Treaty Series No. 8 (2020)

Amendments

to the International Convention for the Safety of Life at Sea, 1974
(SOLAS 1974)

Resolution MSC.170(79) adopted 9 December 2004
Resolution MSC.201(81) adopted 18 May 2006
Resolution MSC.207(81) adopted 18 May 2006
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ANNEX 3

RESOLUTION MSC.170(79)
(adopted on 9 December 2004)

ADOPTION OF AMENDMENTS TO THE INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974, AS AMENDED

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING FURTHER article VIII(b) of the International Convention for the Safety of Life at Sea (SOLAS), 1974 (hereinafter referred to as "the Convention"), concerning the amend ment procedure applicable to the Annex to the Convention, other than the provisions of chapter I thereof,

HAVING CONSIDERED, at its seventy-ninth session, amendments to the Convention, proposed and circulated in accordance with article VIII(b)(i) thereof,

1. ADOPTS, in accordance with article VIII(b)(iv) of the Convention, amendments to the Convention, the text of which is set out in the Annex to the present resolution;

2. DETERMINES, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the said amendments shall be deemed to have been accepted on 1 January 2006, unless, prior to that date, more than one third of the Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not le ss than 50% of the gross tonnage of the world's merchant fleet, have notified their objections to the amendments;

3. INVITES SOLAS Contracting Governments to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on 1 July 2006 upon their acceptance in accordance with paragraph 2 above;

4. REQUESTS the Secretary-General, in conformity with article VIII(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the Annex to all Contracting Governments to the Convention;

5. FURTHER REQUESTS the Secretary-General to transmit copies of this resolution and its Annex to Members of the Organization, which are not Contracting Governments to the Convention.

ANNEX

AMENDMENTS TO THE INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974, AS AMENDED

CHAPTER III

LIFE-SAVING APPLIANCES AND ARRANGEMENTS

Regulation 31 - Survival craft and rescue boats

1 The following new paragraph 1.8 is added after existing paragraph 1.7:

"1.8 Notwithstanding the requirements of paragraph 1.1, bulk carriers as defined in regulation IX/1.6 constructed on or after 1 July 2006 shall comply with the requirements of paragraph 1.2."

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ANNEX 1

RESOLUTION MSC.201(81)
(adopted on 18 May 2006)

ADOPTION OF AMENDMENTS TO THE INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974, AS AMENDED

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING FURTHER article VIII(b) of the International Convention for the Safety of Life at Sea (SOLAS), 1974 (hereinafter referred to as "the Convention"), concerning the amendment procedure applicable to the Annex to the Convention, other than the provisions of chapter I thereof,

HAVING CONSIDERED, at its eighty-first session, amendments to the Convention, proposed and circulated in accordance with article VIII(b)(i) thereof,

1. ADOPTS, in accordance with article VIII(b)(iv) of the Convention, amendments to the Convention, the text of which is set out in the Annex to the present resolution;

2. DETERMINES, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the said amendments shall be deemed to have been accepted on 1 January 2010, unless, prior to that date, more than one third of the Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet, have notified their objections to the amendments;

3. INVITES SOLAS Contracting Governments to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on 1 July 2010 upon their acceptance in accordance with paragraph 2 above;

4. REQUESTS the Secretary-General, in conformity with article VIII(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the Annex to all Contracting Governments to the Convention;

5. FURTHER REQUESTS the Secretary-General to transmit copies of this resolution and its Annex to Members of the Organization, which are not Contracting Governments to the Convention.

ANNEX

AMENDMENTS TO THE INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974, AS AMENDED

CHAPTER III

LIFE-SAVING APPLIANCES AND ARRANGEMENTS

Regulation 7 – Personal life-saving appliances

1 In paragraph 2.1, the following new subparagraphs .1 and .2 are inserted:

".1 for passenger ships on voyages less than 24 h, a number of infant lifejackets equal to at least 2.5% of the number of passengers on board shall be provided;

.2 for passenger ships on voyages 24 h or greater, infant lifejackets shall be provided for each infant on board;",

and the existing subparagraphs .1 and .2 are renumbered as subparagraphs .3 and .4. The word "and" is moved from the end of renumbered subparagraph .3 to the end of renumbered subparagraph .4.

2 The following new subparagraph .5 is inserted after the renumbered subparagraph .4 of paragraph 2.1:

".5 if the adult lifejackets provided are not designed to fit persons weighing up to 140 kg and with a chest girth of up to 1,750 mm, a sufficient number of suitable accessories shall be available on board to allow them to be secured to such persons."

