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 amendment 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 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 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 II-1

CONSTRUCTION – STRUCTURE, SUBDIVISION AND STABILITY, MACHINERY AND ELECTRICAL INSTALLATIONS

Regulation 2 - Definitions

1 The following new paragraph 14 is added after existing paragraph 13:

"14 *Bulk carrier* means a bulk carrier as defined in regulation XII/1.1."

Regulation 18 – Construction and initial tests of watertight doors, sidescuttles, etc., in passenger ships and cargo ships

2 Paragraph 2 of the regulation is replaced by the following:

"2 In passenger ships and cargo ships watertight doors shall be tested by water pressure to a head up to the bulkhead deck or freeboard deck respectively. Where testing of individual doors is not carried out because of possible damage to insulation or outfitting items, testing of individual doors may be replaced by a prototype pressure test of each type and size of door with a test pressure corresponding at least to the head required for the intended location. The prototype test shall be carried out before the door is fitted. The installation method and procedure for fitting the door on board shall correspond to that of the prototype test. When fitted on board, each door shall be checked for proper seating between the bulkhead, the frame and the door."

Regulation 45 - Precautions against shock, fire and other hazards of electrical origin

3 After the heading the following words are added:

"(*Paragraphs* 10 *and* 11 *of this regulation apply to ships constructed on or after 1 January 2007*)".

4 Existing paragraph 10 is replaced by the following:

"10 No electrical equipment shall be installed in any space where flammable mixtures are liable to collect, e.g. in compartments assigned principally to accumulator batteries, in paint lockers, acetylene stores or similar spaces, unless the Administration is satisfied that such equipment is:

.1 essential for operational purposes;

.2 of a type which will not ignite the mixture concerned;

.3 appropriate to the space concerned; and

.4 appropriately certified for safe usage in the dusts, vapours or gases likely to be encountered."

5 The following new paragraph 11 is added after paragraph 10, as amended:

"11 In tankers, electrical equipment, cables and wiring shall not be installed in hazardous locations unless it conforms with standards not inferior to those acceptable to the Organization.* However, for locations not covered by such standards, electrical equipment, cables and wiring which do not conform to the standards may be installed in hazardous locations based on a risk assessment to the satisfaction of the Administration, to ensure that an equivalent level of safety is assured."

6 Existing paragraph 11 is renumbered as paragraph 12.

CHAPTER III

LIFE-SAVING APPLIANCES AND ARRANGEMENTS

Regulation 31 - Survival craft and rescue boats

7 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."

CHAPTER V

SAFETY OF NAVIGATION

Regulation 19 – Carriage requirements for shipborne navigational systems and equipment

8 In paragraph 2.5, the existing text of subparagraph .1 is replaced by the following:

".1 a gyro compass, or other means, to determine and display their heading by shipborne non-magnetic means, being clearly readable by the helmsman at the main steering position. These means shall also transmit heading information for input to the equipment referred in paragraphs 2.3.2, 2.4 and 2.5.5;"

* Refer to the standards published by the International Electrotechnical Commission, IEC 60092-502:1999 'Electrical installations in ships – Tankers'.

Regulation 20 – Voyage data recorders

9 The following new paragraph 2 is added after existing paragraph 1:

"2 To assist in casualty investigations, cargo ships, when engaged on international voyages, shall be fitted with a VDR which may be a simplified voyage data recorder (S-VDR)** as follows:

.1 in the case of cargo ships of 20,000 gross tonnage and upwards constructed before 1 July 2002, at the first scheduled dry-docking after 1 July 2006 but not later than 1 July 2009;

.2 in the case of cargo ships of 3,000 gross tonnage and upwards but less than 20,000 gross tonnage constructed before 1 July 2002, at the first scheduled dry-docking after 1 July 2007 but not later than 1 July 2010; and

.3 Administrations may exempt cargo ships from the application of the requirements of subparagraphs .1 and .2 when such ships will be taken permanently out of service within two years after the implementation date specified in subparagraphs .1 and .2 above."

10 Existing paragraph 2 is renumbered as paragraph 3.

CHAPTER VII

CARRIAGE OF DANGEROUS GOODS

Regulation 10 – Requirements for chemical tankers

11 The following sentence is deleted from paragraph 1 of the regulation:

"For the purpose of this regulation, the requirements of the Code shall be treated as mandatory."

CHAPTER XII

ADDITIONAL SAFETY MEASURES FOR BULK CARRIERS

12 The existing text of chapter XII is replaced by the following:

"**Regulation 1**

Definitions

For the purpose of this chapter:

** Refer to resolution MSC.163(78) – Performance standards for shipborne simplified voyage data recorders (S-VDRs).

1 *Bulk carrier* means a ship which is intended primarily to carry dry cargo in bulk, including such types as ore carriers and combination carriers*.

2 *Bulk carrier of single-side skin construction* means a bulk carrier as defined in paragraph 1, in which:

.1 any part of a cargo hold is bounded by the side shell; or

.2 where one or more cargo holds are bounded by a double-side skin, the width of which is less than 760 mm in bulk carriers constructed before 1 January 2000 and less than 1,000 mm in bulk carriers constructed on or after 1 January 2000 but before 1 July 2006, the distance being measured perpendicular to the side shell.

Such ships include combination carriers in which any part of a cargo hold is bounded by the side shell.

3 *Bulk carrier of double-side skin construction* means a bulk carrier as defined in paragraph 1, in which all cargo holds are bounded by a double-side skin, other than as defined in paragraph 2.2.

4 *Double-side skin* means a configuration where each ship side is constructed by the side shell and a longitudinal bulkhead connecting the double bottom and the deck. Hopper side tanks and top-side tanks may, where fitted, be integral parts of the double-side skin configuration.

