



**GUIDANCE CHANGE NOTICE No. 4**  
**Part 1 Seagoing Ships**

**GUIDANCE FOR CODE AND  
CONVENTION INTERPRETATIONS**

**Volume Y**

**September 2023**

## Foreword

This Guidance Change Notices (GCN) No. 4 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 [GCN No.1 2022](#), [GCN No.2 2022](#), [GCN No.3 2023](#), and [2022 Consolidated 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 these Rules are welcomed through communication with BKI Head Office.

## Guidance Change Notice No.4 - Oktober 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 SubSection.

Paragraph	Title/Subject	Status/Remark
<b>Section 5 - GF Convention</b>		
GF 13	Fire protection of spaces containing equipment for the fuel preparation	To add a requirement for Reg.2.2.42 and its interpretation
<b>Section 9 - MARPOL Convention</b>		
MPC 125	Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines (NOx Technical Code 2008, Chapter 4, Paragraph 4.4.6.1)	Update UI related to adoption of circular MEPC.1/Circ.895/Rev.1 which superseded circular MEPC.1/Circ.895
<b>Section 11 - SOLAS Convention</b>		
SC 30	Fire-extinguishing arrangements in machinery spaces	To include the text of SOLAS Regulation II-2/10.5.1.2.2 as adopted by MSC.409(97), which entered into force on 1 January 2020.
SC 70	Cargo tank vent systems and selection of electrical equipment	Corrigenda due to editorial errors in the clean version of Revision 4 of this UI.
SC 121	Fire Pump Isolation Requirements	Corrigenda to replaced the wording "constructed" with "contracted for construction" in the application statement.
SC 123	Machinery Installations - Service Tank Arrangements	To add a footnote that includes examples of equivalent arrangements (1.2 & 2.2).
SC 299	Fire Pump Isolation Requirements	To add a new interpretation of Fire Pump Isolation Requirements and to provide clarity on the provisions of SOLAS II-1 Regulation 13 when considering the requirements for testing of penetrations in watertight divisions after fire.

## Section 5 GF Convention

### GF13. Fire protection of spaces containing equipment for the fuel preparation

(July 2018)

(Rev.1 May 2023)

#### **IGF Code Part A, Regulation 2.2.42 reads:**

**2.2.42** *Ship constructed on or after 1 January 2024 means:*

*.1 for which the building contract is placed on or after 1 January 2024; or*

*.2 in the absence of a building contract, the keels of which are laid, or which are at a similar stage of construction on or after 1 July 2024; or*

*.3 the delivery of which is on or after 1 January 2028.*

#### **IGF Code Part A-1, Section 11.3.1 reads:**

##### **11.3** *Regulations for fire protection*

**11.3.1** *Any space containing equipment for the fuel preparation such as pumps, compressors, heat exchangers, vaporizers and pressure vessels shall be regarded as a machinery space of category A for fire protection purposes.*

#### **Interpretation**

1. Fire protection in 11.3.1 means structural fire protection, not including means of escape.

~~2.—Enclosed spaces containing equipment for fuel preparation such as pumps or compressors or other potential ignition sources are to be provided with a fixed fire extinguishing system complying with the provisions of SOLAS II-2/10.4.1.1 and the FSS Code and taking into account the necessary concentrations / application rate required for extinguishing gas fires.~~

**2. Notwithstanding interpretation 1, any enclosed spaces containing equipment for fuel preparation such as pumps or compressors or other potential ignition sources are to comply with regulation 11.8 of the IGF Code as amended by Resolution MSC.475(102).**

#### **Note:**

1. *This Unified Interpretation is to be uniformly implemented by IACS Societies on:*

i) *ships contracted for construction on or after 1 July 2019;*

ii) *ships which commence conversion to using low-flashpoint fuels on or after 1 July 2019;*

iii) *ships, using low-flashpoint fuels, which commence, on or after 1 July 2019, undertaking to use low-flashpoint fuels different from those which it was originally approved to use before 1 July 2019.*

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. *The “commence conversion” date means the date on which the contract is placed for the conversion or in the absence of a contract, the date on which the work identifiable with the specific conversion begins.*

4. *The “commence undertaking to use” date is the date of the document accepted by the Classification Society as request for approval for the use of a new fuel.*

