標題

MSC76 での審議結果の紹介

ClassNK
テクニカル
インフォメーション

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各位

2002 年 12 月 2 日から 2002 年 12 月 13 日にかけて開催された IMO の第 76 回海上安全委員会（MSC76）及び海上安全に関する SOLAS 条約締約国政府会議での審議結果について次のとおりお知らせ致します。

1. 条約等の採択に関して
以下の条約改正案が採択されました。改正規則の発効は2004年7月1日が予定されています。（添付1参照）
(1) ばら積貨物船及びタンカーの点検設備（SOLAS Chap Ⅱ-1/3-6 新設）
2005 年 1 月 1 日以降建造の総トン数2万トン以上のばら積貨物船及び総トン数 500 トン以上の油タンカーに対し、貨物倉・貨物タンク・バラストタンクに保守点検のための固定点検設備の設置が要求されます。（添付 2 参照）
(2) 機関の制御装置（SOLAS Chap II-1/31 改正）
推進システムの自動減速や非常停止時等に、当直航海士がその回避に介入できる自動システムの要件が新たに規定されました。
(3) RoRo 旅客船に搭載されるレーダートランスポンダー（SOLAS Chap III/26 改正）
ロールオン・ロールオフ旅客船に搭載するレーダートランスポンダー及び liferaft へのレーダートランスポンダーの積み込みに関し設置要件が改正されました。
(4) ばら積貨物船に対する浸水警報及び排水装置の設置（SOLAS Chap XII/12&13 新設）
ばら積み貨物船に対する安全対策として、次の設備が要求されます。
(i) 貨物倉への浸水警報設置
(ii) 最前部の貨物倉より前のバラストタンクへの浸水警報設置
(iii) 最前部の貨物倉より前の dry or void space への浸水警報設置
(iv) 最前部の貨物倉より前の区画への浸水時の排水設備設置
2004 年 7 月 1 日以降建造されるばら積み貨物船については就航時に、2004 年 7 月 1 日以前に建造されたばら積み貨物船については、(i)-(iii)が同日以降最初に来る年次、中間あるいは定期検査時までに、(iv)については同日以降最初に来る中間・定期検査時までにそれぞれ設置することが要求されています。
なお、浸水警報装置に関する性能要件を早期に作成することが合意されており、3 月に開催される第 46 回設計設備小委員会(DE46)で検討が行われます。

（次頁に続く）

(5) 海上テロ防止（SOLAS Chap V, XI, XI-1, XI-2 関連)
海上・港湾におけるテロ対策として、船舶及び港湾施設の保安要件を強制化する SOLAS 条約並びに船舶及び港湾施設の保安コード（ISPS コード）が採択され、2004 年 7 月 1 日までに、本船に対し本条約への適合が要求されています。また既に段階的搭載が要求されていた AIS（船舶自動識別装置）を前倒して搭載すること、船舶識別番号を船体へ恒久的表示すること、船舶履歴記録を所持すること等の SOLAS 改正もあわせて採択されています。なお要件の詳細につきましては、別途発行しています ClassNK テクニカル・インフォメーション No. TEC-0497 を参照願います。

2. MSC77（2003 年 5 月）で採択が見込まれる主な規則改正
(1) 国際満載喫水線条約の改正
国際満載喫水線条約の改正が承認されました。主な改正内容は、ハッチカバー設計荷重の見直し、船首部予備浮力確保の規定追加等です。本改正案は、本年5月末に開催予定の MSC77 で採択され、2005 年1月1日以降建造される船舶に適用される予定です。

3. その他の検討項目
(1) ばら積み貨物船の安全対策
IMO で検討してきたばら積み貨物船への総合安全評価（FSA : Formal Safety Assessment）の結果として、今後検討すべき安全対策の項目が合意され勧告リストが作成されました。個々の項目について関連する IMO 小委員会での検討が開始されます。（添付 3 参照）

なお、本 MSC76 の審議概要につきましては IMO のホームページにも掲載されていますのでご参照下さい。（http://www.imo.org）

なお、本件に関してご不明な点は、以下の部署にお問い合わせください。

財団法人 日本海事協会 （ClassNK）
本部 管理センター国際室
住所: 東京都千代田区紀尾井町 4-7（郵便番号 102-8567）
Tel.: 03-5226-2038
Fax: 03-5226-2039
E-mail: xad@classnk.or.jp

添付:

1. SOLAS 改正（案）
2. 固定足場に対する技術要件（案）
3. 勧告リスト

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

## PART A-1

## STRUCTURE OF SHIPS

1 The following new regulation 3-6 is added after existing regulation 3-5:

**"Regulation 3-6**

**Access to and within spaces in the cargo area of oil tankers and bulk carriers**

**1 Application**

1.1 Except as provided for in paragraph 1.2, this regulation applies to oil tankers of 500 gross tonnage and over and bulk carriers, as defined in regulation IX/1, of 20,000 gross tonnage and over, constructed on or after 1 January 2005.

