environment for a period of at least three years.

(9) The date of manufacture and the date of expiry shall be marked indelibly on the rockets and these date markings shall be similarly stamped on the cartridges.

(10) Clear and concise directions for use in English, supported by illustrations, shall form an integral part of the appliance.

SCHEDULE 15

SPECIFICATIONS OF EQUIPMENT FOR LIFEBOATS, BOATS AND LIFERAFTS

PART I

COMPASSES FOR LIFEBOATS

Regulation 36(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 15°C. It shall be clear

and free from sediment, cloudiness, and dirt defects. The compass shall function efficiently over a temperature range of 50°C to minus 20°C.

(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 15°C 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 50°C to minus 20°C, 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 100 millimetres in diameter and shall have a clearance from the bowl of at least 6 millimetres. 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 50°C to minus 20°C 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	...	...	...	...	...	...	...	4.0 millimetres
Binnacle	...	...	...	...	...	...	...	3.85 millimetres
Lamp	...	...	...	...	...	...	...	3.85 millimeters

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 15 millimetres by 3 millimetres. Gimbal pins shall be of naval brass or other hard non-magnetic material of 6 millimetres 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 AND INFLATABLE BOATS

Regulation 36(1)(k) and (5)(g)

- (1) Every sea anchor shall comply with the following requirements:—
 - (a) it shall be constructed of No. 1 best flax canvas, or other suitable material;
 - (b) the canvas part shall be strongly sewn together and be roped at the seams with 14 millimetres in diameter bolt rope; the ropes then being formed into a bridle with a thimble seized in the connecting end, and the ropes extended and seized into a parcelled loop to form the attachment for the tripping line;
 - (c) a hawser shall be attached to the sea anchor by means of a shackle of suitable size to take the thimble;
 - (d) the length of the hawser shall be three times the length of the lifeboat or boats;
 - (e) tripping line 3.5 metres longer than the hawser shall be provided.
- (2) A circular sea anchor shall be fitted at the mouth with a galvanised iron hoop. Any other type of sea anchor shall be fitted with galvanised iron spreaders across the mouth and with an ash spreader at the upper edge.
- (3) The size of sea anchors shall be as follows:—
 - (a) for lifeboats over 9 metres in length—

Non-circular folding sea anchors—Mouth 760 millimetres upper edge
685 millimetres lower edge
685 millimetres each side
Area of mouth 4968 square centimetres
Length of canvas bag—1.35 metres.
Hawser—24 millimetres in diameter.
Tripping line—16 millimetres in diameter.
 - (b) for lifeboats over 6 metres in length but not over 9 metres in length—

Circular sea anchors—Mouth 685 millimetres diameter.
Non-circular folding sea anchors—Mouth 610 millimetres each side.
Length of canvas bag—1.25 metres.
Hawser—24 millimetres in diameter.
Tripping line—16 millimetres in diameter.
 - (c) for lifeboats not over 6 metres in length and other boats (other than Class C boats)—

Circular sea anchors—Mouth 610 millimetres diameter.
Non-Circular folding sea anchors—Mouth 545 millimetres each side.
Length of canvas bag—1.10 metres.
Hawser—21 millimetres in diameter.
Tripping line—11 millimetres in diameter.

PART III

PARACHUTE DISTRESS ROCKET SIGNALS FOR LIFEBOATS AND LIFERAFTS

Regulations 36(1)(n) and 41(1)(m)

- (1) Every parachute distress rocket signal shall consist of a single bright red flare which is projected to the required height by means of a rocket, and which burns while falling, descent being controlled by a parachute or other means at an average rate not greater than 5 metres per second.
- (2) The signal shall be so constructed that the end from which the rocket is ejected can be positively identified by day or night.
- (3) When the rocket is fired approximately vertically the flare and parachute shall be ejected at or before the top of the trajectory at a minimum height of 300 metres. The signal shall in addition be capable of functioning when the rocket is fired at an angle of 45 degrees to the horizontal.

(4) The flare shall burn with an average luminous intensity of not less than 30,000 candela for not less than 40 seconds. It shall burn out at a height of not less than 50 metres above sea level, when the rocket has been fired approximately vertically.

(5) The signal may be ignited by any suitable method but the ignition system shall be an integral part of the signal, easy to operate with wet, cold or gloved hands in adverse conditions and require the minimum of preparation. The sealing shall not depend on adhesive tapes.