5 *Length* of a bulk carrier means the length as defined in the International Convention on Load Lines in force.

6 *Solid bulk cargo* means any material, other than liquid or gas, consisting of a combination of particles, granules or any larger pieces of material, generally uniform in composition, which is loaded directly into the cargo spaces of a ship without any intermediate form of containment.

7 *Bulk carrier bulkhead and double bottom strength standards* means "Standards for the evaluation of scantlings of the transverse watertight vertically corrugated bulkhead between the two foremost cargo holds and for the evaluation of allowable hold loading of the foremost cargo hold" adopted by resolution 4 of the Conference of Contracting Governments to the International Convention for the Safety of Life at Sea, 1974 on 27 November 1997, as may be amended by the Organization, provided that such amendments are adopted, brought into force and take effect in accordance with the

* Reference is made to:
.1 For ships constructed before 1 July 2006, resolution 6, Interpretation of the definition of "bulk carrier", as given in chapter IX of SOLAS 1974, as amended in 1994, adopted by the 1997 SOLAS Conference.
.2 The Interpretation of the provisions of SOLAS chapter XII on Additional safety measures for bulk carriers, adopted by the Maritime Safety Committee of the Organization by resolution MSC.79(70).
.3 The application provisions of Annex 1 to the Interpretation of the provisions of SOLAS chapter XII on Additional safety measures for bulk carriers, adopted by the Maritime Safety Committee of the Organization by resolution MSC.89(71).

provisions of article VIII of the present Convention concerning the amendment procedures applicable to the Annex other than chapter I.

8 *Bulk carriers constructed* means bulk carriers the keels of which are laid or which are at a similar stage of construction.

9 *A similar stage of construction* means the stage at which:

.1 construction identifiable with a specific ship begins; and

.2 assembly of that ship has commenced comprising at least 50 tonnes or one per cent of the estimated mass of all structural material, whichever is less.

10 *Breadth* (B) of a bulk carrier means the breadth as defined in the International Convention on Load Lines in force.

Regulation 2

Application

Bulk carriers shall comply with the requirements of this chapter in addition to the applicable requirements of other chapters.

Regulation 3

Implementation schedule

Bulk carriers constructed before 1 July 1999 to which regulations 4 or 6 apply shall comply with the provisions of such regulations according to the following schedule, with reference to the enhanced programme of inspections required by regulation XI-1/2:

.1 bulk carriers, which are 20 years of age and over on 1 July 1999, by the date of the first intermediate survey or the first periodical survey after 1 July 1999, whichever comes first;

.2 bulk carriers, which are 15 years of age and over but less than 20 years of age on 1 July 1999, by the date of the first periodical survey after 1 July 1999, but not later than 1 July 2002; and

.3 bulk carriers, which are less than 15 years of age on 1 July 1999, by the date of the first periodical survey after the date on which the ship reaches 15 years of age, but not later than the date on which the ship reaches 17 years of age.

Regulation 4

Damage stability requirements applicable to bulk carriers

1 Bulk carriers of 150 m in length and upwards of single-side skin construction, designed to carry solid bulk cargoes having a density of 1,000 kg/m^3 and above, constructed on or after 1 July 1999 shall, when loaded to the summer load line, be able to withstand flooding of any one cargo hold in all loading conditions and remain afloat in a satisfactory condition of equilibrium, as specified in paragraph 4.

2 Bulk carriers of 150 m in length and upwards of double-side skin construction in which any part of longitudinal bulkhead is located within B/5 or 11.5 m, whichever is less, inboard from the ship's side at right angle to the centreline at the assigned summer load line, designed to carry solid bulk cargoes having a density of 1,000 kg/m^3 and above, constructed on or after 1 July 2006 shall, when loaded to the summer load line, be able to withstand flooding of any one cargo hold in all loading conditions and remain afloat in a satisfactory condition of equilibrium, as specified in paragraph 4.

3 Bulk carriers of 150 m in length and upwards of single-side skin construction, carrying solid bulk cargoes having a density of 1,780 kg/m^3 and above, constructed before 1 July 1999 shall, when loaded to the summer load line, be able to withstand flooding of the foremost cargo hold in all loading conditions and remain afloat in a satisfactory condition of equilibrium, as specified in paragraph 4. This requirement shall be complied with in accordance with the implementation schedule specified in regulation 3.

4 Subject to the provisions of paragraph 7, the condition of equilibrium after flooding shall satisfy the condition of equilibrium laid down in the annex to resolution A.320(IX) - Regulation equivalent to regulation 27 of the International Convention on Load Lines, 1966, as amended by resolution A.514(13). The assumed flooding need only take into account flooding of the cargo hold space to the water level outside the ship in that flooded condition. The permeability of a loaded hold shall be assumed as 0.9 and the permeability of an empty hold shall be assumed as 0.95, unless a permeability relevant to a particular cargo is assumed for the volume of a flooded hold occupied by cargo and a permeability of 0.95 is assumed for the remaining empty volume of the hold.

5 Bulk carriers constructed before 1 July 1999, which have been assigned a reduced freeboard in compliance with regulation 27(7) of the International Convention on Load Lines, 1966, as adopted on 5 April 1966, may be considered as complying with paragraph 3 of this regulation.

6 Bulk carriers which have been assigned a reduced freeboard in compliance with the provisions of paragraph (8) of the regulation equivalent to regulation 27 of the International Convention on Load Lines, 1966, adopted by resolution A.320(IX), as amended by resolution A.514(13), may be considered as complying with paragraphs 1 or 2, as appropriate.

7 On bulk carriers which have been assigned reduced freeboard in compliance with the provisions of regulation 27(8) of Annex B of the Protocol of 1988 relating to the International Convention on Load Lines, 1966, the condition of equilibrium after flooding shall satisfy the relevant provisions of that Protocol.

