



**GUIDANCE CHANGE NOTICE No.3**

**Part 1 Seagoing Ships**

# **GUIDANCE FOR CODE AND CONVENTION INTERPRETATIONS**

**Volume Y**

**April 2023**

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## Foreword

This Guidance Change Notices (GCN) No. 3 provide amendment and corrigenda to the “Guidance for Code and Convention Interpretations (Pt. 1, Vol. Y), 2022 Consolidated edition” along with effective date from which these change are applicable. This Guidance also as a reference to all BKI regulations in Part 1 – Seagoing Ship.

Amendments to the preceding Edition are marked by strikethrough, red color, and expanded text. These new additions and amendments are to be read in conjunction with the requirements given in the Consolidated 2022 edition of the Guidance.

The summary of current amendments for each section including the implementation date are indicated in ***Table 1 - Amendments Incorporates in This Notice***.

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Further queries or comments concerning this Guidance are welcomed through communication to BKI Head Office.

## Guidance Changes Notice No. 3 – April 2023

**Table 1 – Amendments Incorporates in This Notice**

These amendments will come into force in accordance with the date which stated in the notes in each Sub-Section.

Paragraph	Title/Subject	To Status/Remark
<b>Section 1 – Chemical Code</b>		
CC 6.	Lining approved for use with acids	To be added a requirement for the elasticity of the lining
<b>Section 3 – Fire Test Procedure</b>		
FTP 2.	Pipe and duct penetrations	To be deleted
FTP 4.	Fire resistant windows on tankers	To be added refer to the current testing of windows, fire dampers, pipe penetrations and cable transits contained in the Appendix of the FTP Code (MSC.307(88))
FTP 5.	Testing and approval of “A” class divisions – fastening of insulation material and details of joints	To be added references of paragraphs 1.6 and 7.5.1 of IMO Resolution A.754(18) and paragraphs 1.12 and 7.6.1 of 2010 FTP Code, Annex 1, Part 3, Appendix 1
<b>Section 6 – High Speed Craft Code</b>		
HSC 8.	Protection of load bearing structures	To be added a reference to the related IMO circular, MSC.1/Circ.1457
<b>Section 7 – Load Line Convention</b>		
LL 16.	Sheer	To updated the footnote to clarifies that this unified interpretation is only applicable for ships built in accordance with the 1966 International Convention on Load Lines or the original 1988 Protocol. It is not applicable to the 1988 Protocol as amended by resolution MSC.143(77)
LL 61.	Method of correction for the effect of free surface of liquids in tanks (Regulation 10(2), UR L3 and UI LL45)	To be deleted
<b>Section 9 – MARPOL Convention</b>		
MPC 14.	Annex VI of MARPOL 73/78	To update the UI to take account of IMO Resolutions MEPC.324(75) and MEPC.328(76).
<b>Section 11 – SOLAS Convention</b>		
SC 32.	Fixed high expansion foam fire-extinguishing system	To be deleted
SC 60.	Fixed deck foam systems	To be deleted
SC 120.	Paints, varnishes and other finishes	To include the reference to paragraph 3.2.3 and 3.2.4 of IGC Code (Resolution MSC.5(48) as amended by resolution MSC.30(61))
SC 121.	Fire Pump Isolation Requirements	To be edited to provide a more clear understanding of the text.
SC 127.	Access to fore-castle spaces on tankers	To be added the text of the SOLAS regulation as amended by resolution MSC.57(67)
SC 138.	Safe Access to Tanker Bows	To be referred to UI LL50 Rev.2 1997, which is not the latest version.
SC 155.	Lightweight check in lieu of inclining test	To be deleted
SC 198.	Sections in local application fire extinguishing systems	To be added the text of SOLAS II-2/10.5.6.3 which amended by resolution MSC.338(91)

Paragraph	Title/Subject	To Status/Remark
SC 217.	Nozzles installation for fixed water based local application fire-fighting systems for use in category A machinery spaces (MSC/Circ 913)	To be added a note indicating that despite the fact that MSC.1/Circ.1387 generally supersedes MSC/Circ.913, the latter remains valid for the approval of new fixed water based local application fire-fighting systems previously tested in accordance with MSC/Circ.913.
SC 245.	Suction and discharge piping of emergency fire pumps, which are run through the machinery space	To be added minor text to improve the technical understanding of the existing text
SC 250.	Fire-Extinguishing Arrangements in Cargo Spaces IMSBC Code, as amended)	To be added amendment made to the IMSBC Code by resolution MSC.462(101)
SC 254.	Fall Preventer Devices (MSC.1/Circ.1392 and Circ.1327)	To be deleted
SC 297.	Amendment to stability/loading information in conjunction with the alterations of lightweight	To add a new UI to clarify which documents needed to be updated following a change in the lightweight particulars.
SC 298.	Interpretations of various Performance Standards related to GMDSS radio installations	To add a new UI that clarifies the phrase “installed on or after 1 January 2024” used in various IMO Performance standards, related to GMDSS radio installation, adopted at MSC 105 to supplement the amendments to SOLAS IV, as adopted by resolution MSC.469(105)

## Section 1 Chemical Code

### CC 6. Lining approved for use with acids

(Apr 2011)

(Rev.1 Aug 2022)

**Interpretation of paragraph 15.11 Acids of the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code)**

**Paragraph 15.11 Acids reads as follows:**

*15.11.2 Proposals for lining steel tanks and related piping systems with corrosion-resistant materials may be considered by the Administration. The elasticity of the lining shall not be less than that of the supporting boundary plating.*

#### Interpretation

"Lining" is an acid-resistant material that is applied to the tank or piping system in a solid state **i.e. not spray on** ~~with a defined elasticity property.~~

**The requirement for the elasticity of a lining to be not less than the supporting boundary plating is to prevent debonding at the interface between the lining and the lined surface.**

#### Note:

1. *This Unified Interpretation is to be uniformly implemented by IACS Societies to ships contracted for construction on/after 1 January 2012.*
2. *The "contracted for construction" date means the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. For further details regarding the date of "contract for construction", refer to IACS Procedural Requirement (PR) No. 29.*
3. ***Rev.1 of this UI is to be uniformly implemented by IACS Societies on ships contracted for construction on or after 1 January 2023.***

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## Section 3 Fire Test Procedure

### FTP 2. Pipe and duct penetrations

(June 2000)

(Del Oct 2022)

This UI is deleted in October 2022.

~~{para. 5.1 of Res A.754}~~

~~In cases where a test specimen (deck) which includes the prototype penetration(s) is not mounted within a rigid restraint frame but is connected to the furnace roof by side wall coamings, the rigidity of the coamings is to be equivalent to that of a restraint frame and evaluated in accordance with Section 5.1 of A.754(18).~~

~~In cases where insulation is fitted to the test pipe(s), the distance(s) of 500 ±50 mm required in A.III/2.2.3 of A.754 to which the pipe should project is to be taken from the end of the insulation as this is considered an integral part of the penetration(s) being tested and it is necessary that a length of unprotected pipe is exposed to the furnace.~~

~~In all cases, the support and fixing of the test pipe(s) is to be by a framework mounted from the restraint frame such that any movement of the bulkhead or deck relative to the pipe(s) will be experienced by the penetration(s) being tested.~~

**Note:**

~~This UI FTP 2 is to be uniformly implemented by IACS Members and Associates from 1 January 2001.~~

-----end-----

### FTP 4. Fire resistant windows on tankers ~~(Appendix A.I to resolution A.754(18))~~

(Sep 2005)

(Rev.1 Aug 2006)

(Rev.2 Nov 2022)

#### Regulation

~~Paragraph 2.2 of Appendix A.I to resolution A.754(18) reads:~~

#### Interpretation of 2010 FTP Code (MSC.307(88))

**Annex 1, Part 3 – Test for “A”, “B” and “F” Class Divisions, Appendix 2- Testing of windows, fire dampers, pipe and duct penetrations and cable transits, Paragraph 2.2 reads as follows:**

#### **A.1 Windows**

#### **2.2 Design**

**2.2.1** *The bulkhead which includes the window ~~should~~ shall be insulated to class “A-60” on the stiffened face, which ~~should~~ shall be the face exposed to the heating conditions of the test. This is considered to be most typical of the use of windows on board ships, ~~not necessarily being the worst way around~~. There may be special applications of windows where the Administration considers it appropriate to test the window with the insulation of the bulkhead to the unexposed face of the structural core, **such as the window on front bulkhead of the tanker**, or within bulkheads other than class “A-60”.*

~~The window should be positioned within the bulkhead, shown in figure 1 of the resolution, at that height which is intended for practical application. When this is not known, the window should be positioned with the top of its frame as close as possible, but not closer than 300 mm, to the top of the bulkhead.~~

### Interpretation

Windows to be fitted at the forward bulkhead of accommodation block on tankers shall correspond to prototype subject to the “A” class standard fire test with the fire against its external side (i.e. the side which, after the installation on board, will be exposed to the weather). The insulation of the bulkhead used along with the window’s specimen shall be fitted on the unexposed face of the structural core.