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[*] Refer to the Revised Guidelines for approval of sprinkler systems equivalent to that referred to in SOLAS regulation II-2/12 (resolution A.800(19)).

ANNEX 7

RESOLUTION MSC.207(81)
(adopted on 18 May 2006)

ADOPTION OF AMENDMENTS TO THE INTERNATIONAL LIFE-SAVING APPLIANCE (LSA) CODE

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

NOTING resolution MSC.48(66), by which it adopted the International Life-Saving Appliance Code (hereinafter referred to as "the LSA Code"), which has become mandatory under chapter III of the International Convention for the Safety of Life at Sea, 1974 (hereinafter referred to as "the Convention"),

NOTING ALSO article VIII(b) and regulation III/3.10 of the Convention concerning the procedure for amending the LSA Code,

HAVING CONSIDERED, at its eighty-first session, amendments to the LSA Code, proposed and circulated in accordance with article VIII(b)(i) of the Convention,

1. ADOPTS, in accordance with article VIII(b)(iv) of the Convention, amendments to the LSA Code, the text of which is set out in the Annex to the present resolution;

2. DETERMINES, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the amendments shall be deemed to have been accepted on 1 January 2010, unless, prior to that date, more than one third of the Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet, have notified their objections to the amendments;

3. INVITES Contracting Governments to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on 1 July 2010 upon their acceptance in accordance with paragraph 2 above;

4. REQUESTS the Secretary-General, in conformity with article VIII(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the Annex to all Contracting Governments to the Convention;

5. FURTHER REQUESTS the Secretary-General to transmit copies of this resolution and its Annex to Members of the Organization, which are not Contracting Governments to the Convention.

ANNEX

AMENDMENTS TO
THE INTERNATIONAL LIFE-SAVING APPLIANCE (LSA) CODE

CHAPTER I

GENERAL

1 The existing subparagraph .2 of paragraph 1.2.2 is replaced by the following:

".2 not be damaged in stowage throughout the air temperature range -30°C to +65°C and, in the case of personal life-saving appliances, unless otherwise specified, remain operational throughout the air temperature range -15°C to +40°C;"

2 The existing subparagraph .6 of paragraph 1.2.2 is replaced by the following:

".6 be of international or vivid reddish orange, or a comparably highly visible colour on all parts where this will assist detection at sea;"

CHAPTER II

PERSONAL LIFE-SAVING APPLIANCES

3 The words "sufficient to operate the quick-release arrangement" in paragraph 2.1.1.7 are replaced by the words "of not less than 4 kg".

4 In paragraph 2.1.3, the word "and" is moved from the end of subparagraph .4 to the end of subparagraph .5, and the following new subparagraph .6 is added:

".6 be provided with a quick-release arrangement that will automatically release and activate the signal and associated self-igniting light connected to a lifebuoy having a mass of not more than 4 kg."

5 The existing section 2.2 is replaced by the following: "**2.2 Lifejackets**

2.2.1 General requirements for lifejackets

2.2.1.1 A lifejacket shall not sustain burning or continue melting after being totally enveloped in a fire for a period of 2 s.

2.2.1.2 Lifejackets shall be provided in three sizes in accordance with table 2.1. If a lifejacket fully complies with the requirements of two adjacent size ranges, it may be marked with both size ranges, but the specified ranges shall not be divided. Lifejackets shall be marked by either weight or height, or by both weight and height, according to table 2.1.

Table 2.1 – Lifejacket sizing criteria

Lifejacket marking	Infant	Child	Adult
User's size:			
Weight (kg)	less than 15	15 or more but less than 43	43 or more
Height (cm)	less than 100	100 or more but less than 155	155 or more

2.2.1.3 If an adult lifejacket is not designed to fit persons weighing up to 140 kg and with a chest girth of up to 1,750 mm, suitable accessories shall be available to allow it to be secured to such persons.

2.2.1.4 The in-water performance of a lifejacket shall be evaluated by comparison to the performance of a suitable size standard reference lifejacket, i.e. reference test device (RTD) complying with the recommendations of the Organization.*

2.2.1.5 An adult lifejacket shall be so constructed that:

.1 at least 75% of persons who are completely unfamiliar with the lifejacket can correctly don it within a period of 1 min without assistance, guidance or prior demonstration;

.2 after demonstration, all persons can correctly don it within a period of 1 min without assistance;

.3 it is clearly capable of being worn in only one way or inside-out and, if donned incorrectly, it is not injurious to the wearer;

.4 the method of securing the lifejacket to the wearer has quick and positive means of closure that do not require tying of knots;

.5 it is comfortable to wear; and

.6 it allows the wearer to jump into the water from a height of at least 4.5 m while holding on to the lifejacket, and from a height of at least 1m with arms held overhead, without injury and without dislodging or damaging the lifejacket or its attachments.

