

標題

MSC78 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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2004 年 5 月 12 日から 21 日にかけて開催された IMO 第 78 回海上安全委員会 (MSC78) の審議結果について次のとおりご紹介いたします。

1. 条約等強制要件の採択

以下の SOLAS 条約、IMDG Code 改正案等が採択されました。

(1) PMA の改正 (添付 1 参照)

MSC76 で採択された SOLAS II-1 章/3-6 規則および Technical Provisions (以下、PMA 規則) の改正案が今回採択されました。2003 年 12 月に開催された第 23 回総会において、現行の PMA 規則は実用的・安全でないとの懸念をギリシャ政府が示し、これを DE 小委員会で検討するよう指示が出されました。MSC78 では、DE 小委員会で作成された改正 PMA 規則案を審議し、結果、MSC76 で採択された現行 PMA 規則より緩和された改正 PMA 規則が採択されました。本改正規則は SOLAS 条約の規定に基づき 2006 年 1 月 1 日に正式発効することとなりますが、条約締約国が正式発効に先駆けて 2005 年 1 月 1 日以降同改正規則を MSC76 で採択された現行規則の代わりに適用できることも合意されています。

(2) イマーシヨンスーツの定員分の搭載 (添付 2 参照)

定員分のイマーシヨンスーツの搭載を要求する SOLAS III 章/32 規則の改正案が今回採択されました。全貨物船に対し、新造船および現存船に関係なく、定員分のイマーシヨンスーツを搭載するよう規定しています。ただし、SOLAS IX 章で定義されるバルクキャリア以外の船種で温暖海域のみを航行するものにあつては、主管庁裁量で免除可能と規定されています。2006 年 7 月 1 日以前建造の現存船は、2006 年 7 月 1 日以降の最初の SE 検査までに定員分のイマーシヨンスーツを搭載する必要があります。

(3) 救命設備の検査・保守・ドリル (添付 2 参照)

救命設備の検査・保守・ドリルに関する SOLAS III/19, 20 規則の改正案が今回採択されました。発効は 2006 年 7 月 1 日を予定。

(4) 衛星 EPIRB の保守 (添付 2 参照)

衛星 EPIRB の保守に関する SOLAS IV/15 規則の改正案が今回採択されました。衛星 EPIRB は 5 年に一度は承認された陸上整備施設での保守が要求されることとなります。発効は 2006 年 7 月 1 日を予定。

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NOTES:

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(5) IMDG コードの改正

IMDG コードの第 32 回改正が今回採択されました。IMDG コード第 32 回改正は危険物輸送に関する国連勧告の第 13 回改訂版を基に作成されたものであり、SOLAS 条約の規定に基づき 2006 年 1 月 1 日に正式発効することとなりますが、条約締約国が正式発効に先駆けて 2005 年 1 月 1 日以降同改正の全部または一部をボランタリーに適用できることも合意されています。

2. バルクキャリアの安全対策

150m 以上の比重 1,000kg/m³ 以上の貨物を運送するバルクキャリアに二重船側化を強制とする MSC76 (2002 年 12 月) での決定は、MSC78 において覆され二重船側の強制化は否決されました。代わりに、単船側構造と同等の安全性を確保するために二重船側構造の要件が策定されました。(これまでの審議内容については、テクニカル・インフォメーション No. TEC-0498, TEC-0532 を参照下さい。)

(1) SOLAS XII 章改正案の承認

上記決定に基づき、SOLAS XII 章の改正案が作成され今回承認されました。今年 12 月に開催予定の MSC79 で採択を予定しており、発効は 2006 年 7 月 1 日の予定となっています。主な改正点は以下のとおりです。

(i) バルクキャリアの定義の見直し

SOLAS XII 章適用上のバルクキャリアの定義は、「鉱石運搬船および兼用船を含む主として乾貨物をばら積みで運搬する船舶」となります。

(ii) 二重船側バルクキャリアの復原性および強度要件

150m 以上で二重船側幅 B/5 未満の新造二重船側バルクキャリアは、比重 1,000kg/m³ 以上の貨物を運送するために設計された場合、損傷時復原性要件および損傷時強度要件が要求されます。