5. *Rev.1 of this Unified Interpretation is to be uniformly implemented by IACS Societies on ships constructed on or after 1 January 2024 as defined in paragraph 2.2.42 of the IGF Code.*

*end*

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## Section 9 MARPOL Convention

### MPC 125. Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines (NOx Technical Code 2008, Chapter 4, Paragraph 4.4.6.1)

(Nov 2015)

(Rev.1 May 2023)

**Paragraph 4.4.6.1, Chapter 4 of NOx Technical Code (NTC) 2008 reads:**

**4.4.6.1** *The engine group may be defined by basic characteristics and specifications in addition to the parameters defined in 4.3.8 for an engine family.*

#### **Interpretation**

Paragraph 4.4.6.1 cross references 4.3.8 which provides guidance for selection of an engine family. For engines fitted with SCR system to reduce NOx emissions it is recognised that some of the parameters provided may not be common to all engines within a group, 4.3.8.2.3 and 4.3.8.2.4 state that:

**.3** *for which the building contract is placed on or after 1 January 2024; or*

- *to be within a total spread of 15*

**.4** *number of cylinders and cylinder configuration:*

- *applicable in certain cases only, e.g., in combination with exhaust gas cleaning devices*

For engines fitted with SCR system to reduce NOx emissions the number and arrangement of cylinders may not be common to all members of the engine group. These parameters may be replaced with new parameters derived from the SCR chamber and catalyst blocks, such as the SCR space velocity (SV), catalyst block geometry and catalyst material.

**This interpretation may be applied to the engine family where the applicant has provided clear evidence that an engine family concept, allowing for different numbers and arrangements of cylinders, will result in same or lower NOx emissions of the engines with different cylinder numbers compared to the NOx emissions of the related parent engine.**

#### **Note:**

- 1.** *This Unified Interpretation is to be uniformly implemented by IACS Societies not later than 1 July 2016.*
- 2.** *This Unified Interpretation is to be uniformly implemented by IACS Societies not later than 1 July 2016.*

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*end*

## Section 11 SOLAS Convention

### SC 30 Fire-extinguishing arrangements in machinery spaces

(May 1998)

(Rev.1 June 2000)

(Rev.2 Nov. 2005)

(Rev.3 Mar 2023)

{Interpretation of **SOLAS** Chapter II-2, Regulation 10.5.1 and 10.5.2}

**SOLAS Regulation II-2/10.5.1 reads as follows:**

#### **5.1 Machinery spaces containing oil-fired boilers or oil fuel units**

*Machinery spaces of category A containing oil-fired boilers or oil fuel units shall be provided with any one of the fixed fire-extinguishing systems in paragraph 4.1. In each case, if the engine and boiler rooms are not entirely separate, or if fuel oil can drain from the boiler room into the engine-room, the combined engine and boiler rooms shall be considered as one compartment.*

#### **5.1.2 Additional fire-extinguishing arrangements<sup>1)</sup>**

**5.1.2.1** *There shall be in each boiler room or at an entrance outside of the boiler room at least one portable foam applicator unit complying with the provisions of the Fire Safety Systems Code.*

**5.1.2.2** *There shall be at least two portable foam extinguishers or equivalent in each firing space in each boiler room and in each space in which a part of the oil fuel installation is situated. There shall be not less than one approved foam-type extinguisher of at least 135 L capacity or equivalent in each boiler room. These extinguishers shall be provided with hoses on reels suitable for reaching any part of the boiler room. In the case of domestic boilers of less than 175 kW, or boilers protected by fixed water-based local application fire-extinguishing systems as required by paragraph 5.6, an approved foam-type extinguisher of at least 135 L capacity is not required.*

**5.1.2.3** *In each firing space there shall be a receptacle containing at least 0.1 m<sup>3</sup> sand, sawdust impregnated with soda, or other approved dry material, along with a suitable shovel for spreading the material. An approved portable extinguisher may be substituted as an alternative.*

**SOLAS Chapter II-2, Regulation 10.5.2 reads as follows:**

#### **5.2 Machinery spaces of category A containing internal combustion machinery**

#### **5.2.1 Fixed fire-extinguishing systems<sup>2)</sup>**

*Machinery spaces of category A containing internal combustion machinery shall be provided with one of the fixed fire-extinguishing systems in paragraph 4.1.*

#### **5.2.2 Additional fire-extinguishing arrangements**

**5.2.2.1** *There shall be at least one portable foam applicator unit complying with the provisions of the Fire Safety Systems Code.*

<sup>1)</sup>Refer to Unified interpretation of SOLAS chapter II-2 on the number and arrangement of portable fire extinguishers on board ships (MSC.1/Circ.1275 and Corr.1).