2.2.1.6 When tested according to the recommendations of the Organization on at least 12 persons, adult lifejackets shall have sufficient buoyancy and stability in calm fresh water to:

* Refer to the Revised Recommendation on testing of life-saving appliances (resolution MSC.81(70)), as amended.

.1 lift the mouth of exhausted or unconscious persons by an average height of not less than the average provided by the adult RTD;

.2 turn the body of unconscious, face-down persons in the water to a position where the mouth is clear of the water in an average time not exceeding that of the RTD, with the number of persons not turned by the lifejacket no greater than that of the RTD;

.3 incline the body backwards from the vertical position for an average torso angle of not less than that of the RTD minus 5°;

.4 lift the head above horizontal for an average faceplane angle of not less than that of the RTD minus 5°; and

.5 return the wearer to a stable face-up position after being destabilized when floating in the flexed foetal position.*

2.2.1.7 An adult lifejacket shall allow the person wearing it to swim a short distance and to board a survival craft.

2.2.1.8 An infant or child lifejacket shall perform the same as an adult lifejacket except as follows:

.1 donning assistance is permitted for small children and infants;

.2 the appropriate child or infant RTD shall be used in place of the adult RTD; and

.3 assistance may be given to board a survival craft, but wearer mobility shall not be reduced to any greater extent than by the appropriate size RTD.

2.2.1.9 With the exception of freeboard and self-righting performance, the requirements for infant lifejackets may be relaxed, if necessary, in order to:

.1 facilitate the rescue of the infant by a caretaker;

.2 allow the infant to be fastened to a caretaker and contribute to keeping the infant close to the caretaker;

.3 keep the infant dry, with free respiratory passages;

.4 protect the infant against bumps and jolts during evacuation; and

.5 allow a caretaker to monitor and control heat loss by the infant.

2.2.1.10 In addition to the markings required by paragraph 1.2.2.9, an infant or child lifejacket shall be marked with:

* Refer to the illustration on page 11 of the IMO Pocket Guide to Cold Water Survival and to the Revised Recommendation on testing of life-saving appliances (resolution MSC.81(70)), as amended.

.1 the size range in accordance with paragraph 2.2.1.2; and

.2 an "infant" or "child" symbol as shown in the "infant's lifejacket" or "child's lifejacket" symbol adopted by the Organization.*

2.2.1.11 A lifejacket shall have buoyancy which is not reduced by more than 5% after 24 h submersion in fresh water.

2.2.1.12 The buoyancy of a lifejacket shall not depend on the use of loose granulated materials.

2.2.1.13 Each lifejacket shall be provided with means of securing a lifejacket light as specified in paragraph 2.2.3 such that it shall be capable of complying with paragraphs 2.2.1.5.6 and 2.2.3.1.3.

2.2.1.14 Each lifejacket shall be fitted with a whistle firmly secured by a lanyard.

2.2.1.15 Lifejacket lights and whistles shall be selected and secured to the lifejacket in such a way that their performance in combination is not degraded.

2.2.1.16 A lifejacket shall be provided with a releasable buoyant line or other means to secure it to a lifejacket worn by another person in the water.

2.2.1.17 A lifejacket shall be provided with a suitable means to allow a rescuer to lift the wearer from the water into a survival craft or rescue boat.

2.2.2.1 Inflatable lifejackets

A lifejacket which depends on inflation for buoyancy shall have not less than two separate compartments, shall comply with the requirements of paragraph 2.2.1 and shall:

.1 inflate automatically upon immersion, be provided with a device to permit inflation by a single manual motion and be capable of having each chamber inflated by mouth;

.2 in the event of loss of buoyancy in any one compartment be capable of complying with the requirements of paragraphs 2.2.1.5, 2.2.1.6 and 2.2.1.7; and

.3 comply with the requirements of paragraph 2.2.1.11 after inflation by means of the automatic mechanism.

* Refer to Symbols related to life-saving appliances and arrangements, adopted by the Organization by resolution A.760(18), as amended.

2.2.2.2 Lifejacket lights

2.2.2.3 Each lifejacket light shall:

.1 have a luminous intensity of not less than 0.75 cd in all directions of the upper hemisphere;

.2 have a source of energy capable of providing a luminous intensity of 0.75 cd for a period of at least 8 h;

.3 be visible over as great a segment of the upper hemisphere as is practicable when attached to a lifejacket; and

.4 be of white colour.