(6) The signal shall be capable of functioning after immersion for 2 hours under 1 metre of water.

(7) In the ready-to-fire condition the signal shall function after immersion for 1 minute under 10 cm of water.

(8) All components, compositions and ingredients of the signal and the means of igniting it shall be of such character and quality as to enable the signal to maintain its serviceability under good average storage conditions in the marine environment for a period of at least three years.

(9) For carriage in lifeboats, signals shall be packed in a container which shall be durable, damp proof and effectively sealed.

(10) The date of manufacture and the date of expiry shall be marked indelibly on the signal.

(11) Clear and concise directions for use in English supported by illustrations shall be printed indelibly on the signal.

PART IV

HAND HELD DISTRESS FLARE SIGNALS FOR LIFEBOATS AND LIFERAFTS

Regulations 36 (1)(n), 41(1)(n), 41(4)(c)

(1) Every hand held distress signal shall be capable of being used from a lifeboat or liferaft without harm to the occupants and without causing discomfort to the uncovered hand of the operator.

(2) The signal shall be so constructed that when fired, no burning composition will fall from the signal which might cause damage to an inflated liferaft.

(3) The signal shall be capable of emitting a red light of an average luminous intensity of not less than 15,000 candela for not less than 1 minute.

(4) The signal shall be fitted with an integral means of firing, easy to operate with wet, cold or gloved hands in adverse conditions without external aid and requiring the minimum of preparation. Sealing shall not depend on adhesive tapes.

(5) The signal shall be so constructed that the end from which the light is emitted can be positively identified by day or night.

(6) The signal shall be capable of functioning after immersion for 2 hours under 1 metre of water.

(7) In the ready-to-fire condition the signal shall function after immersion for 1 minute under 10 cm of water.

(8) After ignition the signal shall continue to function after immersion for 10 seconds under 10 cm of water.

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

(10) The date of manufacture and the date of expiry shall be marked indelibly on the flare.

(11) Clear and concise directions for use in English supported by illustrations shall be printed indelibly on the signal.

PART V

BUOYANT SMOKE SIGNALS FOR LIFEBOATS

Regulations 36(1)(o) and 51(2)

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

(2) Every buoyant smoke signal shall be fitted with an integral means of ignition, easy to operate with wet, cold or gloved hands in adverse conditions without external aid, require the minimum of preparation and be so designed as to enable the signal to be released from a lifeboat without harm to the occupants.

(3) The signal shall be capable of functioning after immersion for 2 hours under 1 metre of water.

(4) After completion of the ignition cycle the signal shall continue to function after immersion for 10 seconds under 10 cm of water.

(5) The signals shall be safe to operate in oil-covered waters.

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

(7) The date of manufacture and the date of expiry shall be marked indelibly on the signal.

(8) Clear and concise directions for use in English supported by illustrations shall be printed indelibly on the signal.

PART VI

FIRST AID OUTFITS FOR LIFEBOATS AND LIFERAFTS

Regulations 36(1)(p) and 41(1)(i)

The first aid outfit provided in every lifeboat or liferaft carried by the vessel shall comply with the following requirements:—

(1) It shall be packed in a durable, damp-proof and effectively sealed container, which shall bear on its outside an itemised list of its contents.

(2) It shall include the following items, each of which shall comply with any standards or requirements specified in relation to it in the current issue of the British Pharmacopoeia, the British Pharmaceutical Index or the National Formulary:—

ARTICLE	QUANTITY
(a) Standard Dressing No. 14, Medium BPC (15cm × 10cm) ...	4
(b) Standard Dressing No. 15, Large BPC (15cm × 20cm) ...	4
(c) Bandages, Triangular, not less than 90cm sides, 130cm base ...	6
(d) Open Wove Bandage, BPC 75cm × 3.5 metres ...	10
(e) Self Adhesive Waterproof Wound Dressings, assorted sizes ...	1 packet
(f) Paraffin Gauze Dressing for Burns, individual (10cm × 10cm approx) 10 dressings per carton ...	1 carton
(g) Antiseptic Burn or Wound Cream, Cetrimide BP 0.5% w/w 50 gm tube ...	2
(h) Analgesic Tablets, in containers clearly labelled with the name of the analgesic, e.g. Aspirin Compound tablets, Paracetamol tablets, and directions for use ...	50

- (i) Scissors 10cm, 1 sharp, 1 blunt point, of rustless and stainless steel 1
- (j) (i) Six Morphine Ampoule Syringes containing a solution of either morphine salt equivalent to Anhydrous Morphine 15 mg in 1cc or Papaveretum BPC (30 mg in 1cc) in a screw capped metal drum with directions for use; or 1 drum
- (ii) Five Pantopon Ampoule Syringes, each syringe containing 20 mg "Pantopon" substance in 1 ml equivalent to 10 mg of Anhydrous Morphine, with directions for use 2 drums
- (k) Safety pins 4
- (l) First Aid instructions in English printed on linen or waterproof paper.