1.2 Oil tankers of 500 gross tonnage and over constructed on or after 1 October 1994 but before 1 January 2005 shall comply with the provisions of regulation II-1/12-2 adopted by resolution MSC.27(61).

**2 Means of access to cargo and other spaces**

2.1 Each space within the cargo area shall be provided with a permanent means of access to enable, throughout the life of a ship, overall and close-up inspections and thickness measurements of the ship's structures to be carried out by the Administration, the Company, as defined in regulation IX/1, and the ship's personnel and others as necessary. Such means of access shall comply with the requirements of paragraph 5 and with the Technical provisions for means of access for inspections, adopted by the Maritime Safety Committee by resolution MSC...(76), 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.

2.2 Where a permanent means of access may be susceptible to damage during normal cargo loading and unloading operations or where it is impracticable to fit permanent means of access, the Administration may allow, in lieu thereof, the provision of movable

or portable means of access, as specified in the Technical provisions, provided that the means of attaching, rigging, suspending or supporting the portable means of access forms a permanent part of the ship's structure. All portable equipment shall be capable of being readily erected or deployed by ship's personnel.

2.3 The construction and materials of all means of access and their attachment to the ship's structure shall be to the satisfaction of the Administration. The means of access shall be subject to survey prior to, or in conjunction with, its use in carrying out surveys in accordance with regulation I/10.

## 3 Safe access to cargo holds, cargo tanks, ballast tanks and other spaces

3.1 Safe access* to cargo holds, cofferdams, ballast tanks, cargo tanks and other spaces in the cargo area shall be direct from the open deck and such as to ensure their complete inspection. Safe access* to double bottom spaces may be from a pump-room, deep cofferdam, pipe tunnel, cargo hold, double hull space or similar compartment not intended for the carriage of oil or hazardous cargoes.

3.2 Tanks, and subdivisions of tanks, having a length of 35 m or more shall be fitted with at least two access hatchways and ladders, as far apart as practicable. Tanks less than 35 m in length shall be served by at least one access hatchway and ladder. When a tank is subdivided by one or more swash bulkheads or similar obstructions which do not allow ready means of access to the other parts of the tank, at least two hatchways and ladders shall be fitted.

3.3 Each cargo hold shall be provided with at least two means of access as far apart as practicable. In general, these accesses should be arranged diagonally, for example one access near the forward bulkhead on the port side, the other one near the aft bulkhead on the starboard side.

## 4 Ship structure access manual

4.1 A ship's means of access to carry out overall and close-up inspections and thickness measurements shall be described in a Ship structure access manual approved by the Administration, an updated copy of which shall be kept on board. The Ship structure access manual shall include the following for each space in the cargo area:

.1 plans showing the means of access to the space, with appropriate technical specifications and dimensions;

.2 plans showing the means of access within each space to enable an overall inspection to be carried out, with appropriate technical specifications and dimensions. The plans shall indicate from where each area in the space can be inspected;

.3 plans showing the means of access within the space to enable close-up inspections to be carried out, with appropriate technical specifications and

* Refer to the Recommendations for entering enclosed spaces aboard ships, adopted by the Organization by resolution A.864(20).

dimensions. The plans shall indicate the positions of critical structural areas, whether the means of access is permanent or portable and from where each area can be inspected;

.4 instructions for inspecting and maintaining the structural strength of all means of access and means of attachment, taking into account any corrosive atmosphere that may be within the space;

.5 instructions for safety guidance when rafting is used for close-up inspections and thickness measurements;

.6 instructions for the rigging and use of any portable means of access in a safe manner;

.7 an inventory of all portable means of access; and

.8 records of periodical inspections and maintenance of the ship's means of access.

4.2 For the purpose of this regulation "critical structural areas" are locations which have been identified from calculations to require monitoring or from the service history of similar or sister ships to be sensitive to cracking, buckling, deformation or corrosion which would impair the structural integrity of the ship.