2.2.2.4 If the light referred to in paragraph 2.2.3.1 is a flashing light, it shall, in addition:

.1 be provided with a manually operated switch; and

.2 flash at a rate of not less than 50 flashes and not more than 70 flashes per minute with an effective luminous intensity of at least 0.75 cd."

6 The word "The" in the beginning of paragraph 2.3.1.1 is replaced by the word "An".

7 The existing subparagraph .1 of paragraph 2.3.1.1 is replaced by the following:

".1 it can be unpacked and donned without assistance within 2 min, taking into account donning of any associated clothing*, donning of a lifejacket if the immersion suit must be worn in conjunction with a lifejacket to meet the requirements of paragraph 2.3.1.2, and inflation of orally inflatable chambers if fitted;"

8 The existing subparagraph .3 of paragraph 2.3.1.1 is replaced by the following:

".3 it will cover the whole body with the exception of the face, except that covering for the hands may be provided by separate gloves which shall be permanently attached to the suit;"

9 The existing paragraph 2.3.1.2 is replaced by the following:

"2.3.1.2 An immersion suit on its own, or worn in conjunction with a lifejacket if necessary, shall have sufficient buoyancy and stability in calm fresh water to:

.1 lift the mouth of an exhausted or unconscious person clear of the water by not less than 120 mm; and

* Refer to paragraph 3.1.3 of the Recommendation on testing of life-saving appliances, adopted by the Maritime Safety Committee of the Organization by resolution MSC.81(70), as amended.

.2 allow the wearer to turn from a face-down to a face-up position in not more than 5 s."

10 In paragraph 2.3.1.3.3, the words "or its attachments," are inserted between the words "the immersion suit" and "or being injured".

11 In paragraph 2.3.1.4, the number "2.2.1.8" is replaced by "2.2.1.14".

12 The following new paragraphs 2.3.1.5 and 2.3.1.6 are inserted after the existing paragraph 2.3.1.4:

"2.3.1.5 An immersion suit which has buoyancy and is designed to be worn without a lifejacket shall be provided with a releasable buoyant line or other means to secure it to a suit worn by another person in the water.

2.3.1.6 An immersion suit which has buoyancy and is designed to be worn without a lifejacket shall be provided with a suitable means to allow a rescuer to lift the wearer from the water into a survival craft or rescue boat."

13 The existing paragraph 2.3.1.5 is replaced by the following:

"2.3.1.7 If an immersion suit is to be worn in conjunction with a lifejacket, the lifejacket shall be worn over the immersion suit. Persons wearing such an immersion suit shall be able to don a lifejacket without assistance. The immersion suit shall be marked to indicate that it must be worn in conjunction with a compatible lifejacket."

14 The following new paragraph 2.3.1.8 is added:

"2.3.1.8 An immersion suit shall have buoyancy which is not reduced by more than 5% after 24 h submersion in fresh water and does not depend on the use of loose granulated materials."

15 The existing paragraph 2.3.3 is deleted.

16 The word "The" in the beginning of paragraph 2.4.1.1 is replaced by the word "An".

17 The existing subparagraph .3 of paragraph 2.4.1.1 is replaced by the following:

".3 covers the whole body except, where the Administration so permits, the feet; covering for the hands and head may be provided by separate gloves and a hood, both of which shall be permanently attached to the suit;"

18 The existing paragraph 2.4.1.2 is deleted and paragraphs 2.4.1.3 and 2.4.1.4 are renumbered as paragraphs 2.4.1.2 and 2.4.1.3 respectively.

19 The words "or its attachments," are inserted between the words "the suit" and "or being injured" in subparagraph .2 of the renumbered paragraph 2.4.1.2.

20 The renumbered paragraph 2.4.1.3 is replaced by the following:

"2.4.1.3 An anti-exposure suit shall be fitted with a light complying with the requirements of paragraph 2.2.3 such that it shall be capable of complying with paragraphs 2.2.3.1.3 and 2.4.1.2.2, and the whistle prescribed by paragraph 2.2.1.14."

21 The existing subparagraph .2 of paragraph 2.4.2.1 is replaced by the following:

".2 be so constructed that, when worn as marked and following one jump into the water which totally submerges the wearer, the suit continues to provide sufficient thermal protection to ensure that when it is worn in calm circulating water at a temperature of 5°C, the wearer's body core temperature does not fall at a rate of more than 1.5°C per hour, after the first 0.5 h."