Regulation 5

Structural strength of bulk carriers

1 Bulk carriers of 150 m in length and upwards of single-side skin construction, designed to carry solid bulk cargoes having a density of 1,000 kg/m^3 and above constructed on or after 1 July 1999, shall have sufficient strength to withstand flooding of any one cargo hold to the water level outside the ship in that flooded condition in all loading and ballast conditions, taking also into account dynamic effects resulting from the presence of water in the hold, and taking into account the recommendations adopted by the Organization.*

2 Bulk carriers of 150 m in length and upwards of double-side skin construction, in which any part of longitudinal bulkhead is located within B/5 or 11.5 m, whichever is less, inboard from the ship's side at right angle to the centreline at the assigned summer load line, designed to carry bulk cargoes having a density of 1,000 kg/m^3 and above constructed on or after 1 July 2006, shall comply with the structural strength provisions of paragraph 1.

Regulation 6

Structural and other requirements for bulk carriers

1 Bulk carriers of 150 m in length and upwards of single-side skin construction, carrying solid bulk cargoes having a density of 1,780 kg/m^3 and above, constructed before 1 July 1999, shall comply with the following requirements in accordance with the implementation schedule specified in regulation 3:

.1 The transverse watertight bulkhead between the two foremost cargo holds and the double bottom of the foremost cargo hold shall have sufficient strength to withstand flooding of the foremost cargo hold, taking also into account dynamic effects resulting from the presence of water in the hold, in compliance with the Bulk carrier bulkhead and double bottom strength standards. For the purpose of this regulation, the Bulk carrier bulkhead and double bottom strength standards shall be treated as mandatory.

.2 In considering the need for, and the extent of, strengthening of the transverse watertight bulkhead or double bottom to meet the requirements of 1.1, the following restrictions may be taken into account:

* Refer to resolution 3, Recommendation on compliance with SOLAS regulation XII/5, adopted by the 1997 SOLAS Conference.

.1 restrictions on the distribution of the total cargo weight between the cargo holds; and

.2 restrictions on the maximum deadweight.

.3 For bulk carriers using either of, or both, the restrictions given in 1.2.1 and 1.2.2 above for the purpose of fulfilling the requirements of 1.1, these restrictions shall be complied with whenever solid bulk cargoes having a density of 1,780 kg/m^3 and above are carried.

2 Bulk carriers of 150 m in length and upwards constructed on or after 1 July 2006, in all areas with double-side skin construction shall comply with the following requirements:

.1 Primary stiffening structures of the double-side skin shall not be placed inside the cargo hold space.

.2 Subject to the provisions below, the distance between the outer shell and the inner shell at any transverse section shall not be less than 1,000 mm measured perpendicular to the side shell. The double-side skin construction shall be such as to allow access for inspection as provided in regulation II-1/3-6 and the Technical Provisions referring thereto.

.1 The clearances below need not be maintained in way of cross ties, upper and lower end brackets of transverse framing or end brackets of longitudinal framing.

.2 The minimum width of the clear passage through the double-side skin space in way of obstructions such as piping or vertical ladders shall not be less than 600 mm.

.3 Where the inner and/or outer skins are transversely framed, the minimum clearance between the inner surfaces of the frames shall not be less than 600 mm.

.4 Where the inner and outer skins are longitudinally framed, the minimum clearance between the inner surfaces of the frames shall not be less than 800 mm. Outside the parallel part of the cargo hold length, this clearance may be reduced where necessitated by the structural configuration, but, in no case, shall be less than 600 mm.

.5 The minimum clearance referred to above shall be the shortest distance measured between assumed lines connecting the inner surfaces of the frames on the inner and outer skins.

3 Double-side skin spaces and dedicated seawater ballast tanks arranged in bulk carriers of 150 m in length and upwards constructed on or after 1 July 2006 shall be

coated in accordance with the requirements of regulation II-1/3-2 and also based on the Performance standards for coatings* to be adopted by the Organization.

4 The double-side skin spaces, with the exception of top-side wing tanks, if fitted, shall not be used for the carriage of cargo.

5 In bulk carriers of 150 m in length and upwards, carrying solid bulk cargoes having a density of 1,000 kg/m^3 and above, constructed on or after 1 July 2006:

.1 the structure of cargo holds shall be such that all contemplated cargoes can be loaded and discharged by standard loading/discharge equipment and procedures without damage which may compromise the safety of the structure;

.2 effective continuity between the side shell structure and the rest of the hull structure shall be assured; and

.3 the structure of cargo areas shall be such that single failure of one stiffening structural member will not lead to immediate consequential failure of other structural items potentially leading to the collapse of the entire stiffened panels.

Regulation 7

Survey and maintenance of bulk carriers

1 Bulk carriers of 150 m in length and upwards of single-side skin construction, constructed before 1 July 1999, of 10 years of age and over, shall not carry solid bulk cargoes having a density of 1,780 kg/m^3 and above unless they have satisfactorily undergone either:

.1 a periodical survey, in accordance with the enhanced programme of inspections during surveys required by regulation XI-1/2; or

.2 a survey of all cargo holds to the same extent as required for periodical surveys in the enhanced programme of inspections during surveys required by regulation XI-1/2.

2 Bulk carriers shall comply with the maintenance requirements provided in regulation II-1/3-1 and the Standards for owners' inspection and maintenance of bulk carrier hatch covers, adopted by the Organization by resolution MSC.169(79), as may be amended by the Organization, provided that such amendments are adopted, brought into force and take effect in accordance with the provisions of article VIII of the present Convention concerning the amendment procedures applicable to the Annex other than chapter I.

* Refer to the standards acceptable to the Administration until such time that Performance standards for coating, to be adopted by the Organization, will be made mandatory by suitably modifying the above requirements.

