

# Amendments of the Rules for Classification of Steel Ships

(Development Review : For external opinion inquiry)

## Pt. 8 Fire Protection and Fire Extinction



2021.09.

Machinery Rule Development Team

## - Main Amendments -

(1) Effective date : 1 July 2022 (based on contract date for construction)

● reflected of SOLAS II-2/19.4

Present	Amendment	Note
<p style="text-align: center;"><b>CHAPTER 12 CARRIAGE OF DANGEROUS GOODS</b></p> <p style="text-align: center;">Section 1 &lt;omitted&gt;</p> <p style="text-align: center;">Section 2 Special Requirements</p> <p>201. Special requirements</p> <p style="text-align: center;"><u>Section 3 Document of Compliance</u></p> <p><u>301. Document of Compliance</u> <b>【See Guidance】</b>          &lt;newly added&gt;</p>	<p style="text-align: center;"><b>CHAPTER 12 CARRIAGE OF DANGEROUS GOODS</b></p> <p style="text-align: center;">Section 1 &lt;omitted&gt;</p> <p style="text-align: center;">Section 2 Special Requirements</p> <p>201. Special requirements <b>【See Guidance】</b></p> <p style="text-align: center;"><u>Section 3 Document of Compliance</u></p> <p><u>301. Document of Compliance</u> <b>【See Guidance】</b>  <u>The Administration shall provide the ship with an appropriate document as evidence of compliance of construction and equipment with the requirements of this chapter. Certification for dangerous goods, except solid dangerous goods in bulk, is not required for those cargoes specified as class 6.2 and 7 and dangerous goods in limited quantities and excepted quantities.</u></p>	<p>(amendment)          - added <b>【See Guidance】</b></p> <p>- reflected of SOLA S II-2/19.4</p>

# Amendments of the Rules / Guidance

## Pt. 8 Protection and Fire Extinction



2021. 4

Hull Rule Development Team

Present	Amendment
<p style="text-align: center;"><b>CHAPTER 7 CONTAINMENT OF FIRE</b></p> <p style="text-align: center;"><b>Section 1 Thermal and Structural Boundaries</b></p> <p>102. Passenger ships</p> <p>1. ~ 5. &lt;omitted&gt;</p> <p>&lt;newly added&gt;</p>	<p style="text-align: center;"><b>CHAPTER 7 CONTAINMENT OF FIRE</b></p> <p style="text-align: center;"><b>Section 1 Thermal and Structural Boundaries</b></p> <p>102. Passenger ships</p> <p>1. ~ 5. &lt;same as the present&gt;</p> <p>6. <u>In applying 102.3(2)(B) ⑨ of the Rules, "Isolated pantries containing no cooking appliances in accommodation spaces" are pantries enclosed in an accommodation space and are only accessible from accommodation spaces and/or open deck. For the purpose of this categorization, "accommodation space" is as defined in 103.1 of the Rules. These pantries should not have communicating openings to spaces other than accommodation spaces, such as "main galley" in category ⑫ (see Fig 8.7.1 of the Guidance).</u></p> <div data-bbox="1167 791 1973 1321" data-label="Diagram"> </div> <p style="text-align: center;"><b>Fig 8.7.1 Example of isolated pantries containing no cooking appliances in accommodation spaces</b></p>

# Amendments of the Guidance relating to the Rules

(External Opinion Inquiry)

## Pt. 8 Fire Protection and Fire Extinction



2021. 04.

