

国际海事组织

1974 SOLAS 公约第四届缔约国大会决议

RESOLUTIONS ADOPTED AT 4TH CONFERENCE OF
CONTRACTING GOVERNMENTS TO 1974 SOLAS

1997

人民交通出版社

INTERNATIONAL MARITIME ORGANIZATION

**RESOLUTIONS ADOPTED AT
4TH CONFERENCE OF CONTRACTING
GOVERNMENTS TO 1974 SOLAS**

People's Communications Publishing House

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**CONSIDERATION AND ADOPTION OF AMENDMENTS TO THE INTERNATIONAL
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**CONSIDERATION AND ADOPTION OF AMENDMENTS TO
RESOLUTION A.744(18) - GUIDELINES ON THE ENHANCED PROGRAMME OF
INSPECTIONS DURING SURVEYS OF BULK CARRIERS AND OIL TANKERS**

**CONSIDERATION AND ADOPTION OF RESOLUTIONS AND RECOMMENDATIONS
AND RELATED MATTERS**

**Conference resolution 1 and related amendments to SOLAS;
Conference resolution 2 and related amendments to resolution A.744(18); and
Conference resolutions 3 to 9**

As adopted by the Conference

Attached in the annex are the texts of:

- .1 Conference resolution 1 and amendments to the International Convention for the Safety of Life at Sea, 1974, annexed thereto, as set out in attachment 1 to the Final Act of the Conference;
- .2 Conference resolution 2 and amendments to resolution A.744(18) - Guidelines on the enhanced programme of inspections during surveys of bulk carriers and oil tankers, annexed thereto, also set out in attachment 1 to the Final Act of the Conference; and
- .3 Conference resolutions 3 to 9, as set out in attachment 2 to the Final Act of the Conference.

ANNEX

ATTACHMENT 1 TO THE FINAL ACT OF THE CONFERENCE

RESOLUTION 1 OF THE CONFERENCE OF CONTRACTING GOVERNMENTS TO THE INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974 ADOPTED ON 27 NOVEMBER 1997

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

THE CONFERENCE,

RECALLING article VIII(c) of the International Convention for the Safety of Life at Sea, 1974 (hereinafter referred to as "the Convention"), concerning the procedure for amending the Convention by a Conference of Contracting Governments,

NOTING resolutions A.713(17) and A.797(19) adopted by the Assembly of the International Maritime Organization (IMO), concerning the safety of ships carrying solid bulk cargoes,

BEING DEEPLY CONCERNED at the continued loss of ships carrying bulk cargoes, sometimes without a trace, and the heavy loss of life incurred,

RECOGNIZING the urgent need to further improve the safety standards of ships carrying solid bulk cargoes, in all aspects of their design, equipment and operation to avoid recurrence of such casualties,

HAVING CONSIDERED amendments to the Annex to the Convention proposed and circulated to all Members of IMO and all Contracting Governments to the Convention,

1. ADOPTS, in accordance with article VIII(c)(ii) of the Convention, amendments to the Annex 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 amendments shall be deemed to have been accepted on 1 January 1999, unless, prior to that date, more than one third of Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than fifty per cent of the gross tonnage of the world's merchant fleet, have notified the Secretary-General of IMO of 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 1999 upon their acceptance in accordance with paragraph 2 above.

ANNEX

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

The following new chapter XII is added after existing chapter XI:

"CHAPTER XII - ADDITIONAL SAFETY MEASURES FOR BULK CARRIERS

Regulation 1

Definitions

For the purpose of this chapter:

- 1 "Bulk carrier" means a bulk carrier as defined in regulation IX/1.6.
- 2 "Bulk carrier of single side skin construction" means a bulk carrier in which a cargo hold is bounded by the side shell.
- 3 "Length" of a bulk carrier means the length as defined in the International Convention on Load Lines in force.
- 4 "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
- 5 "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 provisions of article VIII of the present Convention concerning the amendment procedures applicable to the annex other than chapter I.
- 6 The term "ships constructed" has the same meaning as defined in regulation 11-1/1.1.3.1.