<sup>2)</sup>Refer to Unified interpretation of SOLAS chapter II-2 on the number and arrangement of portable fire extinguishers on board ships (MSC.1/Circ.1275 and Corr.1).

**5.2.2.2** *There shall be in each such space approved foam-type fire extinguishers, each of at least 45 L capacity or equivalent, sufficient in number to enable foam or its equivalent to be directed onto any part of the fuel and lubricating oil pressure systems, gearing and other fire hazards. In addition, there shall be provided a sufficient number of portable foam extinguishers or equivalent which shall be so located that no point in the space is more than 10 m walking distance from an extinguisher and that there are at least two such extinguishers in each such space. For smaller spaces of cargo ships the Administration may consider relaxing this requirement.*

**Interpretation**

**Number of systems, appliances and extinguishers required by Reg. II-2/10.5.1 10.5.2 (MSC/Circ. 1120)**

Systems, appliances & extinguishers  Category A machinery spaces	Fixed fire-extinguishing system	Portable foam applicator <sup>1</sup>	Portable foam extinguishers	Add'l portable foam extinguishers	135 / foam extinguisher	45 / foam extinguishers <sup>2</sup>	Sand boxes <sup>3</sup>
SOLAS paragraph	10.5.1.1 10.5.2.1	10.5.1.2.1 10.5.2.2.1	10.5.1.2.2	10.5.2.2.2	10.5.1.2.2	10.5.2.2.2	10.5.1.2.3
<b>Boiler room containing:</b>							
Oil-fired boilers	1	1	2N	NA	1 <sup>4</sup>	-	N
Oil-fired boilers and oil fuel units	1	1	2N+2	NA	1 <sup>4</sup>	-	N
<b>Engine room containing:</b>							
Oil fuel units only	1	1	2N	NA	1 <sup>4</sup>	-	N
Internal combustion machinery	1	1	x		1 <sup>4</sup>	-	N
Internal combustion machinery and oil fuel units	1	1	x		1 <sup>4</sup>	-	N
<b>Combined engine/boiler room containing:</b>							
Internal combustion machinery, oil fired boilers and oil fuel units	1	1	(2N + 2) or x whichever is greater	NA	1 <sup>4</sup>	y <sup>5</sup>	N
<p>N = number of firing spaces.                      "2N" means that two extinguishers are to be located in each firing space.                      x = sufficient number, minimum two in each space, so located that there are at least one portable fire extinguisher within 10 m walking distance from any point.                      y = sufficient number to enable foam to be directed onto any part of the fuel and lubricating oil pressure systems, gearing and other fire hazards.</p> <p><b>Notes:</b>  <sup>1</sup> May be located at outside of the entrance to the room.  <sup>2</sup> May be arranged outside of the space concerned for smaller spaces of cargo ships.  <sup>3</sup> The amount of sand is to be at least 0.1 m<sup>3</sup>. A shovel is to be provided. Sand boxes may be substituted by approved portable fire extinguishers.  <sup>4</sup> Not required for such spaces in cargo ships wherein all boilers contained therein are for domestic services and are less than 175 kW, <b>or boilers are protected by fixed water-based local application fire-extinguishing systems as required by Reg. II-2/10.5.6.</b>  <sup>5</sup> In case of machinery spaces containing both boilers and internal combustion engines (case not explicitly considered in Reg. 10.5) Reg. 10.5.1 and 10.5.2 apply, with the exception that one of the foam fire-extinguishers of at least 45 L capacity or equivalent (required by Reg. 10.5.2.2.2) may be omitted on the condition that the 135 L extinguisher (required by Reg. 10.5.1.2.2) can protect efficiently and readily the area covered by the 45 L extinguisher.  <sup>6</sup> Oil fired machinery other than boilers such as fired inert gas generators, incinerators and waste disposal units are to be considered the same as boilers insofar as the required number and type of fire fighting appliances are concerned.</p>							