Rule Development Team

## – Main Amendments –

(1) Effective Date : 1 June 2021(based on contracted date for construction)

- Reflection of internal request for rule revision

Present	Amendment	Note
<p><b>CHAPTER 7 CONTAINMENT OF FIRE</b></p> <p><b>Section 1 Thermal and Structural Boundaries</b></p> <p>102. Passenger ships</p> <p>1. ~ 5. &lt;omitted&gt;</p> <p>&lt;newly added&gt;</p>	<p><b>CHAPTER 7 CONTAINMENT OF FIRE</b></p> <p><b>Section 1 Thermal and Structural Boundaries</b></p> <p>102. Passenger ships</p> <p>1. ~ 5. &lt;same as the present&gt;</p> <p>6. In applying <b>102.3 (2) (B) ⑨</b> of the Rules, "Isolated pantries containing no cooking appliances in accommodation spaces" are pantries enclosed in an accommodation space and are only accessible from accommodation spaces and/or open deck. For the purpose of this categorization, "accommodation space" is as defined in <b>103. 1</b> of the Rules. These pantries should not have communicating openings to spaces other than accommodation spaces, such as "main galley" in category ⑫ (see <b>Fig 8.7.1</b> of the Guidance).</p> <div data-bbox="1039 805 1845 1334" data-label="Diagram"> <p>The diagram illustrates an 'Accommodation Space' which is a large rectangular area. Within this space, there are three smaller rectangular areas, each labeled 'Pantry (9)' and 'No cooking appliances'. One pantry is located in the top-left corner, another in the bottom-left corner, and a third is on the right side. The pantry on the right has an opening that leads directly to the 'Accommodation Space or Open Deck' outside the main room. The other two pantries have openings that lead into the main 'Accommodation Space'.</p> </div> <p><b>Fig 8.7.1</b> Example of isolated pantries containing no cooking appliances in accommodation spaces</p>	



# Amendments of the Guidance relating to the Rules

(External Opinion Inquiry)

## Pt. 8 Fire Protection and Fire Extinction



2022. 01.

Rule Development Team

# Main Amendments

## (1) Background of Amendment

- 1) Reflection of revision IACS UI SC64(requirement for fire damper of ventilation duct)
- 2) Correction of classification error for Ro-Ro space(vehicle deck space→ vehicle spaces)
- 3) Reflection of revision IACS UI SC126 Corr.1(Annex 8-1)

Present	Amendment	Note
<p><b>CHAPTER 7 CONTAINMENT OF FIRE</b></p> <p>Section 1 ~ 5 &lt;omitted&gt;</p> <p>Section 6 Ventilation Systems</p> <p>601. ~ 602. &lt;omitted&gt;</p> <p>603. Details of fire dampers and duct penetrations</p> <p>1. ~ 2. &lt;omitted&gt;</p> <p><u>&lt;newly added&gt;</u></p> <p>605. &lt;omitted&gt;</p>	<p><b>CHAPTER 7 CONTAINMENT OF FIRE</b></p> <p>Section 1 ~ 5 &lt;same as the present&gt;</p> <p>Section 6 Ventilation Systems</p> <p>601. ~ 602. &lt;same as the present&gt;</p> <p>603. Details of fire dampers and duct penetrations</p> <p>1. ~ 2. &lt;same as the present&gt;</p> <p><u>3. In applying 603. 1 of the Rules, ducts or pipes with free sectional area of 0.075 m<sup>2</sup> or less need to be fitted with fire damper at their passage through Class "A" divisions in those cases indicated in 602. 2 and 3 of the Rules. The fire damper can be omitted if the duct is arranged in compliance with the requirements of 602. 4 (5) and (6) of the Rules.</u></p> <p>605. &lt;omitted&gt;</p>	<p>- Reflection of IAC S UI SC 64</p> <p>"Ducts or pipes with free sectional area of 0.075 m<sup>2</sup> or less need to be fitted with fire damper at their passage through Class "A" divisions in those cases indicated in Regulations 9.7.2.2 and 9.7.2.3. The fire damper can be omitted if the duct is arranged in compliance with the requirements of 9.7.2.4.2.1 and 9.7.2.4.2.2."</p>