(MSC.1/Circ.1203)

#### Note:

1. This UI is editorially amended to refer to MSC.1/Circ.1203.
2. Rev.2 of FTP4 is to be uniformly implemented by IACS Societies for approvals granted on or after 1 July 2023.

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## FTP 5. Testing and approval of “A” class divisions – fastening of insulation material and details of joints ~~(IMO Res. A.754(18) / IMO FTP Code Part 3)~~

(June 2010)

(Corr.1 Sep 2022)

### Regulation

~~IMO Res. A.754(18) item 1.6 / IMO FTP Code Part 3 Appendix 1 item 1.12 reads:~~

~~“The construction to be tested should be, as far as possible, representative of that to be used on board ships, including the materials and method of assembly”.~~

~~IMO Res. A.754(18) item 7.5.1 / IMO FTP Code Part 3 Appendix 1 item 7.6.1 reads:~~

~~“Thermocouples shall be placed over all types of joints, both vertical and horizontal, and also at intersections between the joints”.~~

**Interpretation of paragraphs 1.6 and 7.5.1 of IMO Resolution A.754(18) and paragraphs 1.12 and 7.6.1 of 2010 FTP Code, Annex 1, Part 3, Appendix 1**

**Paragraph 1.6 of IMO Resolution A.754(18) reads as follows:**

*The construction to be tested should be, as far as possible, representative of that to be used on board ships, including the materials and method of assembly.*

**Paragraph 1.12 of 2010 FTP Code, Annex 1, Part 3, Appendix 1 reads as follows:**

*The construction to be tested shall be, as far as possible, representative of that to be used on board ships, including the materials and method of assembly.*

**Paragraph 7.6.1 of 2010 FTP Code, Annex 1, Part 3, Appendix 1 reads as follows:**

*The surface temperatures on the unexposed face of the test specimen shall be measured by thermocouples located as shown in figures 7 and 8:*

- .1 five thermocouples, one at the centre of the test specimen and one at the centre of each of the four quarters, all positioned at least 100 mm away from the nearest part of any joints and/or at least 100 mm away from the welds to any stiffeners;*
- .2 two thermocouples, one placed over each of the central stiffeners and for a bulkhead at 0.75 height of the specimen and for a deck at mid-length of the deck;*
- .3 two thermocouples, each placed over a vertical (longitudinal) joint, if any, in the insulation system and positioned for a bulkhead at 0.75 height of the specimen and for a deck at mid-length of the deck;*
- .4 when a construction has two differently orientated joint details, for example normal to each other, then two thermocouples additional to those already described in paragraph 7.6.1.3 above shall be used, one on each of two intersections;*
- .5 when a construction has two different types of joint detail, then two thermocouples shall be used for each type of joint;*
- .6 additional thermocouples, at the discretion of the testing laboratory or Administration, may be fixed over special features or specific construction details if it is considered that temperatures higher than those measured by the thermocouples listed above may result; and*
- .7 the thermocouples specified in subparagraphs .4 to .6 above for measurements on bulkheads, e.g., over different joint types or over joint intersections, shall, where possible, be positioned in the upper half of the specimen.*

**Paragraph 7.5.1 of IMO Resolution A.754(18) reads as follows:**

*The surface temperatures on the unexposed face of the test specimen should be measured by thermocouples located as shown in figures 7 and 8:*

- .1 five thermocouples, one at the centre of the test specimen and one at the centre of each of the four quarters, all positioned at least 100 mm away from the nearest part of any joints and/or at least 100 mm away from the welds to any stiffeners;*
- .2 two thermocouples, one placed over each of the central stiffeners and for a bulkhead at 0.75 height of the specimen and for a deck at mid-length of the deck;*
- .3 two thermocouples, each placed over a vertical (longitudinal) joint, if any, in the insulation system and positioned for a bulkhead at 0.75 height of the specimen and for a deck at mid-length of the deck;*
- .4 when a construction has two differently orientated joint details, for example normal to each other, then two thermocouples additional to those already described in 7.5.1.3 above should be used, one on each of two intersections;*
- .5 when a construction has two different types of joint detail, then two thermocouples shall be used for each type of joint;*
- .6 additional thermocouples, at the discretion of the testing laboratory or Administration, may be fixed over special features or specific construction*



*details if it is considered that temperatures higher than those measured by the thermocouples listed above may result; and*

*.7 the thermocouples specified in 7.5.1.4 to 7.5.1.6 above for measurements on bulkheads, e.g. over different joint types or over joint intersections, should, where possible, be positioned in the upper half of the specimen.*

## Interpretation

To demonstrate that the tested “A” class assemblies are representative of that used on board ships, the following details shall, as a minimum when applicable, be clearly indicated in test reports and included in type approvals:

- Type, thickness, density and number of layers of insulation material;
- Size, types, materials and fixing methods of pins and washers;
- Spacing between pins;
- Maximum spacing between pins and adjacent joints;
- Stepping of joints for multi-layers if applicable;
- Insulation and pinning details on and around stiffeners;
- Details of wire mesh, aluminium tape etc, if used in the test;
- The type approval test report shall contain the information required by 2.1.3, 2.2.3, 6.1 and 10.4 of resolution A.754(18);
- Type approval certificate shall refer to drawing numbers of the test sample.

(MSC.1/Circ.1435)

### Note:

1. This UI is to be uniformly implemented by IACS Societies for approvals issued in accordance with IMO FTPC Part 3 from 1 July 2011.

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## Section 6 High Speed Craft Code

### HSC 8. Protection of load bearing structures

(Jul 2012)

(Corr.1 Sep 2022)

#### Interpretation of paragraph 7.4.2.3 of the 2000 HSC Code

**2000 HSC Code Ch.7.4.2.3 reads as follows:**

*“Main load-carrying structures within areas of major fire hazard and areas of moderate fire hazard and structures supporting control stations shall be arranged to distribute load such that there will be no collapse of the construction of the hull and superstructure when it is exposed to fire for the appropriate fire protection time. The load-carrying structure shall also comply with the requirements of 7.4.2.4 and 7.4.2.5.”*

#### Interpretation

##### Protection time

The structural fire protection time of main load bearing structures located within areas of major fire hazard (classified as A) and areas of moderate fire hazard (classified as B), and load bearing structures supporting control stations shall, as a minimum, be the same as that required by tables 7.4-1 and 7.4-2 (as applicable), for the divisions enclosing the space where these supports are located. In accordance with para. 7.4.1.1 in no case shall the structural fire protection time be less than 30 min.

Load bearing structures made of steel, other than those constituting the divisions dealt with in tables 7.4-1 and 7.4-2 (as applicable), need not be insulated.

##### Extent of structural fire protection

The structures considered shall be all load-carrying structures within areas of major and moderate fire hazard (classified as A or B) as well as all structures (irrespective of where they are located) which are necessary to support control stations.

The vertical extent of structure supporting control stations shall be considered all the way down to and including spaces within the hull(s). However, all structures within voids in the hull can be exempted from this consideration based on HSC Code 7.4.2.1 (first part).

##### Fire testing

Approvals from the standard fire test according to the IMO FTP Code, Annex 1, Part 11 for a bulkhead or deck of a given material can be applied for protection of pillars of the same material. The structural fire protection time shall be considered to be the same as that achieved in the fire test.