Regulation 8

Information on compliance with requirements for bulk carriers

1 The booklet required by regulation VI/7.2 shall be endorsed by the Administration or on its behalf, to indicate that regulations 4, 5, 6 and 7, as appropriate, are complied with.

2 Any restrictions imposed on the carriage of solid bulk cargoes having a density of 1,780 kg/m^3 and above in accordance with the requirements of regulations 6 and 14 shall be identified and recorded in the booklet referred to in paragraph 1.

3 A bulk carrier to which paragraph 2 applies shall be permanently marked on the side shell at midships, port and starboard, with a solid equilateral triangle having sides of 500 mm and its apex 300 mm below the deck line, and painted a contrasting colour to that of the hull.

Regulation 9

Requirements for bulk carriers not being capable of complying with regulation 4.3 due to the design configuration of their cargo holds

For bulk carriers constructed before 1 July 1999 being within the application limits of regulation 4.3, which have been constructed with an insufficient number of transverse watertight bulkheads to satisfy that regulation, the Administration may allow relaxation from the application of regulations 4.3 and 6 on condition that they shall comply with the following requirements:

.1 for the foremost cargo hold, the inspections prescribed for the annual survey in the enhanced programme of inspections during surveys required by regulation XI-1/2 shall be replaced by the inspections prescribed therein for the intermediate survey of cargo holds;

.2 are provided with bilge well high water level alarms in all cargo holds, or in cargo conveyor tunnels, as appropriate, giving an audible and visual alarm on the navigation bridge, as approved by the Administration or an organization recognized by it in accordance with the provisions of regulation XI-1/1; and

.3 are provided with detailed information on specific cargo hold flooding scenarios. This information shall be accompanied by detailed instructions on evacuation preparedness under the provisions of section 8 of the International Safety Management (ISM) Code and be used as the basis for crew training and drills.

Regulation 10

Solid bulk cargo density declaration

1 Prior to loading bulk cargo on bulk carriers of 150 m in length and upwards, the shipper shall declare the density of the cargo, in addition to providing the cargo information required by regulation VI/2.

2 For bulk carriers to which regulation 6 applies, unless such bulk carriers comply with all relevant requirements of this chapter applicable to the carriage of solid bulk cargoes having a density of 1,780 kg/m^3 and above, any cargo declared to have a density within the range 1,250 kg/m^3 to 1,780 kg/m^3 shall have its density verified by an accredited testing organization.*

Regulation 11

Loading instrument

(Unless provided otherwise, this regulation applies to bulk carriers regardless of their date of construction)

1 Bulk carriers of 150 m in length and upwards shall be fitted with a loading instrument capable of providing information on hull girder shear forces and bending moments, taking into account the recommendation adopted by the Organization.**

2 Bulk carriers of 150 m in length and upwards constructed before 1 July 1999 shall comply with the requirements of paragraph 1 not later than the date of the first intermediate or periodical survey of the ship to be carried out after 1 July 1999.

3 Bulk carriers of less than 150 m in length constructed on or after 1 July 2006 shall be fitted with a loading instrument capable of providing information on the ship's stability in the intact condition. The computer software shall be approved for stability calculations by the Administration and shall be provided with standard conditions for testing purposes relating to the approved stability information.***

Regulation 12

Hold, ballast and dry space water ingress alarms

(This regulation applies to bulk carriers regardless of their date of construction)

1 Bulk carriers shall be fitted with water level detectors:

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* In verifying the density of solid bulk cargoes, reference should be made to the Uniform method of measurement of the density of bulk cargoes (MSC/Circ.908).

** Refer to the Recommendation on loading instruments, adopted by resolution 5 of the 1997 SOLAS Conference.

*** Refer to the relevant parts of the appendix to the Guidelines for the on-board use and application of computers (MSC/Circ.891).

.1 in each cargo hold, giving audible and visual alarms, one when the water level above the inner bottom in any hold reaches a height of 0.5 m and another at a height not less than 15% of the depth of the cargo hold but not more than 2 m. On bulk carriers to which regulation 9.2 applies, detectors with only the latter alarm need be installed. The water level detectors shall be fitted in the aft end of the cargo holds. For cargo holds which are used for water ballast, an alarm overriding device may be installed. The visual alarms shall clearly discriminate between the two different water levels detected in each hold;

.2 in any ballast tank forward of the collision bulkhead required by regulation II-1/11, giving an audible and visual alarm when the liquid in the tank reaches a level not exceeding 10% of the tank capacity. An alarm overriding device may be installed to be activated when the tank is in use; and

.3 in any dry or void space other than a chain cable locker, any part of which extends forward of the foremost cargo hold, giving an audible and visual alarm at a water level of 0.1 m above the deck. Such alarms need not be provided in enclosed spaces the volume of which does not exceed 0.1% of the ship's maximum displacement volume.

2 The audible and visual alarms specified in paragraph 1 shall be located on the navigation bridge.

3 Bulk carriers constructed before 1 July 2004 shall comply with the requirements of this regulation not later than the date of the annual, intermediate or renewal survey of the ship to be carried out after 1 July 2004, whichever comes first.

Regulation 13

Availability of pumping systems*

(This regulation applies to bulk carriers regardless of their date of construction)

1 On bulk carriers, the means for draining and pumping ballast tanks forward of the collision bulkhead and bilges of dry spaces any part of which extends forward of the foremost cargo hold shall be capable of being brought into operation from a readily accessible enclosed space, the location of which is accessible from the navigation bridge or propulsion machinery control position without traversing exposed freeboard or superstructure decks. Where pipes serving such tanks or bilges pierce the collision bulkhead, valve operation by means of remotely operated actuators may be accepted, as an alternative to the valve control specified in regulation II-1/11.4, provided that the location of such valve controls complies with this regulation.