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

(This regulation applies to bulk carriers constructed before 1 July 1999)

Bulk carriers 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/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 1000 kg/m³ 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 3.

2 Bulk carriers of 150 m in length and upwards of single side skin construction, carrying solid bulk cargoes having a density of 1780 kg/m³ 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 3. This requirement shall be complied with in accordance with the implementation schedule specified in regulation 3.

3 Subject to the provisions of paragraph 6, 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. 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.

4 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 2 of this regulation.

5 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.

6 On bulk carriers which have been assigned reduced freeboard in compliance with the provisions of regulation 27(8) set out in 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

(This regulation applies to bulk carriers constructed on or after 1 July 1999)

Bulk carriers of 150 m in length and upwards of single side skin construction, designed to carry solid bulk cargoes having a density of 1000 kg/m³ and above, shall have sufficient strength to withstand flooding of any one cargo hold 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*.

Regulation 6

Structural and other requirements for bulk carriers

(This regulation applies to bulk carriers constructed before 1 July 1999)

1 Bulk carriers of 150 m in length and upwards of single side skin construction, carrying solid bulk cargoes having a density of 1780 kg/m³ and above, shall comply with the requirements of this regulation in accordance with the implementation schedule specified in regulation 3.

2 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.

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

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

- .1 restrictions on the distribution of the total cargo weight between the cargo holds; and
- .2 restrictions on the maximum deadweight.

4 For bulk carriers using either of, or both, the restrictions given in paragraphs 3.1 and 3.2 above for the purpose of fulfilling the requirements of paragraph 2, these restrictions shall be complied with whenever solid bulk cargoes having a density of 1780 kg/m^3 and above are carried.

Regulation 7

Survey of the cargo hold structure of bulk carriers

(This regulation applies to bulk carriers constructed before 1 July 1999)

A bulk carrier of 150 m in length and upwards of single side skin construction, of 10 years of age and over, shall not carry solid bulk cargoes having a density of 1780 kg/m^3 and above unless it has satisfactorily undergone either:

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

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 1780 kg/m^3 and above in accordance with the requirements of regulation 6 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 amidships, 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 4.2 due to the design configuration of their cargo holds

(This regulation applies to bulk carriers constructed before 1 July 1999)

For bulk carriers being within the application limits of regulation 4.2, 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 4.2 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 required by regulation XI/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; 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 a bulk carrier, 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 the relevant requirements of this chapter applicable to the carriage of solid bulk cargoes having a density of 1780 kg/m^3 and above, any cargo declared to have a density within the range 1250 kg/m^3 to 1780 kg/m^3 shall have its density verified by an accredited testing organization.

Regulation 11

Loading instrument

(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."

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

**RESOLUTION 2 OF THE CONFERENCE OF CONTRACTING GOVERNMENTS TO
THE INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974
ADOPTED ON 27 NOVEMBER 1997**

**ADOPTION OF AMENDMENTS TO THE GUIDELINES ON THE ENHANCED
PROGRAMME OF INSPECTIONS DURING SURVEYS OF BULK CARRIERS
AND OIL TANKERS (RESOLUTION A.744(18))**

THE CONFERENCE,

RECALLING article VIII(c) of the International Convention for the Safety of Life at Sea, 1974 (hereinafter referred to as "the Convention") concerning the procedure for amending the Convention by a Conference of Contracting Governments,

RECALLING ALSO resolution A.744(18) by which the Assembly of the International Maritime Organization (IMO) adopted Guidelines on the enhanced programme of inspections during surveys of bulk carriers and oil tankers,

RECALLING FURTHER article VIII(b) and regulation XI/2 of the Convention concerning the procedure for amending the aforementioned Guidelines,

NOTING that the IMO Assembly, at its eighteenth session, when adopting resolution A.744(18), requested the IMO Maritime Safety Committee and the Marine Environment Protection Committee to keep the Guidelines under review and update them as necessary, in the light of experience gained in their application,

NOTING ALSO resolution MSC.49(66) by which amendments to resolution A.744(18) were adopted by the Maritime Safety Committee in accordance with article VIII and regulation XI/2 of the Convention,

RECOGNIZING the urgent need to further improve the safety standards of ships carrying solid bulk cargoes,

HAVING CONSIDERED amendments to the said Guidelines proposed and circulated in accordance with article VIII of the Convention,

1. ADOPTS, in accordance with article VIII(c)(ii) of the Convention, amendments to the Guidelines on the enhanced programme of inspections during surveys of bulk carriers and oil tankers, 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 1999, 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 fifty per cent of the gross tonnage of the world's merchant fleet, have notified the Secretary-General of IMO of 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 1999 upon their acceptance in accordance with paragraph 2 above.