**Note:**

- Changes introduced in Rev.1 are to be implemented by IACS Members and Associates from 1 January 2001.
- Rev.3 is updated to include the text of SOLAS Regulation II-2/10.5.1.2.2 as adopted by MSC.409(97), which entered into force on 1 January 2020.

end



## SC 70 Cargo tank vent systems and selection of electrical equipment

(1985)

(Rev.1 May 2001)

(Rev.2 Nov 2005)

(Rev.3 Oct 2010)

(Rev.4 Feb 2021)

**(Corr.1 Apr 2023)**

**Interpretation of Regulations SOLAS II-2/11.6.2.2 and SOLAS II-2/4.5.4.3.1 of SOLAS Chapter II-2 as amended by IMO resolutions up to MSC.421(98)**

**SOLAS regulation II-2/11.6.2 reads as follows.**

### **6.2 Openings for small flow by thermal variations**

*Openings for pressure release required by paragraph 6.1.1 shall:*

*.1 have as great a height as is practicable above the cargo tank deck to obtain maximum dispersal of flammable vapours, but in no case less than 2 m above the cargo tank deck; and*

*.2 Be arranged at the furthest distance practicable but not less than 5 m from the nearest air intakes and openings to enclosed spaces containing a source of ignition and from deck machinery and equipment which may constitute an ignition hazard. Anchor windlass and chain locker openings constitute an ignition hazard.*

*For tankers constructed on or after 1 January 2017, the openings shall be arranged in accordance with regulation 4.5.3.4.1.*

### **Interpretation:**

Area Classification is to be carried out in accordance with the principles laid down in IEC 60092-502:1999.

A1 Areas on open deck, or semi-enclosed spaces on open deck, within 3m of cargo tank ventilation outlets which permit the flow of small volumes of vapour or gas mixtures caused by thermal variation are defined as Zone 1 as specified by IEC 60092-502:1999 para 4.2.2.7.

A2 Areas within 2m beyond the zone specified in A1 above are to be considered Zone 2 (as opposed to 1.5m as specified by IEC 60092-502:1999 para 4.2.3.1).

A3 Electrical equipment or cables shall not normally be installed in hazardous areas. Where essential for operational purposes, electrical equipment may be installed in accordance with IEC 60092-502:1999.

**SOLAS regulation II-2/4.5.3.4.1 reads as follows.**

*.3 Not less than 10 m measured horizontally from the nearest air intakes and openings to enclosed spaces containing a source of ignition and from deck machinery and equipment which may constitute an ignition hazard.*

### **Interpretation:**

Area Classification is to be carried out in accordance with the principles laid down in IEC 60092-502:1999.

B1 Areas on open deck, or semi-enclosed spaces on open deck, within a vertical cylinder of unlimited height and 6m radius centred upon the centre of the outlet, and within a hemisphere of 6m radius below the outlet which permit the flow of large volumes of vapour, or gas mixtures during loading/discharging/ballasting are defined as Zone 1 as specified by IEC 60092-502:1999 para 4.2.2.8.

B2 Areas within 4m beyond the zone specified in B1 above are defined as Zone 2 as specified by IEC 60092-502:1999 para 4.2.3.2.

B3 Electrical equipment or cables shall not normally be installed in hazardous areas. Where essential for operational purposes, electrical equipment may be installed in accordance with IEC 60092-502:1999.

**Note:**

1. Changes introduced in Rev.1 are to be implemented by IACS Members and Associates from 1 July 2001.
2. Rev.3 of this UI is to be uniformly implemented by IACS Societies on ships contracted for construction on or after 1 January 2012.
3. Rev.4 of this UI is to be uniformly implemented by IACS Societies on ships contracted for construction on or after 1 July 2022.
4. 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 Procedural Requirement (PR) No. 29.

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end

## SC 121 Fire Pump Isolation Requirements

(1997)

(Rev.1 Nov 2005)

(Rev.2 Jan 2023)

(Corr.1 Apr 2023)

### Interpretation of SOLAS II-2 Regulation 10.2.1.4.1

**SOLAS regulation II-2/11.6.2 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 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 **contracted for construction** ~~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.