**5 General technical specifications**

5.1 For access through horizontal openings, hatches or manholes, the dimensions shall be sufficient to allow a person wearing a self-contained air-breathing apparatus and protective equipment to ascend or descend any ladder without obstruction and also provide a clear opening to facilitate the hoisting of an injured person from the bottom of the space. The minimum clear opening shall not be less than 600 mm x 600 mm. When access to a cargo hold is arranged through the cargo hatch, the top of the ladder shall be placed as close as possible to the hatch coaming. Access hatch coamings having a height greater than 900 mm shall also have steps on the outside in conjunction with the ladder.

5.2 For access through vertical openings, or manholes, in swash bulkheads, floors, girders and web frames providing passage through the length and breadth of the space, the minimum opening shall be not less than 600 mm x 800 mm at a height of not more than 600 mm from the bottom shell plating unless gratings or other foot holds are provided.

5.3 For oil tankers of less than 5,000 tonnes deadweight, the Administration may approve, in special circumstances, smaller dimensions for the openings referred to in paragraphs 5.1 and 5.2, if the ability to traverse such openings or to remove an injured person can be proved to the satisfaction of the Administration."

## PART B

## SUBDIVISION AND STABILITY

### Regulation 12-2 - Access to spaces in the cargo area of oil tankers

2 The existing regulation 12-2 is deleted.

## PART C

## MACHINERY INSTALLATIONS

### Regulation 31 - Machinery control

3 The following new sub-paragraph .10 is added to paragraph 2 of the regulation:

".10 automation systems shall be designed in a manner which ensures that threshold warning of impending or imminent slowdown or shutdown of the propulsion system is given to the officer in charge of the navigational watch in time to assess navigational circumstances in an emergency. In particular, the systems shall control, monitor, report, alert and take safety action to slow down or stop propulsion while providing the officer in charge of the navigational watch an opportunity to manually intervene, except for those cases where manual intervention will result in total failure of the engine and/or propulsion equipment within a short time, for example in the case of overspeed."

## CHAPTER II-2

## CONSTRUCTION – FIRE PROTECTION, FIRE DETECTION AND FIRE EXTINCTION

### Regulation 3 – Definitions

4 In paragraph 20, the words “regulation VII/2” are replaced by the words “the IMDG Code, as defined in regulation VII/1.1”.

### Regulation 19 – Carriage of dangerous goods

5 In table 19.3, in vertical columns 7 and 8 (concerning flashpoints of class 3), the numbers “3.1 3.2” and “3.3”, respectively, are replaced by the number “3”.

6 In table 19.3, in vertical column 13 (concerning class 5.2), the character "X" in rows 15 (concerning paragraph 3.10.1) and 16 (concerning paragraph 3.10.2) is replaced by the character "X[16]" and a new note 16 is added as follows:

"[16] Under the provisions of the IMDG Code, as amended, stowage of class 5.2 dangerous goods under deck or in enclosed ro-ro spaces is prohibited."

## CHAPTER III

## LIFE-SAVING APPLIANCES AND ARRANGEMENTS

### Regulation 26 - Additional requirements for ro-ro passenger ships

7 The following new subparagraph .4 is added at the end of paragraph 1:

".4 before 1 July 2004 shall comply with the requirements of paragraph 2.5 not later than the first survey on or after that date."

8 The following new subparagraph .5 is added at the end of paragraph 2:

".5 Liferafts carried on ro-ro passenger ships shall be fitted with a radar transponder* in the ratio of one transponder for every four liferafts. The transponder shall be mounted inside the liferaft so its antenna is more than one metre above the sea level when the liferaft is deployed, except that for canopied reversible liferafts the transponder shall be so arranged as to be readily accessed and erected by survivors. Each transponder shall be arranged to be manually erected when the liferaft is deployed. Containers of liferafts fitted with transponders shall be clearly marked.

* Refer to the Performance standards for survival craft radar transponders for use in search and rescue operations, adopted by the Organization by resolution A.802(19)."

## CHAPTER XII

## ADDITIONAL SAFETY MEASURES FOR BULK CARRIERS

9 The following new regulations 12 and 13 are added after existing regulation 11:

### "Regulation 12

### Hold, ballast and dry space water level detectors

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

1 Bulk carriers shall be fitted with water level detectors:

.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 2.0 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, as an alternative to the valve control specified in regulation II-1/11.4, valve operation by means of remotely operated actuators may be accepted, provided that the location of such valve controls complies with this regulation.

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."