##### Load case

When load carrying capability calculations are performed for an assumed fire within a space, all insulated or un-insulated steel structures, including pillars, as well as fire insulated aluminium and FRP structures in the space may be included; un-insulated aluminium and FRP structures shall not be included. A single fire concept can be applied where a fire is only presumed to originate in one enclosed space and not propagate to another enclosed space.

*Example: Structures within a public space support a wheelhouse and a separate enclosed public space on the wheelhouse deck. Two load calculations shall then be made:*

- i) One presuming a fire below the wheelhouse; utilizing, in the load calculations un-insulated steel and insulated aluminium and FRP structures within the public space on the wheelhouse deck;*

- ii) *Another presuming fire within the public spaces on the wheelhouse deck; utilizing, in the load calculations, un-insulated steel and insulated aluminium and FRP structures within the public space below the wheelhouse.*

(Paragraphs 6 to 11 of MSC.1/Circ.1457)

**Note:**

1. *This UI is to be uniformly implemented by IACS Societies on high speed craft the keels of which are laid on/after 1 January 2014.*

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## Section 7 Load Line Convention

### LL 16. Sheer (~~Regulation 38~~)<sup>20</sup>

(1968)

(Rev.1 July 2008)

(Rev.2 Jan 2023)

Interpretation of Regulation 38 of the International Convention on Load Lines, 1966 and of the 1988 Protocol as adopted by the International Conference on the Harmonized System of Survey and Certification

Paragraph 12 of Regulation 38 of the International Convention on Load Lines, 1966 reads as follows:

*Where sheer credit is given for a poop or forecastle the following formula shall be used:*

$$s = \frac{yL'}{3L}$$

*where*

*s* = sheer credit, to be deducted from the deficiency or added to the excess of sheer,

*y* = difference between actual and standard height of super-structure at the end of sheer,

*L'* = mean enclosed length of poop or forecastle up to a maximum length of 0.5 *L*,

*L* = length of ship as defined in Regulation 3 (1) of this Annex.

*The above formula provides a curve in the form of a parabola tangent to the actual sheer curve at the freeboard deck and intersecting the end ordinate at a point below the superstructure deck a distance equal to the standard height of a superstructure. The superstructure deck shall not be less than standard height above this curve at any point. This curve shall be used in determining the sheer profile for forward and after halves of the ship.*

Paragraph 12 of Regulation 38 of the 1988 Protocol as adopted by the International Conference on the Harmonized System of Survey and Certification reads as follows:

*Where sheer credit is given for a poop or forecastle the following formula shall be used:*

$$s = \frac{yL'}{3L}$$

*where*

*s* = sheer credit, to be deducted from the deficiency or added to the excess of sheer,

*y* = difference between actual and standard height of super-structure at the end of sheer,

*L'* = mean enclosed length of poop or forecastle up to a maximum length of 0.5 *L*,

<sup>20</sup> This UI is also applicable to Regulation 38 of the 1988 Protocol.

$L$  = length of ship as defined in Regulation 3 (1) of this Annex.

*The above formula provides a curve in the form of a parabola tangent to the actual sheer curve at the freeboard deck and intersecting the end ordinate at a point below the superstructure deck a distance equal to the standard height of a superstructure. The superstructure deck shall not be less than standard height above this curve at any point. This curve shall be used in determining the sheer profile for forward and after halves of the ship.*

### Interpretation

Where the height of a superstructure is less than standard, paragraph 12 may be applied except that the superstructure deck shall not be less than the minimum height of the superstructure above the virtual sheer curve at any point.

For this purpose “y” shall be taken as the difference between the actual and minimum height of the superstructure at

- the end of sheer under the International Convention on Load Lines, 1966, and
- at the after or forward perpendicular under the 1988 Protocol as adopted by the International Conference on the Harmonized System of Survey and Certification.

#### ~~Footnote~~ Note:

1. This UI is ~~also~~ applicable to Regulation 38 of International Convention on Load Lines, 1966 and the 1988 Protocol as adopted by the International Conference on the Harmonized System of Survey and Certification.

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## LL 61. Method of correction for the effect of free surface of liquids in tanks<sup>73</sup>

(1997)

(Rev.1 July 2008)

(Del Nov 2022)

**Deleted in Nov 2022.**

(Regulation 10(2), UR L3 and UI LL45)

~~1. — For all loading conditions, the initial metacentric height and the righting lever curve should be corrected for the effect of free surfaces of liquids in tanks.~~

~~2. — Free surface effects will exist whenever the filling level in a tank is less than 100% and greater than 0%. Where the total free surface effects of nominally full (i.e. 98% or above) tanks is small in relation to the metacentric height of the vessel, with the agreement of the administration the effects for such tanks may be ignored. Free surface effects should be considered whenever the filling level in a tank is less than 98%.~~

~~3. — Tanks which are taken into consideration when determining the free surface correction may be in one of two categories:~~

~~3.1 — Tanks with filling levels fixed (e.g. liquid cargo, water ballast). The free surface correction should be determined for the actual filling level to be used in each tank.~~

<sup>73</sup> This UI is also applicable to Regulation 10(2) of the 1988 Protocol and the revised 1988 Protocol.

~~3.2 Tanks with filling levels variable (e.g. consumable liquids such as fuel oil, diesel oil, and fresh water, and also liquid cargo and water ballast during liquid transfer operations). Except as permitted in 5 and 6, the free surface correction should be the maximum value attainable between the filling limits envisaged for each tank, consistent with any operating instructions.~~

~~4. In calculating the free surface effects in tanks containing consumable liquids, it should be assumed that for each type of liquid at least one transverse pair or a single centreline tank has a free surface and the tank or combination of tanks taken into account should be those where the effect of free surfaces is the greatest.~~

~~5. Where water ballast tanks, including anti-rolling tanks and anti-heeling tanks, are to be filled or discharged during the course of a voyage, the free surface effects should be calculated to take account of the most onerous transitory stage relating to such operations.~~

~~6. For vessels engaged in liquid transfer operations, the free surface corrections at any stage of the liquid transfer operations may be determined in accordance with the filling level in each tank at that stage of the transfer operation.~~

~~7. The corrections to the initial metacentric height and to the righting lever curve should be addressed separately as follows:~~

~~7.1 In determining the correction to initial metacentric height, the transverse moments of inertia of the tanks should be calculated at 0 degrees angle of heel according to the categories indicated in 3.~~

~~7.2 The righting lever curve may be corrected by any of the following methods subject to the agreement of the Administration:~~

~~Correction based on the actual moment of fluid transfer for each angle of heel calculated.~~

~~Correction based on the moment of inertia, calculated at 0 degrees angle of heel, modified at each angle of heel calculated, (i.e.:  $GG_1 \sin \theta$ ).~~

~~Correction based on the summation of  $M_{fs}$  values for all tanks taken into consideration, see 8.~~

~~With the exception of item 7.2.3 above, corrections may be calculated according to the categories indicated in 3. Whichever method is selected for correcting the righting lever curve, only that method should be presented in the vessel's stability booklet. However, where an alternative method is described for use in manually calculating loading conditions, an explanation of the differences which may be found in the results, as well as an example correction for each alternative, should be included.~~

~~8. The values of  $M_{fs}$  for each tank may be derived from the formula:~~

$$\text{M}_{fs} = v b \rho k \sqrt{\delta}$$

~~where:~~

~~$M_{fs}$  is the free surface moment at any inclination in metre tonnes~~

~~$v$  is the tank total capacity in cubic metres~~

~~$b$  is the tank maximum breadth in metres~~

~~$\rho$  is the mass density of liquid in the tank in tonnes/cubic metre~~

~~$\delta$  is equal to  $v/blh$  (the tank block coefficient)~~

~~$h$  is the tank maximum height in metres~~

~~$l$  is the tank maximum length in metres~~

~~k~~ is the dimensionless coefficient to be determined from the following table according to the ratio  $b/h$ . The intermediate values are determined by interpolation.