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end

## SC 123 Machinery Installations - Service Tank Arrangements

(1998)  
(Rev.1 Apr 1998)  
(Rev.2 June 2002)  
(Rev.3 Dec 2005)  
(Rev.4 Nov 2018  
Withdrawn and Rev.3 reinstated Nov 2019)  
(Corr.1 Feb 2022)  
**(Rev.5 July 2023)**

### Reg. II-1/26.11

#### SOLAS Regulation II-1/26.11 states:

Two fuel oil service tanks for each **type of fuel** used on board necessary for propulsion and vital systems or **equivalent arrangements** shall be provided on each new ship, with a capacity of at least 8 h at maximum continuous rating of the propulsion plant and normal operating load at sea of the generator plant.

#### Interpretation

Arrangements complying with this regulation and acceptable "equivalent arrangements", for the most commonly utilised fuel systems, are shown below.

A service tank is a fuel oil tank which contains only fuel of a quality ready for use i.e. fuel of a grade and quality that meet the specification required by the equipment manufacturer. A service tank is to be declared as such and not to be used for any other purpose.

Use of a setting tank with or without purifiers, or purifiers alone, and one service tank is not acceptable as an "equivalent arrangement" to two service tanks.

### 1. Example 1

#### 1.1 Requirement according to SOLAS - Main and Auxiliary Engines and Boiler(s) operating with Heavy Fuel Oil (HFO) (one fuel ship)

HFO Serv. TK Capacity for at least 8 h Main Eng. + Aux. Boiler + Aux. Eng.
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HFO Serv. TK Capacity for at least 8 h Main Eng. + Aux. Boiler + Aux. Eng.
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MDO TK For initial cold starting or repair work of Engines/ Boiler
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#### 1.2 Equivalent arrangement<sup>3)</sup>

HFO Serv. TK Capacity for at least 8 h Main Eng. + Aux. Boiler + Aux. Eng.
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MDO Serv. TK Capacity for at least 8 h Main Eng. + Aux. Boiler + Aux. Eng.
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This arrangement only applies where main and auxiliary engines can operate with heavy fuel oil under all load conditions and, in the case of main engines, during manoeuvring.

For pilot burners of Auxiliary Boilers if provided, an additional MDO tank for 8 hours may be necessary.

<sup>3)</sup> Any fuel oil which requires post service tank heating to achieve the required injection viscosity is not regarded in this context as MDO.

## 2. Example 2

2.1 Requirement according to SOLAS - Main Engine(s) and Auxiliary Boiler(s) operating with HFO and Auxiliary Engine operating with Marine Diesel Oil (MDO)

HFO Serv. TK Capacity for at least 8 h Main Eng.+ Aux. Boiler	HFO Serv. TK Capacity for at least 8 h Main Eng.+ Aux. Boiler	MDO Serv. TK Capacity for at least 8 h Aux. Eng.	MDO Serv. TK Capacity for at least 8 h Aux. Eng.
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2.2 Equivalent arrangement<sup>4)</sup>

HFO Serv. TK Capacity for at least 8 h Main Eng. + Aux. Boiler +	MDO Serv. TK Capacity for at least the highest of: 4 h Main Eng. +Aux. Eng. + Aux. Boiler or 8 h Aux. Eng. + Aux. Boiler	MDO Serv. TK Capacity for at least the highest of: 4 h Main Eng. +Aux. Eng. +Aux. Boiler or 8 h Aux. Eng. + Aux. Boiler
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3. The arrangements in 1.2 and 2.2 apply, provided the propulsion and vital systems which use two types of fuel support rapid fuel changeover and are capable of operating in all normal operating conditions at sea with both types of fuel (MDO and HFO).