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RESOLUTION MSC.218(82)
(adopted on 8 December 2006)

AMENDMENTS TO THE INTERNATIONAL LIFE-SAVING APPLIANCE (LSA) CODE

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

NOTING resolution MSC.48(66), by which it adopted the International Life-Saving Appliance (LSA) Code (hereinafter referred to as "the LSA Code"), which has become mandatory under chapter III of the International Convention for the Safety of Life at Sea, 1974 (hereinafter referred to as "the Convention"),

NOTING ALSO article VIII(b) and regulation III/3.10 of the Convention concerning the procedure for amending the LSA Code,

HAVING CONSIDERED, at its eighty-second session, amendments to the LSA Code, proposed and circulated in accordance with article VIII(b)(i) of the Convention,

1. ADOPTS, in accordance with article VIII(b)(iv) of the Convention, amendments to the International Life-Saving Appliance (LSA) Code, the text of which is set out in the Annex to the present resolution;

2. DETERMINES, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the amendments shall be deemed to have been accepted on 1 January 2008, unless, prior to that date, more than one third of the Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet, have notified their objections to the amendments;

3. INVITES Contracting Governments to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on 1 July 2008 upon their acceptance in accordance with paragraph 2 above;

4. REQUESTS the Secretary-General, in conformity with article VIII(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the Annex to all Contracting Governments to the Convention;

5. FURTHER REQUESTS the Secretary-General to transmit copies of this resolution and its Annex to Members of the Organization, which are not Contracting Governments to the Convention.

ANNEX

AMENDMENTS TO THE INTERNATIONAL LIFE-SAVING APPLIANCE (LSA) CODE

CHAPTER I

GENERAL

1.1 Definitions

1 Paragraph 1.1.8 is deleted and the existing paragraphs 1.1.9, 1.1.10 and 1.1.11 are renumbered as paragraphs 1.1.8, 1.1.9 and 1.1.10 respectively.

1.2 General requirements for life-saving appliances

2 The following sentence is added at the end of paragraph 1.2.3:

"In the case of pyrotechnic life-saving appliances, the date of expiry shall be indelibly marked on the product by the manufacturer."

CHAPTER IV

SURVIVAL CRAFT

4.1 General requirements for liferafts

3 In paragraph 4.1.2.2, the words "required to be stowed in a position providing" are replaced by the word "intended".

4 The first sentence of paragraph 4.1.3.3 is replaced by the following:

"A manually controlled exterior light shall be fitted to the uppermost portion of the liferaft canopy or structure."

5 The first and second sentences of paragraph 4.1.3.4 are replaced by the following:

"A manually controlled interior light shall be fitted inside the liferaft capable of continuous operation for a period of at least 12 h. It shall light automatically when the canopy is erected and shall produce an arithmetic mean luminous intensity of not less than 0.5 cd when measured over the entire upper hemisphere to permit reading of survival and equipment instructions."

6 Subparagraphs .18 and .19 of paragraph 4.1.5.1 are replaced by the following:

".18 a food ration consisting of not less than 10,000 kJ (2,400 kcal) for each person the liferaft is permitted to accommodate. These rations shall be palatable, edible throughout the marked life, and packed in a manner which can be readily divided and easily opened, taking into account immersion suit gloved hands.

The rations shall be packed in permanently sealed metal containers or vacuum packed in a flexible packaging material with a negligible vapour transmission rate

(<0.1 g/m^2 per 24 h at 23°C/85% relative humidity) when tested to a standard acceptable to the Administration. Flexible packaging materials shall be further protected by outer packaging, if needed, to prevent physical damage to the food ration and other items as result of sharp edges. The packaging shall be clearly marked with date of packing and date of expiry, the production lot number, the content in the package and instructions for use. Food rations complying with the requirements of an international standard acceptable to the Organization are acceptable in compliance with these requirements;

.19 1.5 *l* of fresh water for each person the liferaft is permitted to accommodate, of which either 0.5 *l* per person may be replaced by a de-salting apparatus capable of producing an equal amount of fresh water in 2 days or 1 *l* per person may be replaced by a manually powered reverse osmosis desalinator, as described in paragraph 4.4.7.5, capable of producing an equal amount of fresh water in 2 days. The water shall satisfy suitable international requirements for chemical and microbiological content, and shall be packed in sealed watertight containers that are of corrosion resistant material or are treated to be corrosion resistant. Flexible packaging materials, if used, shall have a negligible vapour transmission rate (<0.1 g/m^2 per 24 h at 23°C / 85% relative humidity) when tested to a standard acceptable to the Administration, except that individually packaged portions within a larger container need not meet this vapour transmission requirement. Each water container shall have a method of spill proof reclosure, except for
individually packaged portions of less than 125 ml. Each container shall be clearly marked with date of packing and date of expiry, the production lot number, the quantity of water in the container, and instructions for consumption. The containers shall be easy to open, taking into account immersion suit gloved hands. Water for emergency drinking complying with the requirements of an international standard acceptable to the Organization is acceptable in compliance with these requirements;"