Present	Amendment	Note
<p style="text-align: center;"><b>CHAPTER 12 CARRIAGE OF DANGEROUS GOODS</b></p> <p style="text-align: center;"><b>Section 1 General Requirements</b></p> <p>101. General requirements</p> <p>1. ~ 2. &lt;omitted&gt;</p> <p>3. In applying <b>101. 2</b> (3) of the Rules, Ro-ro spaces include special category spaces and <u>vehicle deck spaces</u>;</p> <p style="text-align: center;"><b>Section 2 &lt;omitted&gt;</b></p>	<p style="text-align: center;"><b>CHAPTER 12 CARRIAGE OF DANGEROUS GOODS</b></p> <p style="text-align: center;"><b>Section 1 General Requirements</b></p> <p>101. General requirements</p> <p>1. ~ 2. &lt;omitted&gt;</p> <p>3. In applying <b>101. 2</b> (3) of the Rules, Ro-ro spaces include special category spaces and <u>vehicle spaces</u>;</p> <p style="text-align: center;"><b>Section 2 &lt;same as present&gt;</b></p>	<p>- (correction of error) IACS UI SC 85</p> <p>“Ro-ro spaces include special category spaces (Reg.3.46) and vehicle spaces (3.49)”</p>

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1	Moulding				○ <sup>(3)</sup>				1	Moulding				○ <sup>(3)</sup>				
2	Panel	○ <sup>(4)</sup>							2	Panel	○ <sup>(4)</sup>							
3	Painted surface, veneer, fabric or foils			○	○	○	○ <sup>(5)</sup>		3	Painted surface, veneer, fabric or foils			○	○	○		○ <sup>(5)</sup>	
4	Painted surface, veneer, fabric or foils			○	○ <sup>(3)</sup>	○ <sup>(2)</sup>	○ <sup>(5)</sup>		4	Painted surface, veneer, fabric or foils			○	○ <sup>(3)</sup>	○ <sup>(2)</sup>		○ <sup>(5)</sup>	
5	Decoration				○ <sup>(3)</sup>		○		5	Decoration				○ <sup>(3)</sup>			○	
6	Painted surface, veneer, fabric or foils				○ <sup>(3)</sup>	○ <sup>(2)</sup>	○ <sup>(5)</sup>		6	Painted surface, veneer, fabric or foils				○ <sup>(3)</sup>	○ <sup>(2)</sup>		○ <sup>(5)</sup>	
7	Skirting board				○ <sup>(3)</sup>				7	Skirting board				○ <sup>(3)</sup>				
8	Insulation		○ <sup>(1)</sup>						8	Insulation		○ <sup>(1)</sup>						
9	Surfaces and paints in concealed or inaccessible spaces			○					9	Surfaces and paints in concealed or inaccessible spaces			○					
10	Draught stop	○ <sup>(4)</sup>							10	Draught stop	○ <sup>(4)</sup>							
11	Grounds and supports	○ <sup>(4)</sup>		○					11	Grounds and supports	○ <sup>(4)</sup>		○					
12	Lining	○ <sup>(4)</sup>							12	Lining	○ <sup>(4)</sup>							
13	Primary deck covering 1st layer						○	○	13	Primary deck covering 1st layer							○ <sup>(7)</sup>	○
14	Floor finishing			○ <sup>(6)</sup>			○		14	Floor finishing			○ <sup>(6)</sup>			○		
15	Window box	○ <sup>(4)</sup>							15	Window box	○ <sup>(4)</sup>							
16	Window box surface			○ <sup>(3)</sup>	○ <sup>(3)</sup>	○ <sup>(2)</sup>	○		16	Window box surface			○ <sup>(3)</sup>	○ <sup>(3)</sup>	○ <sup>(2)</sup>	○		

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# Amendments of the Guidance Relating to the Rules for Classification of Steel Ships

(For External opinion inquiry)

## Pt. 8 Fire Protection and Fire Extinction



2022.1.