(iii) 二重船側区画の要件

150m 以上の新造二重船側バルクキャリアに対する二重船側区画の要件は以下のとおりです。

(a) 二重船側の船側外板と内側板の最小幅は 1,000mm

(b) 二重船側内の最小クリアランスは交通性を考慮し 600mm

(c) フレームが横式／縦通式構造の場合フレーム間のクリアランスは 600mm／800mm 以上

(d) ボイドスペースであっても塗装が必要

(iv) 復原性計算機

150m 未満の新造バルクキャリアは、非損傷時復原性を計算機できるコンピューターの搭載が要求されます。

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(v) 隔倉積みの禁止

長さ 150m 以上の密度 1,780kg/m³ 以上の固体ばら積み貨物を運送する現存単船側バルクキャリアは、「SOLAS XII/5.1 規則(浸水時強度要件)」および「IACS UR S12(rev.2.1)または UR S31(船側肋骨強度要件)」の両方に適合していなければ、船齢 10 年以降、Deadweight の 90%に相当する喫水以上において如何なる貨物倉を空倉状態で航行することが禁止されます。空倉状態とは、当該貨物倉の最大積付け重量の 10%未満の積付け状態をいいます。

(2) Free-fall Lifeboat の強制化

SOLAS IX 章で定義される新造バルクキャリアに Free-fall Lifeboat の搭載を強制化する SOLAS III/32 規則が今回承認されました。今年 12 月に開催予定の MSC79 で採択を予定しており、発効は 2006 年 7 月 1 日を予定しています。

3. S-VDR の現存船適用

(1) SOLAS V/20 規則改正

2002 年 7 月 1 日以前に建造された現存貨物船に対する S-VDR(簡易型航海データ記録装置)搭載の義務付けする SOLAS V/20 規則改正案が承認されました。MSC79 で採択予定。

実施時期は以下のとおりです。

- 20,000GT 以上の現存貨物船:
2006 年 7 月 1 日以降の最初の scheduled dry docking。ただし、2009 年 7 月 1 日まで。
- 3,000GT~20,000GT の現存貨物船:
2007 年 7 月 1 日以降の最初の scheduled dry docking。ただし、2010 年 7 月 1 日まで。

(2) S-VDR の性能要件

S-VDR の性能要件となる” Performance standards for shipborne simplified voyage data recorders (S-VDRs)”が採択されました。

4. MSC79 に採択予定の条約規則改正

本年 12 月開催の MSC79 において採択が予定されている条約規則改正案が承認されました。

- (1) IEC 60092-502:1999 “Electrical installations in ships-Tankers”を参照する危険区域内に設置される電気設備に関する SOLAS II-1/45 規則、IBC コードおよび IGC コードの改正案が承認されました。
- (2) 主操舵場所にジャイロリピーターの設置を要求する SOLAS V/19.2.5 改正案が承認されました。これは、2000 年改正で抜け落ちたもの。
- (3) 床表面材の SO₂ ガス濃度に関する FTP コードの改正案が承認されました。

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5. その他情報

MSC78 の会期中の 5 月 18 日に、船舶からの大気汚染を防止するための MARPOL 73/78 Annex VI が発効要件を満たしました。MARPOL 73/78 の第 15(2)条に従い 2005 年 5 月 19 日に発効することになります。

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。

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添付:

1. SOLAS II-1/3-6 規則改正および Technical Provisions 改正
2. SOLAS III/19, 20, 32 規則および SOLAS IV/15 規則改正

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**

Regulation 3-6 - Access to and within spaces in the cargo area of oil tankers and bulk carriers

- 1 The title of the regulation is replaced by the following:

“Access to and within spaces in, and forward of, the cargo area of oil tankers and bulk carriers”
- 2 In paragraph 1.1, the date “1 January 2005” is replaced with “1 January 2006”.
- 3 In paragraph 2.1, first sentence, the words “within the cargo area” and ~~“a permanent” and the square brackets around the resolution number “MSC.133(76)”~~ are deleted.
- 4 In paragraph 3.1, second sentence, the words “or to forward ballast tanks” are inserted between the words “bottom spaces” and “may be from a pump-room”.
- 5 In paragraph 4.1, second sentence, the words “in the cargo area” are deleted.

ANNEX

AMENDMENTS TO THE TECHNICAL PROVISIONS FOR MEANS OF ACCESS FOR INSPECTIONS (RESOLUTION MSC.133(76))

1 The existing text of the Technical provisions for means of access for inspections is replaced with the following:

“1 Preamble

1.1 It has long been recognized 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. This will 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.

1.2 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 ship 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.