4.2 Inflatable liferafts

7 The following new sentence is inserted between the second and third sentences of paragraph 4.2.2.3:

"The inflation system, including any relief valves installed in compliance with paragraph 4.2.2.4, shall comply with the requirements of an international standard acceptable to the Organization."

8 The first sentence of paragraph 4.2.4.1 is replaced by the following:

"At least one entrance shall be fitted with a boarding ramp, capable of supporting a person weighing 100 kg sitting or kneeling and not holding onto any other part of the liferaft, to enable persons to board the liferaft from the sea."

9 The following new subparagraph .8 is inserted in paragraph 4.2.6.3 and the existing subparagraphs .8 and .9 are renumbered as subparagraphs .9 and .10 respectively:

".8 mass of the packed liferaft, if greater than 185 kg;"

4.3 Rigid liferafts

10 The first sentence of paragraph 4.3.4.1 is replaced by the following:

"At least one entrance shall be fitted with a boarding ramp, capable of supporting a person weighing 100 kg sitting or kneeling and not holding onto any other part of the liferaft, to enable persons to board the liferaft from the sea."

4.4 General requirements for lifeboats

11 In paragraph 4.4.1.1, the words ", and are capable of being safely launched under all conditions of trim of up to 10° and list of up to 20° either way" are added at the end of the first sentence.

12 Paragraph 4.4.1.2 is replaced by the following:

"4.4.1.2 Each lifeboat shall be fitted with a permanently affixed approval plate, endorsed by the Administration or its representative, containing at least the following items:

.1 manufacturer's name and address;

.2 lifeboat model and serial number;

.3 month and year of manufacture;

.4 number of persons the lifeboat is approved to carry; and

.5 the approval information required under paragraph 1.2.2.9.

Each production lifeboat shall be provided with a certificate or declaration of conformity which, in addition to the above items, specifies:

.6 number of the certificate of approval;

.7 material of hull construction, in such detail as to ensure that compatibility problems in repair should not occur;

.8 total mass fully equipped and fully manned;

.9 the measured towing force of the lifeboat; and

.10 statement of approval as to sections 4.5, 4.6, 4.7, 4.8 or 4.9."

13 In paragraph 4.4.3.1, in the first sentence, the word "rapidly" is deleted and the words "in not more than 10 min from the time the instruction to board is given" are added at the end.

14 In the first sentence of paragraph 4.4.6.8, the words "a 25-person liferaft" are replaced by the words "the largest liferaft carried on the ship".

15 Paragraph 4.4.7.6 is replaced by the following:

"4.4.7.6 Every lifeboat to be launched by a fall or falls, except a free-fall lifeboat, shall be fitted with a release mechanism complying with the following requirements subject to subparagraph .9 below:

.1 the mechanism shall be so arranged that all hooks are released simultaneously;

.2 the mechanism shall have two release capabilities: normal (off-load) release capability and on-load release capability:

2.1 normal (off-load) release capability shall release the lifeboat when it is waterborne or when there is no load on the hooks, and not require manual separation of the lifting ring or shackle from the jaw of the hook; and

2.2 on-load release capability shall release the lifeboat with a load on the hooks. This release shall be so arranged as to release the lifeboat under any conditions of loading from no load with the lifeboat waterborne to a load of 1.1 times the total mass of the lifeboat when loaded with its full complement of persons and equipment. This release capability shall be adequately protected against accidental or premature use. Adequate protection shall include special mechanical protection not normally required for off-load release, in addition to a danger sign. To prevent a premature on-load release, on-load operation of the release mechanism should require a deliberate and sustained action by the operator;

.3 to prevent an accidental release during recovery of the boat, unless the hook is completely reset, either the hook shall not be able to support any load, or the handle or safety pins shall not be able to be returned to the reset (closed) position without excessive force. Additional danger signs shall be posted at each hook station to alert crew members to the proper method ofresetting;