**Table of Values for Coefficient "k" for Calculating Free Surface Corrections**

$$k = \frac{\sin \theta}{12} \left( 1 + \frac{\tan^2 \theta}{2} \right) \frac{b}{h}$$

$$\text{where } \cot \theta \geq \frac{b}{h}$$

$$k = \frac{\cos \theta}{8} \left( 1 + \frac{\tan \theta}{b/h} \right) - \frac{\cos \theta}{12(b/h)^2} \left( 1 + \frac{\cot^2 \theta}{2} \right)$$

$$\text{where } \cot \theta \leq \frac{b}{h}$$

$\theta$ b/h	5°	10°	15°	20°	30°	40°	45°	50°	60°	70°	75°	80°	85°	$\theta$ b/h
20	0.11	0.12	0.12	0.12	0.11	0.10	0.09	0.09	0.07	0.05	0.04	0.03	0.02	20
10	0.07	0.11	0.12	0.12	0.11	0.10	0.10	0.09	0.07	0.05	0.04	0.03	0.02	10
5	0.04	0.07	0.10	0.11	0.11	0.11	0.10	0.10	0.08	0.07	0.06	0.05	0.04	5
3	0.02	0.04	0.07	0.09	0.11	0.11	0.11	0.10	0.09	0.08	0.07	0.06	0.05	3
2	0.01	0.03	0.04	0.06	0.09	0.11	0.11	0.11	0.10	0.09	0.09	0.08	0.07	2
1.5	0.01	0.02	0.03	0.05	0.07	0.10	0.11	0.11	0.11	0.11	0.10	0.10	0.09	1.5
1	0.01	0.01	0.02	0.03	0.05	0.07	0.09	0.10	0.12	0.13	0.13	0.13	0.13	1
0.75	0.01	0.01	0.02	0.02	0.04	0.05	0.07	0.08	0.12	0.15	0.15	0.16	0.16	0.75
0.5	0.00	0.01	0.01	0.02	0.02	0.04	0.04	0.05	0.09	0.16	0.18	0.21	0.23	0.5
0.3	0.00	0.00	0.01	0.01	0.01	0.02	0.03	0.03	0.05	0.11	0.19	0.27	0.34	0.3
0.2	0.00	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.04	0.07	0.13	0.27	0.45	0.2
0.1	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.02	0.04	0.06	0.14	0.53	0.1

9. Small tanks which satisfy the following condition using the values of "k" corresponding to an angle of inclination of 30 degrees, need not be included in the correction:

$$b p k \sqrt{\delta / \Delta_{\min}} < 0,01 m$$

where  $\Delta_{\min}$  = the minimum ship displacement in tonnes.

10. The usual remainder of liquids in empty tanks need not be taken into account in calculating the corrections providing the total of such residual liquids does not constitute a significant free surface effect.

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## Section 9 MARPOL Convention

### MPC 14. Annex VI of MARPOL 73/78

(July 2004)

(Rev.1, Apr 2014)

(Corr.1, June 2014)

(Rev.2 Aug 2018)

(Rev.3 Dec 2022)

#### Regulation 1 / Regulation 5.2

#### *Application / Surveys and Inspections*

#### *Regulation 1 reads as follows:*

~~The provisions of this Annex shall apply to all ships, except where expressly provided otherwise in regulations 3, 5, 6, 13, 15, 16, 18, 19, 20, 21, 22 and 22A of this Annex.~~

*The provisions of this Annex shall apply to all ships, except where expressly provided otherwise.*

#### *Regulation 5.2 reads as follows:*

*In the case of ships of less than 400 gross tonnage, the Administration may establish appropriate measures in order to ensure that the applicable provisions of chapter 3 are complied with.*

#### **Interpretation**

It shall be interpreted that all marine diesel engines over 130 kW except those exempted by Regulation 3 or Regulation 13 are to comply with the Regulation 13 ~~limit~~ regardless of the gross tonnage of the ship onto which the engine is installed. In this context such engines must have an approved Technical File and must be issued with an EIAPP certificate in accordance with the NO<sub>x</sub> Technical Code in all cases.

However the application of the ship surveys as given in Regulation 5.2 to ships under 400 GT would be at the discretion of the relevant Administration.

#### **Note:**

1. This UI is to be uniformly implemented by IACS Societies from 19 May 2005.
2. Rev.1 of the UI is to be uniformly implemented by IACS Societies from 1 January 2015
3. Rev.2 of the UI is to be uniformly implemented by IACS Societies from 1 January 2020.
4. *Rev.3 of the UI is to be uniformly implemented by IACS Societies from 1 January 2023.*

-----end-----



## Section 11 SOLAS Convention

### SC 32. Fixed high expansion foam fire-extinguishing system

(1985)

(Rev.1 2001)

(Rev.2 Nov 2005)

(Del Nov 2022)

Deleted in Nov 2022 because of FSS Code amendments introduced by resolution MSC.327(90) of 25 May 2012.

~~(FSS Code, Ch. 6, 2.2)~~

~~When such a system is to be fitted in any other space than a machinery space, this regulation applies. Reference is made to MSC/Circ. 670 — Guidelines for the performance and testing criteria and surveys of high expansion foam concentrates for fixed fire extinguishing systems.~~

-----end-----

### SC 60. Fixed deck foam systems

(1985)

(Corr.1 2001)

(Rev.1 Nov 2005)

(Del Nov 2022)

Deleted in Nov 2022 because of FSS Code amendments introduced by resolution MSC.339(91) of 30 November 2012.

~~(FSS Code, Ch. 14, 2.2.2.1)~~

~~2.2.2.3 and 2.3.3 of Ch. 14 of the FSS Code apply to all tankers regardless of size.~~

-----end-----

### SC 120. Access to forecastle spaces on tankers

(1996)

(Rev.1 Nov 2005)

(Rev.2 Aug 2006)

(Corr.1 Jan 2023)

**Interpretation of SOLAS regulations II-2/4.5.2.1 and 4.5.2.2, IBC Code paragraph 3.2.3 and 1983 IGC Code paragraph 3.2.4 (Resolution MSC.5(48) as amended by resolution MSC.30(61))**

*Restriction on boundary openings*

SOLAS regulations II-2/4.5.2.1 and 4.5.2.2 read

**“5.2.1** Except as permitted in paragraph 5.2.2, access doors, air inlets and openings to accommodation spaces, service spaces, control stations and machinery spaces shall not face the cargo area. They shall be located on the transverse bulkhead not facing the cargo area or on the outboard side of the superstructure or deckhouse at a distance of at least 4 % of the length of the ship, but not less than 3 m from the end of the superstructure or deckhouse facing the cargo area. This distance need not exceed 5 m.”

**“5.2.2** The Administration may permit access doors in boundary bulkheads facing the cargo area or within the 5 m limits specified in paragraph 5.2.1, to main cargo control stations and to such service spaces used as provision rooms, store-rooms and lockers, provided they do not give access directly or indirectly to any other space containing or providing for accommodation, control stations or service spaces such as galleys, pantries or workshops, or similar spaces containing sources of vapour ignition. The boundary of such a space shall be insulated to “A-60” ~~class~~ standard, with the exception of the boundary facing the cargo area. Bolted plates for the removal of machinery...”

**Paragraph 3.2.3 of the IBC Code reads**

**“3.2.3** Entrances, air inlets and openings to accommodation, service and machinery spaces and control stations ~~should~~ **shall** not face the cargo area. They ~~should~~ **shall** be located on the end bulkhead not facing the cargo area and/or on the outboard side of the superstructure or deckhouse at a distance of at least 4% of the length (L) of the ship but not less than 3 m from the end of the superstructure or deck-house facing the cargo area. This distance, however, need not exceed 5 m. No doors ~~should~~ **shall** be permitted within the limits mentioned above, except that doors to those spaces not having access to accommodation and service spaces and control stations, such as cargo control stations and store-rooms, may be fitted. Where such doors are fitted, the boundaries of the space ~~should~~ **shall** be insulated to “A-60” standard. Bolted plates for removal of machinery may be fitted within the limits specified above. Wheelhouse doors and wheelhouse windows may be located within the limits specified above so long as they are so designed that a rapid and efficient gas- and vapour-tightening of the wheelhouse can be ensured. Windows and sidescuttles facing the cargo area and on the sides of the superstructures and deck-houses within the limits specified above ~~should~~ **shall** be of the fixed (non-opening) type. Such side scuttles in the first tier on the main deck ~~should~~ **shall** be fitted with inside covers of steel or equivalent material.”