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ANNEX

# TECHNICAL PROVISIONS FOR MEANS OF ACCESS FOR INSPECTIONS

## Preamble

It has long been recognised that the only way of ensuring that the condition of a ship's structure is maintained to conform with the applicable requirements is for all its components to be surveyed on a regular basis throughout their operational life so as to ensure that they are free from damage such as cracks, buckling or deformation due to corrosion, overloading or contact damage and that thickness diminution is within established limits. The provision of suitable means of access to the hull structure for the purpose of carrying out overall and close-up surveys and inspections is essential and such means should be considered and provided for at the ship design stage.

Ships should be designed and built with due consideration as to how they will be surveyed by flag State inspectors and classification society surveyors during their in-service life and how the crew will be able to monitor the condition of the ship. Without adequate access, the structural condition of the vessel can deteriorate undetected, and major structural failure can arise. A comprehensive approach to design and maintenance is required to cover the whole projected life of the ship.

In order to address this issue, the Organization has developed these Technical provisions for means of access for inspections, intended to facilitate close-up inspections and thickness measurements of the ship's structure referred to in SOLAS regulation II-1/ 3-6 on access to and within spaces in the cargo area of oil tankers and bulk carriers.

## Definitions

Terms used in the Technical provisions have the same meaning as those defined in the 1974 SOLAS Convention, as amended, and in resolution A.744(18), as amended.

## Technical provisions

1 Structural members subject to the close-up inspections and thickness measurements of the ship's structure referred to in SOLAS regulation II-1/ 3-6, except those in double bottom spaces shall be provided with a permanent means of access to the extent as specified in table 1 and table 2, as applicable. For oil tankers and wing ballast tanks of ore carriers rafting may be used in addition to the specified permanent means of access, provided that the structure allows for its safe and effective use.

2 Elevated passageways, where fitted, shall have a minimum width of 600 mm and be provided with toe boards of not less than 150 mm high and guard rails over both sides of their entire length. Sloping structure providing part of the access shall be of a non-skid construction. Guard rails shall be 1,000 mm in height and consist of a rail and intermediate bar 500 mm in height and of substantial construction. Stanchions shall be not more than 3 m apart.

3 Access to elevated passageways and vertical openings from the ship's bottom shall be provided by means of easily accessible passageways, ladders or treads. Treads shall be provided with lateral support for the foot. Where the rungs of ladders are fitted against a vertical surface,

the distance from the centre of the rungs to the surface shall be at least 150 mm. Where vertical manholes are fitted higher than 600 mm above the walking level, access shall be facilitated by means of treads and hand grips with platform landings on both sides.

4 Tunnels passing through cargo holds shall be equipped with ladders or steps at each end of the hold so that personnel may easily cross such tunnels.

5 Permanent ladders except for vertical ladders which are fitted on vertical structures for close-up survey or thickness measurement shall be inclined at an angle less than 70º. There shall be no obstructions within 750 mm of the face of the inclined ladder except through openings when this may be reduced to 600 mm. The flights of ladders shall not be more than 9 m in actual length. Resting platforms of adequate dimensions shall be provided. Ladders and handrails shall be constructed of steel or equivalent material of adequate strength and stiffness and securely attached to the tank structure by stays. The method of support and length of stay shall be such that vibration is reduced to a practical minimum. In cargo holds ladders shall be designed and arranged so that the risk of damage from cargo handling gear is minimized.

6 The width of ladders between stringers shall not be less than 400 mm. The treads shall be equally spaced at a distance apart, measured vertically, of between 250 mm and 300 mm. When steel is used, the treads shall be formed of two square bars of not less that 22 mm by 22 mm in section, fitted to form a horizontal step with the edges pointing upward. The treads shall be carried through the side stringers and attached thereto by double continuous welding. All sloping ladders shall be provided with handrails of substantial construction on both sides fitted at a convenient distance above the treads.

7 No free-standing portable ladder shall be more than 5 m long.

8 Portable ladders more than 5 m long may only be utilized if fitted with a remotely controlled mechanical device to secure the upper end of the ladder.

9 Movable means of access includes such devices as:

.1 hydraulic arm fitted with a stable base and with local control at the safety cage. The operational conditions should be in accordance with applicable safety requirements of the manufacturer; and

.2 wire lift platform.

10 For bulk carriers, access ladders to a cargo hold, shall be:

.1 where the vertical distance between the upper surface of adjacent decks or, between deck and the bottom of the cargo space is not more than 6 m, either a vertical ladder or an inclined ladder; and

.2 where the vertical distance between the upper surface of adjacent decks or between deck and the bottom of the cargo space is more than 6 m an inclined ladder or ladders, except the uppermost 2.5 m of a cargo space measured clear of overhead obstructions, and the lowest 6 m may have vertical ladders, providing the vertical extent of the inclined ladder or ladders connecting the vertical ladders in not less than 2.5 m.

