

8 In paragraph 4.4.7.6, the following new subparagraphs .15 and .16 are inserted after the renumbered subparagraph .14:

".15 a hydrostatic interlock shall be designed for a factor of safety of not less than 6 times maximum operating force based on the ultimate strength of the materials used;

.16 the operating cables shall be designed for a factor of safety of not less than 2.5 times maximum operating force based on the ultimate strength of the materials used; and".

9 In paragraph 4.4.7.6, the existing subparagraph .9 is renumbered as subparagraph .17 and in the renumbered subparagraph .17, the references to paragraphs "4.4.7.6.2.2 and 4.4.7.6.3" are replaced by the references to paragraphs "4.4.7.6.7, 4.4.7.6.8 and 4.4.7.6.15".

10 In paragraph 4.4.7.6, the referenced subparagraph .9 is replaced by .17.

第 19/2015 號行政長官公告

中華人民共和國是國際海事組織的成員國及一九七四年十一月一日訂於倫敦的《國際海上人命安全公約》（下稱“公約”）的締約國；

中華人民共和國於一九九九年十二月十三日以照會通知聯合國秘書長，經修訂的公約自一九九九年十二月二十日起適用於澳門特別行政區；

國際海事組織海上安全委員會於二零一零年五月二十日透過第MSC.287(87)號決議通過了《國際散貨船和油船目標型船舶建造標準》，該標準自二零一二年一月一日起適用於澳門特別行政區；

基於此，行政長官根據澳門特別行政區第3/1999號法律第六條第一款的規定，命令公佈包含上指標準的第MSC.287(87)號決議的中文及英文文本。

二零一五年三月九日發佈。

行政長官 崔世安

Aviso do Chefe do Executivo n.º 19/2015

Considerando que a República Popular da China é um Estado Membro da Organização Marítima Internacional e um Estado Contratante da Convenção Internacional para a Salvaguarda da Vida Humana no Mar, concluída em Londres em 1 de Novembro de 1974, adiante designada por Convenção;

Considerando igualmente que a República Popular da China, por nota datada de 13 de Dezembro de 1999, notificou o Secretário-Geral das Nações Unidas sobre a aplicação da Convenção, tal como emendada, na Região Administrativa Especial de Macau, a partir de 20 de Dezembro de 1999;

Considerando ainda que, em 20 de Maio de 2010, o Comité de Segurança Marítima da Organização Marítima Internacional, através da resolução MSC.287(87), adoptou as Normas de Construção de Navios Baseadas em Objectivos para Graneliros e Petroleiros, e que tais Normas são aplicáveis na Região Administrativa Especial de Macau desde 1 de Janeiro de 2012;

O Chefe do Executivo manda publicar, nos termos do n.º 1 do artigo 6.º da Lei n.º 3/1999 da Região Administrativa Especial de Macau, a resolução MSC.287(87), que contém as referidas Normas, nos seus textos em línguas chinesa e inglesa.

Promulgado em 9 de Março de 2015.

O Chefe do Executivo, *Chui Sai On*.

第 MSC.287 (87) 號決議

2010 年 5 月 20 日通過

通過國際散貨船和油船目標型船舶建造標準

海上安全委員會，

憶及《國際海事組織公約》關於本委員會職能的第二十八條第(二)款，

渴望本組織在決定新船建造的結構標準方面發揮更大作用，

還憶及本組織關於制訂和維持一個安全、保安、高效和無害環境航運全面框架的戰略方針之一是建立目標型新船設計和建造標準，

考慮到為了安全和環境友好，船舶的設計和建造應使其具有明確的設計壽命，從而，如果在規定的營運和環境條件下操作和維護得當，能夠在整個服務壽命期間保持其安全性，

注意到以第 MSC.290 (87) 號決議通過的關於散貨船和油船目標型新船建造標準的經修正的《1974 年國際海上人命安全公約》(下稱“公約”) 第 II-1/2.28 和 II-1/3-10 條，