1.3 In order to address this issue, the Organization has developed these Technical provisions for means of access for inspections (hereinafter called the “Technical Provisions”), 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, and forward of, the cargo area of oil tankers and bulk carriers. The Technical Provisions do not apply to the cargo tanks of combined chemical/oil tankers complying with the provisions of the IBC Code.

1.4 Permanent means of access which are designed to be integral parts of the structure itself are preferred and Administrations may allow reasonable deviations to facilitate such designs.

2 Definitions

For the purpose of these Technical Provisions, the following definitions apply in addition to those provided in the 1974 SOLAS Convention, as amended, and in resolution A.744(18), as amended:

- .1 *Rung* means the step of vertical ladder or step on the vertical surface.
- .2 *Tread* means the step of inclined ladder, or step for the vertical access opening.

- .3 *Flight of an inclined ladder* means the actual stringer length of an inclined ladder. For vertical ladders, it is the distance between the platforms.
- .4 *Stringer* means:
- .1 the frame of a ladder; or
 - .2 the stiffened horizontal plating structure fitted on side shell, transverse bulkheads and/or longitudinal bulkheads in the space. For the purpose of ballast tanks of less than 5 m width forming double side spaces, the horizontal plating structure is credited as a stringer and a longitudinal permanent means of access, if it provides a continuous passage of 600 mm or more in width past frames or stiffeners on the side shell or longitudinal bulkhead. Openings in stringer plating utilized as permanent means of access shall be arranged with guard rails or grid covers to provide safe passage on the stringer or safe access to each transverse web.
- .5 *Vertical ladder* means a ladder of which the inclined angle is 70° and over up to 90°. A vertical ladder shall not be skewed by more than 2°.
- .6 *Overhead obstructions* mean the deck or stringer structure including stiffeners above the means of access.
- .7 *Distance below deck head* means the distance below the plating.
- .8 *Cross deck* means the transverse area of the main deck which is located inboard and between hatch coamings.

3 Technical provisions

3.1 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, approved alternative methods may be used in combination with the fitted permanent means of access, provided that the structure allows for its safe and effective use.

3.2 Permanent means of access should as far as possible be integral to the structure of the ships, thus ensuring that they are robust and at the same time contributing to the overall strength of the structure, of the ship.

3.3 Elevated passageways forming sections of a permanent means of access, where fitted, shall have a minimum clear width of 600 mm, except for going around vertical webs where the minimum clear width may be reduced to 450 mm, and have guard rails over the open side 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.

3.4 Access to permanent means of access 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.

3.5 Permanent inclined ladders shall be inclined at an angle of less than 70°. There shall be no obstructions within 750 mm of the face of the inclined ladder, except that in way of an opening this clearance may be reduced to 600 mm. Resting platforms of adequate dimensions shall be provided normally at a maximum of 6 m vertical height. 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 cargo handling difficulties are not increased and the risk of damage from cargo handling gear is minimized.

3.6 The width of inclined ladders between stringers shall not be less than 400 mm. The treads shall be equally spaced at a distance apart, measured vertically, of between 200 mm and 300 mm. When steel is used, the treads shall be formed of two square bars of not less than 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 inclined ladders shall be provided with handrails of substantial construction on both sides, fitted at a convenient distance above the treads.

3.7 For vertical ladders or spiral ladders, the width and construction should be in accordance with international or national standards accepted by the Administration.

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

3.9 Alternative means of access include, but are not limited to such devices as:

- .1 hydraulic arm fitted with a stable base;
- .2 wire lift platform;
- .3 staging;
- .4 rafting;
- .5 robot arm or remotely operated vehicle (ROV);
- .6 portable ladders more than 5 m long shall only be utilized if fitted with a mechanical device to secure the upper end of the ladder;
- .7 other means of access, approved by and acceptable to the Administration.

Means for safe operation and rigging of such equipment to and from and within these spaces shall be clearly described in the Ship structure access manual.

3.10 For access through horizontal openings, hatches or manholes, 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.

3.11 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 passage unless gratings or other foot holds are provided.

3.12 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 3.10 and 3.11, if the ability to traverse such openings or to remove an injured person can be proved to the satisfaction of the Administration.

3.13 For bulk carriers, access ladders to cargo holds and other spaces 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.
- .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 series of inclined ladders at one end of the cargo hold, except the uppermost 2.5 m of a cargo space measured clear of overhead obstructions and the lowest 6 m may have vertical ladders, provided that the vertical extent of the inclined ladder or ladders connecting the vertical ladders is not less than 2.5 m.