* Refer to the Interpretation of SOLAS regulation XII/13 (MSC/Circ.1069).

2 Bulk carriers constructed before 1 July 2004 shall comply with the requirements of this regulation not later than the date of the first intermediate or renewal survey of the ship to be carried out after 1 July 2004, but, in no case, later than 1 July 2007.

Regulation 14

Restrictions from sailing with any hold empty

Bulk carriers of 150 m in length and upwards of single-side skin construction, carrying cargoes having a density of 1,780 kg/m^3 and above, if not meeting the requirements for withstanding flooding of any one cargo hold as specified in regulation 5.1 and the Standards and criteria for side structures of bulk carriers of single-side skin construction, adopted by the Organization by resolution MSC.168(79), as may be amended by the Organization, provided that such amendments are adopted, brought into force and take effect in accordance with the provisions of article VIII of the present Convention concerning the amendment procedures applicable to the Annex other than chapter I, shall not sail with any hold loaded to less than 10% of the hold's maximum allowable cargo weight when in the full load condition, after reaching 10 years of age. The applicable full load condition for this regulation is a load equal to or greater than 90% of the ship's deadweight at the relevant assigned freeboard."

APPENDIX

CERTIFICATES

Form of Safety Certificate for Passenger Ships

13 The following new section is inserted between the section commencing with the words "This certificate is valid until" and the section commencing with the words "Issued at":

"Completion date of the survey on which this certificate is based:……"
(dd/mm/yyyy)

Form of Safety Construction Certificate for Cargo Ships

14 The following new section is inserted between the section commencing with the words "This certificate is valid until" and the section commencing with the words "Issued at":

"Completion date of the survey on which this certificate is based:……"
(dd/mm/yyyy)

Form of Safety Equipment Certificate for Cargo Ships

15 The following new section is inserted between the section commencing with the words "This certificate is valid until" and the section commencing with the words "Issued at":

"Completion date of the survey on which this certificate is based:……"
(dd/mm/yyyy)

Record of Equipment for the Cargo Ship Safety Equipment Certificate (Form E)

16 Existing section 3 is replaced by the following:

"**3 Details of navigational systems and equipment**

Item		Actual provision
1.1	Standard magnetic compass*	.....
1.2	Spare magnetic compass*	.....
1.3	Gyro compass*	.....
1.4	Gyro compass heading repeater*	.....
1.5	Gyro compass bearing repeater*	.....
1.6	Heading or track control system*	.....
1.7	Pelorus or compass bearing device*	.....
1.8	Means of correcting heading and bearings	.....
1.9	Transmitting heading device (THD)*	.....

	Item	Actual provision
2.1	Nautical charts/Electronic chart display and information system (ECDIS)**	.....
2.2	Back up arrangements for ECDIS	.....
2.3	Nautical publications	.....
2.4	Back up arrangements for electronic nautical publications	.....
3.1	Receiver for a global navigation satellite system/ terrestrial radionavigation system*, **	.....
3.2	9 GHz radar*	.....
3.3	Second radar (3 GHz/ 9 GHZ**)*	.....
3.4	Automatic radar plotting aid (ARPA)*	.....
3.5	Automatic tracking aid*	.....
3.6	Second automatic tracking aid*	.....
3.7	Electronic plotting aid*	.....
4	Automatic identification system (AIS)	.....
5.1	Voyage data recorder (VDR)**	.....
5.2	Simplified voyage data recorder (S-VDR)**	……
6.1	Speed and distance measuring device (through the water)*	.....
6.2	Speed and distance measuring device (over the ground in the forward and athwartship direction)*	.....
6.3	Echo sounding device*	.....
7.1	Rudder, propeller, thrust, pitch and operational mode indicator*	.....
7.2	Rate of turn indicator*	.....
8	Sound reception system*	.....
9	Telephone to emergency steering position*	.....
10	Daylight signalling lamp*	.....
11	Radar reflector*	.....
12	International Code of Signals	.....
13	IAMSAR Manual, Volume III	.....

* Alternative means of meeting this requirement are permitted under regulation V/19. In case of other means, they shall be specified.

** Delete as appropriate.”

Form of Safety Radio Certificate for Cargo Ships

17 The following new section is inserted between the section commencing with the words "This certificate is valid until" and the section commencing with the words "Issued at":

"Completion date of the survey on which this certificate is based:……"
(dd/mm/yyyy)

Form of Safety Certificate for Nuclear Passenger Ships

18 The existing form of the certificate is replaced by the following:

"NUCLEAR PASSENGER SHIP SAFETY CERTIFICATE

This Certificate shall be supplemented by a Record of Equipment (Form PNUC)

(Official seal) *(State)*

for an [1] / a short international voyage

Issued under the provisions of the
INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE
AT SEA, 1974 as modified by the Protocol of 1988 relating thereto

under the authority of the Government of

_____
(name of the State)

by _____
(person or organization authorized)

[1] Delete as appropriate.

Particulars of ship[2]

Name of ship .....

Distinctive number or letters .....

Port of registry .....

Gross tonnage .....

Sea areas in which ship is certified to operate (regulation IV/2) .....

IMO Number .....

Date on which keel was laid or ship was at a similar stage of construction or, where applicable, date on which work for a conversion or an alteration or modification of a major character was commenced .....

THIS IS TO CERTIFY:

1 That the ship has been surveyed in accordance with the requirements of regulation VIII/9 of the Convention.

2 That the ship, being a nuclear ship, complied with all the requirements of chapter VIII of the Convention and conformed to the Safety Assessment approved for the ship; and that:

2.1 the ship complied with the requirements of the Convention as regards:

.1 the structure, main and auxiliary machinery, boilers and other pressure vessels, including the nuclear propulsion plant and the collision protective structure;

.2 the watertight subdivision arrangements and details;

.3 the following subdivision load lines:

Subdivision load lines assigned and marked on the ship's side amidships (regulation II-1/13)	Freeboard	To apply when the spaces in which passengers are carried include the following alternative spaces
C.1	.....	.....
C.2	.....	.....
C.3	.....	.....