## Table 1 - Means of access for oil tankers

| 1 Water ballast tanks, except those specified in the right column, and cargo oil tanks | 2 Wing water ballast tanks less than 5 m width forming double side spaces and their bilge hopper sections |
|---|---|
| **Access to the overhead structure** | |
| 1.1 For tanks of which the height is 6 m and over, permanent means of access shall be provided in accordance with .1 to .3:<br><br>.1 continuous athwartship permanent access arranged at the transverse bulkheads and at every deck transverse, at a minimum of 1.8 m to a maximum of 2.5 m below the overhead structure. If the access is fitted on the side of the unobstructed side of the web plating, then lightening holes of at least 300 mm diameter shall be fitted in the web plating providing access adjacent to both sides of each tripping bracket;<br><br>.2 at least one longitudinal permanent means of access at a minimum of 1.8 m to a maximum of 2.5 m below the overhead structure. Where the longitudinal bulkhead contains attached framing, the access shall be provided at that side; and<br><br>.3 access between the arrangements specified in .1 and .2 and from the main deck to either .1 or .2.<br><br>1.2 For tanks of which the height is less than 6 m, raft or portable means may be utilized in lieu of the permanent means of access. | 2.1 Where the vertical distance between horizontal upper stringer and deck head exceeds 6 m, one continuous permanent means of access shall be provided for the full length of the tank with a means to allow passing through transverse swash bulkheads installed a minimum of 1.8 m to a maximum of 2.5 m from the overhead structure with a vertical access ladder at each end and mid-span of tank.<br><br>2.2 For bilge hopper sections of which the vertical distance from baseline to the upper knuckle point is 6 m and over, one longitudinal permanent means of access shall be provided for the full length of the tank. It shall be accessible by vertical permanent means of access at both ends of the tank.<br><br>2.3 Where the vertical distance referred to in 2.2 is less than 6 m, portable means of access may be utilised in lieu of the permanent means of access. To facilitate the operation of the portable means of access, in-line openings in horizontal stringers should be provided. The openings should be of an adequate diameter and should have suitable protective railings.<br><br>2.4 Whenever practicable, the distance between the overhead structure and the uppermost longitudinal stringer and between the longitudinal stringers should not exceed 6 m. |
| **Access to the vertical structures** | |
| 1.3 For tanks of which the height is 6 m and over, containing internal structures, permanent means of access shall be provided to each transverse web.<br><br>1.4 For tanks of which the height is less than 6 m, raft or portable means may be utilized in lieu of the permanent means of access. | 2.5 Vertical permanent means of access shall be provided to each transverse web in the following cases where the vertical distance is 6 m and over:<br><br>.1 from baseline to the upper knuckle point of the bilge hopper section;<br><br>.2 from the upper knuckle point of the bilge hopper section to main deck where no horizontal stringers are provided; and<br><br>.3 between horizontal stringers.<br><br>2.6 Access holes within 600 mm of the stringer shall be provided in each transverse web/swash bulkhead above each stringer and tank base.<br><br>2.7 In the case where the vertical distance referred to in 2.5 is less than 6 m, portable means may be utilised in lieu of the permanent means of access. |