還注意到上述第 II-1/3-10 條要求其所界定的散貨船和油船滿足與散貨船和油船的目標型船舶建造標準功能要求相符的被認可組織的適用結構要求或主管機關的國家標準，

在其第 87 屆會議上，審議了《國際散貨船和油船目標型船舶建造標準》建議文本，

1. 通過《國際散貨船和油船目標型船舶建造標準》，其正文載於本決議附件中；
2. 請公約締約國政府注意，《國際散貨船和油船目標型船舶建造標準》將於 2012 年 1 月 1 日公約第 II-1/3-10 條生效時生效；
3. 要求秘書長將本決議及載於附件中的《國際散貨船和油船目標型船舶建造標準》文本的核證無誤副本送發所有公約締約國政府；
4. 進一步要求秘書長將本決議及其附件的副本送發非公約締約國政府的本組織會員國。

附件

國際散貨船和油船目標型船舶建造標準

1 序言

1.1 “目標型新船建造標準”的概念，於 2002 年 11 月通過巴哈馬和希臘在理事會第 89 屆會議上的一份提案，在本組織內提出。該提案建議本組織制訂船舶建造標準，這種標準應既鼓勵設計創新又保證船舶的建造方式將使船舶，若維護得當，在其整個經濟壽命裏都是安全的。該標準還必須確保船舶所有構件均易於接近，以做適當檢查並易於維護。理事會將該提案送交 2003 年 5/6 月份的海安會第 77 屆會議審議。

1.2 海安會第 77 屆會議按要求審議了該事項，並建議理事會第 90 屆會議在制訂本組織戰略規劃時進一步審議該事項。委員會還同意在其工作計劃和下一屆會議的議程中納入一個關於“目標型新船建造標準”的新項目。

1.3 理事會第 90 屆會議在審議 2006 至 2011 年間本組織戰略和政策時批准了關於制訂新船設計和建造標準的戰略方針。隨後，在其第 22 屆特別會議上，理事會在本組織戰略方針中納入了一條規定：“海事組織將為新船的設計和建造制訂目標型標準”。

1.4 2003 年 11/12 月，第 23 屆大會在通過關於本組織 2004 至 2010 六年期戰略規劃的第 A.944 (23) 號大會決議時，特別決定，“本組織將為新船的設計和建造制訂目標型標準”。該決定還反映在關於本組織至 2010 年長期工作計劃的第 A.943 (23) 號大會決議中，在該決議中，“目標型新船建造標準”主題被列入一般性主題列表中。

1.5 2004 年 5 月，海安會在其第 78 屆會議上開始了目標型船舶建造標準的制訂工作，會上對所涉及的問題進行了一次全面的一般性辯論，委員會同意採用最初由巴哈馬、希臘和國際船級社協會建議的一個五層次系統，其構成如下：

.1 第 I 層 - 目標

要達到的高層目標。

.2 第 II 層 - 功能要求

為符合這些目標而需滿足的衡準。

.3 第 III 層 - 符合性驗證

驗證船舶設計和建造規範及規定符合目標和功能要求的程序。

.4 第 IV 層 - 船舶設計和建造規範及規定

為符合目標和功能要求，由海事組織、國家主管機關和（或）被認可組織制訂並由國家主管機關和（或）代其行事的被認可組織應用於船舶設計和建造的詳細要求。

.5 第 V 層 - 行業做法和標準

船舶建造、運營、維護、培訓、配員等方面的行業標準、實用規則以及安全和質量體系，可以在船舶的設計和建造規範及規定中納入或引用。

1.6 委員會在其第 81 屆會議上對該問題進行了討論後，同意將其最初審議範圍限制為散貨船和油船，將來再考慮擴大到其他船舶類型和安全領域。

2 範圍

《國際散貨船和油船目標型船舶建造標準》(下稱“標準”)描述了目標並規定了功能要求，根據《安全公約》第 II-1/2.28 和 II-1/3-10 條的定義，主管機關認可的組織的散貨船和油船設計和建造規範或主管機關的國家標準須符合這些目標和功能要求。此外，本標準規定，須驗證上述規範符合目標和功能要求。