**Paragraph 3.2.4 of the 1983 IGC Code reads**

**“3.2.4** Entrances, air inlets and openings to accommodation spaces, service spaces, machinery spaces and control stations should not face the cargo area. They should be located on the end bulkhead not facing the cargo area or on the outboard side of the superstructure or deck-house or on both at a distance of at least 4% of the length (L) of the ship but not less than 3 m from the end of the superstructure or deck-house facing the cargo area. This distance, however, need not exceed 5 m. Windows and sidescuttles facing the cargo area and on the sides of the superstructures or deck-houses within the distance mentioned above should be of the fixed (non-opening) type. Wheelhouse windows may be non-fixed and wheelhouse doors may be located within the above limits so long as they are so designed that a rapid and efficient gas and vapour tightening of the wheelhouse can be ensured. For ships dedicated to the carriage of cargoes which have neither flammable nor toxic hazards, the Administration may approve relaxations from the above requirements.”

**Interpretation**

Access to forecastle spaces containing sources of ignition may be permitted through doors facing cargo area provided the doors are located outside hazardous areas as defined in IEC Publication 60092-502:1999.

**Note:**

1. Rev. 2 of this UI is to be uniformly implemented by IACS Members and Associates by 1 January 2007.
2. This UI is only applicable to gas carriers constructed on or after 1 July 1986 but before 1 July 2016.

-----end-----

## SC 121. Fire Pump Isolation Requirements

(1997)

(Rev.1, Nov 2005)

(Rev.2 Jan 2023)

~~(Reg. II-2/10.2.1.4.1)~~ Interpretation of SOLAS II-2 Regulation 10.2.1.4.1

**SOLAS II-2 Regulation 10.2.1.4.1 reads as follows:**

*Isolating valves to separate the section of the fire main within the machinery space containing the main fire pump or pumps from the rest of the fire main shall be fitted in an easily accessible and tenable position outside the machinery spaces. The fire main shall be so arranged that when the isolating valves are shut all the hydrants on the ship, except those in the machinery space referred to above, can be supplied with water by another fire pump or an emergency fire pump. The emergency fire pump, its seawater inlet, and suction and delivery pipes and isolating valves shall be located outside the machinery space. If this arrangement cannot be made, the sea-chest may be fitted in the machinery space if the valve is remotely controlled from a position in the same compartment as the emergency fire pump and the suction pipe is as short as practicable. Short lengths of suction or discharge piping may penetrate the machinery space, provided they are enclosed in a substantial steel casing, or are insulated to "A-60" class standards. The pipes shall have substantial wall thickness, but in no case less than 11 mm, and shall be welded except for the flanged connection to the sea inlet valve.*

### Interpretation

Any part of the fire main routed through a category A machinery space, **except for short lengths of suction or discharge piping complying with SOLAS II-2/10.2.1.4.1**, must be fitted with isolating valves outside of the space. The arrangements of the fire mains must allow for fire water from the fire pumps or emergency fire pump to reach all hydrants outside of the isolated space. Isolation requirements of SOLAS Reg. II-2/10.2.1.4.1 are not applicable to the piping from fire pumps located in ~~other~~ spaces other than category A machinery spaces.

#### Note:

1. *Rev.2 of this Unified Interpretation is to be uniformly implemented by IACS Societies on ships constructed on or after 1 July 2023.*
2. *The "contracted for construction" date means the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. For further details regarding the date of "contract for construction", refer to IACS Procedural Requirement (PR) No. 29.*

-----end-----

## SC 127. Paints, varnishes and other finishes

(May, 1998)

(Rev.1 July 2004)

(Rev.2 Nov 2005)

(Corr.1 Jan 2023)

**(Reg. II-2/6.2) Interpretation of SOLAS Chapter II-2, Regulation 6.2.1**

**SOLAS Chapter II-2, Regulation 6.2.1 reads as follows:**

### 2.1 *Paints, varnishes and other finishes*

*Paints, varnishes and other finishes used on exposed interior surfaces shall not be capable of producing excessive quantities of smoke and toxic products, this being determined in accordance with the Fire Test Procedures Code.*

### Interpretation

This regulation only applies to accommodation spaces, service spaces and control stations as well as stairway enclosures.

**Note:**

1. This Unified Interpretation is to be applied on ships contracted for construction on or after 1 January, 2006.
2. The “contracted for construction” date means the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. For further details regarding the date of “contract for construction”, refer to IACS Procedural Requirement (PR) No. 29.”

-----end-----

## SC 138. Safe Access to Tanker Bows

(May, 1998)

(Corr.1 Feb 2023)

~~Reg. II-1/3-3.2~~

### Interpretation of SOLAS Chapter II-1, Regulation 3-3.2

SOLAS Chapter II-1, Regulation 3-3.2 reads as follows:

*“Every tanker shall be provided with the means to enable the crew to gain safe access to the bow even in severe weather conditions. Such means of access shall be approved by the Administration based on the guidelines developed by the Organization.”*

### Interpretation:

Interpretation of SOLAS II-1/3-3.2, Safe Access to Tanker Bows, for all vessels subject to that regulation, is provided in IACS UI LL50.

**Note:**

IACS ~~Members and Associates~~ **Societies** are to apply [Section 7, UI LL50](#) (~~Rev. 2 1997~~), in so far as SOLAS II-1/3-3.2 is concerned, to all ships subject to that regulation.

-----end-----

## SC 155. Lightweight check in lieu of inclining test

(June 2000)

(Rev.1 Feb 2008)

(Rev.2 Feb 2010)

(Del Aug 2022)

UI SC155 text was incorporated into UI SC297. This UI was deleted on 01 January 2023 when UI SC297 came into force.

~~Regulation II-1/22~~

~~Stability information for passenger ships and cargo ships~~

~~1. — Every passenger ship regardless of size and every cargo ship having a length, as defined in the International Convention on Load Lines in force, of 24 m and upwards, shall be inclined upon its completion and the elements of its stability determined. The master shall be supplied with such information satisfactory to the Administration as is necessary to enable him by rapid and simple processes to obtain accurate guidance as to the stability of the ship under varying conditions of service. A copy of the stability information shall be furnished to the Administration.~~

~~2. — Where any alterations are made to a ship so as to materially affect the stability information supplied to the master, amended stability information shall be provided. If necessary the ship shall be re-inclined.~~

~~3. — At periodical intervals not exceeding five years, a lightweight survey shall be carried out on all passenger ships to verify any changes in lightship displacement and longitudinal centre of gravity. The ship shall be re-inclined whenever, in comparison with the approved stability information, a deviation from the lightship displacement exceeding 2% or a deviation of the longitudinal centre of gravity exceeding 1% of L is found or anticipated.~~

~~4. — The Administration may allow the inclining test of an individual ship to be dispensed with provided basic stability data are available from the inclining test of a sister ship and it is shown to the satisfaction of the Administration that reliable stability information for the exempted ship can be obtained from such basic data, as required by paragraph 1.~~

~~5. — The Administration may also allow the inclining test of an individual ship or class of ships especially designed for the carriage of liquids or ore in bulk to be dispensed with when reference to existing data for similar ships clearly indicates that due to the ship's proportions and arrangements more than sufficient metacentric height will be available in all probable loading conditions.~~

#### Interpretation

~~Unless advised otherwise by the Flag Administration, MSC/Circ.1158 shall be applied to determine the lightship characteristics of a ship under SOLAS 74/78, as amended. Where it is determined that the tolerances in MSC/Circ.1158 are exceeded, the Administration shall be contacted to determine the acceptability of such a deviation.~~

#### Note:

~~1. — This UI-SC155 is to be uniformly implemented by IACS Members and Associates from 1 January 2001.~~

~~2. — Revision 1 is to be uniformly implemented by IACS Members and Associates to ships that are contracted for construction, or to ships which commence conversions, on or after 1 April 2008.~~