2.2 the ship complied with the requirements of the Convention as regards structural fire protection, fire safety systems and appliances and fire control plans;

[2] Alternatively, the particulars of the ship may be placed horizontally in boxes.

2.3 the ship complied with the requirements of the Convention as regards radiation protection systems and equipment;

2.4 the life-saving appliances and the equipment of the lifeboats, liferafts and rescue boats were provided in accordance with the requirements of the Convention;

2.5 the ship was provided with a line-throwing appliance and radio installations used in life-saving appliances in accordance with the requirements of the Convention;

2.6 the ship complied with the requirements of the Convention as regards radio installations;

2.7 the functioning of the radio installations used in life-saving appliances complied with the requirements of the Convention;

2.8 the ship complied with the requirements of the Convention as regards shipborne navigational equipment, means of embarkation for pilots and nautical publications;

2.9 the ship was provided with lights, shapes, means of making sound signals and distress signals in accordance with the requirements of the Convention and the International Regulations for Preventing Collisions at Sea in force;

2.10 in all other respects the ship complied with the relevant requirements of the Convention.

This certificate is valid until .....

Completion date of the survey on which this certificate is based .....
dd/mm/yyyy

Issued at .....
(Place of issue of certificate)

…… .....
(Date of issue) *(Signature of authorized official issuing the certificate)*

(Seal or stamp of the issuing authority, as appropriate)"

19 The following Record of Equipment for the Nuclear Passenger Ship Safety Certificate is added after the form of the Nuclear Passenger Ship Safety Certificate:

"RECORD OF EQUIPMENT FOR THE NUCLEAR PASSENGER SHIP SAFETY CERTIFICATE (FORM PNUC)

This Record shall be permanently attached to the
Nuclear Passenger Ship Safety Certificate

RECORD OF EQUIPMENT FOR COMPLIANCE WITH
THE INTERNATIONAL CONVENTION FOR THE SAFETY
OF LIFE AT SEA, 1974, AS MODIFIED BY THE PROTOCOL
OF 1988 RELATING THERETO

1 Particulars of ship

Name of ship .....

Distinctive number or letters .....

Number of passengers for which certified .....

Minimum number of persons with required qualifications
to operate the radio installations .....

2 Details of life-saving appliances

1	Total number of persons for which life-saving appliances are provided	.....	
		Port side	Starboard Side
2	Total number of lifeboats	.....	.....
2.1	Total number of persons accommodated by them	.....	.....
2.2	Number of partially enclosed lifeboats (regulation III/21 and LSA Code, section 4.5)	.....	.....
2.3	Number of totally enclosed lifeboats (regulation III/21 and LSA Code, section 4.6)	.....	.....
2.4	Other lifeboats		
2.5.1	Number	.....	.....
2.5.2	Type	.....	.....

3	Number of motor lifeboats included in the total lifeboats shown above	.....
3.1	Number of lifeboats fitted with searchlights	.....
4	Number of rescue boats	.....
4.1	Number of boats which are included in the total lifeboats shown above	.....
5	Liferafts	
5.1	Those for which approved launching appliances are required	
5.1.1	Number of liferafts	.....
5.1.2	Number of persons accommodated by them	.....
5.2	Those for which approved launching appliances are not required	
5.2.1	Number of liferafts	.....
5.2.2	Number of persons accommodated by them	.....
6	Buoyant apparatus	
6.1	Number of apparatus	.....
6.2	Number of persons capable of being supported	.....
7	Number of lifebuoys	.....
8	Number of lifejackets	
9	Immersion suits	.....
9.1	Total number	.....
9.2	Number of suits complying with the requirements for lifejackets	.....
10	Number of thermal protective aids[1]	.....
11	Radio installations used in life-saving appliances	.....
11.1	Number of radar transponders	.....
11.2	Number of two-way VHF radiotelephone apparatus	.....

[1] Excluding those required by the LSA Code, paragraphs 4.1.5.1.24, 4.4.8.31 and 5.1.2.213.

3 Details of radio facilities

	Item	Actual provision
1	Primary systems	
1.1	VHF radio installation	
1.1.1	DSC encoder	……
1.1.2	DSC watch receiver	……
1.1.3	Radiotelephony	……
1.2	MF radio installation	
1.2.1	DSC encoder	……
1.2.2	DSC watch receiver	……
1.2.3	Radiotelephony	……
1.3	MF/HF radio installation	
1.3.1	DSC encoder	……
1.3.2	DSC watch receiver	……
1.3.3	Radiotelephony	……
1.3.4	Direct-printing radiotelegraphy	……
1.4	INMARSAT ship earth station	……
2	Secondary means of alerting	……
3	Facilities for reception of marine safety information	
3.1	NAVTEX receiver	……
3.2	EGC receiver	……
3.3	HF direct-printing radiotelegraph receiver	……
4	Satellite EPIRB	
4.1	COSPAS-SARSAT	……
4.2	INMARSAT	……
5	VHF EPIRB	……
6	Ship's radar transponder	……

4 **Methods used to ensure availability of radio facilities** (regulations IV/15.6 and 15.7)