ANNEX

AMENDMENTS TO THE GUIDELINES ON THE ENHANCED PROGRAMME OF INSPECTIONS DURING SURVEYS OF BULK CARRIERS AND OIL TANKERS (RESOLUTION A.744(18))

GUIDELINES ON THE ENHANCED PROGRAMME OF INSPECTIONS DURING SURVEYS OF BULK CARRIERS (resolution A.744(18), Annex A)

- 1 In the "Contents", the following text is added at the end:

"Annex 10 - Requirements for extent of thickness measurement at those areas of substantial corrosion. Periodical survey of bulk carriers within the cargo area".

- 2 Existing paragraph 1.2.10 is replaced by the following:

"1.2.10 A corrosion prevention system is normally considered either:

- .1 a full hard coating; or
- .2 a full hard coating supplemented by anodes

Protective coating should usually be epoxy coating or equivalent. Other coating systems may be considered acceptable as alternatives provided that they are applied and maintained in compliance with the manufacturer's specifications.

Where soft coatings have been applied, safe access should be provided for the surveyor to verify the effectiveness of the coating and to carry out an assessment of the conditions of internal structures which may include spot removal of the coating. When safe access cannot be provided, the soft coating should be removed."

- 3 The title "Tank corrosion - prevention system" of section 2.3 is changed to "Space protection".
- 4 Existing paragraph 2.3.1 is replaced by the following:

"2.3.1 Where provided, the condition of corrosion prevention system of ballast tanks should be examined. For ballast tanks, excluding double bottom tanks, where a coating is found in POOR condition as defined in 1.2.11, and it is not renewed, or where soft coating has been applied, or where a coating has not been applied, the tanks in question should be examined at annual intervals. When such breakdown of coating is found in ballast double bottom tanks, or where a soft coating has been applied, or where a coating has not been applied, the tanks in question may be examined at annual intervals. When considered necessary by the surveyor, or where extensive corrosion exists, thickness measurements should be carried out. Where a protective coating is provided in cargo holds and is found in good condition, the extent of close-up surveys and thickness measurements may be specially considered*."

NOTES:

All through the text, replace the sentence "Thickness measurement should be carried out as considered necessary by the surveyor" with the expression "When considered necessary by the surveyor, or where extensive corrosion exists, thickness measurements should be carried out."

Where the words "specially considered" are found, add a reference to the following footnote:

- * As a minimum, the words "specially considered" is taken to mean that sufficient close-up inspection and thickness measurements are taken to confirm the actual average condition of the structure under coating.

- 5 In paragraph 2.4.2, the word "random" is deleted and the word "all" is inserted between the words "operation of" and "mechanically".
- 6 The following sentence is added to paragraph 2.6.3:

"Provisions for extended measurements for areas with substantial corrosion as defined in 1.2.9 are given in annex 10."
- 7 The following sentence is added to paragraph 2.6.4:

"Where a protective coating is provided in cargo holds and is found in good condition, the extent of close-up surveys and thickness measurements may be specially considered."
- 8 In paragraph 3.3.2, the words ",including close-up survey of hatch cover plating" are inserted after the words "hatch cover".
- 9 In paragraph 3.3.3, the words ", including close-up survey of hatch cover plating" are inserted after the words "steel pontoons".
- 10 The following new paragraphs 3.3.5 and 3.3.6 are added:

"3.3.5 Checking the satisfactory condition of hatch coaming plating and their stiffener, including close-up survey should be made.