~~3. — The "contracted for construction" date means the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. For further details regarding the date of "contract for construction", refer to IACS Procedural Requirement (PR) No. 29.~~

~~4. — Revision 2 is to be uniformly implemented by IACS Members and Associate to ships that are contracted for construction, or to ships which commence conversions, before 1 July 2010.~~

-----end-----

## SC 198. Sections in local application fire extinguishing systems

(June 2005)

(Corr.1 Sep 2022)

{Reg.II-2/10.5.6.3}

Interpretation of SOLAS chapter II-2 regulation 10.5.6.3 as amended by resolution MSC.338(91)

**SOLAS Regulation II-2/10.5.6.3 reads as follows:**

*Fixed local application fire-extinguishing systems are to protect areas such as the following without the necessity of engine shutdown, personnel evacuation, or sealing of the spaces:*

1. *the fire hazard portions of internal combustion machinery or, for ships constructed before 1 July 2014, the fire hazard portions of internal combustion machinery used for the ship's main propulsion and power generation; ~~the fire hazards portions of internal combustion machinery...~~*

**Interpretation:**

"In multi-engine installations, at least two sections ~~should~~ **shall** be arranged."\*

(\* refer to item 3.2.4 of MSC.1/Circ.1387)

**Note:**

1. This UI is to be uniformly implemented by IACS Members ~~and Associates~~ on ships the keels of which are laid from 1 January 2006.

-----end-----

**SC 217. Nozzles installation for fixed water based local application fire-fighting systems for use in category A machinery spaces (MSC/Circ 913)**

(Aug, 2007)

(Corr.1 Sept 2007)

(Corr.2 Aug 2022)

IMO MSC/Circular 913 paragraphs 3.4.2.1 and 3.4.2.2 in the Appendix of the Annex read: -

**3.4.2** The results of the tests should be interpreted as follows:

- .1 Systems (utilizing a 3 x 3 nozzle grid) that extinguish fires referred to in 3.3.2.1 to 3.3.2.3 are considered to have successfully completed the protocol with the condition that the outer nozzles should be installed outside of the protected area a distance of at least 1/4 of the maximum nozzle spacing.
- .2 Systems (utilizing either a 2 x 2 or 3 x 3 nozzle grid) that extinguish fires referred to in 3.3.2.3 to 3.3.2.5 are considered to have successfully completed the protocol and can be designed with the outer nozzles located at the edge of the protected area. This does not prohibit the location of the nozzles outside of the protected area.

**Paragraph 3.4.2.4 in the Appendix of the Annex reads:**

- .4 For installations which may be adequately protected using individual nozzles or a single row of nozzles, the effective nozzle coverage (width and length) is defined as 1/2 the maximum nozzle spacing.

**Interpretation:**

The end nozzles of a single line of nozzles shall be positioned:

- I. outside the hazard where paragraph 3.4.2.1 is applicable, to the distance established in testing, and
- II. at the edge or outside of the protected area where paragraph 3.4.2.2 is applicable.

A single nozzle shall be located above the fire source and at the centre of an area having dimensions D/2 x D/2.

Sketches of acceptable arrangements are shown in the Annex.

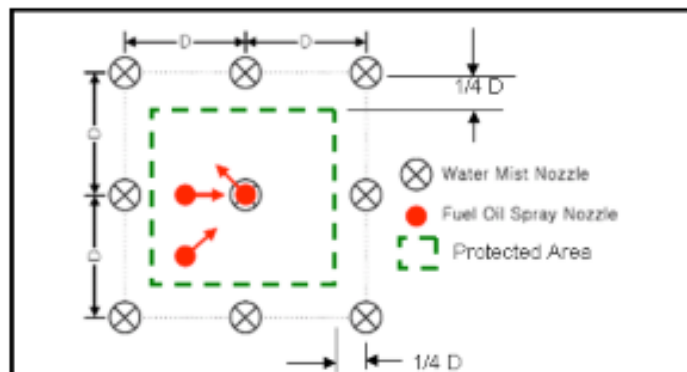
**Note:**

1. *This Unified Interpretation is to be applied by all Members and Associate on ships contracted for construction on or after 1 April 2008. However, Members and Associate are not precluded from applying this UI before this date.*
2. *The “contracted for construction” date means the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. For further details regarding the date of “contract for construction”, refer to IACS Procedural Requirement (PR) No. 29.*
3. *This UI was originally developed to interpret IMO MSC/Circ.913 which is superseded by MSC.1/Circ.1387. According to paragraph 4 of MSC.1/Circ.1387, fire and component tests previously conducted in accordance with MSC/Circ.913 remain valid for the approval of new systems.*

*Existing fixed water-based local application fire-fighting systems approved and installed based on MSC/Circ.913 should be permitted to remain in service as long as they are serviceable.*

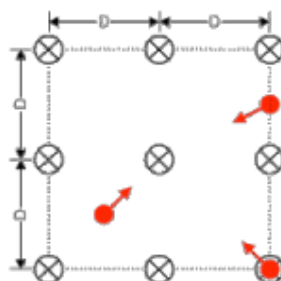
**ANNEX**

- a. System (utilizing a 3 X 3 nozzle grid) that extinguishes fires referred to in 3.3.2.1 to 3.3.2.3 of Appendix of Annex of MSC/Circ.913.



For this system, the outer nozzles should be installed outside of the protected area a distance of at least 1/4 of the maximum nozzle spacing.

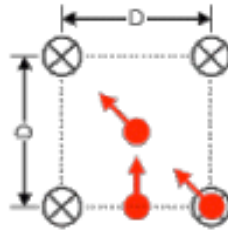
- b. System (utilizing a 3 X 3 nozzle grid) that extinguishes fires referred to in 3.3.2.3 to 3.3.2.5



For this system, outer nozzles can be located either at the edge of the protected area or outside of the protected area.



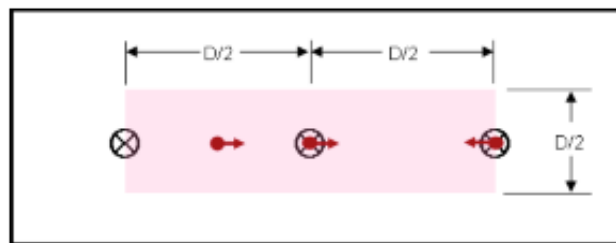
- c. System (utilizing a 2 X 2 nozzle grid) that extinguishes fires referred to in 3.3.2.3 to 3.3.2.5



For this system, outer nozzles can be located either at the edge of the protected area or outside of the protected area.

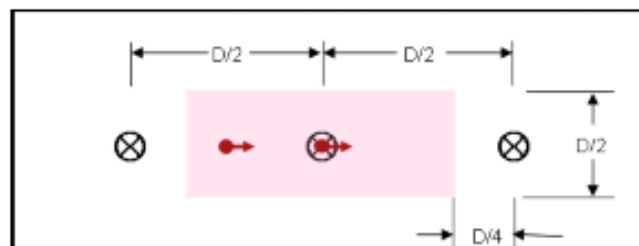
- d. A single row of nozzles

- i) System that extinguishes fires referred to in 3.3.2.3 to 3.3.2.5



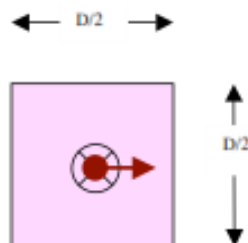
For this system, outer nozzles should be placed at least at the edge of the protected area.

- ii) System that extinguishes fires referred to in 3.3.2.1 to 3.3.2.3



For this system, the outer nozzles should be placed outside of the protected area a distance of at least 1/4 of the maximum nozzle spacing.