PART VII
MANUAL PUMPS FOR LIFEBOATS

Regulation 36(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 1.2 metres suction head, shall be not less than:
 - (a) 30 litres per minute in lifeboats of 7 metres in length or over; or
 - (b) 20 litres per minute in lifeboats of less than 7 metres 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 1.2 metres.
- (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 30 millimetres 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.

SCHEDULE 16
DAVITS AND LIFEBOAT LAUNCHING GEAR
PART I
GENERAL

Regulation 43(10)

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 75 kilogrammes;
- (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 75 kilogrammes;
- (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 regulation 43(1) of these Regulations to be put into the water when loaded with its full complement of persons shall, together with its winch, falls, blocks and all other associated lowering gear, be of such strength that the lifeboat with its full equipment and manned by a launching crew of not less than two persons can be turned out and then safely lowered into the water from the embarkation position with its full complement of persons, when the ship has a trim of up to 10 degrees and is listed up to 15 degrees either way.

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

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

(d) Every set of davits, davit or other means of launching to which a lifeboat, Class C boat or other boat is attached, together with its winch and an 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 0.3 metres per second when loaded with its full equipment and a distributed load of 1000 kilogrammes.

(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 1525 kilogrammes.

(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 12 millimetres greater than the diameter of new cordage ropes when those ropes are 30 millimetres diameter and less in proportion to the diameter 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 0.3 and 0.6 metres per second. 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 manila 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 10 millimetres 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 20 millimetres in diameter shall not be used for lifeboat falls. Winding reels or flaking boxes for the manila 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 Regulations 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 Regulations 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 75 kilogrammes.

(3) *Hoisting tests for emergency lifeboats.* Emergency lifeboats which are required by these Regulations 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 regulations and a distributed load of 1000 kilogrammes 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 17

LAUNCHING DEVICES

Regulation 43(5) and (10)

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

the sum of the weights of:—

- (a) the inflatable boat and its full equipment;
- (b) the blocks and falls;
- (c) a launching crew of 2 persons each weighing 75 kilogrammes; and

(d) a weight of 60 kilogrammes or the weight of the engine together with its fuel tank and sufficient fuel for three hours operation, whichever is the greater.

(2) Every such appliance shall be designed so that when loaded with the working load as defined in paragraph (1) of this Schedule it shall have an adequate factor of safety when the ship is upright and when the ship has a trim of 10 degrees towards the side on which the device is fitted and is listed 15 degrees.

(3) Every such appliance shall be tested to a static load of 2.2 times the working load.

(4) Blocks provided with every such appliance shall be proof tested to 2.5 times the working load, and the falls shall have a factor of safety of at least 6.

(5) Every such appliance shall be:

- (a) capable of recovering the inflatable boat and bringing it on board the ship;
- (b) readily available and not stowed or used for any other purpose other than the launching of liferafts whilst the ship is at sea;
- (c) provided with a suitable means for manual operation; and
- (d) satisfactorily tested after installation.

(6) Every such appliance shall be provided with a winch when the inflatable boat is situated more than 4.5 metres above the lightest sea going waterline. The winch shall be adequate for the lowering operation and shall be tested to 1.5 times the working load. The brake gear of the winch shall include means for automatically maintaining the lowering speed between 0.3 metres per second and 0.6 metres per second.

SCHEDULE 18

LIFEBOAT DISENGAGING GEARS

Regulation 43(17)

(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 of link or 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 19

LIFERAFT LAUNCHING APPLIANCES

Regulation 44(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 75 kilogrammes.

(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 Secretary of State 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 0.3 metres per second not more than 0.6 metres per second 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 Regulations.

(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 20

SHIPS' PARACHUTE DISTRESS ROCKET SIGNALS

Regulation 51(1) and (4)

(1) Every parachute distress rocket signal shall consist of a single bright red flare which is projected to the required height by means of a rocket, and which burns while falling, descent being controlled by a parachute or other means at an average rate not greater than 5 metres per second.