4.1 Duplication of equipment .....

4.2 Shore-based maintenance .....

4.3 At-sea maintenance capability .....

5 Details of navigation systems and equipment

		Actual provision
1.1	Standard magnetic compass[2]	…….
1.2	Spare magnetic compass[2]	…….
1.3	Gyro compass[2]	…….
1.4	Gyro compass heading repeater[2]	…….
1.5	Gyro compass bearing repeater[2]	……..
1.6	Heading or track control system[2]	…….
1.7	Pelorus or compass bearing device[2]	……..
1.8	Means of correcting heading and bearings	…….
1.9	Transmitting heading device (THD)[2]	…….
2.1	Nautical charts/Electronic chart display and information system (ECDIS)[3]	…….
2.2	Back up arrangements for ECDIS	…….
2.3	Nautical publications	…….
2.4	Back up arrangements for electronic nautical publications	…….
3.1	Receiver for a global navigation satellite system/terrestrial radio navigation system[2, 3]	…….
3.2	9 GHz radar[2]	…….
3.3	Second radar (3 GHz/9 GHz[3])[2]	…….
3.4	Automatic radar plotting aid (ARPA)[2]	…….
3.5	Automatic tracking aid[2]	…….
3.6	Second automatic tracking aid[2]	…….
3.7	Electronic plotting aid[2]	…….
4	Automatic identification system (AIS)	…….
5	Voyage data recorder (VDR)	…….
6.1	Speed and distance measuring device (through the water)[2]	…….
6.2	Speed and distance measuring device (over the ground in the forward and athwartship direction)[2]	…….
7	Echo sounding device[2]	…….

[2] Delete as appropriate

[3] Alternative means of meeting this requirement are permitted under regulation V/19. In case of other means, they shall be specified.

		Actual provision
8.1	Rudder, propeller, thrust, pitch and operational mode indicator[2]	…….
8.2	Rate of turn indicator[2]	…….
9	Sound reception system[2]	…….
10	Telephone to emergency steering position[2]	…….
11	Daylight signalling lamp[2]	…….
12	Radar reflector[2]	…….
13	International Code of Signals	…….
14	IAMSAR Manual, Volume III	…….

THIS IS TO CERTIFY that this Record is correct in all respects.

Issued at .....
(Place of issue of the Record)

……. .....
(Date of issue) *(Signature of duly authorized official issuing the Record)*

(Seal or stamp of the issuing authority, as appropriate)"

Form of Safety Certificate for Nuclear Cargo Ships

20 The existing form of the certificate is replaced by the following:

"NUCLEAR CARGO SHIP SAFETY CERTIFICATE

This Certificate shall be supplemented by a Record of Equipment (Form CNUC)

(Official seal) *(State)*

Issued under the provisions of the
INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE
AT SEA, 1974 as modified by the Protocol of 1988 relating thereto

under the authority of the Government of

_____
(name of the State)

by _____
(person or organization authorized)

Particulars of ship[1]

Name of ship .....

Distinctive number or letters .....

Port of registry .....

Gross tonnage .....

Deadweight of ship (metric tons)[2] .....

[1] Alternatively the particulars of the ship may be placed horizontally in boxes.
[2] For oil tankers, chemical tankers and gas carriers only.

Length of ship (regulation III/3.12) .....

Sea areas in which ship is certified to operate (regulation IV/2) .....

IMO Number.....

Type of ship[3]

Bulk carrier
Oil tanker
Chemical tanker
Gas carrier
Cargo ship other than any of the above

Date on which keel was laid or ship was at a similar stage of construction or, where applicable, date on which work for an alteration or modification of a major character was commenced .....

THIS IS TO CERTIFY:

1 That the ship has been surveyed in accordance with the requirements of regulation VIII/9 of the Convention.

2 That the ship, being a nuclear ship, complied with all the requirements of chapter VIII of the Convention and conformed to the Safety Assessment approved for the ship; and that:

2.1 the condition of the structure, machinery and equipment as defined in regulation I/10 (as applicable to comply with regulation VIII/9), including the nuclear propulsion plant and the collision protective structure, was satisfactory and the ship complied with the relevant requirements of chapter II-1 and chapter II-2 of the Convention (other than those relating to fire safety systems and appliances and fire control plans);

2.2 the ship complied with the requirements of the Convention as regards fire safety systems and appliances and fire control plans;

2.3 the life-saving appliances and the equipment of the lifeboats, liferafts and rescue boats were provided in accordance with the requirements of the Convention;

2.4 the ship was provided with a line-throwing appliance and radio installations used in life-saving appliances in accordance with the requirements of the Convention;

2.5 the ship complied with the requirements of the Convention as regards radio installations;

2.6 the functioning of the radio installations used in life-saving appliances complied with the requirements of the Convention;

2.7 the ship complied with the requirements of the Convention as regards shipborne navigational equipment, means of embarkation for pilots and nautical publications;

[3] Delete as appropriate

2.8 the ship was provided with lights, shapes, means of making sound signals and distress signals in accordance with the requirements of the Convention and the International Regulations for Preventing Collisions at Sea in force;

2.9 in all other respects the ship complied with the relevant requirements of the regulations, so far as these requirements apply thereto.

This certificate is valid until .....

Completion date of the survey on which this certificate is based .....
dd/mm/yyyy

Issued at .....
(Place of issue of certificate)

……. …….
(Date of issue) *(Signature of authorized official issuing the certificate)*

(Seal or stamp of the issuing authority, as appropriate)"

21 The following Record of Equipment for the Nuclear Cargo Ship Safety Certificate is added after the form of the Nuclear Cargo Ship Safety Certificate:

"RECORD OF EQUIPMENT FOR THE NUCLEAR CARGO SHIP SAFETY CERTIFICATE (FORM CNUC)

This Record shall be permanently attached to the
Nuclear Cargo Ship Safety Certificate

RECORD OF EQUIPMENT FOR COMPLIANCE WITH THE INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974, AS MODIFIED BY THE PROTOCOL OF 1988 RELATING THERETO

1 Particulars of ship

Name of ship .....