- e. Single nozzle



-----end-----



## SC 245. Suction and discharge piping of emergency fire pumps, which are run through the machinery space ~~(SOLAS II-2/10.2.1.4.1)~~

(June 2011)  
(Corr.1 Jan 2012)  
(Rev.1 Jan 2023)

### Interpretation of SOLAS II-2 Regulation 10.2.1.4.1

~~Regulation SOLAS Ch. II-2~~ **Regulation 10.2.1.4.1 reads as follows:**

*The emergency fire pump, its seawater inlet, and suction and delivery pipes and isolating valves shall be located outside the machinery space. If this arrangement cannot be made, the sea-chest may be fitted in the machinery space if the valve is remotely controlled from a position in the same compartment as the emergency fire pump and the suction pipe is as short as practicable. Short lengths of suction or discharge piping may penetrate the machinery space, provided they are enclosed in a substantial steel casing, or are insulated to "A-60" class standards. The pipes shall have substantial wall thickness, but in no case less than 11 mm, and shall be welded except for the flanged connection to the sea inlet valve.*

#### Interpretation

- .1 "the valve" in second sentence means "sea inlet valve";
- .2 in cases where suction or discharge piping penetrating machinery spaces are enclosed in a substantial steel casing, or are insulated to "A-60" class standards, it is not necessary to enclose or insulate "distance pieces", "sea inlet valves" and "sea-chests". ~~For this purpose, the discharge piping means piping between the emergency fire pump and the isolating valve;~~
- .3 the method for insulating pipes to "'A-60" class standards" is that they are to be covered/protected in a practical manner by insulation material which is approved as a part of "A-60" class divisions in accordance with the FTP Code; and
- .4 where the sea inlet valve is in the machinery space, the valve should not be a fail-close type. Where the sea inlet valve is in the machinery space and is not a fail-open type, measures should be taken so that the valve can be opened in the event of fire, e.g. control piping, actuating devices and/or electric cables with fire resistant protection equivalent to "A60" class standards.
- .5 In cases where main fire pumps are provided in compartments outside machinery spaces and where the emergency fire pump suction or discharge piping penetrates such compartments, the above interpretation is to be applied to the piping.

#### Note:

1. *This Unified Interpretation is to be applied by IACS Societies on ships contracted for construction on or after 1 July 2012.*
2. *The "contracted for construction" date means the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. For further details regarding the date of "contract for construction", refer to IACS Procedural Requirement (PR) No. 29.*
3. *Rev 1 of this UI is to be applied by IACS Societies on ships contracted for construction on or after 1 July 2023.*

-----end-----

## SC 250. Fire-Extinguishing Arrangements in Cargo Spaces (~~Res. MSC.268(85)~~, IMSBC Code, **as amended**)

(Oct 2011)

(Corr.1 July 2012)

**(Corr.2 Nov 2022)**

### **Interpretation of the IMSBC Code, as amended by resolution MSC.462(101)**

For certain individual schedules of solid bulk cargoes in Appendix 1 of the IMSBC Code as amended, such as FISHMEAL (FISHSCRAP) STABILIZED UN 2216, ~~SEED CAKE, containing vegetable oil UN 1386~~, SEED CAKE UN 2217, **SEED CAKE (a) UN 1386 and SEED CAKE (b) UN 1386, SEED CAKE UN 2217, SEED CAKES AND OTHER RESIDUES OF PROCESSED OILY VEGETABLES of Group B** the following ventilation requirement is present:

QUOTE

*If the temperature of the cargo exceeds 55°C and continues to increase, ventilation to the cargo space shall be stopped. If self-heating continues, then carbon dioxide or inert gas shall be introduced to the cargo spaces*

UNQUOTE

### **Interpretation**

This self-heating phenomenon shall be regarded as an emergency condition such that it is not necessary to provide a separate fixed carbon dioxide fire-extinguishing system or inert gas system dedicated to the control of the self-heating of the cargo within the cargo holds. The fixed carbon dioxide or inert gas fire-extinguishing system complying with the provisions of the Fire Safety Systems Code required by SOLAS Regulations II-2/10.7.1.3 or II-2/10.7.2 may be used for this purpose. Fixed gas fire-extinguishing systems or inert gas systems installed on board dedicated to the protection of spaces other than cargo spaces cannot be used for this purpose.

#### **Note:**

*This Unified Interpretation is to be uniformly implemented by IACS Societies from 1 July 2012.*

-----end-----

## SC 254. Fall Preventer Devices (MSC.1/Circ.1392 and Circ.1327)

(April 2012)

**(Del Aug 2022)**

**This UI is deleted in August 2022.**

### **MSC.1/Circ.1392, Paragraph 4**

~~Member Governments are strongly urged to ensure that all ships which are fitted with on-load release systems for lifeboats, are equipped with fall preventer devices as per paragraph 6 of these Guidelines at the earliest opportunity.~~

### **MSC.1/Circ.1392, Annex Paragraph 6**

~~On each ship, fall preventer devices in accordance with the Guidelines for the fitting and use of fall preventer devices (FPDs) (MSC.1/Circ.1327) should be employed for each existing lifeboat release and retrieval system~~

.....

## MSC.1/Circ.1327, Paragraph 2

~~The use of FPDs should be considered as an interim risk mitigation measure, only to be used in connection with existing on-load release hooks, at the discretion of the master, pending the wide implementation of improved hook designs with enhanced safety features.~~

### Interpretation

~~Where locking pins are provided as a FPD, the pins shall be designed so that they have a minimum factor of safety of 6 as per LSA Code Paragraph 6.1.1.6. Where existing on-load release hooks are drilled to provide a locking pin insertion point, the strength of the hooks shall continue to satisfy the relevant requirements in the LSA Code and MSC 81(70), Part 2 section 5.3.1 and shall comply with the requirements of MSC.1/Circ.1327 paragraph 2.1. The modification of the hook in this respect must be acceptable to the manufacturer of the hook.~~

~~Where strops or slings with fittings (with fittings e.g. shackles) are used as a FPD, they shall be approved against the following test requirements:~~

- ~~i. Environment tests as set out in MSC 81(70) Part 1, Paragraphs 1.2.1 or equivalent.~~
- ~~ii. Tests for rot-proof, colour fast and resistant to deterioration from exposure to sunlight and that they are not unduly affected by seawater, oil or fungal attack as set out in MSC 81(70) Part 1, Paragraphs 2.4 or equivalent.~~
- ~~iii. Prototype test to a factor of safety of 6.~~
- ~~iv. A factory acceptance test of 2.2 x SWL.~~

#### **Note:**

~~the factor of safety shall be based upon the SWL, which shall be not less than the total weight of the lifeboat when loaded with its full complement of persons and equipment.~~

~~It is the responsibility of the lifeboat and davit manufacturer, to confirm that the attachment eye is suitable for the use of the proposed FPD. If the lifeboat and/or davit manufacturer is no longer available, the suitability is to be determined by an independent service provider.~~

#### **Note:**

- ~~1. This Unified Interpretation is to be implemented for the approval of FPDs submitted on or after 1 January 2013.~~

-----end-----

## SC 297. Amendment to stability/loading information in conjunction with the alterations of lightweight

(Aug 2022)

Interpretation of SOLAS chapter II-1, regulations 5.4 and 5.5 (as amended by resolution MSC.421(98)) and of resolution MSC.429(98)/Rev.1 and Rev.2, Explanatory Notes.

SOLAS II-1/Regulation 5.4 and 5.5 reads as follows:

4. Where any alterations are made to a ship so as to materially affect the stability information supplied to the master, amended stability information shall be provided. If necessary the ship shall be re-inclined. The ship shall be re-inclined if anticipated deviations exceed one of the values specified in paragraph 5.

5. *At periodical intervals not exceeding five years, a lightweight survey shall be carried out on all passenger ships to verify any changes in lightship displacement and longitudinal centre of gravity. The ship shall be re-inclined whenever, in comparison with the approved stability information, a deviation from the lightship displacement exceeding 2% or a deviation of the longitudinal centre of gravity exceeding 1% of L is found or anticipated.*

**Explanatory Notes to SOLAS II-1 Regulation 5.4 (resolution MSC.429(98)/Rev.1 and Rev.2) read as follows:**

1. *When alterations are made to a ship in service that result in calculable differences in the lightship properties, a detailed weights and centres of gravity calculation to adjust the lightship properties should be carried out. If the adjusted lightship displacement or longitudinal centre of gravity, when compared to the approved values, exceeds one of the deviation limits specified in regulation 5.5, the ship should be re-inclined. In addition, if the adjusted lightship vertical centre of gravity, when compared to the approved value, exceeds 1%, the ship should be re-inclined. The lightship transverse centre of gravity is not subject to a deviation limit.*

2. *When a ship does not exceed the deviation limits specified in explanatory note 1 above, amended stability information should be provided to the master using the new calculated lightship properties if any of the following deviations from the approved values are exceeded:*

- .1 1% of the lightship displacement; or*
- .2 0.5% of L for the longitudinal centre of gravity; or*
- .3 0.5% of the vertical centre of gravity.*

*However, in cases when these deviation limits are not exceeded, it is not necessary to amend the stability information supplied to the master.*

## **Interpretation**

### *Definition of lightweight calculation*

For the purposes of this interpretation, the term “lightweight calculation” means a detailed calculation of weights added to, removed from and relocated on a vessel, resulting from all alterations to the vessel since the date of the last approved inclining test, to determine the adjusted lightship properties. Lightship properties include weights and the centre of gravity. The documented weights and their centres of gravity shall be verified onboard/onsite by the attending Class Surveyor.