3 結構

這些標準由以下三層構成：

第 I 層 - 目標

第 II 層 - 功能要求

第 III 層 - 符合性驗證。

4 第 I 層 - 目標

第 I 層目標由《安全公約》第 II-1/3-10 條所界定，為便於參照，在此列出這些目標如下：

船舶的設計和建造須使其具有明確的設計壽命，如果船舶在規定的營運和環境條件下操作和維護得當，在完整和規定的破損條件下，在其整個服務壽命期間安全和環境友好。

.1 安全和環境友好係指船舶須有足夠的強度、完整性和穩性，以最大限度地減少船舶因結構失效（包括坍塌）導致浸水或喪失水密完整性而發生船舶滅失或海洋環境污染的風險。

.2 環境友好還包括使用可環保回收的材料建造船舶。

- .3 安全還包括船舶的結構、裝置和佈置為安全進出、逃生、檢查和妥善維護做出安排並便於安全操作。
- .4 規定的操作和環境條件被界定為船舶在其整個壽命擬運營的領域，並包括在港口、航道和海上的貨物和壓載作業中出現的各種工況，包括過渡工況。
- .5 規定的設計壽命是指船舶設定的承受運營和（或）環境條件和（或）腐蝕環境的標定期限，用於選擇適當的船舶設計參數。但是，船舶的實際服役壽命取決於船舶在其整個壽命周期的實際運營條件和維護狀況，可能更長或更短。

5 第 II 層 - 功能要求

（適用於無限航區的散貨船和油船）

設計

II.1 設計壽命

規定的設計壽命不得少於 25 年。

II.2 環境條件

船舶須按照北大西洋環境條件和相關的長期海況散佈圖設計。

II.3 結構強度

II.3.1 總體設計

船舶結構部件的設計須適合處所的目的並保證一定程度的結構連續性。船舶結構部件的設計須便於所有擬載運貨物的裝/卸，避免裝/卸設備造成可能危害結構安全的損壞。

II.3.2 變形及失效模式

對結構強度須按過度撓曲和失效模式進行評估，包括但不限於彎曲、屈服和疲勞。

II.3.3 極限強度

船舶須設計成具有充分的極限強度。極限強度計算須包括船體桁材的極限負載和相關板材及扶強材的極限強度，並根據第 II.2 項功能要求的環境條件核驗縱向彎曲力矩。

II.3.4 安全餘度

船舶須設計成具有適當的安全餘度：

- .1 在淨尺寸、完整狀況下，能承受船舶設計壽命中預期的環境條件和與其相應的適當裝載條件，這須包括適用於所屬船級的完全均勻裝載和隔艙裝載、部分裝載、多港航次和壓載航次、以及壓載水管理工況荷載和在裝載/卸載操作的過程中的偶爾超限/超載；以及
- .2 適合所有計算中涉及一定程度不確定性的設計參數，包括荷載、結構模型、疲勞、腐蝕、材料瑕疵、建造工藝誤差、彎曲、剩餘強度和極限強度。

II.4 疲勞壽命

設計疲勞壽命不得低於船舶的設計壽命，並須以第 II.2 項功能要求中的環境條件為依據。

II.5 剩餘強度

船舶須設計為具備充足的強度，能夠在規定的破損條件下（如碰撞、擱淺或進水）承受波浪和內部荷載。剩餘強度計算須考慮到船體桁材的最大儲備能力，包括永久變形和彎曲後特性。須儘實際可行地對這方面的可預見實際情形進行調查。

II.6 防腐保護

須採取措施，確保需要滿足結構強度規定的淨尺寸在整個規定設計壽命期間得以保持。措施包括但不限於塗層、防腐加厚、陰極保護、外加電流系統等。

II.6.1 塗層壽命

塗層須按照生產商關於表面處理、塗料選擇、塗裝和維護的規範加以應用和維護。如果要求應用塗層，須規定塗層的設計壽命。塗層實際壽命，視船舶實際條件和維護，可能會比塗層的設計壽命更長或更短。塗層的選擇須考慮到艙室的預定用途、材料和其他腐蝕防護系統（如陰極保護或其他選擇）的應用情況。

