Subject

Introduction of the outcomes of MSC79

ClassNK
Technical Information

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To whom it may concern

A summary of the decisions and discussions taken at the seventy ninth session of the Maritime Safety Committee (MSC 79) held from 1 to 10 December 2004 is given hereunder for your information.

1. Adoption of Mandatory Instruments – Bulk Carrier Safety related
The discussion of Bulk Carrier Safety issues starting from 1998 was closed at this session. The revised SOLAS Chapter XII to specify additional safety measures for bulk carriers and the amendment to SOLAS Regulation III/31 to make the carriage of free-fall lifeboat mandatory were adopted at this session and will enter into force on 1 July 2006.

(1) Revised SOLAS Chapter XII (refer to Attachment 1)
The main points of the revised SOLAS Chapter XII are as follows:

(i) New definition of "Bulk Carriers" (Reg.1)
The definition of "Bulk Carriers" in SOLAS chapter XII will be changed as follows:
"Bulk carrier means a ship which is intended primarily to carry dry cargo in bulk, including such types as ore carriers and combination carriers."
For the purpose of the revised SOLAS chapter XII, the new definition will contain "ships intended primarily to carry dry cargo in bulk" regardless of cross section of ship as well as typical bulk carriers arranged with top-side tanks and bilge hopper tanks as defined in SOLAS chapter IX.
(Note) Ships such as a chip carrier, an open type bulk carrier and a general cargo ship, etc. will fall into the definition of bulk carriers from 1 July 2006 due to the revised SOLAS XII. Nevertheless, the requirements of the revised SOLAS chapter XII do not apply to these type ships constructed before 1 July 2006.

(ii) Stability and strength requirements for double-side skin construction (Reg.4.2 & 5.2)
For new bulk carriers of 150 m in length and upwards with a double side skin space less than B/5 or 11.5 meter in width and designed to carry bulk cargoes having a density of 1,000kg/m^3 and above, the requirements of damage stability and structural strength to withstand flooding of any one cargo hold in all conditions will be required.

(iii) Requirements for double-side skin space (Reg.6.2, 6.3 & 6.4)
For new double-side skin bulk carriers of 150 m in length and upwards, the double side skin space should be arranged such that:

(To be continued)

(a) the minimum distance between the outer shell and the inner shell at any transverse section be not less than 1,000 mm,
(b) the minimum width of clear passage through the double side skin space be not less than 600 mm,
(c) the minimum clearance between the inner surfaces of the frames not be less than 600 mm / 800 mm where inner and outer skins are transversely / longitudinally framed respectively, and
(d) double-side skin spaces and all ballast tanks be coated, and
(e) the banning of the carriage of cargo in double-side skin spaces

(iv) Structural redundancy (Reg.6.5)
Although the mandatory requirement of double-side skin construction for new bulk carriers was not agreed at the last session, new requirements of structural redundancy was adopted so that single failure of one stiffening structural member will not lead to immediate consequential failure. The new requirement should apply to new bulk carriers of 150 m in length and upward, carrying solid bulk cargoes having a density of 1,000kg/m^3 and above.

(v) Maintenance of hatch covers (Reg.7.2)
"Standards for owners' inspection and maintenance of bulk carrier hatch covers"(Resolution MSC.169(79)) was adopted as a mandatory requirement. All bulk carriers should comply with the new standards from 1 July 2006.

(vi) Stability instruments (Reg.11.3)
New bulk carriers of less than 150 m in length are to be fitted with a loading computer and software providing information on the ship's intact stability.

(vii) Alternate hold loading ban (Reg.14)
Existing single-side skin bulk carriers of 150 m in length and upward carrying cargoes having a density of 1,780kg/m^3 and above, if not in compliance with SOLAS regulation XII/5.1 and IACS UR S12 (rev. 2.1) or UR S31, shall be banned from sailing with any hold empty in the full load condition (greater than 90% of the ship's deadweight at the relevant assigned freeboard) after reaching 10 years of age from 1 July 2006. The term "hold empty" means loaded to less than 10% of the hold's maximum allowable cargo weight.
IACS UR S12 (rev. 2.1) or UR S31 were adopted as new IMO mandatory requirements (Resolution MSC.169(79)) .

(2) Free-fall lifeboat (refer to Attachment 1)
The amendment to SOLAS regulation III/31 to require new bulk carriers as defined in SOLAS chapter IX to provide with free-fall lifeboats instead of davit-type lifeboats was adopted.