3.3.6 Random checking of the satisfactory operation of mechanically operated hatch covers should be made, including:
 - .1 stowage and securing in open condition;
 - .2 proper fit and efficiency of sealing in closed condition;
 - .3 operational testing of hydraulic and power components, wires, chains, and link drives."

11 Existing paragraphs 3.4.1 and 3.4.2 are replaced by the following:

"3.4.1 For bulk carriers over 10 years of age, the following should be carried out:

- .1 overall survey of all cargo holds. Where a protective coating is provided in cargo holds and is found in GOOD condition, the extent of close-up surveys and thickness measurements may be specially considered;
- .2 close-up examination of sufficient extent, minimum 25% of frames, to establish the condition of the lower region of the shell frames including approx. lower one third length of side frame at side shell and side frame end attachment and the adjacent shell plating in the forward cargo hold. Where this level of survey reveals the need for remedial measures, the survey is to be extended to include a close-up survey of all of the shell frames and adjacent shell plating of that cargo hold as well as a close-up survey of sufficient extent of all remaining cargo holds;
- .3 when considered necessary by the surveyor, thickness measurement is to be carried out. If the results of these thickness measurements indicate that Substantial Corrosion is found, the extent of thickness measurements should be increased in accordance with annex 10.

3.4.2 For bulk carriers over 15 years of age, the following should be carried out:

- .1 overall survey of all cargo holds. Where a protective coating is provided in cargo holds and is found in good condition, the extent of close-up surveys and thickness measurements may be specially considered;
- .2 close-up examination of sufficient extent, minimum 25% of frames, to establish the condition of the lower region of the shell frames including approx. lower one third length of side frame at side shell and side frame end attachment and the adjacent shell plating in the forward cargo hold and one other selected cargo hold. Where this level of survey reveals the need for remedial measures, the survey is to be extended to include a close-up survey of all of the shell frames and adjacent shell plating of that cargo hold as well as a close-up survey of sufficient extent of all remaining cargo holds;
- .3 when considered necessary by the surveyor, thickness measurement should be carried out. If the results of these thickness measurements indicate that Substantial Corrosion is found, the extent of thickness measurements should be increased in accordance with annex 10."

12 Add a new paragraph 3.4.3 as follows:

"3 all piping and penetrations in cargo holds, including overboard piping, should be examined."

13 Existing paragraph 3.5.1 is replaced by the following:

"3.5.1 Examination of ballast tanks should be carried out when required as a consequence of the results of the periodical survey and intermediate enhanced survey. When considered necessary by the surveyor, thickness measurement should be carried out. If the results of these thickness measurements indicate that substantial corrosion is found, the extent of thickness measurements should be increased in accordance with annex 10."

14 Existing paragraph 4.2.3 is replaced by the following:

"4.2.3 For ballast tanks excluding double bottom tanks, where a coating is found in POOR condition as defined in 1.2.11, and it is not renewed, or where soft coating has been applied, or where a coating has not been applied, the tanks in question should be examined at annual intervals. When such breakdown of coating is found in ballast double bottom tanks, or where soft coating has been applied, or where a coating has not been applied, the tanks in question may be examined at annual intervals. When considered necessary by the surveyor, or where extensive corrosion exists, thickness measurements should be carried out."

15 Existing paragraphs 4.3.1 and 4.3.2 are replaced by the following:

"4.3.1 For bulk carriers over 5 years of age, the following should be carried out:

- .1 An overall survey of all cargo holds, including a close-up survey of sufficient extent, minimum 25% of frames, should be carried out to establish the condition of:
 - shell frames including their upper and lower end attachments, adjacent shell plating, and transverse bulkheads in the forward cargo hold and one other selected cargo hold;
 - areas found suspect according to chapter 1.2.8 at the previous periodical survey.
- .2 Where considered necessary by the surveyor as a result of the overall and close-up survey as described in 4.3.1.1, the survey should be extended to include a close-up survey of all of the shell frames and adjacent shell plating of that cargo hold as well as a close-up survey of sufficient extent of all remaining cargo holds.

4.3.2 For bulk carriers over 10 years of age, the following should be carried out: