RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

RULES

Part C Hull Construction and Equipment

2007 AMENDMENT NO.3

Rule No.48 27th September 2007

Resolved by Technical Committee on 2nd July 2007

Approved by Board of Directors on 24th July 2007

Rule No.48 27th September 2007
AMENDMENT TO THE RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

"Rules for the survey and construction of steel ships" has been partly amended as follows:

Part C HULL CONSTRUCTION AND EQUIPMENT

Amendment 3-1

Chapter 18 SUPERSTRUCTURES

18.3 Closing Means for Access Openings in Superstructure End Bulkheads

18.3.1 Closing Means for Access Openings

Sub-paragraph -2(1) has been amended as follows.

1 The doors to be provided on the access openings in the end bulkheads of enclosed superstructures are to be in accordance with the requirements in **(1)** through **(5)**:

(1) The doors are to be made of steel or other equivalent materials and to be permanently and rigidly fitted up to the bulkheads.

(2) The doors are to be rigidly constructed, to be of equivalent strength to that of intact bulkhead and to be weathertight when closed.

(3) The means for securing weathertightness are to consist of gaskets and clamping devices or other equivalent devices and to be permanently fitted up to the bulkhead or the door itself.

(4) The doors are to be operated from both sides of the bulkheads.

(5) Hinged doors are, as a rule, to open outward.

2

(1) The height of sills of access openings specified in **-1** is not to be less than 380 *mm* above the upper surface of the deck. For sills protecting access openings to spaces below the freeboard deck, the height is to comply with the provisions of **20.4.2**. However, ~~except where~~ higher sills may be required when deemed necessary by the Society.

(2) In principle, portable sills are not permitted.

Chapter 20 HATCHWAYS, MACHINERY SPACE OPENINGS AND OTHER DECK OPENINGS

20.4 Companionways and Other Deck Openings

20.4.2 Companionways

Sub-paragraphs -4 to -6 have been amended as follows.

1 Access openings in the freeboard deck are to be protected by enclosed superstructures, or by deckhouses or companionways of equivalent strength and weathertightness.

2 Access openings in exposed superstructure decks or in the top of deckhouses on the freeboard deck which give access to a space below the freeboard deck or a space within an enclosed superstructure are to be protected by efficient deckhouses or companionways.

3 Doorways in deckhouse or companionways such as specified in **-1** and **-2** are to be provided with doors complying with the requirements in **18.3.1-1**.

4 The sills of doorways in companionways specified in **-1** to **-3** are not to be less than 600 *mm* in height above the upper surface of the deck in Position I and 380 *mm* in Position II.

5 For deckhouses or superstructures which protect access openings to spaces below the freeboard deck ~~Where access is not provided from above~~, the height of ~~the~~ sills ~~to~~of doorways in deckhouses on the freeboard deck are not to be less than 600 *mm*. However, where access is provided from the deck above as an alternative to access from the freeboard deck, the height of sills into a bridge or poop or deckhouses may be reduced to 380 *mm*.

6 Where the ~~closing appliances of~~ access openings in superstructures and deckhouses ~~are not~~ which protect access openings to spaces below the freeboard deck do not have closing appliances in accordance with the requirements of **18.3.1-1**, ~~interior deck openings~~ the openings to spaces below the freeboard deck are to be considered exposed.

Chapter 23 BULWARKS, GUARDRAILS, FREEING ARRANGEMENTS, CARGO PORTS AND OTHER SIMILAR OPENINGS, SIDE SCUTTLES, RECTANGULAR WINDOWS, VENTILATORS AND GANGWAYS

23.4 Side Shell Doors and Stern Doors

23.4.2 Arrangement of Doors

Sub-paragraph -3 has been amended as follows.

1 Doors are to be made weathertight.

2 Where the lower edges of any openings of the doors are situated below the freeboard deck, the doors are to be watertight.

3 Notwithstanding the requirements in **-2**, the lower edges of the doors are not to be below a line drawn parallel to the freeboard deck at side, which has at its lowest point at least 230 *mm* above the upper edge of the uppermost load line~~ in any case~~, unless the implementation of additional measures for ensuring watertightness such as the following **(1)** to **(4)**.

(1) A second door of equivalent strength and watertightness is to be fitted inside the watertight door

(2) A leakage detection device is provided in the compartment between the two doors

(3) Drainage of this compartment to the bilges is controlled by a readily accessible screw-down valve

(4) The outer door opens outwards

4 The number of door openings is to be kept to the minimum compatible with design and proper operation of the ship.

5 Doors are in principle to open outwards.

EFFECTIVE DATE AND APPLICATION (Amendment 3-1)

1. The effective date of the amendments is 1 October 2007.

2. Notwithstanding the amendments to the Rules, the current requirements may apply to ships for which the date of contract for construction* is before the effective date.
*"contract for construction" is defined in IACS Procedural Requirement (PR) No.29 (Rev.4).

IACS PR No.29 (Rev.4)

1. The date of "contract for construction" of a vessel is the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. This date and the construction numbers (i.e. hull numbers) of all the vessels included in the contract are to be declared to the classification society by the party applying for the assignment of class to a newbuilding.

2. The date of "contract for construction" of a series of vessels, including specified optional vessels for which the option is ultimately exercised, is the date on which the contract to build the series is signed between the prospective owner and the shipbuilder.
For the purpose of this Procedural Requirement, vessels built under a single contract for construction are considered a "series of vessels" if they are built to the same approved plans for classification purposes. However, vessels within a series may have design alterations from the original design provided:
(1) such alterations do not affect matters related to classification, or
(2) If the alterations are subject to classification requirements, these alterations are to comply with the classification requirements in effect on the date on which the alterations are contracted between the prospective owner and the shipbuilder or, in the absence of the alteration contract, comply with the classification requirements in effect on the date on which the alterations are submitted to the Society for approval.
The optional vessels will be considered part of the same series of vessels if the option is exercised not later than 1 year after the contract to build the series was signed.

3. If a contract for construction is later amended to include additional vessels or additional options, the date of "contract for construction" for such vessels is the date on which the amendment to the contract, is signed between the prospective owner and the shipbuilder. The amendment to the contract is to be considered as a "new contract" to which **1.** and **2.** above apply.

4. If a contract for construction is amended to change the ship type, the date of "contract for construction" of this modified vessel, or vessels, is the date on which revised contract or new contract is signed between the Owner, or Owners, and the shipbuilder.

Notes:
1. This Procedural Requirement applies to all IACS Members and Associates.
2. This Procedural Requirement is effective for ships "contracted for construction" on or after 1 January 2005.
3. Revision 2 of this Procedural Requirement is effective for ships "contracted for construction" on or after 1 April 2006.
4. Revision 3 of this Procedural Requirement was approved on 5 January 2007 with immediate effect.
5. Revision 4 of this Procedural Requirement was adopted on 21 June 2007 with immediate effect.

Amendment 3-2

Chapter 28 has been amended as follows.

Chapter 28 （Deleted）

EFFECTIVE DATE AND APPLICATION (Amendment 3-2)

1. The effective date of the amendments is 1 March 2008.

2. Notwithstanding the amendments to the Rules, the current requirements may apply to ships for which the date of contract for construction* is before the effective date.
*"contract for construction" is defined in IACS Procedural Requirement(PR) No.29 (Rev.4).

IACS PR No.29 (Rev.4)

1. The date of "contract for construction" of a vessel is the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. This date and the construction numbers (i.e. hull numbers) of all the vessels included in the contract are to be declared to the classification society by the party applying for the assignment of class to a newbuilding.

2. The date of "contract for construction" of a series of vessels, including specified optional vessels for which the option is ultimately exercised, is the date on which the contract to build the series is signed between the prospective owner and the shipbuilder.
For the purpose of this Procedural Requirement, vessels built under a single contract for construction are considered a "series of vessels" if they are built to the same approved plans for classification purposes. However, vessels within a series may have design alterations from the original design provided:
(1) such alterations do not affect matters related to classification, or
(2) If the alterations are subject to classification requirements, these alterations are to comply with the classification requirements in effect on the date on which the alterations are contracted between the prospective owner and the shipbuilder or, in the absence of the alteration contract, comply with the classification requirements in effect on the date on which the alterations are submitted to the Society for approval.
The optional vessels will be considered part of the same series of vessels if the option is exercised not later than 1 year after the contract to build the series was signed.

3. If a contract for construction is later amended to include additional vessels or additional options, the date of "contract for construction" for such vessels is the date on which the amendment to the contract, is signed between the prospective owner and the shipbuilder. The amendment to the contract is to be considered as a "new contract" to which **1.** and **2.** above apply.

4. If a contract for construction is amended to change the ship type, the date of "contract for construction" of this modified vessel, or vessels, is the date on which revised contract or new contract is signed between the Owner, or Owners, and the shipbuilder.

Notes:
1. This Procedural Requirement applies to all IACS Members and Associates.
2. This Procedural Requirement is effective for ships "contracted for construction" on or after 1 January 2005.
3. Revision 2 of this Procedural Requirement is effective for ships "contracted for construction" on or after 1 April 2006.
4. Revision 3 of this Procedural Requirement was approved on 5 January 2007 with immediate effect.
5. Revision 4 of this Procedural Requirement was adopted on 21 June 2007 with immediate effect.

GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

GUIDANCE

Part C Hull Construction and Equipment

2007 AMENDMENT NO.3

Notice No.51 27th September 2007

Resolved by Technical Committee on 2nd July 2007

Notice No.51 27th September 2007
AMENDMENT TO THE GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

"Guidance for the survey and construction of steel ships" has been partly amended as follows:

Part C HULL CONSTRUCTION AND EQUIPMENT

Amendment 3-1

C1 GENERAL

C1.1.23 Structural Details

Sub-paragraph -1 has been amended as follows.

1 In applying the requirements in **1.1.23-4**, **Part C** of the Rules, fatigue strength assessment of longitudinals for tankers and bulk carriers is to be in accordance with the following items **(1)** and **(2)**.

(1) The fatigue strength assessment of the parts of ships 150 *m* or more in length L_1, except those parts where longitudinals penetrate such structural members as transverse bulkheads, swash bulkheads or floors constraining athwartship or vertical displacements of longitudinals, is to be carried out in accordance with the **Annex C1.1.23-1** "**GUIDANCE FOR THE FATIGUE STRENGTH ASSESSMENT OF LONGITUDINALS**". L_1 is ship length specified in **15.2.1-1. Part C** of the Rules.

(2) The fatigue strength assessment of parts where longitudinals penetrate such structural members as transverse bulkheads, swash bulkheads or floors constraining athwartship or vertical displacements of longitudinals is to be in accordance with the following **(a)** and **(b)**.

(a) For ships 150 *m* or more in length L_1, where the scantlings of the longitudinals comply with the requirements in **(1)** mentioned above and soft brackets enough considered to have sufficient fatigue strength are arranged on both sides of the bulkheads, etc., the fatigue assessment thereof may be dispensed with.

(b) For ships intended to register where class notation "PS-FA" is marked appended to the classification character, a fatigue assessment is to be carried out for the structural parts where longitudinals penetrate transverse bulkhead, etc., in accordance with the **Annex C1.1.23-1** "**GUIDANCE FOR THE FATIGUE STRENGTH ASSESSMENT OF LONGITUDINALS**".

EFFECTIVE DATE AND APPLICATION (Amendment 3-1)

1. The effective date of the amendments is 1 April 2006.

2. Notwithstanding the amendments to the Guidance, the current requirements may apply to ships for which the date of contract for construction* is before the effective date.
*"contract for construction" is defined in IACS Procedural Requirement (PR) No.29 (Rev.4).

IACS PR No.29 (Rev.4)

1. The date of "contract for construction" of a vessel is the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. This date and the construction numbers (i.e. hull numbers) of all the vessels included in the contract are to be declared to the classification society by the party applying for the assignment of class to a newbuilding.

2. The date of "contract for construction" of a series of vessels, including specified optional vessels for which the option is ultimately exercised, is the date on which the contract to build the series is signed between the prospective owner and the shipbuilder.
For the purpose of this Procedural Requirement, vessels built under a single contract for construction are considered a "series of vessels" if they are built to the same approved plans for classification purposes. However, vessels within a series may have design alterations from the original design provided:
(1) such alterations do not affect matters related to classification, or
(2) If the alterations are subject to classification requirements, these alterations are to comply with the classification requirements in effect on the date on which the alterations are contracted between the prospective owner and the shipbuilder or, in the absence of the alteration contract, comply with the classification requirements in effect on the date on which the alterations are submitted to the Society for approval.
The optional vessels will be considered part of the same series of vessels if the option is exercised not later than 1 year after the contract to build the series was signed.

3. If a contract for construction is later amended to include additional vessels or additional options, the date of "contract for construction" for such vessels is the date on which the amendment to the contract, is signed between the prospective owner and the shipbuilder. The amendment to the contract is to be considered as a "new contract" to which **1.** and **2.** above apply.

4. If a contract for construction is amended to change the ship type, the date of "contract for construction" of this modified vessel, or vessels, is the date on which revised contract or new contract is signed between the Owner, or Owners, and the shipbuilder.

Notes:
1. This Procedural Requirement applies to all IACS Members and Associates.
2. This Procedural Requirement is effective for ships "contracted for construction" on or after 1 January 2005.
3. Revision 2 of this Procedural Requirement is effective for ships "contracted for construction" on or after 1 April 2006.
4. Revision 3 of this Procedural Requirement was approved on 5 January 2007 with immediate effect.
5. Revision 4 of this Procedural Requirement was adopted on 21 June 2007 with immediate effect.

Amendment 3-2

C1 GENERAL

C1.1 General

C1.1.3 Ships of Unusual Form or Proportions, or Intended for Carriage of Special Cargoes

Sub-paragraph -2 has been amended as follows.

2 Ships with Unusual Large Freeboards

(1) "Ships with unusual large freeboards" are the ships having their freeboards which comply with following formula.

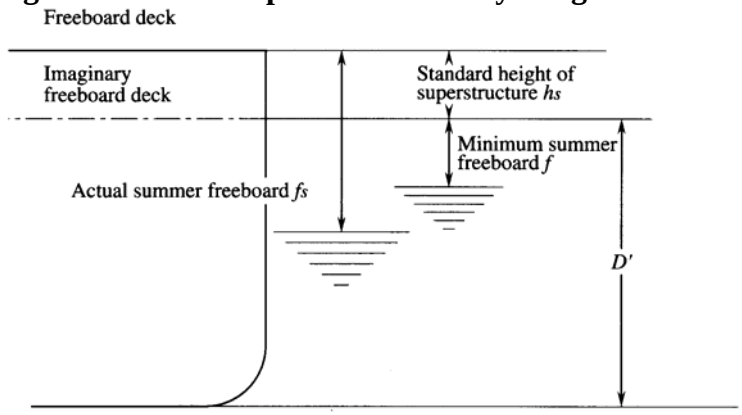
$f_s \geq h_s + f$

f_s : Actual summer freeboard assigned by the requirements in **V2.2.1** (*mm*)

h_s : Standard height of superstructure determined by the requirements in **V2.2.1** (*mm*)

f : Minimum summer freeboard determined by the requirements in **Part V of the Rules** on basis of an assumed freeboard deck which is measured down from the actual freeboard deck by h_s (*mm*)

Fig. C1.1.3-2 Ships with Unusually Large Freeboard



(2) Ships with unusual large freeboards may be treated as follows in case that the requirements in **Part C of the Rules** apply. However, undermentioned treatment is not to apply to the ships whose assigned freeboards are "*B*-60" or "*B*-100" type specified in **Part V of the Rules**.

(a) In the provision of "*h*" specified in **5.5.2, Part C of the Rules**, "*D*" may replace with "*D'*" which is the vertical distance from the top of keel to an assumed freeboard deck.

(b) The requirements in **7.6.2-2, Part C of the Rules** may apply to tween deck frames above an assumed freeboard deck even if they are located below actual freeboard deck.

(c) In the provision of "*h*" specified in **10.2.1-2, Part C of the Rules**, a weather deck may be regarded as follows in accordance with H_D which is the vertical distance from an assumed freeboard deck to the weather deck at side. In other Chapter, **Part**

C of the Rules, this deck load "*h*" may be treated in the same manner.

$h_s \leq H_D < 2h_s$: Superstructure deck of first tier above an assumed freeboard deck

$2h_s \leq H_D < 3h_s$: Superstructure deck of second tier above an assumed freeboard deck

$3h_s \leq H_D$: Superstructure deck of third tier above an imaginary freeboard deck

(d) The requirements in **C16.1.5-2** may apply to side shell platings above an assumed freeboard deck. In applying "freeboard deck" and "superstructure side platings" are regarded as "an assumed freeboard deck" and "side shell platings" respectively.

(e) **Chapter 18, Part C of the Rules**

The interpretation of **(c)** above may be applied to the provision of "*h*" specified~~The requirements~~ in **18.2.1-1, Part C of the Rules**~~ may apply correspondingly to preceding **(c)**~~.

(f) The requirements in **19.2.1-1, Part C of the Rules** may apply correspondingly to preceding **(c)**.

(g) **Chapter 20, Part C of the Rules**

i) In determination of "Position of Exposed Deck Openings" in **20.1.2, Part C** of the Rules, exposed deck may be treated in the same manner of preceding **(c)** and similarly treated in the provisions in other Chapter, **Part C** and **Part D of the Rules** apply.

ii) In case that the requirements in **Table C20.3** Note(*3), **Part C of the Rules** apply, "freeboard deck" may read as "assumed freeboard deck".

(h) **Chapter 23, Part C of the Rules**

The requirements in **23.1**, **23.2** and **23.5, Part C of the Rules** may apply to side scuttles and rectangular windows above an assumed freeboard deck, regarding "freeboard deck" in place of "an assumed freeboard deck" and determining the deck in the same manner as the provisions of **(c)** above. However, side scuttles for spaces below the actual freeboard deck or spaces considered buoyancy in stability calculations, are to be class *A* side scuttles, class *B* side scuttles or equivalent thereto. In such cases, omission of deadlight is in no case to be granted.

(i) Piping Systems, **Chapter 13, Part D of the Rules**

D' may be used in place of *D* in determining the diameters of bilge suction pipes.

C13 WATERTIGHT BULKHEADS

C13.3 Watertight Doors

Paragraph C13.3.3 has been amended as follows.

C13.3.3 Strength and Watertightness

1 The term of "where deemed necessary by the Society" in **13.3.3-1, Part C** of the Rules means cases other than those specified in the following **(1)** to **(3)**:

(1) Prototype of such doors has been tested by design water pressure.

(2) Design of such doors has been verified to have enough strength and watertightness by direct structural analysis. Where watertight doors utilize gasket seals, a prototype pressure test to confirm that the compression of the gasket material is capable of accommodating any deflection, revealed by the structural analysis, is to be carried out.

(3) Such doors are complying with a standard deemed appropriate by the Society.

2 Hydrostatic tests specified in **13.3.3-1, Part C of the Rules** are to be carried out as follows:

(1) The head of water used for the hydrostatic test is to correspond at least to the head measured from the lower edge of the door opening, at the location in which the door is to be fitted in the ship, to the bulkhead deck. However, for ships subject to **4.3.1, Part C of the Rules**, the head is not to be less than the height of the final damage waterline or the intermediate waterline, whichever is larger.

(2) The acceptable leakage rate at the test is not to be greater than the following values.

(a) Doors with gaskets: No leakage

(b) Doors with metallic sealing: 1 *l/min*

(3) Notwithstanding **(2)** above, the following leakage rate may be accepted for hydrostatic tests on large doors located in cargo spaces employing gasket seals or guillotine doors located in conveyor tunnels.

(a) For doors of design head exceeding 6.10 *m*:

$$\frac{(P + 4.572) \cdot h^3}{6568} \quad (l/min)$$

P : Perimeter of door opening (*m*)

h : Test head of water (*m*)

(b) For doors with a design head not exceeding 6.10 *m*, the acceptable leakage rate is the value calculated by the formula specified in **(a)** above or 0.375 *l/min*, whichever is the greater.

C15 LONGITUDINAL STRENGTH

C15.2 Bending Strength

C15.2.1 Bending Strength at the Midship Part

Sub-paragraph -1(8) has been added as follows.

1 With respect to the provisions of **15.2.1, Part C of the Rules**, calculation of the longitudinal bending moment in still water is to be as follows:

(1) (Omitted)

(2) (Omitted)

(3) (Omitted)

(4) Where ballast conditions in the actual loading plans (including intermediate conditions specified in **1.3.1-2** and **-3 in Annex C34.1.2**) involve partially filled ballast tanks, such conditions where such ballast tanks are assumed to be empty and full are to be added to the calculation sheets for longitudinal strength specified in **(2)** above. Where two or more ballast tanks are in partially filled condition at the same time at departure, arrival or during intermediate conditions specified in **1.3.1-2** and **-3 in Annex C34.1.2**, full combinations of these ballast tanks assumed to be empty and full are to be considered.

(5) In cargo loaded conditions, the requirements of **(4)** above are to apply to the peak tanks only.

(6) For large wing ballast tanks of ore carriers as defined in **1.3.1(13)(b), Part B of the Rules**, an examination for partially filled ballast tanks specified in **(4)** above, may be according to the followings.

(a) Where full ballast water filling levels or empty of one or two pairs of these tanks lead to the ship's trim exceeding one of the following conditions, it may be sufficient to demonstrate compliance with maximum, minimum and intended partial filling levels of these one or two pairs of ballast tanks such that the ship's condition does not exceed any of these trim limits.

i) Trim by stern of 3% of the ship's length (L_1)

ii) Trim by bow of 1.5% of ship's length (L_1)

iii) Any trim that cannot maintain propeller immersion (I/D) not less than 25%, where;

I = the distance from propeller centerline to the waterline

D = propeller diameter

(b) Where two or more pairs of ballast tanks are intended to be partially filled, for the application of the provisions of **(a)** above, filling levels of all wing ballast tanks other than any one pairs of ballast tanks filling level of which determined by the trim limitation are to be considered between empty and full.

(c) For the application of the provisions of **(a)** above, the maximum and minimum filling levels of the above mentioned pairs of side ballast tanks are to be indicated in the loading manual specified in **34.2.1, Part C of the Rules**.

(7) (Omitted)

(8) For the application of the provisions of **(4)** to **(6)** above, reference is to be made to **ANNEX C15.2.1**.

C18 SUPERSTRUCTURES

Section C18.2 has been added as follows.

C18.2 Superstructure End Bulkheads

C18.2.4 End Bulkheads of Raised Quarterdecks

The fore end intact bulkheads of raised quarterdecks specified in **18.2.4-1, Part C of the Rules** may be provided with side scuttles of the non-opening type fitted with deadlights specified in **23.5, Part C of the Rules** and manholes with bolted covers.

C18.3 Closing Means for Access Openings in Superstructure End Bulkheads

C18.3.1 Closing Means for Access Openings

Sub-paragraph (3) has been added as follows.

Where the sill of access opening is liable to make hindrance to the passage of heavy spare parts, etc., removable sill may be used subject to approval by the Society under the following conditions.

(1) Portable sills are to be installed before the ship leaves port.

(2) Portable sills are to be gasketed and fastened by closely spaced through bolts.

(3) Whenever the sills are replaced after removal, the weathertightness of the sills and relevant doors is to be verified by hose testing. The dates of removal, replacement and hose testing are to be recorded in the ship's log-book.

C20 HATCHWAYS, MACHINERY SPACE OPENINGS AND OTHER DECK OPENINGS

C20.2 Hatchways

Paragraph C20.2.7 has been added as follows.

C20.2.7 Tarpaulins and Securing Arrangements for Hatchways Closed by Portable Covers

Equivalent means referred to in **20.2.7-5, Part C of the Rules** are to comply with the following.

(1) Such means are to consist of materials which will provide strength equivalent to, and elasticity not greater than that of steel. Steel wire ropes cannot be regarded as satisfactorily equivalent means.

(2) Adequate measures are to be taken so that tarpaulins are protected from damage arising from the use of securing devices which do not provide a flat bearing surface.

C23 BULWARKS, GUARDRAILS, FREEING ARRANGEMENTS, CARGO PORTS AND OTHER SIMILAR OPENINGS, SIDE SCUTTLES, RECTANGULAR WINDOWS, VENTILATORS AND GANGWAYS

C23.5 Side Scuttles and Rectangular Windows

Paragraph C23.5.1 has been amended as follows.

C23.5.1 General Application

1 With respect to the provisions of **23.5, Part C of the Rules**, side scuttles with round or oval openings having areas exceeding 0.16 m^2 are to be treated as windows.

2 With respect to the provisions of **23.5.1-2, Part C of the Rules**, windows on a navigation bridge within the third tiers above the freeboard deck, which is granted to be of rectangular window in accordance with the provisions of **23.5.6, Part C of the Rules**, may be of rectangular window other than those of Class *E* or Class *F* subject to the following **(1)** and **(2)**:

(1) the navigation bridge is to be separated from spaces below the freeboard deck and spaces within enclosed superstructures by the followings:

(a) weathertight closing devices; or

(b) two or more cabin bulkheads or doors. In such case, the height of sills of the doorway to the navigation bridge are not to be less than those required for closing devices at the position of such doorway.

(2) the design pressure of such windows is not to be less than the value specified in **23.5.8, Part C of the Rules** and construction of frames, etc. for such windows is to be in conformity to those required for the Class *E* or Class *F* rectangular window corresponding to the position of such windows and to have appropriate weathertightness.

3 For the application of the requirements of deadlights in **23.5, Part C of the Rules**, deckhouse on the deck of a superstructure of less than standard height specified in **V2.2.1-1** but not less than the standard quarterdeck height specified in **V2.2.1-1** may be regarded as being on the second tier of the freeboard deck.

C23.6 Ventilator

Paragraph C23.6.5 has been added as follows.

C23.6.5 Closing Appliances

Closing appliances required in **23.6.5, Part C of the Rules** are to be of steel or other equivalent materials.

Annex C15.2.1 has been added as follows.

Annex C15.2.1 GUIDELINE FOR THE ASSESSMENT OF HULL GIRDER STRENGTH RELATING TO BALLSTING/DEBALLASTING

1.1 General

1.1.1 Application

This Annex provides general guidelines for the determination of loading conditions to be considered in the application of **Chapter 15 of the Rules**, for ships intended to be operated with partially filled ballast tanks and ships in which any ballasting and/or deballasting of ballast tanks is intended during voyages.

1.1.2 General Rules

1 Where a ballast tank(s) is filled partially during the voyage, it is presumed that the hull girder bending moment will exceed the designed hull girder bending moment in still water due to difficulties on precise control of the tank level and unexpected stress will act on the hull structures. Therefore, ships intending to operate with partially filled ballast tanks are required to comply with the requirements of hull girder strength even when filled to a level differing from the designed tank level.

2 For ships intending to ballast/deballast during the voyage, it is presumed that unexpected stress will act on hull structures according to the time when the ballasting/deballasting is conducted. Therefore, such ships are required either to be designed so as to comply with the requirements of hull girder strength even when the ballasting/deballasting operation is conducted at anytime during the voyage or the allowable times for the ballasting/deballasting operation are to be specified.

3 Not withstanding the provisions above, when the ship is loaded with cargo, the requirements specified in **-1** and **-2** may apply to the peak tanks only.

1.2 Guidelines for the Assessment of Hull Girder Strength

1.2.1 Loading Conditions to be Considered

1 Ships intending to operate with partially filled ballast tanks are required to be designed so as to comply with the requirements of hull girder strength specified in **Chapter 15, Part C of the Rules**, when the ballast tanks are full and when they are empty. For this purpose, compliance with the hull girder strength requirements of **Chapter 15, Part C of the Rules** is to be assessed for conditions just before and just after such ballasting/deballasting operation is conducted, for the partially filled condition, as well as when such ballast tanks are assumed empty or full. (Refer to **C15.2.1(4)**.)

2 Notwithstanding the provisions of **-1** above, for ore carriers defined in **1.3.1(13)(b), Part B of the Rules**, tank levels of “empty and full” referred to in **-1** above may be modified according to **C15.2.1(6)**.

3 For ships intending to ballast/deballast during the voyage, loading conditions corresponding to all steps of the ballasting/deballasting operation are to be included in the ships’ loading manuals as intermediate conditions which are part of the standard loading conditions. For this purpose, “step” is a condition just before and just after a ballasting/deballasting operation for

each tank. Such intermediate conditions are to be assessed in compliance with the requirements of **Chapter 15, Part C of the Rules**. (Refer to **1.3.1-2 of Annex C34.1.2** and **C15.2.1(4)**)

4 Notwithstanding the provisions of **-3**, if comprehensive assessment on hull girder longitudinal strength is conducted so as to obtain operational flexibility regarding when ballasting/deballasting operations are made during the voyage, the intermediate conditions specified in **-3** above may be reduced or omitted appropriately.

5 In the application of the provisions in **-3** and **-4**, ships that have had their hull girder strength assessed on the condition that the times when ballasting/deballasting operations may be conducted are specified or limited, are to have the time parameters for ballasting/deballasting complying with the strength criteria and appropriate instructions regarding ballasting/deballasting based on these time parameters included in the loading manual.

6 Examples of relationships between loading conditions specified in the ships' loading manuals and those for the assessment of hull girder strength are given as the following **(1)** to **(4)**.

(1) Where no ballast tank is partially filled

For example, when loading conditions as shown in **(a)** are deemed as standard loading conditions, additional conditions are not required to be assessed.

(a) Loading conditions specified in the ship's loading manual
- i) Departure (Consumables: 100%, No.6 WBT(P/S): 0%)
- ii) Intermediate condition 1 (Consumables: 50%, No.6 WBT(P/S): 0%)
- iii) Intermediate condition 2 (Consumables: 50%, No.6 WBT(P/S): 100%)
- iv) Arrival (Consumables: 10%, No.6 WBT(P/S): 100%)

(2) Where ballasting/deballasting operations are permitted anytime during the voyage

For example, when loading conditions as shown in **(a)** are deemed standard loading conditions, additional conditions such as in **(b)** are required to be assessed.

(a) Loading conditions specified in the ship's loading manual
- i) Departure (Consumables: 100%, No.6 WBT(P/S): 0%)
- ii) Intermediate condition 1 (Consumables: 50%, No.6 WBT(P/S): 0%)
- iii) Intermediate condition 2 (Consumables: 50%, No.6 WBT(P/S): 60%)
- iv) Intermediate condition 3 (Consumables: 20%, No.6 WBT(P/S): 60%)
- v) Intermediate condition 4 (Consumables: 20%, No.6 WBT(P/S): 100%)
- vi) Arrival (Consumables: 10%, No.6 WBT(P/S): 100%)

(b) Additional loading conditions for the assessment of hull girder strength are to be as follows. Conditions **ii)** and **iii)** may be guaranteed by the assessment of conditions **i)** and **iv)** respectively, however it should be determined on a case by case basis.
- i) Departure (Consumables: 100%, No.6 WBT(P/S): 100%)
- ii) Intermediate condition 1/2 (Consumables: 50%, No.6 WBT(P/S): 100%)
- iii) Intermediate condition 3/4 (Consumables: 20%, No.6 WBT(P/S): 0%)
- iv) Arrival (Consumables: 10%, No.6 WBT(P/S): 0%)

(3) Where ballasting/deballasting operations are permitted only at certain times during the voyage

For example, when loading conditions as shown in **(a)** are deemed as standard loading conditions and ballasting/deballasting operations are assumed to be made when remaining consumables reach levels of 50% and 20%, additional conditions such as in **(b)** are required to be assessed. It is to be noted in the ship's loading manual that the timing for ballasting/deballasting is assumed to take place when the remaining consumables are at 50% and 20% for the purpose of complying with the hull girder strength requirements and for ballasting/deballasting at other times, the hull girder strength of the ship is to be assessed while carefully noting the filling level of the ballast tanks .

(a) Loading conditions specified in the ship's loading manual
   i) Departure (Consumables: 100%, No.6 WBT(P/S): 0%)
   ii) Intermediate condition 1 (Consumables: 50%, No.6 WBT(P/S): 0%)
   iii) Intermediate condition 2 (Consumables: 50%, No.6 WBT(P/S): 60%)
   iv) Intermediate condition 3 (Consumables: 20%, No.6 WBT(P/S): 60%)
   v) Intermediate condition 4 (Consumables: 20%, No.6 WBT(P/S): 100%)
   vi) Arrival (Consumables: 10%, No.6 WBT(P/S): 100%)

(b) Additional loading conditions for the assessment of hull girder strength are to be as follows.
   i) Intermediate condition 1/2 (Consumables: 50%, No.6 WBT(P/S): 100%)
   ii) Intermediate condition 3/4 (Consumables: 20%, No.6 WBT(P/S): 0%)

(4) Where an ore carrier conducts ballasting/deballasting operations on 2 pairs of ballast tanks only at certain times during the voyage

For example, when loading conditions as shown in **(a)** are deemed standard loading conditions and ballasting/deballasting operations are assumed to be made when remaining consumables reach levels of 50% and 20%, additional conditions such as in **(b)** are required to be assessed. It is to be noted in the ship's loading manual that the timing for ballasting/deballasting is assumed to take place when the remaining consumables are at 50% and 20% for the purpose of complying with the hull girder strength requirements and for ballasting/deballasting at other times the hull girder strength of the ship is to be assessed while carefully noting the filling level of the ballast tanks.

(a) Loading conditions specified in the ship's loading manual
   i) Departure (Consumables: 100%, No.1 WBT(P/S): 60%, No.5 WBT(P/S): 30%)
   ii) Intermediate condition 1 (Consumables: 50%, No.1 WBT(P/S): 60%, No.5 WBT(P/S): 30%)
   iii) Intermediate condition 2 (Consumables: 50%, No.1 WBT(P/S): 30%, No.5 WBT(P/S): 50%)
   iv) Intermediate condition 3 (Consumables: 20%, No.1 WBT(P/S): 30%, No.5 WBT(P/S): 50%)
   v) Intermediate condition 4 (Consumables: 20%, No.1 WBT(P/S): 10%, No.5 WBT(P/S): 70%)
   vi) Arrival (Consumables: 10%, No.1 WBT(P/S): 10%, No.5 WBT(P/S): 70%)

(b) Additional loading conditions for the assessment of hull girder strength are to be as follows. "Max." and "Min." in the following conditions refer to the maximum and minimum filling levels specified in **C15.2.1(6)**.
   i) Departure (Consumables: 100%, No.1 WBT(P/S): 60%, No.5 WBT(P/S): 30%)
      1) Consumables: 100%, No.1 WBT(P/S): 60%, No.5 WBT(P/S): Max.
      2) Consumables: 100%, No.1 WBT(P/S): 60%, No.5 WBT(P/S): Min.
      3) Consumables: 100%, No.1 WBT(P/S): 100%, No.5 WBT(P/S): Max.
      4) Consumables: 100%, No.1 WBT(P/S): 100%, No.5 WBT(P/S): Min.
      5) Consumables: 100%, No.1 WBT(P/S): 0%, No.5 WBT(P/S): Max.
      6) Consumables: 100%, No.1 WBT(P/S): 0%, No.5 WBT(P/S): Min.
      7) Consumables: 100%, No.1 WBT(P/S): Max., No.5 WBT(P/S): 30%
      8) Consumables: 100%, No.1 WBT(P/S): Min., No.5 WBT(P/S): 30%
      9) Consumables: 100%, No.1 WBT(P/S): Max., No.5 WBT(P/S): 100%
      10) Consumables: 100%, No.1 WBT(P/S): Min., No.5 WBT(P/S): 100%
      11) Consumables: 100%, No.1 WBT(P/S): Max., No.5 WBT(P/S): 0%
      12) Consumables: 100%, No.1 WBT(P/S): Min., No.5 WBT(P/S): 0%

ii) Intermediate condition 1 (Consumables: 50%, No.1 WBT(P/S): 60%, No.5 WBT(P/S): 30%)
    1) Consumables: 50%, No.1 WBT(P/S): 60%, No.5 WBT(P/S): Max.
    2) Consumables: 50%, No.1 WBT(P/S): 60%, No.5 WBT(P/S): Min.
    3) Consumables: 50%, No.1 WBT(P/S): 100%, No.5 WBT(P/S): Max.
    4) Consumables: 50%, No.1 WBT(P/S): 100%, No.5 WBT(P/S): Min.
    5) Consumables: 50%, No.1 WBT(P/S): 0%, No.5 WBT(P/S): Max.
    6) Consumables: 50%, No.1 WBT(P/S): 0%, No.5 WBT(P/S): Min.
    7) Consumables: 50%, No.1 WBT(P/S): Max., No.5 WBT(P/S): 30%
    8) Consumables: 50%, No.1 WBT(P/S): Min., No.5 WBT(P/S): 30%
    9) Consumables: 50%, No.1 WBT(P/S): Max., No.5 WBT(P/S): 100%
    10) Consumables: 50%, No.1 WBT(P/S): Min., No.5 WBT(P/S): 100%
    11) Consumables: 50%, No.1 WBT(P/S): Max., No.5 WBT(P/S): 0%
    12) Consumables: 50%, No.1 WBT(P/S): Min., No.5 WBT(P/S): 0%
iii) Intermediate condition 2 (Consumables: 50%, No.1 WBT(P/S): 30%, No.5 WBT(P/S): 50%)
    1) Consumables: 50%, No.1 WBT(P/S): 30%, No.5 WBT(P/S): Max.
    2) Consumables: 50%, No.1 WBT(P/S): 30%, No.5 WBT(P/S): Min.
    3) Consumables: 50%, No.1 WBT(P/S): Max., No.5 WBT(P/S): 50%
    4) Consumables: 50%, No.1 WBT(P/S): Min., No.5 WBT(P/S): 50%
iv) Intermediate condition 3 (Consumables: 20%, No.1 WBT(P/S): 30%, No.5 WBT(P/S): 50%)
    1) Consumables: 20%, No.1 WBT(P/S): 30%, No.5 WBT(P/S): Max.
    2) Consumables: 20%, No.1 WBT(P/S): 30%, No.5 WBT(P/S): Min.
    3) Consumables: 20%, No.1 WBT(P/S): 100%, No.5 WBT(P/S): Max.
    4) Consumables: 20%, No.1 WBT(P/S): 100%, No.5 WBT(P/S): Min.
    5) Consumables: 20%, No.1 WBT(P/S): 0%, No.5 WBT(P/S): Max.
    6) Consumables: 20%, No.1 WBT(P/S): 0%, No.5 WBT(P/S): Min.
    7) Consumables: 20%, No.1 WBT(P/S): Max., No.5 WBT(P/S): 50%
    8) Consumables: 20%, No.1 WBT(P/S): Min., No.5 WBT(P/S): 50%
    9) Consumables: 20%, No.1 WBT(P/S): Max., No.5 WBT(P/S): 100%
    10) Consumables: 20%, No.1 WBT(P/S): Min., No.5 WBT(P/S): 100%
    11) Consumables: 20%, No.1 WBT(P/S): Max., No.5 WBT(P/S): 0%
    12) Consumables: 20%, No.1 WBT(P/S): Min., No.5 WBT(P/S): 0%
v) Intermediate condition 4 (Consumables: 20%, No.1 WBT(P/S): 10%, No.5 WBT(P/S): 70%)
    1) Consumables: 20%, No.1 WBT(P/S): 10%, No.5 WBT(P/S): Max.
    2) Consumables: 20%, No.1 WBT(P/S): 10%, No.5 WBT(P/S): Min.
    3) Consumables: 20%, No.1 WBT(P/S): Max., No.5 WBT(P/S): 70%
    4) Consumables: 20%, No.1 WBT(P/S): Min., No.5 WBT(P/S): 70%
vi) Arrival (Consumables: 10%, No.1 WBT(P/S): 10%, No.5 WBT(P/S): 70%)
    1) Consumables: 10%, No.1 WBT(P/S): 10%, No.5 WBT(P/S): Max.
    2) Consumables: 10%, No.1 WBT(P/S): 10%, No.5 WBT(P/S): Min.
    3) Consumables: 10%, No.1 WBT(P/S): 100%, No.5 WBT(P/S): Max.
    4) Consumables: 10%, No.1 WBT(P/S): 100%, No.5 WBT(P/S): Min.
    5) Consumables: 10%, No.1 WBT(P/S): 0%, No.5 WBT(P/S): Max.
    6) Consumables: 10%, No.1 WBT(P/S): 0%, No.5 WBT(P/S): Min.
    7) Consumables: 10%, No.1 WBT(P/S): Max., No.5 WBT(P/S): 70%
    8) Consumables: 10%, No.1 WBT(P/S): Min., No.5 WBT(P/S): 70%

9) Consumables: 10%, No.1 WBT(P/S): Max., No.5 WBT(P/S): 100%
10) Consumables: 10%, No.1 WBT(P/S): Min., No.5 WBT(P/S): 100%
11) Consumables: 10%, No.1 WBT(P/S): Max., No.5 WBT(P/S): 0%
12) Consumables: 10%, No.1 WBT(P/S): Min., No.5 WBT(P/S): 0%

Annex C34.1.2 GUIDANCE FOR PREPARATION OF LOADING MANUAL

1.3 Standard Loading Conditions

1.3.1 Standard Loading Conditions

Sub-paragraph -2 has been amended as follows.

2 Where any ballasting and/or deballasting is intended during voyage in the standard loading conditions, conditions just before and just after ballasting and/or deballasting any ballast tanks are to be included in the standard loading conditions specified in **-1** above, as intermediate conditions between departure conditions and arrival conditions. In general, such intermediate conditions are to be set up along to ballasting and/or deballasting of each ballast tank. For determining intermediate conditions and notes to be mentioned in the ships' loading manuals, reference is to be made to **Annex C15.2.1**.

EFFECTIVE DATE AND APPLICATION (Amendment 3-2)

1. The effective date of the amendments is 1 October 2007.

2. Notwithstanding the amendments to the Guidance, the current requirements may apply to ships for which the date of contract for construction* is before the effective date.
*"contract for construction" is defined in IACS Procedural Requirement (PR) No.29 (Rev.4).

IACS PR No.29 (Rev.4)

1. The date of "contract for construction" of a vessel is the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. This date and the construction numbers (i.e. hull numbers) of all the vessels included in the contract are to be declared to the classification society by the party applying for the assignment of class to a newbuilding.

2. The date of "contract for construction" of a series of vessels, including specified optional vessels for which the option is ultimately exercised, is the date on which the contract to build the series is signed between the prospective owner and the shipbuilder.
For the purpose of this Procedural Requirement, vessels built under a single contract for construction are considered a "series of vessels" if they are built to the same approved plans for classification purposes. However, vessels within a series may have design alterations from the original design provided:
(1) such alterations do not affect matters related to classification, or
(2) If the alterations are subject to classification requirements, these alterations are to comply with the classification requirements in effect on the date on which the alterations are contracted between the prospective owner and the shipbuilder or, in the absence of the alteration contract, comply with the classification requirements in effect on the date on which the alterations are submitted to the Society for approval.
The optional vessels will be considered part of the same series of vessels if the option is exercised not later than 1 year after the contract to build the series was signed.

3. If a contract for construction is later amended to include additional vessels or additional options, the date of "contract for construction" for such vessels is the date on which the amendment to the contract, is signed between the prospective owner and the shipbuilder. The amendment to the contract is to be considered as a "new contract" to which **1.** and **2.** above apply.

4. If a contract for construction is amended to change the ship type, the date of "contract for construction" of this modified vessel, or vessels, is the date on which revised contract or new contract is signed between the Owner, or Owners, and the shipbuilder.

Notes:
1. This Procedural Requirement applies to all IACS Members and Associates.
2. This Procedural Requirement is effective for ships "contracted for construction" on or after 1 January 2005.
3. Revision 2 of this Procedural Requirement is effective for ships "contracted for construction" on or after 1 April 2006.
4. Revision 3 of this Procedural Requirement was approved on 5 January 2007 with immediate effect.
5. Revision 4 of this Procedural Requirement was adopted on 21 June 2007 with immediate effect.

Amendment 3-3

C31B ADDITIONAL REQUIREMENTS FOR EXISTING BULK CARRIERS

C31B.2 Damage Stability

C31B.2.1 Survivability

Sub-paragraph -2(3) has been amended as follows.

2 "The measures as deemed by the Society" as referred to in **31B2.1-2**, **Part C** of the Rules, are specified in the followings:

(1) (Omitted)

(2) (Omitted)

(3) The ship is provided with detailed information on specific cargo hold flooding scenarios. This information is accompanied by detailed instructions on evacuation preparedness and is used as the basis for crew training and drills. The information is to be prepared in accordance with the following **(a)** to **(c)**.

(a) The information is to include at least the following:

i) Specific cargo hold flooding scenarios (see (b) below)

ii) Instructions for evacuation preparedness

iii) Details of the ship's means for leakage detection

(b) Specific cargo hold flooding scenarios

i) Flooding scenarios of the ship when loaded down to the summer load line are to be developed, detailing the order of events from when flooding is detected to evacuation from the ship (*e.g.* progressive flooding to other holds or immersion of the deck). The scope covered is to include at least the following loading conditions.

1) Homogenous loading condition

2) Alternate hold loading condition, if applicable

3) Packaged cargo condition, if applicable

ii) Where an above mentioned loading condition complies with the requirements of **31B.2.1-1, Part C of the Rules**, the flooding scenario for that condition does not need to be prepared provided that the compliance with the requirements is noted in the information.

iii) Where the ship is able to satisfy the requirements of **31B.2.1-1, Part C of the Rules** at a draught lower than the summer load line, guidance to counter measures for hold flooding is to be given with allowable *KG/GM* curves for complying with the requirements of **31B.2.1-1, Part C of the Rules**, for the following loading conditions.

1) Homogenous loading condition

2) Alternate hold loading condition with high density cargo in the foremost cargo hold, if applicable

3) Packaged cargo condition, if applicable

4) Empty condition

iv) The results are to clearly indicate the reasons for non-compliance with the survival criteria given in **31B.2.1-2, Part C of the Rules** and explain the

implications regarding the need to abandon ship: *e.g.* immersion of a weathertight closing appliance may indicate that there is no immediate danger of foundering if the stability characteristics are otherwise satisfactory, the bulkhead strength is adequate, the weather conditions are favourable and bilge pumping can cope with any progressive flooding.

v) When making hold flooding calculations for the flooding scenarios, the following assumptions are to apply.

1) The flooding of the foremost cargo hold is to be used as the starting point for any respective flooding scenario. Subsequent flooding of other spaces can only occur due to progressive flooding through relevant openings.

2) The permeability of a loaded hold is to be determined in accordance with **C31A.2.2**. However, when deemed appropriate by the Society, other permeability values may be assumed for particular cargoes and the remaining empty volume of the hold is assumed to have a permeability of 0.95. The permeability of a hold loaded with packaged cargo is to be assumed as 0.7.

(c) Guidance for evacuation

It should be noted that responsibility for the preparation of detailed information rests with the operator of the ship. With regard to preparation for evacuation, the following guidance is provided as a most general guide.

i) In the event that severe flooding is detected, preparations for abandoning the ship should be envisaged in accordance with the applicable rules and procedures, such as *SOLAS* Chapter III, *STCW* and the *ISM* Code.

ii) Severe weather conditions may have substantial influence on the rate of flooding decreasing the time remaining to abandon the ship beyond that estimated in any pre-assessed flooding scenario.

(4) (Omitted)

(5) (Omitted)

EFFECTIVE DATE AND APPLICATION (Amendment 3-3)

1. The effective date of the amendments is 1 October 2007.

2. Notwithstanding the amendments to the Guidance, the current requirements may apply to the surveys related to 1.1.7-1, Part B of the Rules for which the application is submitted to the Society before the effective date.

Amendment 3-4

Chapter C28 has been amended as follows.

C28（Deleted）

C31B ADDITIONAL REQUIREMENTS FOR EXISTING BULK CARRIERS

Paragraph C31B.1.1 has been amended as follows.

C31B.1.1 Application

1 "Bulk Carriers defined in **1.3.1(13), Part B of the Rules** with single side skin construction" stipulated in **31B.1.1-1, Part C of the Rules**, mean bulk carriers defined in **1.3.1(13), Part B of the Rules** having single side skin construction in the foremost cargo hold. In this case, double side skin construction is to be recognized as single side skin construction if the distance between side shell to extent between the bottom of top-side tank and the top of bilge hopper tank in cargo holds and longitudinal watertight bulkhead of double side skin construction is less than 760 *mm*. The distance between side shell and longitudinal watertight bulkhead is to be measured perpendicular to the side shell.

2 Where Bulk Carriers are reinforced to comply with an ice class notation in accordance with the requirements in ~~Chapter 28, Part C~~**Chapter 5, Part I of the Rules**, the intermediate frames are not included in "cargo hold frames" as referred to in **31B.1.1-2, Part C of the Rules**.

Paragraph C31B.5.2 has been amended as follows.

C31B.5.2 Steel Renewal Criteria and Reinforcing Measures

1 If the ice class notation in accordance with the requirements in ~~Chapter 28, Part C~~**Chapter 5, Part I of the Rules** is requested to be withdrawn, the additional ice strengthening structure, with the exception of tripping brackets which have already complied with the requirements of **31B.5.2-5, Part C of the Rules**, is not to be considered to contribute to compliance with **31B.5, Part C of the Rules**.

EFFECTIVE DATE AND APPLICATION (Amendment 3-4)

1. The effective date of the amendments is 1 March 2008.

2. Notwithstanding the amendments to the Guidance, the current requirements may apply to ships for which the date of contract for construction* is before the effective date.
*"contract for construction" is defined in IACS Procedural Requirement(PR) No.29 (Rev.4).

IACS PR No.29 (Rev.4)

1. The date of "contract for construction" of a vessel is the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. This date and the construction numbers (i.e. hull numbers) of all the vessels included in the contract are to be declared to the classification society by the party applying for the assignment of class to a newbuilding.

2. The date of "contract for construction" of a series of vessels, including specified optional vessels for which the option is ultimately exercised, is the date on which the contract to build the series is signed between the prospective owner and the shipbuilder.
For the purpose of this Procedural Requirement, vessels built under a single contract for construction are considered a "series of vessels" if they are built to the same approved plans for classification purposes. However, vessels within a series may have design alterations from the original design provided:
(1) such alterations do not affect matters related to classification, or
(2) If the alterations are subject to classification requirements, these alterations are to comply with the classification requirements in effect on the date on which the alterations are contracted between the prospective owner and the shipbuilder or, in the absence of the alteration contract, comply with the classification requirements in effect on the date on which the alterations are submitted to the Society for approval.
The optional vessels will be considered part of the same series of vessels if the option is exercised not later than 1 year after the contract to build the series was signed.

3. If a contract for construction is later amended to include additional vessels or additional options, the date of "contract for construction" for such vessels is the date on which the amendment to the contract, is signed between the prospective owner and the shipbuilder. The amendment to the contract is to be considered as a "new contract" to which **1.** and **2.** above apply.

4. If a contract for construction is amended to change the ship type, the date of "contract for construction" of this modified vessel, or vessels, is the date on which revised contract or new contract is signed between the Owner, or Owners, and the shipbuilder.

Notes:
1. This Procedural Requirement applies to all IACS Members and Associates.
2. This Procedural Requirement is effective for ships "contracted for construction" on or after 1 January 2005.
3. Revision 2 of this Procedural Requirement is effective for ships "contracted for construction" on or after 1 April 2006.
4. Revision 3 of this Procedural Requirement was approved on 5 January 2007 with immediate effect.
5. Revision 4 of this Procedural Requirement was adopted on 21 June 2007 with immediate effect.