The second means of access at the other end of the cargo hold may be formed of a series of staggered vertical ladders, which should comprise of one or more ladder linking platforms spaced not more than 6 m apart vertically and displaced to one side of the ladder. Adjacent sections of ladder should be laterally offset from each other by at least the width of the ladder. The uppermost entrance section of the ladder directly exposed to a cargo hold should be vertical for a distance of 2.5 m measured clear of overhead obstructions and connected to a ladder-linking platform.

- .3 A vertical ladder may be used as a means of access to topside tanks, where the vertical distance is 6 m or less between the deck and the longitudinal means of access in the tank or the stringer or the bottom of the space immediately below the entrance. The uppermost entrance section from deck of the vertical ladder of the tank should be vertical for a distance of 2.5 m measured clear of the overhead obstructions and comprises a ladder linking platform unless landing on the longitudinal means of access, the stringer or the bottom within the vertical distance, it should be displaced to one side of a vertical ladder.

- .4 Unless allowed in .3 above, an inclined ladder or combination of ladders should be used for access to a tank or a space where the vertical distance is greater than 6 m between the deck and a stringer immediately below the entrance, between stringers, or between the deck or a stringer and the bottom of the space immediately below the entrance.
- .5 In case of .4 above, the uppermost entrance section from deck of the ladder should be vertical for a distance of 2.5 m clear of the overhead obstructions and connected to a landing platform and continued with an inclined ladder. The flights of inclined ladders should not be more than 9 m in actual length and the vertical height should not normally be more than 6 m. The lowermost section of the ladders may be vertical for a vertical distance of not less than 2.5 m.
- .6 In double side skin spaces of less than 2.5 m width, the access to the space may be by means of vertical ladders that comprise of one or more ladder linking platforms spaced not more than 6 m apart vertically and displaced to one side of the ladder. Adjacent sections of ladder should be laterally offset from each other by at least the width of the ladder.
- .7 A spiral ladder is considered acceptable as an alternative for inclined ladders. In this regard, the uppermost 2.5 m can continue to be comprised of the spiral ladder and need not change over to vertical ladders.

3.14 The uppermost entrance section from deck of the vertical ladder providing access to a tank should be vertical for a distance of 2.5 m measured clear of the overhead obstructions and comprises a ladder linking platform. It should be displaced to one side of a vertical ladder. The vertical ladder can be between 1.6 m and 3 m below deck structure if it lands on a longitudinal or athwartship permanent means of access fitted within that range.

Table 1 - Means of access for ballast and cargo tanks of oil tankers*

1 Water ballast tanks, except those specified in the right column, and cargo oil tanks	2 Water ballast wing tanks of less than 5 m width forming double side spaces and their bilge hopper sections
Access to the underdeck and vertical structure	
<p>1.1 For tanks of which the height is 6 m and over containing internal structures, permanent means of access shall be provided in accordance with .1 to .6:</p> <ul style="list-style-type: none"> .1 continuous athwartship permanent access arranged at each transverse bulkhead on the stiffened surface, at a minimum of 1.6 m to a maximum of 3 m below the deck head; .2 at least one continuous longitudinal permanent means of access at each side of the tank. One of these accesses shall be at a minimum of 1.6 m to a maximum of 6 m below the deck head and the other shall be at a minimum of 1.6 m to a maximum of 3 m below the deck head; .3 access between the arrangements specified in .1 and .2 and from the main deck to either .1 or .2; .4 continuous longitudinal permanent means of access which are integrated in the structural member on the stiffened surface of a longitudinal bulkhead, in alignment, where possible, with horizontal girders of transverse bulkheads are to be provided for access to the transverse webs unless permanent fittings are installed at the uppermost platform for use of alternative means as defined in paragraph 3.9 of the Technical Provisions for inspection at intermediate heights; .5 for ships having cross-ties which are 6 m or more above tank bottom, a transverse permanent means of access on the cross-ties providing inspection of the tie flaring brackets at both sides of the tank, with access from one of the longitudinal permanent means of access in .4; and .6 alternative means as defined in paragraph 3.9 of the Technical Provisions may be provided for small ships as an alternative to .4 for cargo oil tanks of which the height is less than 17 m. 	<p>2.1 For double side spaces above the upper knuckle point of the bilge hopper sections, permanent means of access are to be provided in accordance with .1 to .3:</p> <ul style="list-style-type: none"> .1 where the vertical distance between horizontal uppermost stringer and deck head is 6 m or more, one continuous longitudinal permanent means of access shall be provided for the full length of the tank with a means to allow passing through transverse webs installed at a minimum of 1.6 m to a maximum of 3 m below the deck head with a vertical access ladder at each end of the tank; .2 continuous longitudinal permanent means of access, which are integrated in the structure, at a vertical distance not exceeding 6 m apart; and .3 plated stringers shall, as far as possible, be in alignment with horizontal girders of transverse bulkheads.