II.6.2 防腐加厚

防腐加厚須增加到淨尺寸上，並須適合規定的設計壽命。確定防腐加厚須取決於其接觸的侵蝕介質，如水、貨物或腐蝕性氣體，或機械磨損以及該結構是否有防腐系統保護（如塗層、陰極保護或其他替代方式）。設計腐蝕速率（毫米/年）須根據服務經歷和（或）加速模型試驗確定的統計信息進行評定。實際腐蝕速率取決於船舶實際條件和維護，可能會比設計腐蝕速率更大或更小。

II.7 結構冗餘

船舶須按冗餘設計和建造，從而任何加強結構部件的局部損壞（例如局部永久性變形、裂縫或脫焊）不會立即導致整個加強板架隨後坍塌。

II.8 水密和風雨密完整性

船舶須針對其擬投入的服務設計成具有充分的水密和風雨密完整性，並且船體開口的相關固定裝置須具有充足的強度和冗餘。

II.9 考慮人為的因素

船舶的結構和裝置須採用工效學原則設計和佈置，以確保在營運、檢查和維護期間的安全。這些考慮須包括但不限於：樓梯、豎梯、坡道、步道和用作檢驗通道的站立平台，工作環境，檢查和維護以及操作便利。

II.10 設計透明度

船舶的設計過程須可靠、受控和透明，具有為確認新完建船舶安全性所必要的開放程度，並充分考慮到知識產權。隨時可用的文件須包括主要的目標型參數和所有可能限制船舶運營的相關設計參數。

建造

II.11 建造質量程序

船舶須按照受控並且透明的質量生產標準建造，並充分考慮到知識產權。船舶建造質量程序須包括但不限於：材料、製造、校直、組裝、組接和焊接程序、表面準備和塗層規範。

II.12 建造期間的檢驗

須考慮到船舶的類型和設計，為船舶的建造階段制訂檢驗規劃。檢驗規劃須含有一系列的要求，包括規定建造檢驗的程度和範圍並確定在檢驗期間需要特別注意的區域，以確保建造符合強制性船舶建造標準。

服役期間的考慮

II.13 檢驗和維護

船舶的設計和建造須使其便於檢驗和維護，特別是避免產生過度受限的空間使檢驗和維護活動不能妥善開展。在船舶整個壽命期間的檢驗過程中需要特別注意的區域，須加以確定。特別是，這須包括在選擇船舶設計參數時認為必要的所有服役期間的檢驗和維護。

II.14 結構可接近性

船舶的設計、建造和舾裝須為所有內部結構提供出入通道，以便於進行總體和近觀檢查及厚度測量。

拆船考慮

II.15 拆船

船舶的設計和建造須使用可環保回收、而不影響船舶安全和營運效率的材料。

6 第 III 層 – 符合性驗證

6.1 主管機關按照《安全公約》第 XI-1/1 條的規定而認可的組織的散貨船和油船設計和建造規範，或按照《安全公約》第 II-1/3-1 條用作等效於被認可組織規範的主管機關國家規範，須根據本組織制訂

的導則，對其符合第 I 層目標和第 II 層功能要求的情況予以驗證。關於符合性驗證的最終決定，須由本組織海上安全委員會做出，海安會須將該決定通知所有締約國政府。

6.2 “驗證”一詞（以及“驗證”一詞的任何其他變化）係指上述散貨船和油船的設計和建造規範已與標準進行比較，並發現與標準中所列目標和功能要求相符或相一致。

6.3 某主管機關或被認可組織的散貨船和油船設計和建造規範，一旦被證明符合標準，則在規範變更時，只要對規範變更的驗證結果未表明不符合，該符合性須被視為仍然有效。除非海上安全委員會另有決定，因符合性驗證而引入的任何規範改變須適用於規範改變生效之日或之後簽訂建造合同的船舶。

RESOLUTION MSC.287(87)
(adopted on 20 May 2010)

**ADOPTION OF THE INTERNATIONAL GOAL-BASED SHIP CONSTRUCTION
STANDARDS FOR BULK CARRIERS AND OIL TANKERS**

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

BEING DESIROUS that the Organization should play a larger role in determining the structural standards to which new ships are built,

RECALLING ALSO that among the strategic directions of the Organization relating to developing and maintaining a comprehensive framework for safe, secure, efficient and environmentally sound shipping is the establishment of goal-based standards for the design and construction of ships,

CONSIDERING that ships should be designed and constructed for a specified design life to be safe and environmentally friendly, so that, if properly operated and maintained under specified operating and environmental conditions, they can remain safe throughout their service life,

NOTING regulations II-1/2.28 and II-1/3-10 of the International Convention for the Safety of Life at Sea (SOLAS), 1974, as amended (hereinafter referred to as "the Convention"), adopted by resolution MSC.290(87), concerning goal-based ship construction standards for bulk carriers and oil tankers,

NOTING ALSO that the aforementioned regulation II-1/3-10 requires that bulk carriers and oil tankers as defined therein satisfy the applicable structural requirements of a recognized organization, or national standards of an Administration, conforming to the functional requirements of the goal-based ship construction standards for bulk carriers and oil tankers,

HAVING CONSIDERED, at its eighty-seventh session, the proposed International Goal-based Ship Construction Standards for Bulk Carriers and Oil Tankers,

1. ADOPTS the International Goal-based Ship Construction Standards for Bulk Carriers and Oil Tankers, the text of which is set out in the Annex to the present resolution;
2. INVITES Contracting Governments to the Convention to note that the International Goal-based Ship Construction Standards for Bulk Carriers and Oil Tankers will take effect on 1 January 2012 upon entry into force of regulation II-1/3-10 of the Convention;
3. REQUESTS the Secretary-General to transmit certified copies of this resolution and the text of the International Goal-based Ship Construction Standards for Bulk Carriers and Oil Tankers, contained in the Annex, to all Contracting Governments to the Convention;
4. FURTHER REQUESTS the Secretary-General to transmit copies of this resolution and the Annex to all Members of the Organization which are not Contracting Governments to the Convention.

ANNEX

INTERNATIONAL GOAL-BASED SHIP CONSTRUCTION STANDARDS
FOR BULK CARRIERS AND OIL TANKERS

1 PREAMBLE

1.1 The notion of "goal-based ship construction standards" was introduced in the Organization at the eighty-ninth session of the Council in November 2002 through a proposal by the Bahamas and Greece, suggesting that the Organization should develop ship construction standards that would permit innovation in design but ensure that ships are constructed in such a manner that, if properly maintained, they remain safe for their entire economic life. The standards would also have to ensure that all parts of a ship can be easily accessed to permit proper inspection and ease of maintenance. The Council referred the proposal to the seventy-seventh meeting of the Maritime Safety Committee (MSC) in May/June 2003 for consideration.

1.2 The MSC, at its seventy-seventh session, considered the matter as requested and recommended that the ninetieth session of the Council should consider it further in the context of the development of the Organization's Strategic Plan. The Committee also agreed to include a new item on "Goal-based new ship construction standards" in its work programme and agenda for its next meeting.

1.3 The ninetieth session of the Council, in considering the strategy and policy of the Organization for the 2006 to 2011 period, approved strategic directions regarding the development of goal-based standards for the design and construction of new ships. Subsequently, at its twenty-second extraordinary session, the Council included in the strategic directions of the Organization a provision that "IMO will establish goal-based standards for the design and construction of new ships".

1.4 The Assembly, at its twenty-third session in November/December 2003, when adopting resolution A.944(23) on the Organization's Strategic plan for the six-year period 2004 to 2010, resolved, *inter alia*, that "the IMO would establish goal-based standards for the design and construction of new ships". This decision was also reflected in resolution A.943(23) on the Long-term work plan of the Organization, up to 2010, where the subject "Goal-based new ship construction standards" was introduced in the list of general subjects.