(3) New definition of "Bulk carrier" of SOLAS chapter II-1 (refer to Attachment 1)
With respect to the amended definition of SOLAS chapter XII, the definition of "Bulk carrier" same as chapter XII was newly added on chapter II-2.

(To be continued)

2. Adoption of Mandatory Instruments – Other than Bulk Carrier Safety related
The following amendments to the 1974 SOLAS Convention, IBC Code, IGC Code, etc were adopted at this session and will enter into force on 1 July 2006 except IBC Code.

(1) S-VDR on Existing ships (refer to Attachment 1)
The draft amendment to SOLAS regulation V/20, concerning making the carriage of a Simplified Voyage Data Recorder on existing cargo ships constructed before 1 July 2002 mandatory, was adopted.
The implementation schedule is to be as follows:
- cargo ships of 20,000 GT and upward, at the first scheduled dry-docking after 1 July 2006 but not later than 1 July 2009, and
- cargo ships of 3,000 GT and upward but less than 20,000 GT, at the first scheduled dry-docking after 1 July 2007 but not later than 1 July 2010.
Administrations may exempt from the requirements to fit with S-VDR when the ships will be taken permanently out of service within two years after the implementation date specified above.

(2) Electrical installations (refer to Attachment 1)
The amendments to SOLAS regulation II-1/45.11, the IBC Code chapter 10 and the IGC Code chapter 10, concerning electrical installations in hazardous areas onboard referring to the standards of IEC 60092-502:1999 “Electrical installations in ships-Tankers” were adopted. New ships constructed on or after 1 January 2007 should comply with these requirements.
The amendments to the requirements of IBC Code with respect to the electrical installations and other safety aspects agreed at this session and were incorporated into the revised IBC Code adopted at MEPC52 held in October last year. The revised IBC Code was formally adopted at this session.

(3) Watertight test for doors (refer to Attachment 1)
The amendments to SOLAS regulation II-1/18 concerning the prototype test on water-tight door on passenger ships and cargo ships was adopted. Where water-tight tests on doors onboard during new construction stage are impracticable, the prototype tests are allowed in lieu of such tests. This prototype test should apply a pressure corresponding to the head required for the intended location.

(4) Gyro repeater (refer to Attachment 1)
The amendments to SOLAS regulation V/19.2.5 to reintroduce the mandatory carriage of a gyro repeater at the main steering position, which was omitted from 2000 Amendments by mistake, was adopted.

(5) FTP Code
The amendment to the FTP Code (Part 2, regulation 2.6.2) to limit sulphur dioxide (SO_2) gas concentration for floor coverings to 120 ppm was adopted.

(6) 2000 HSC Code
The amendment to the 2000 HSC Code (regulation 2.2.1.1) concerning damage on buoyant spaces was adopted.

(To be continued)

(7) Forms of Certificate
The certificate forms are partly revised:
(i) to identify the completion date of the survey in all certificates, and
(ii) to add items concerning "S-VDR" and "IAMSAR Manual, Volume III" on SE Certificate due to the relevant SOLAS amendments.

3. Approved Mandatory Instruments
The following mandatory instruments were approved at this session with a view to the adoption at MSC80 held in May 2005.

(1) draft amendments to SOLAS chapter II-1, part B concerning damage stability requirements,
(2) draft new SOLAS regulation II-1/3-7 to require construction drawings to be maintained on board and shore,
(3) draft new SOLAS regulation II-1/3-8 concerning towing and mooring equipment,
(4) draft new SOLAS regulation II-1/23-3 to be fitted with water level detectors on single hold cargo ships other than bulk carriers (new and existing ships),
(5) draft amendment to SOLAS V/19 to require AIS information to be presented to the OOW (Officer On Watch), and
(6) draft amendments to Resolution A.744(18) to newly introduce the requirements of enhanced survey programme for double hull tankers and to incorporate some elements of CAS (Condition Assessment Scheme).

4. Revised BC Code
MSC 79 adopted the revised BC Code (Code of Safe Practice for Solid Bulk Cargoes) to provide practical guidance on the procedures to be followed and the appropriate precautions to be taken in the loading, trimming, carriage and discharge of bulk cargoes with a view to promoting the safe stowage and shipment of solid bulk cargoes.
The last MSC decided to make the BC Code mandatory requirement in future and the DSC Sub-committee will identify mandatory and recommendatory parts of the BC Code in accordance with the MSC instruction. Timetable on mandatory implementation of the BC Code is scheduled January 2011.

For any questions about the above, please contact:

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Attachment:

1. Amendments to SOLAS regulations (Resolution MSC.170(79))

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;"

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* 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

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* 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:

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* 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.

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* 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."