(2) The signal shall be so constructed that the end from which the rocket is ejected can be positively identified by day or night.

(3) When the rocket is fired approximately vertically the flare and parachute shall be ejected at or before the top of the trajectory at a minimum height of 300 metres. The signal shall in addition be capable of functioning when the rocket is fired at an angle of 45 degrees to the horizontal.

(4) The flare shall burn with an average luminous intensity of not less than 30,000 candela for not less than 40 seconds. It shall burn out at a height of not less than 50 metres above sea level, when the rocket had been fired approximately vertically.

(5) The signal may be ignited by any suitable method but the ignition system shall be an integral part of the signal, easy to operate with wet, cold or gloved hands in adverse conditions and require the minimum of preparation. The sealing shall not depend on adhesive tapes.

(6) The signal shall be capable of functioning after immersion for 2 hours under 1 metre of water.

(7) In the ready-to-fire condition the signal shall function after immersion for 1 minute under 10 cm of water.

(8) All components, compositions and ingredients of the signal and the means of igniting it shall be of such character and quality as to enable the signal to maintain its serviceability under good average storage conditions in the marine environment for a period of at least three years.

(9) For carriage on ships, signals shall be packed in a container which shall be durable, damp proof and effectively sealed.

(10) The date of manufacture and the date of expiry shall be marked indelibly on the signal.

(11) Clear and concise directions for use in English supported by illustrations shall be printed indelibly on the signal.

SCHEDULE 21

SHIPS' TWO-STAR RED DISTRESS ROCKET SIGNALS

Regulation 51(3) and (4)

(1) Every two-star red distress rocket signal shall be capable of emitting two or more red stars either together or separately, when projected to the required height by means of a rocket.

(2) The signal shall be so constructed that the end from which the rocket is ejected can be positively identified by day or night.

(3) When the rocket is fired approximately vertically the stars shall be ejected at or before the top of the trajectory at a minimum height of 45 metres. The signal shall in addition be capable of functioning when the rocket is fired at an angle of 45 degrees to the horizontal.

(4) Each star shall burn with an average luminous intensity of not less than 5,000 candela for not less than 5 seconds.

(5) The signal may be ignited by any suitable method but the ignition system shall be an integral part of the signal, easy to operate with wet, cold or gloved hands in adverse conditions and require the minimum of preparation. The sealing shall not depend on adhesive tapes.

(6) The signal shall be capable of functioning after immersion for 2 hours under 1 metre of water.

(7) In the ready-to-fire condition the signal shall function after immersion for 1 minute under 10 cm of water.

(8) All components, compositions and ingredients of the signal and the means of igniting it shall be of such character and quality as to enable the signal to maintain its serviceability under good average storage conditions in the marine environment for a period of at least three years.

(9) For carriage on ships, signals shall be packed in a container which shall be durable, damp proof and effectively sealed.

(10) The date of manufacture and the date of expiry shall be marked indelibly on the signal.

(11) Clear and concise directions for use in English supported by illustrations shall be printed indelibly on the signal.

EXPLANATORY NOTE

(This Note is not part of the Regulations.)

These Regulations revoke the Merchant Shipping (Life-Saving Appliances) Rules 1965 to the extent that they apply to United Kingdom ships and to other ships, registered in a country to which a Safety of Life at Sea Convention applies while they are within the United Kingdom or the territorial waters thereof. The 1965 Rules will continue to apply to ships of non-Convention countries while they are within United Kingdom ports. The Regulations re-enact the provisions of the 1965 Rules with additional requirements in respect of specified classes of ships. These additional requirements give effect to the Safety of Life at Sea Convention 1974 (Cmnd. 7874).

The Regulations apply to United Kingdom ships and to ships registered in a country to which a Safety of Life at Sea Convention applies while they are within the United Kingdom in the territorial waters thereof, and the additional requirements are:

- (1) a description of tankers is added to the classification of ships (regulation 2);
- (2) in specified ships under 16.8 metres in length, smaller types of lifebuoys may be carried (regulation 33).
- (3) in specified cargo ships, sailing ships and pleasure craft, inflatable boats can be carried instead of lifeboats (regulations 11, 22 and 23);
- (4) inflatable boats are required to carry specified items of equipment.

The British Standards referred to in the Regulations can be obtained from the British Standards Institution, 2 Park St., London W.1.

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