When weights are added, removed or relocated the final cumulative change is to be compared to the last approved inclining test.

### *Definition of stability information*

“Stability information” includes any document (whether on paper or electronic) or electronic means of calculation of stability which includes light ship properties. This could include, but is not limited to, the approved stability book, computer software for onboard calculation of stability, the approved strength book and the loading instrument.

## **Amendment of stability information in conjunction with alterations of lightship properties**

1. If the lightweight calculation, regardless of keel laying date, shows a deviation in lightweight mass, or the longitudinal or vertical position of the centre of gravity:-

- a) beyond any of the tolerance limits specified in the explanatory note 1 to Regulation 5.4 of MSC.429(98)/Rev.1 and Rev.2, then the ship should be re-inclined and the stability information, as defined above, should be updated to reflect the lightship properties derived from the inclining test and approved;

- b) within the tolerance limits specified in the explanatory note 1 and any of the deviations specified in the explanatory note 2 to Regulation 5.4 of MSC.429(98)/Rev.1 and Rev.2 is exceeded, then the stability information should be updated to reflect the lightship properties derived from the lightweight calculation and approved; or
- c) within the tolerance limits specified in the explanatory note 2 to Regulation 5.4 of MSC.429(98)/Rev.1 and Rev.2, then a copy of the endorsed lightweight calculation report should be provided onboard for future reference with no further amendments required to the stability information.

However, even if addition, removal or relocation of any weight results in lightship properties being within tolerable limits, that deviation of lightship properties should be noted in the onboard stability information and applied for all future references and stability/loading calculations.

2. A summary of paragraph 1 is provided in the following table. Where stability information is to be updated, it shall be approved and provided to the Master with instruction that it should now be used for all stability calculations.

Scenario, as calculated by lightweight calculation	Requirement for Inclining Test	Update of Stability Information
Lightweight change > 2%	Yes	Yes, using new incline result
LCG change > 1% of L (either forward or aft)	Yes	Yes, using new incline result
VCG change > 1%	Yes	Yes, using new incline result
1% < Lightweight change ≤ 2%	No	Yes, using lightweight calculation
0.5% of L < LCG change ≤ 1% of L (either forward or aft)	No	Yes, using lightweight calculation
0.5% < VCG change ≤ 1%	No	Yes, using lightweight calculation
Lightweight change ≤ 1%	No	No
LCG change ≤ 0.5% of L (either forward or aft)	No	No
VCG change ≤ 0.5%	No	No

3. Lightship properties shall be consistent in all documents which use them, e.g. loading manual, stability manual, computer data.

4. A change in lightweight will result in a change in deadweight unless there is an associated change in freeboard. The consequences of the change could have an impact on compliance with regulations that are applied based on deadweight.

**Note:**

1. *This Unified Interpretation is to be uniformly implemented by IACS Societies on ships which have their lightship properties changed on or after 1 January 2023.*

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## SC 298. Interpretations of various Performance Standards related to GMDSS radio installations

(Dec 2022)

Operative paragraphs 2.1 and 3.1 of resolution MSC.508(105) respectively read:

2. *RECOMMENDS Governments to ensure that NAVTEX receiver equipment:*

- .1 *if installed on or after 1 January 2024, conforms to performance standards not inferior to those specified in the annex to the present resolution;*

3. *ALSO RECOMMENDS that equipment for the reception of NBDP broadcasts of navigational and meteorological warnings and urgent information to ships by HF:*

- .1 *if installed on or after 1 January 2024, conforms to performance standards not inferior to those specified in the annex to the present resolution; and*

**Operative paragraphs 2 and 3 of resolution MSC.510(105) respectively read:**

2. *RECOMMENDS Governments to ensure that radar SARTs that will form part of the GMDSS, conform to performance standards not inferior to those specified in the annex to this resolution;*

3. *DETERMINES that this resolution supersedes resolutions A.530(13) and A.802(19), as amended, as from 1 January 2024;*

**Operative paragraph 2.1 of resolution MSC.511(105) read:**

2. *RECOMMENDS Governments to ensure that shipborne VHF radio installations capable of voice communication and digital selective calling which will form part of the GMDSS:*

- .1 *if installed on or after 1 January 2024, conform to performance standards not inferior to those specified in the annex to the present resolution;*

**Operative paragraph 2.1 of resolution MSC.512(105) read:**

2. *RECOMMENDS Governments to ensure that shipborne MF and MF/HF radio installations capable of voice communication, digital selective calling and reception of maritime safety information which will form part of the GMDSS:*

- .1 *if installed on or after 1 January 2024, conform to performance standards not inferior to those specified in the annex to the present resolution;*

**Operative paragraph 3.1 of resolution MSC.513(105) read:**

3. *RECOMMENDS Governments to ensure that every Inmarsat-C ship earth station which forms part of the GMDSS:*

- .1 *if installed on or after 1 January 2024 conforms to performance standards not inferior to those specified in the annex to the present resolution; and*

**Operative paragraph 2.1 of resolution MSC.515(105) read:**

2. *RECOMMENDS Governments to ensure that survival craft portable two-way VHF radiotelephone apparatus:*

- .1 *if installed on or after 1 January 2024 conforms to performance standards not inferior to those specified in the annex to the present resolution;*

**Operative paragraph 2.1 of resolution MSC.516(105) read:**

2. *RECOMMENDS Governments to ensure that on-scene (aeronautical) two-way VHF radiotelephone apparatus for use in search and rescue operations:*

- .1 *if installed on or after 1 January 2024, conforms to performance standards not inferior to those specified in the annexes to resolution MSC.80(70), as amended by the present resolution; and*

**Operative paragraph 2.1 of resolution MSC.517(105) read:**

2. *RECOMMENDS Governments to ensure that a shipborne integrated communication system (ICS) when used in the GMDSS:*

- .1 if installed on or after 1 January 2024 conforms to performance standards not inferior to those specified in the annex to the present resolution; and*

**Interpretation:**

For application of resolutions MSC.508(105), MSC.511(105), MSC.512(105), MSC.513(105), MSC.515(105), MSC.516(105) and MSC.517(105), the phrase "installed on or after 1 January 2024" shall be interpreted as follows:

- a) for ships for which the building contract is placed on or after 1 January 2024, or in the absence of the contract, the keel of which is laid or which are at a similar stage of construction on or after 1 January 2024, "installed on or after 1 January 2024" means any installation on the ship; and
- b) for ships other than those ships prescribed in (a) above, "installed on or after 1 January 2024" means a contractual delivery date for the equipment or, in the absence of a contractual delivery date, the actual delivery of the equipment to the ship on or after 1 January 2024.

The revised performance standards specified in the annex of resolution MSC.510(105) (Radar SARTs) shall apply to;

- c) the equipment installed for ships for which the building contract is placed on or after 1 January 2024, or in the absence of the contract, for ships the keel of which is laid or which are at a similar stage of construction on or after 1 January 2024; and
- d) For ships other than those ships prescribed in (c) above, the equipment with, a contractual delivery date on or after 1 January 2024 or, in the absence of a contractual delivery date, an actual delivery date of the equipment to the ship on or after 1 January 2024.

**Note:**

1. *This Unified Interpretation is to be uniformly implemented by IACS member Societies on or after 1 January 2024.*

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