<p>1.2 For tanks of which the height is less than 6 m, alternative means as defined in paragraph 3.9 of the Technical Provisions or portable means may be utilized in lieu of the permanent means of access.</p>	<p>2.2 For bilge hopper sections of which the vertical distance from the tank bottom 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 each end of the tank.</p> <p>2.2.1 The longitudinal continuous permanent means of access may be installed at a minimum 1.6 m to maximum 3 m from the top of the bilge hopper section. In this case, a platform extending the longitudinal continuous permanent means of access in way of the webframe may be used to access the identified structural critical areas.</p> <p>2.2.2 Alternatively the continuous longitudinal permanent means of access may be installed at a minimum of 1.2 m below the top of the clear opening of the web ring allowing a use of portable means of access to reach identified structural critical areas.</p>
<p>Fore peak tanks</p> <p>1.3 For fore peak tanks with a depth of 6 m or more at the centre line of the collision bulkhead, a suitable means of access shall be provided for access to critical areas such as the underdeck structure, stringers, collision bulkhead and side shell structure.</p> <p>1.3.1 Stringers of less than 6 m in vertical distance from the deck head or a stringer immediately above are considered to provide suitable access in combination with portable means of access.</p> <p>1.3.2 In case the vertical distance between the deck head and stringers, stringers or the lowest stringer and the tank bottom is 6 m or more, alternative means of access as defined in paragraph 3.9 of the Technical Provisions shall be provided.</p>	<p>2.3 Where the vertical distance referred to in 2.2 is less than 6 m, alternative means as defined in paragraph 3.9 of the Technical Provisions or portable means of access may be utilised in lieu of the permanent means of access. To facilitate the operation of the alternative means of access, in-line openings in horizontal stringers shall be provided. The openings shall be of an adequate diameter and shall have suitable protective railings.</p>

Table 2 - Means of access for bulk carriers *

1 Cargo holds	2 Ballast tanks
<p>Access to underdeck structure</p> <p>1.1 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 centerline. Each means of access shall be accessible from the cargo hold access or directly from the main deck and installed at a minimum of 1.6 m to a maximum of 3 m below the deck.</p> <p>1.2 An athwartship permanent means of access fitted on the transverse bulkhead at a minimum 1.6 m to a maximum 3 m below the cross-deck head is accepted as equivalent to 1.1.</p> <p>1.3 Access to the permanent means of access to overhead structure of the cross deck may also be via the upper stool.</p> <p>1.4 Ships having transverse bulkheads with full upper stools with access from the main deck which allows monitoring of all framing and plates from inside, do not require permanent means of access of the cross deck.</p> <p>1.5 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.</p>	<p>Top side tanks</p> <p>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 1.6 m to a maximum of 3 m below deck with a vertical access ladder in the vicinity of each access to that tank.</p> <p>2.2 If no access holes are provided through the transverse 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.</p> <p>2.3 Three permanent means of access, fitted at the end bay and middle bay of each tank, shall be spanning from tank base up to the intersection of the sloping plate with the hatch side girder. The existing longitudinal structure, if fitted on the sloping plate in the space may be used as part of this means of access.</p> <p>2.4 For topside tanks of which the height is less than 6 m, alternative means as defined in paragraph 3.9 of the Technical Provisions or a portable means may be utilized in lieu of the permanent means of access.</p>
<p>Access to vertical structures</p> <p>1.6 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 permanent means of vertical access fitted to each side (fore and aft ends of hold and mid-span). 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.</p> <p>1.7 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.</p>	<p>Bilge hopper tanks</p> <p>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 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.</p> <p>2.5.1 An access ladder between the longitudinal continuous permanent means of access and the bottom of the space shall be provided at each end of the tank.</p> <p>2.5.2 Alternatively, the longitudinal continuous permanent means of access can be located through the upper web plating above the clear opening of the web ring, at a minimum of 1.6 m below the deck head, when this arrangement facilitates more suitable inspection of identified structurally critical areas. An enlarged longitudinal frame can be used for the purpose of the walkway.</p>