.4 the release mechanism shall be so designed and installed that crew members from inside the lifeboat can clearly determine when the system is ready for liftingby:

4.1 directly observing that the movable hook portion or the hook portion that locks the movable hook portion in place is properly and completely reset at each hook; or

4.2 observing a non-adjustable indicator that confirms that the mechanism that locks the movable hook portion in place is properly and completely reset at each hook; or

4.3 easily operating a mechanical indicator that confirms that the mechanism that locks the movable hook in place is properly and completely reset at each hook;

.5 clear operating instructions shall be provided with a suitably worded warning notice using colour coding, pictograms, and/or symbols as necessary for clarity. If colour coding is used, green shall indicate a properly reset hook and red shall indicate danger of improper or incorrect setting;

.6 the release control shall be clearly marked in a colour that contrasts with its surroundings;

.7 means shall be provided for hanging-off the lifeboat to free the release mechanism for maintenance;

.8 the fixed structural connections of the release mechanism in the lifeboat shall be designed with a calculated factor of safety of 6 based on the ultimate strength of the materials used, and the mass of the lifeboat when loaded with its full complement of persons, fuel and equipment, assuming the mass of the lifeboat is equally distributed between the falls, except that the factor of safety for the hanging-off arrangement may be based upon the mass of the lifeboat when loaded with its full complement of fuel and equipment plus 1,000 kg; and

.9 where a single fall and hook system is used for launching a lifeboat or rescue boat in combination with a suitable painter, the requirements of paragraphs 4.4.7.6.2.2 and 4.4.7.6.3 need not be applicable; in such an arrangement a single capability to release the lifeboat or rescue boat, only when it is fully waterborne, will be adequate."

16 In the first sentence of paragraph 4.4.7.11, the word "lamp" is replaced by the word "exterior light".

17 The existing text of paragraph 4.4.7.12 is replaced by the following:

"4.4.7.12 A manually controlled interior light shall be fitted inside the lifeboat capable of continuous operation for a period of at least 12 h. It shall produce an arithmetic mean luminous intensity of not less than 0.5 cd when measured over the entire upper hemisphere to permit reading of survival and equipment instructions; however, oil lamps shall not be permitted for this purpose."

18 In paragraph 4.4.8.9, the words "as described in paragraph 4.1.5.1.19" are inserted between the words "fresh water" and "for each person".

4.5 Partially enclosed lifeboats

19 Paragraph 4.5.3 is replaced by the following:

"4.5.3 The interior of the lifeboat shall be of a light colour which does not cause discomfort to the occupants."

4.6 Totally enclosed lifeboats

20 In paragraph 4.6.2.8, the word "light" is inserted before the second word "colour".

4.7 Free-fall lifeboats

21 Paragraph 4.7.3.3 is deleted.

CHAPTER V

RESCUE BOATS

5.1 Rescue boats

22 In the first sentence of paragraph 5.1.1.1, the words ", excluding paragraph 4.4.6.8," are inserted between the words "4.4.7.4 inclusive" and "and 4.4.7.6" and the references to "4.4.7.6, 4.4.7.7, 4.4.7.9, 4.4.7.10" are replaced by the references to "4.4.7.6, 4.4.7.8, 4.4.7.10, 4.4.7.11".

23 At the end of the first sentence of paragraph 5.1.1.3.2, the words "all wearing immersion suits, and lifejackets if required" are added.

24 Paragraph 5.1.1.6 is replaced by the following:

"5.1.1.6 Every rescue boat shall be provided with sufficient fuel, suitable for use throughout the temperature range expected in the area in which the ship operates, and be capable of manoeuvring at a speed of at least 6 knots and maintaining that speed, for a period of at least 4 h, when loaded with its full complement of persons and equipment."

25 The following new paragraph 5.1.1.12 is added after the existing paragraph 5.1.1.11:

"5.1.1.12 Every rescue boat shall be so arranged that an adequate view forward, aft and to both sides is provided from the control and steering position for safe launching and manoeuvring and, in particular, with regard to visibility of areas and crew members essential to man-overboard retrieval and marshalling of survival craft."

26 Paragraph 5.1.3.11 is deleted.

27 The following new section 5.1.4 is added after existing section 5.1.3: "5.1.4 *Additional requirements for fast rescue boats*

5.1.4.1 Fast rescue boats shall be so constructed as to capable of being safely launched and retrieved under adverse weather and sea conditions.

5.1.4.2 Except as provided by this section, all fast rescue boats shall comply with the requirements of section 5.1, except for paragraphs 4.4.1.5.3, 4.4.1.6, 4.4.7.2, 5.1.1.6 and 5.1.1.10.