Distinctive number or letters .....

Minimum number of persons with required qualifications
to operate the radio installations .....

2 Details of life-saving appliances

1	Total number of persons for which life-saving appliances are provided	.....	
		Port side	Starboard side
2	Total number of lifeboats	.....	.....
2.1	Total number of persons accommodated by them	.....	.....
2.2	Number of totally enclosed lifeboats (regulation III/31 and LSA Code, section 4.6)	.....	.....
2.3	Number of self-righting partially enclosed lifeboats (regulation III/31 and LSA Code, section 4.8)	.....	.....
2.4	Number of fire-protected lifeboats (regulation III/31 and LSA Code, section 4.9)	.....	.....
2.5	Other lifeboats		
2.5.1	Number	.....	.....
2.5.2	Type	.....	.....
2.6	Number of free-fall life-boats	.....	.....
2.6.1	Totally enclosed (regulation III/31 and LSA Code, section 4.7)	.....	.....
2.6.2	Self-contained (regulation III/31 and LSA Code, section 4.8)	.....	.....
2.6.3	Fire-protected (regulation III/31 and LSA Code, section 4.9)	.....	.....

3	Number of motor lifeboats included in the total lifeboats shown above	.....
3.1	Number of lifeboats fitted with searchlights	.....
4	Number of rescue boats	.....
4.1	Number of boats which are included in the total lifeboats shown above	.....
5	Liferafts	
5.1	Those for which approved launching appliances are required	
5.1.1	Number of liferafts	.....
5.1.2	Number of persons accommodated by them	.....
5.2	Those for which approved launching appliances are not required	
5.2.1	Number of liferafts	.....
5.2.2	Number of persons accommodated by them	.....
5.3	Number of liferafts required by regulation III/31.1.4	.....
6	Number of lifebuoys	.....
7	Number of lifejackets	
8	Immersion suits	.....
8.1	Total number	.....
8.2	Number of suits complying with the requirements for lifejackets	.....
9	Number of thermal protective aids[1]	.....
10	Radio installations used in life-saving appliances	.....
10.1	Number of radar transponders	.....
10.2	Number of two-way VHF radiotelephone apparatus	.....

[1] Excluding those required by the LSA Code, paragraphs 4.1.5.1.24, 4.1.8.31 and 5.1.2.2.13.

3 Details of radio facilities

	Item	Actual provision
1	Primary systems	
1.1	VHF radio installation	
1.1.1	DSC encoder	.....
1.1.2	DSC watch receiver	.....
1.1.3	Radiotelephony	.....
1.2	MF radio installation	
1.2.1	DSC encoder	.....
1.2.2	DSC watch receiver	.....
1.2.3	Radiotelephony	.....
1.3	MF/HF radio installation	
1.3.1	DSC encoder	.....
1.3.2	DSC watch receiver	.....
1.3.3	Radiotelephony	.....
1.3.4	Direct-printing radiotelegraphy	.....
1.4	INMARSAT ship earth station	.....
2	Secondary means of alerting	
3	Facilities for reception of marine safety information	
3.1	NAVTEX receiver	.....
3.2	EGC receiver	.....
3.3	HF direct-printing radiotelegraph receiver	.....
4	Satellite EPIRB	
4.1	COSPAS-SARSAT	.....
4.2	INMARSAT	.....
5	VHF EPIRB	.....
6	Ship's radar transponder	.....

4 **Methods used to ensure availability of radio facilities** (regulations IV/15.6 and 15.7)

4.1 Duplication of equipment .....

4.2 Shore-based maintenance .....

4.3 At-sea maintenance capability .....

5 Details of navigation systems and equipment

		Actual provision
1.1	Standard magnetic compass*	.....
1.2	Spare magnetic compass*	.....
1.3	Gyro compass*	.....
1.4	Gyro compass heading repeater*	.....
1.5	Gyro compass bearing repeater*	.....
1.6	Heading or track control system*	.....
1.7	Pelorus or compass bearing device*	.....
1.8	Means of correcting heading and bearings	.....
1.9	Transmitting heading device (THD)*	.....
2.1	Nautical charts/Electronic chart display and information system (ECDIS)**	.....
2.2	Back up arrangements for ECDIS	
2.3	Nautical publications	.....
2.4	Back up arrangements for electronic nautical publications	.....
3.1	Receiver for a global navigation satellite system/terrestrial radio navigation system*,**	.....
3.2	9 GHz radar*	.....
3.3	Second radar (3 GHz/9 GHz[3])*	.....
3.4	Automatic radar plotting aid (ARPA)*	.....
3.5	Automatic tracking aid*	.....
3.6	Second automatic tracking aid*	.....
3.7	Electronic plotting aid*	.....
4	Automatic identification system (AIS)	.....
5.1	Voyage data recorder (VDR)**	.....
5.2	Simplified voyage data recorder (S-VDR)**	.....
6.1	Speed and distance measuring device (through the water)*	.....
6.2	Speed and distance measuring device (over the ground in the forward and athwartship direction)*	.....
6.3	Echo sounding device*	.....
7.1	Rudder, propeller, thrust, pitch and operational mode indicator*	
7.2	Rate of turn indicator*	.....
8	Sound reception system*	.....
9	Telephone to emergency steering position*	
10	Daylight signalling lamp*	.....
11	Radar reflector*	.....
12	International Code of Signals	.....
13	IAMSAR Manual, Volume III	

* Alternative means of meeting this requirement are permitted under regulation V/19. In case of other means, they shall be specified.

** Delete as appropriate.

THIS IS TO CERTIFY that this Record is correct in all respects.

Issued at .....
(Place of issue of the Record)

....
(Date of issue) *(Signature of duly authorized official issuing the Record)*

(Seal or stamp of the issuing authority, as appropriate)"

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