<p>1.8 Portable or movable means of access may be utilized for access to hold frames up to their upper bracket in place of the permanent means required in 1.6. These means of access shall be carried on board the ship and readily available for use.</p> <p>1.9 The width of vertical ladders for access to hold frames shall be at least 300 mm, measured between stringers.</p> <p>1.10 A single vertical ladder over 6 m in length is acceptable for the inspection of the hold side frames in a single skin construction.</p> <p>1.11 For double side skin construction no vertical ladders for the inspection of the cargo hold surfaces are required. Inspection of this structure should be provided from within the double hull space.</p>	<p>2.5.3 For double side skin bulk carriers the longitudinal continuous permanent means of access may be installed within 6 m from the knuckle point of the bilge, if used in combination with alternative methods to gain access to the knuckle point.</p> <p>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.</p> <p>2.7 For bilge hopper tanks of which the height is less than 6 m, alternative means as defined in paragraph 3.9 of the Technical Provisions or a portable means may be utilized in lieu of the permanent means of access. Such means of access shall be demonstrated that they can be deployed and made readily available in the areas where needed.</p> <p>Double skin side tanks</p> <p>2.8 Permanent means of access shall be provided in accordance with the applicable sections of table 1.</p>
	<p>Fore peak tanks</p> <p>2.9 For fore peak tanks with a depth of 6 m or more at the centre line of the collision bulkhead, a suitable means of access shall be provided for access to critical areas such as the underdeck structure, stringers, collision bulkhead and side shell structure.</p> <p>2.9.1 Stringers of less than 6 m in vertical distance from the deck head or a stringer immediately above are considered to provide suitable access in combination with portable means of access.</p> <p>2.9.2 In case the vertical distance between the deck head and stringers, stringers or the lowest stringer and the tank bottom is 6 m or more, alternative means of access as defined in paragraph 3.9 of the Technical Provisions shall be provided.</p>

* For ore carriers, permanent means of access shall be provided in accordance with the applicable sections of table 1 and table 2.”

ANNEX

**AMENDMENTS TO THE INTERNATIONAL CONVENTION FOR THE SAFETY OF
LIFE AT SEA, 1974, AS AMENDED****CHAPTER III
LIFE-SAVING APPLIANCES AND ARRANGEMENTS****Regulation 19 – Emergency training and drills**

1 The existing text of paragraph 3.3.3 is replaced by the following:

“3.3.3 Except as provided in paragraphs 3.3.4 and 3.3.5, each lifeboat shall be launched, and manoeuvred in the water by its assigned operating crew, at least once every three months during an abandon ship drill.”

Regulation 20 – Operational readiness, maintenance and inspections

2 In paragraph 1, in the second sentence, the words “paragraphs 3 and 6.2” are replaced by the words “paragraphs 3.2, 3.3 and 6.2”.

3 The existing text of paragraph 3 is replaced by the following:

“3 Maintenance

3.1 Maintenance, testing and inspections of life-saving appliances shall be carried out based on the guidelines developed by the Organization* and in a manner having due regard to ensuring reliability of such appliances.

3.2 Instructions for on-board maintenance of life-saving appliances complying with regulation 36 shall be provided and maintenance shall be carried out accordingly.

3.3 The Administration may accept, in compliance with the requirements of paragraph 3.2, a shipboard planned maintenance programme, which includes the requirements of regulation 36.”

4 The existing text of paragraph 6 is replaced by the following:

“6 Weekly inspection

The following tests and inspections shall be carried out weekly and a report of the inspection shall be entered in the log-book:

* Refer to the Guidelines for periodic servicing and maintenance of lifeboats, launching appliances and on-load release gear (MSC/Circ.1093).