## Table 2 - Means of access for bulk carriers*

| 1 Cargo holds | 2 Ballast tanks |
|---|---|
| **Access to overhead structure**<br>1.1 At least 3 permanent means of access shall be fitted to provide access to the overhead structure at both sides of the cross deck and in the vicinity of the centreline. Each means of access shall be accessible from the cargo hold access or directly from the main deck and installed at a minimum of 1.8 m to a maximum of 2.5 m below the deck.<br><br>1.2 Alternatively, movable means of access may be utilized for access to the overhead structure of cross deck if its vertical distance is 17 m or less above the tank top. | **Top side tanks**<br>2.1 For each topside tank, of which the height is 6 m and over, one longitudinal continuous permanent means of access shall be provided along the side shell webs and installed at a minimum of 1.8 m to a maximum of 2.5 m below deck with a vertical access ladder in the vicinity of each access to that tank.<br><br>2.2 If no access holes are provided through the transverse ring webs within 600 mm of the tank base and the web frame rings have a web height greater than 1 m in way of side shell and sloping plating, then step rungs/grab rails shall be provided to allow safe access over each transverse web frame ring.<br><br>2.3 Three permanent means of access, fitted at the end bay and middle bay of each tank, shall be provided spanning from tank base up to the intersection of the sloping plate with the hatch side girder. The existing longitudinal structure may be used as part of this means of access.<br><br>2.4 For topside tanks of which the height is less than 6 m, a portable means may be utilized in lieu of the permanent means of access. |
| **Access to vertical structures**<br><br>1.3 Permanent means of vertical access shall be provided in all cargo holds and built into the structure to allow for an inspection of a minimum of 25 % of the total number of hold frames port and starboard equally distributed throughout the hold including at each end in way of transverse bulkheads. But in no circumstance shall this arrangement be less than 3. Means to readily secure safety cages to the permanent means of access shall be provided. Permanent means of vertical access fitted between two adjacent hold frames is counted for an access for the inspection of both hold frames. A means of portable access may be used to gain access over the sloping plating of lower hopper ballast tanks.<br><br>1.4 In addition, portable or movable means of access shall be utilized for access to the remaining hold frames up to their upper brackets and transverse bulkheads. | **Bilge hopper tanks**<br><br>2.5 For each bilge hopper tank of which the height is 6 m and over, one longitudinal continuous permanent means of access shall be provided along the side shell webs and installed at a minimum of 1.2 m to a maximum of 1.8 m below the top of the clear opening of the web ring with a vertical access ladder in the vicinity of each access to the tank.<br><br>2.6 If no access holes are provided through the transverse ring webs within 600 mm of the tank base and the web frame rings have a web height greater than 1 m in way of side shell and sloping plating, then step rungs/grab rails shall be provided to allow safe access over each transverse web frame ring.<br><br>2.7 For bilge hopper tanks of which the height is less than 6 m, a portable means may be utilized in lieu of the permanent means of access.<br><br>**Double skin side tanks**<br><br>2.8 Permanent means of access shall be provided in accordance with the applicable sections of table 1. |

* For ore carriers, permanent means of access in wing ballast tanks shall be in accordance with the applicable sections of tables 1 and 2.

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## ANNEX 1

## AGREED DRAFT RECOMMENDATIONS FOR DECISION-MAKING WORK SCHEDULE

| No. | Area addressed | Target event | Paragraphs in report | Recommendation | Application | | IMO Body | Sessions needed | Target completion date |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | New | Existing | | | |
| 1 | Operation | Prevention | 30, 31 | Ship/terminal interface improvement | Yes | Yes | DSC | 1 | 2003 |
| 2 | " | Prevention | 35, 36 | Improved loading/stability information | Yes | No | SLF/DE | 2 | 2004 |
| 3 | " | Prevention | 38 | Mandatory BC Code | To be further considered | | DSC | 1 | 2003 |
| 4 | " | Mitigation | 41, 42 | Alternate hold loading ban | No | Yes | DE/DSC | 2 | 2004 |
| 5 | " | Response | 46 | Guidance on early abandonment | Yes | Yes | DE/NAV | 1 | 2003 |
| 6 | " | Response | 33 | PSC officer training | Yes | Yes | FSI | 1 | 2004 |
| 7 | Hull envelope | Prevention | 5, 6 | Double side skin construction | Yes | No | DE | 2 | 2004 |
| 8 | " | Prevention | 7, 8 | Performance standards for protective coatings | Yes | No | DE | 2 | 2004 |
| 9 | " | Prevention | 20 | Strengthening of hold frames to be equivalent to UR S12 by means of UR S31 | No | Yes | DE | 1 | 2003 |
| 10 | " | Prevention | 22 | Protection of fore deck fittings and small hatches | Yes | Yes | DE | 1 | 2003 |
| 11 | " | Mitigation | 43, 44 | Application of structural standards in SOLAS chapter XII | Yes | No | DE | 2 | 2004 |
| 12 | " | Mitigation | 10, 11 | Steel repair standards and shipbuilding practices | Yes | Yes | DE | 1 | 2003 |
| 13 | Closing appliances | Prevention | 23 | Standards for hatch cover securing mechanisms | Yes | Yes | DE | 1 | 2003 |
| 14 | Evacuation | Response | 25, 26 | Performance standards for water ingress alarms | Yes | Yes | DE | 1 | 2003 |
| 15 | " | Response | 27 | Immersion suits | Yes | Yes | DE | 1 | 2003 |
| 16 | " | Response | 28 | Free-fall lifeboats with float-free capability | Yes | No | DE | 2 | 2004 |

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