1.5 The MSC commenced detailed technical work on the development of goal-based ship construction standards at its seventy-eighth session in May 2004, when a comprehensive general debate of the issues involved took place and the Committee agreed to utilize a five-tier system initially proposed by the Bahamas, Greece and IACS, consisting of the following:

- .1 **Tier I – Goals**
High-level objectives to be met.
- .2 **Tier II – Functional requirements**
Criteria to be satisfied in order to conform to the goals.

- .3 ***Tier III – Verification of conformity***
Procedures for verifying that the rules and regulations for ship design and construction conform to the goals and functional requirements.
- .4 ***Tier IV – Rules and regulations for ship design and construction***
Detailed requirements developed by IMO, national Administrations and/or recognized organizations and applied by national Administrations and/or recognized organizations acting on their behalf to the design and construction of a ship in order to conform to the goals and functional requirements.
- .5 ***Tier V – Industry practices and standards***
Industry standards, codes of practice and safety and quality systems for shipbuilding, ship operation, maintenance, training, manning, etc., which may be incorporated into, or referenced in, the rules and regulations for the design and construction of a ship.

1.6 Following deliberation on the subject at its eighty-first session, the Committee agreed to limit the scope of its consideration initially to bulk carriers and oil tankers and consider expansion to other ship types and areas of safety at a later time.

2 SCOPE

The International Goal-based Ship Construction Standards for Bulk Carriers and Oil Tankers (hereinafter referred to as "the Standards") describe the goals and establish the functional requirements that the rules for the design and construction of bulk carriers and oil tankers of an organization recognized by the Administration, or the national rules of an Administration, shall conform to, as defined in SOLAS regulations II-1/2.28 and II-1/3-10. Additionally, the Standards establish that the above mentioned rules shall be verified as conforming to the goals and functional requirements.

3 STRUCTURE

These Standards consist of the following three tiers:

Tier I	–	Goals
Tier II	–	Functional requirements
Tier III	–	Verification of conformity.

4 TIER I – GOALS

The Tier I goals are as defined in SOLAS regulation II-1/3-10 and are reproduced here for ease of reference, as follows:

Ships shall be designed and constructed for a specified design life to be safe and environmentally friendly when properly operated and maintained under the specified operating and environmental conditions, in intact and specified damage conditions, throughout their life.

- .1 *Safe and environmentally friendly* means the ship shall have adequate strength, integrity and stability to minimize the risk of loss of the ship or pollution to the marine environment due to structural failure, including collapse, resulting in flooding or loss of watertight integrity.

- .2 *Environmentally friendly* also includes the ship being constructed of materials for environmentally acceptable recycling.
- .3 *Safety* also includes the ship's structure, fittings and arrangements providing for safe access, escape, inspection and proper maintenance and facilitating safe operation.
- .4 *Specified operating and environmental conditions* are defined by the intended operating area for the ship throughout its life and cover the conditions, including intermediate conditions, arising from cargo and ballast operations in port, waterways and at sea.
- .5 *Specified design life* is the nominal period that the ship is assumed to be exposed to operating and/or environmental conditions and/or the corrosive environment and is used for selecting appropriate ship design parameters. However, the ship's actual service life may be longer or shorter depending on the actual operating conditions and maintenance of the ship throughout its life cycle.

5 TIER II – FUNCTIONAL REQUIREMENTS

(Applicable to bulk carriers and oil tankers in unrestricted navigation)

DESIGN

II.1 Design life

The specified design life shall not be less than 25 years.

II.2 Environmental conditions

Ships shall be designed in accordance with North Atlantic environmental conditions and relevant long-term sea state scatter diagrams.

II.3 Structural strength

II.3.1 General design

The ship's structural members shall be of a design that is compatible with the purpose of the space and ensures a degree of structural continuity. The structural members of ships shall be designed to facilitate load/discharge for all contemplated cargoes to avoid damage by loading/discharging equipment, which may compromise the safety of the structure.

II.3.2 Deformation and failure modes

The structural strength shall be assessed against excessive deflection and failure modes, including but not limited to buckling, yielding and fatigue.

II.3.3 Ultimate strength

Ships shall be designed to have adequate ultimate strength. Ultimate strength calculations shall include ultimate hull girder capacity and related ultimate strength of plates and stiffeners, and be verified for a longitudinal bending moment based on the environmental conditions in functional requirement II.2.

II.3.4 Safety margins

Ships shall be designed with suitable safety margins:

- .1 to withstand, at net scantlings, in the intact condition, the environmental conditions anticipated for the ship's design life and the loading conditions appropriate for them, which shall include full homogeneous and alternate loads, partial loads, multi-port and ballast voyage, and ballast management condition loads and occasional overruns/overloads during loading/unloading operations, as applicable to the class designation; and
- .2 appropriate for all design parameters the calculation of which involves a degree of uncertainty, including loads, structural modelling, fatigue, corrosion, material imperfections, construction workmanship errors, buckling, residual and ultimate strength.

II.4 Fatigue life

The design fatigue life shall not be less than the ship's design life and shall be based on the environmental conditions in functional requirement II.2.

II.5 Residual strength

Ships shall be designed to have sufficient strength to withstand the wave and internal loads in specified damaged conditions such as collision, grounding or flooding. Residual strength calculations shall take into account the ultimate reserve capacity of the hull girder, including permanent deformation and post-buckling behaviour. Actual foreseeable scenarios shall be investigated in this regard as far as is reasonably practicable.

II.6 Protection against corrosion

Measures shall be applied to ensure that net scantlings required to meet structural strength provisions are maintained throughout the specified design life. Measures include, but are not limited to, coatings, corrosion additions, cathodic protection, impressed current systems, etc.

II.6.1 Coating life

Coatings shall be applied and maintained in accordance with manufacturers' specifications concerning surface preparation, coating selection, application and maintenance. Where coating is required to be applied, the design coating life shall be specified. The actual coating life may be longer or shorter than the design coating life, depending on the actual conditions and maintenance of the ship. Coatings shall be selected as a function of the intended use of the compartment, materials and application of other corrosion prevention systems, e.g., cathodic protection or other alternatives.

II.6.2 Corrosion addition

The corrosion addition shall be added to the net scantling and shall be adequate for the specified design life. The corrosion addition shall be determined on the basis of exposure to corrosive agents such as water, cargo or corrosive atmosphere, or mechanical wear, and whether the structure is protected by corrosion prevention systems, e.g., coating, cathodic protection or by alternative means. The design corrosion rates (mm/year) shall be evaluated in accordance with statistical information established from service experience and/or accelerated model tests. The actual corrosion rate may be greater or smaller than the design corrosion rate, depending on the actual conditions and maintenance of the ship.

II.7 Structural redundancy

Ships shall be of redundant design and construction so that localized damage (such as local permanent deformation, cracking or weld failure) of any stiffening structural member will not lead to immediate consequential collapse of the complete stiffened panel.

II.8 Watertight and weathertight integrity

Ships shall be designed to have adequate watertight and weathertight integrity for the intended service of the ship and adequate strength and redundancy of the associated securing devices of hull openings.

II.9 Human element considerations

Ship's structures and fittings shall be designed and arranged using ergonomic principles to ensure safety during operations, inspection and maintenance. These considerations shall include, but not be limited to, stairs, vertical ladders, ramps, walkways and standing platforms used for means of access, the work environment, inspection and maintenance and the facilitation of operation.

II.10 Design transparency

Ships shall be designed under a reliable, controlled and transparent process made accessible to the extent necessary to confirm the safety of the new as-built ship, with due consideration to intellectual property rights. Readily available documentation shall include the main goal-based parameters and all relevant design parameters that may limit the operation of the ship.

CONSTRUCTION

II.11 Construction quality procedures

Ships shall be built in accordance with controlled and transparent quality production standards with due regard to intellectual property rights. The ship construction quality procedures shall include, but not be limited to, specifications for material, manufacturing, alignment, assembling, joining and welding procedures, surface preparation and coating.

II.12 Survey during construction

A survey plan shall be developed for the construction phase of the ship, taking into account the ship type and design. The survey plan shall contain a set of requirements, including specifying the extent and scope of the construction survey(s) and identifying areas that need special attention during the survey(s), to ensure compliance of construction with mandatory ship construction standards.

IN-SERVICE CONSIDERATIONS

II.13 Survey and maintenance

Ships shall be designed and constructed to facilitate ease of survey and maintenance, in particular avoiding the creation of spaces too confined to allow for adequate survey and maintenance activities. Areas shall be identified that need special attention during surveys throughout the ship's life. In particular, this shall include all necessary in-service survey and maintenance that was assumed when selecting ship design parameters.

II.14 Structural accessibility

The ship shall be designed, constructed and equipped to provide adequate means of access to all internal structures to facilitate overall and close-up inspections and thickness measurements.

RECYCLING CONSIDERATIONS**II.15 Recycling**

Ships shall be designed and constructed of materials for environmentally acceptable recycling without compromising the safety and operational efficiency of the ship.

6 TIER III – VERIFICATION OF CONFORMITY

6.1 The rules for the design and construction of bulk carriers and oil tankers of an organization which is recognized by an Administration in accordance with the provisions of SOLAS regulation XI-1/1, or national rules of an Administration used as an equivalent to the rules of a recognized organization according to SOLAS regulation II-1/3-1, shall be verified as conforming to the Tier I goals and Tier II functional requirements, based on the guidelines developed by the Organization. The final decision on verification of conformity shall be taken by the Maritime Safety Committee of the Organization which shall inform all Contracting Governments of the decision.

6.2 The term "verification" (and any variation of the word "verify") means that the rules for the design and construction of bulk carriers and oil tankers as described above have been compared to the Standards and have been found to be in conformity with or are consistent with the goals and functional requirements as set out in the Standards.

6.3 Once the rules for the design and construction of bulk carriers and oil tankers of an Administration or recognized organization have been verified as being in conformity with the Standards, this conformity shall be considered to remain in effect for rule changes, provided that no verification of rule changes has resulted in a non-conformity. Unless the Maritime Safety Committee decides otherwise, any rule changes introduced as a result of verification of conformity shall apply to ships for which the building contract is placed on or after the date on which the rule change enters into force.

第 20/2015 號行政長官公告

中華人民共和國於一九九九年十二月十三日以照會通知聯合國秘書長，經修訂的《1974年國際海上人命安全公約》自一九九九年十二月二十日起適用於澳門特別行政區；

國際海事組織海上安全委員會於二零一零年五月二十一日透過第MSC.293(87)號決議通過了《國際救生設備規則》（《救生設備規則》）修正案，該修正案自二零一二年一月一日起適用於澳門特別行政區；

基於此，行政長官根據澳門特別行政區第3/1999號法律第六條第一款的規定，命令公佈包含上指修正案的MSC.293(87)號決議的中文及英文文本。

二零一五年三月九日發佈。

行政長官 崔世安

Aviso do Chefe do Executivo n.º 20/2015

Considerando que a República Popular da China, por nota datada de 13 de Dezembro de 1999, notificou o Secretário-Geral das Nações Unidas sobre a aplicação da Convenção Internacional para a Salvaguarda da Vida Humana no Mar de 1974, tal como emendada, na Região Administrativa Especial de Macau a partir de 20 de Dezembro de 1999;

Considerando igualmente que, em 21 de Maio de 2010, o Comité de Segurança Marítima da Organização Marítima Internacional, através da resolução MSC.293(87), adoptou emendas ao Código Internacional dos Meios de Salvação (Código LSA), e que tais emendas são aplicáveis na Região Administrativa Especial de Macau desde 1 de Janeiro de 2012;

O Chefe do Executivo manda publicar, nos termos do n.º 1 do artigo 6.º da Lei n.º 3/1999 da Região Administrativa Especial de Macau, a resolução MSC.293(87), que contém as referidas emendas, nos seus textos em línguas chinesa e inglesa.

Promulgado em 9 de Março de 2015.

O Chefe do Executivo, *Chui Sai On*.