- .1 all survival craft, rescue boats and launching appliances shall be visually inspected to ensure that they are ready for use. The inspection shall include, but is not limited to, the condition of hooks, their attachment to the lifeboat and the on-load release gear being properly and completely reset;
- .2 all engines in lifeboats and rescue boats shall be run for a total period of not less than 3 min, provided the ambient temperature is above the minimum temperature required for starting and running the engine. During this period of time it should be demonstrated that the gear box and gear box train are engaging satisfactorily. If the special characteristics of an outboard motor fitted to a rescue boat would not allow it to be run other than with its propeller submerged for a period of 3 min, it should be run for such a period as prescribed in the manufacturer's handbook. In special cases the Administration may waive this requirement for ships constructed before 1 July 1986;
- .3 lifeboats, except free-fall lifeboats, on cargo ships shall be moved from their stowed position, without any persons on board, to the extent necessary to demonstrate satisfactory operation of launching appliances, if weather and sea conditions so allow; and
- .4 the general emergency alarm shall be tested."

5 In paragraph 7, the existing text is numbered as paragraph 7.2 and the following new paragraph 7.1 is added:

"7.1 All lifeboats, except free-fall lifeboats, shall be turned out from their stowed position, without any persons on board if weather and sea conditions so allow."

6 The existing text of paragraph 11 is replaced by the following:

"11 Periodic servicing of launching appliances and on-load release gear

11.1 Launching appliances shall be:

- .1 maintained in accordance with instructions for on-board maintenance as required by regulation 36;
- .2 subject to a thorough examination at the annual surveys required by regulations I/7 or I/8, as applicable; and
- .3 upon completion of the examination in .2 subjected to a dynamic test of the winch brake at maximum lowering speed. The load to be applied shall be the mass of the lifeboat without persons on board, except that, at intervals not exceeding five years, the test shall be carried out with a proof load of 1.1 times the maximum working load of the winch.

11.2 Lifeboat on-load release gear shall be:

- .1 maintained in accordance with instructions for on-board maintenance as required by regulation 36;
- .2 subject to a thorough examination and operational test during the annual surveys required by regulation I/7 and I/8 by properly trained personnel familiar with the system; and
- .3 operationally tested under a load of 1.1 times the total mass of the lifeboat when loaded with its full complement of persons and equipment whenever the release gear is overhauled. Such over-hauling and test shall be carried out at least once every five years.*”

Regulation 32 – Personal life-saving appliances

7 The existing text of paragraph 3 is replaced by the following:

“3 Immersion suits

3.1 This paragraph applies to all cargo ships. However, with respect to cargo ships constructed before 1 July 2006, paragraphs 3.2 to 3.5 shall be complied with not later than the first safety equipment survey on or after 1 July 2006.

3.2 An immersion suit complying with the requirements of section 2.3 of the Code shall be provided for every person on board the ship. However, for ships other than bulk carriers, as defined in regulation IX/1, these immersion suits need not be required if the ship is constantly engaged on voyages in warm climates** where, in the opinion of the Administration, immersion suits are unnecessary.

3.3 If a ship has any watch or work stations which are located remotely from the place or places where immersion suits are normally stowed, additional immersion suits shall be provided at these locations for the number of persons normally on watch or working at those locations at any time.

3.4 Immersion suits shall be so placed as to be readily accessible and their position shall be plainly indicated.

3.5 The immersion suits required by this regulation may be used to comply with the requirements of regulation 7.3.”

* Refer to the Recommendation on testing of life-saving appliances, adopted by the Organization by resolution A.689(17). For life-saving appliances installed on board on or after 1 July 1999, refer to the Revised Recommendations on testing of life-saving appliances, adopted by the Organization by resolution MSC.81(70).

** Refer to the Guidelines for assessment of thermal protection (MSC/Circ.1046).

CHAPTER IV RADIOCOMMUNICATIONS

Regulation 15 – Maintenance requirements

8 The existing text of paragraph 9 is replaced by the following:

“9 Satellite EPIRBs shall be:

- .1 annually tested for all aspects of operational efficiency, with special emphasis on checking the emission on operational frequencies, coding and registration, at intervals as specified below:
 - .1 on passenger ships within 3 months before the expiry date of the Passenger Ship Safety Certificate;
 - .2 on cargo ships, within 3 months before the expiry date, or 3 months before or after the anniversary date, of the Cargo Ship Safety Radio certificate;

The test may be conducted on board the ship or at an approved testing station; and

- .2 subject to maintenance at intervals not exceeding five years, to be performed at an approved shore-based maintenance facility.”

APPENDIX CERTIFICATES

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

9 In section 2, item 9 is deleted and items 10, 10.1 and 10.2 are renumbered as items 9, 9.1 and 9.2 respectively.