5.1.4.3 Notwithstanding paragraph 5.1.1.3.1, fast rescue boats shall have a hull length of not less than 6 m and not more than 8.5 m, including inflated structures or fixed fenders.

5.1.4.4 Fast rescue boats shall be provided with sufficient fuel, suitable for use throughout the temperature range expected in the area in which the ship operates, and be capable of manoeuvring, for a period of at least 4 h, at a speed of at least 20 knots in calm water with a crew of 3 persons and at least 8 knots when loaded with its full complement of persons and equipment.

5.1.4.5 Fast rescue boats shall be self-righting or capable of being readily righted by not more than two of their crew.

5.1.4.6 Fast rescue boats shall be self-bailing or be capable of being rapidly cleared of water.

5.1.4.7 Fast rescue boats shall be steered by a wheel at the helmsman's position remote from the tiller. An emergency steering system providing direct control of the rudder, water jet, or outboard motor shall also be provided.

5.1.4.8 Engines in fast rescue boats shall stop automatically or be stopped by the helmsman's emergency release switch, should the rescue boat capsize. When the rescue boat has righted, each engine or motor shall be capable of being restarted provided that the helmsman's emergency release, if fitted, has been reset. The design of the fuel and lubricating systems shall prevent the loss of more than 250 ml of fuel or lubricating oil from the propulsion system, should the rescue boat capsize.

5.1.4.9 Fast rescue boats shall, if possible, be equipped with an easily and safely operated fixed single-point suspension arrangement or equivalent.

5.1.4.10 A rigid fast rescue boat shall be constructed in such a way that, when suspended by its lifting point, it is of sufficient strength to withstand a load of 4 times the mass of its full complement of persons and equipment without residual deflection upon removal of the load.

5.1.4.11 The normal equipment of a fast rescue boat shall include a VHF radiocommunication set which is hands-free and watertight."

CHAPTER VI

LAUNCHING AND EMBARKATION APPLIANCES

6.1 Launching and embarkation appliances

28 In paragraph 6.1.1.5, the word "factory" is inserted before the words "static proof load" and the word "on" between the words "load" and "test" is deleted.

29 The following new paragraph 6.1.1.11 is added after existing paragraph 6.1.1.10:

"6.1.1.11 Rescue boat launching appliances shall be provided with foul weather recovery strops for recovery where heavy fall blocks constitute a danger."

30 In paragraph 6.1.2.12, the words "or a mechanism activated by the operator" are replaced by the words "either on deck or in the survival craft or rescue boat".

31 The following new paragraph 6.1.2.13 is added after the existing paragraph 6.1.2.12:

"6.1.2.13 A lifeboat launching appliance shall be provided with means for hanging-off the lifeboat to free the on-load release mechanism for maintenance."

32 The following new section 6.1.7 is added after the existing section 6.1.6: "6.1.7 *launching appliances for fast rescue boats*

6.1.7.1 Every fast rescue boat launching appliance shall comply with the requirements of paragraphs 6.1.1 and 6.1.2 except 6.1.2.10 and, in addition, shall comply with the requirements of this paragraph.

6.1.7.2 The launching appliance shall be fitted with a device to dampen the forces due to interaction with the waves when the fast rescue boat is launched or recovered. The device shall include a flexible element to soften shock forces and a damping element to minimize oscillations.

6.1.7.3 The winch shall be fitted with an automatic high-speed tensioning device which prevents the wire from going slack in all sea state conditions in which the fast rescue boat is intended to operate.

6.1.7.4 The winch brake shall have a gradual action. When the fast rescue boat is lowered at full speed and the brake is applied sharply, the additional dynamic force induced in the wire due to retardation shall not exceed 0.5 times the working load of the launching appliance.

6.1.7.5 The lowering speed for a fast rescue boat with its full complement of persons and equipment shall not exceed 1 m/s. Notwithstanding the requirements of paragraph 6.1.1.9, a fast rescue boat launching appliance shall be capable of hoisting the fast rescue boat with 6 persons and its full complement of equipment at a speed of not less than 0.8 m/s. The appliance shall also be capable of lifting the rescue boat with the maximum number of persons that can be accommodated in it, as calculated in accordance with paragraph 4.4.2."

CHAPTER VII

OTHER LIFE-SAVING APPLIANCES

7.2 General alarm and public address system

33 The third sentence of paragraph 7.2.1.1 is deleted.

34 The second sentence of paragraph 7.2.1.2 is deleted.

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