### Note:

1. This Unified Interpretation is to be applied by IACS Members and Associates to all ships subject to the relevant SOLAS Regulation.
2. Changes introduced in Rev.2 are to be uniformly implemented by IACS Members and Associates from 1 January 2003.
3. Changes introduced in Rev.3 are to be uniformly implemented by IACS Members and Associate from 1 July 2006.
4. Rev.4 of this UI is withdrawn prior to coming into force on 1 January 2020 and Rev.3 of this UI is reinstated on Nov 2019.
5. Rev.5 of this Unified Interpretation is to be uniformly implemented by IACS Societies on ships.
6. The "contracted for construction" date means the date on which the contract to build the vessel is signed between the prospective owner and shipbuilder. For further details regarding the date of "contract for construction", refer to IACS Procedural Requirement (PR) No. 29.

end

<sup>4)</sup>See footnote 1.

## SC 299 Watertight testing after fire testing of penetrations in watertight divisions in passenger ships

(July 2023)

**Interpretation of SOLAS Chapter II-1, regulation 13.2.3 and the related explanatory notes contained in resolution MSC.429(98)/Rev.2**

**SOLAS Regulation II-1/13.2.3 reads as follows:**

*Regulation 13 - Openings in watertight bulkheads below the bulkhead deck in passenger ships*

*2.3 Lead or other heat-sensitive materials shall not be used in systems which penetrate watertight bulkheads, where deterioration of such systems in the event of fire would impair the watertight integrity of the bulkheads.*

**The Explanatory Notes to SOLAS Regulation II-1/13.2.3 (as contained in resolution MSC.429(98)/Rev.2) read as follows:**

*3 Materials used in systems which penetrate watertight bulkheads should be of sufficient strength after exposure to heat or be considered as part of an open piping system. Closing devices using intumescent material (swelling when exposed to heat) for open piping systems should not be considered equivalent to the fitting of a valve, since the fire might be located too far from the device to create a watertight seal.*

*4 Approval of pipe penetrations fitted to ensure the watertight integrity of a bulkhead or deck where heat-sensitive materials are used should include a prototype test of watertightness after having undergone the standard fire test appropriate for the location in which the penetrations are to be installed\*.*

*4.1 The fire tested pipe penetration should then be tested to a test pressure of not less than 1.5 times the design pressure as defined in regulation 2.18. The pressure should be applied to the same side of the division as the fire test.*

*4.2 The fire tested pipe penetration should be tested for a period of at least 30 minutes under hydraulic pressure equal to the test pressure, but minimum 1.0 bar. There should be no leakage during this test.*

*4.3 The fire tested pipe penetration should continue to be tested for a further 30 minutes with the test pressure. The quantity of water leakage is not to exceed a total of 1 litre.*

*4.4 The prototype test should be considered valid only for the pipe typology (e.g. thermoplastic and multilayer), pressure classes, the maximum/minimum dimensions tested, and the type and fire rating of the division tested.*

*\* Refer to the requirements for A-class division set out in part 3 of annex 1 to the 2010 FTP Code*

*5 The pressure test need not be carried out on the hot penetration arrangement. Ample time may be given to prepare for the pressure test, i.e. dismantling the fire testing equipment and rigging the pressure test equipment.*

*5.1 The pressure test should be carried out with the pipe section used in the fire test still in place.*

*5.2 Any pipe insulation fitted for the purpose of the fire test may be removed before the pressure test.*

*5.3 Prototype testing need not be carried out if the pipe penetration is made of steel or equivalent material having a thickness of 3 mm or greater and a length of not less than 900 mm (preferably 450 mm on each side of the division), and there are no openings. Such penetrations shall be suitably insulated by extension of the insulation at the same level of the division. See also regulation II-2/9.3.1 with respect to piping. However, the penetration must still comply with the watertight integrity requirement in regulation 2.17.*

### **Interpretation**

1. Any penetration used for the passage of heat-sensitive piping systems through a watertight bulkhead or deck on a passenger ship under SOLAS regulation II-1/13.2.3 shall be tested with the heat-sensitive piping

and shall be type approved for watertight integrity as per paragraphs 4 and 5 of the explanatory notes to regulation II-1/13.2.3 contained in the annex of resolution MSC.429(98)/ Rev.2, as applicable, after the fire test.

2. SOLAS regulation II-1/13.2.3 shall be applicable to heat-sensitive piping systems and shall not be applied to cable penetrations in watertight bulkheads and decks.

**Note:**

1. *This Unified Interpretation is to be uniformly implemented by IACS Members on ships contracted for construction on or after 1 July 2024.*

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.*

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*end*

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