Machinery Rule Development Team

## - Main Amendments -

(1) Effective date : 1 July 2022 (based on contract date for construction)

- reflected of IACS UI SC159 Corr.1 : Reference document updated
- reflected of IACS UI SC147 Rev.2 : Interpretation of fire door updated
- reflected of IACS UI SC169 Rev.1 : Interpretation of the locations of the foam monitors for deck foam system
- reflected of HUT4000-3095-2021 : Reference document for type approval of portable fire extinguisher updated
- reflected of IACS UR M75 Rev.1 : Clarification made for ventilation of Em'cy generator room
- reflected of IACS UI SC42 Rev.3 : Reference document updated
- reflected of IACS UI SC43 Rev.3 : Reference document updated
- reflected of IACS UI SC57
- reflected of IACS UI SC70
- reflected of IACS UI SC79
- reflected of IACS UR F46

Present	Amendment	Note
<p style="text-align: center;"><b>CHAPTER 3 FIRE GROWTH POTENTIAL</b></p> <p style="text-align: center;"><b>Section 1 Control of Air Supply and Flammable Liquid to The Spaces</b></p> <p><b>101. Closing appliances and stopping devices of ventilation</b></p> <p><b>1. &amp; 2. &lt;Omitted&gt;</b></p> <p><b>3.</b> In applying <b>101. 1</b> of the Rules, emergency generator rooms are to be provided with ventilation openings for the admission of combustion air to engines and the removal of heat. These openings are usually provided with louvers which can be closed (when fire breaks out in emergency generator rooms). The louvers may be hand operated or power operated. Alternatively, the louvers may be of fixed type with a closing door which may be hand operated or automatic. <i>(2021)</i></p> <p>The following requirements apply to ventilation louvers for emergency generator rooms and to closing appliances where fitted to ventilators serving emergency generator rooms:</p> <p>(1) Ventilation louvers and closing appliances may either be hand-operated or power-operated (hydraulic / pneumatic / electric) and are to be operable under a fire condition.</p> <p>(2) Hand-operated ventilation louvers and closing appliances are to be kept open during normal operation of the vessel. Corresponding instruction plates are to be provided at the location where hand-operation is provided.</p> <p>(3) Power-operated ventilation louvers and closing appliances shall be of a fail-to-open type. Closed ventilation louvers and closing appliances are acceptable during normal operation of the vessel. Power-operated ventilation louvers and closing appliances shall open automatically whenever the emergency generator is starting / in operation.</p> <p>(4) &lt;Omitted&gt;</p>	<p style="text-align: center;"><b>CHAPTER 3 FIRE GROWTH POTENTIAL</b></p> <p style="text-align: center;"><b>Section 1 Control of Air Supply and Flammable Liquid to The Spaces</b></p> <p><b>101. Closing appliances and stopping devices of ventilation</b></p> <p><b>1. &amp; 2. &lt;Omitted&gt;</b></p> <p><b>3.</b> In applying <b>101. 1</b> of the Rules, <u>emergency generator rooms are to be provided with ventilation openings for the admission of combustion air to engines and the removal of heat. These openings are usually provided with louvers which can be closed (when fire breaks out in emergency generator rooms). The louvers may be hand operated or power operated. Alternatively, the louvers may be of fixed type with a closing door which may be hand operated or automatic. (2021)</u></p> <p><del>The following requirements apply to ventilation louvers for emergency generator rooms and to closing appliances where fitted to ventilators serving emergency generator rooms:</del></p> <p><u>the following requirements apply to closable ventilation louvers and ventilator closing appliances serving emergency generator rooms, where fitted. (2022)</u></p> <p>(1) Ventilation louvers and closing appliances may either be hand-operated or power-operated (hydraulic / pneumatic / electric) and are to be operable under a fire condition.</p> <p>(2) Hand-operated ventilation louvers and closing appliances are to be kept open during normal operation of the vessel. Corresponding instruction plates are to be provided at the location where hand-operation is provided.</p> <p>(3) Power-operated ventilation louvers and closing appliances shall be of a fail-to-open type. Closed <u>power-operated</u> ventilation louvers and closing appliances are acceptable during normal operation of the vessel. Power-operated ventilation louvers and closing appliances shall open automatically whenever the emergency generator is starting / in operation. <u>(2022)</u></p> <p>(4) &lt;Omitted&gt;</p>	<p>(Amendment)</p> <p>– reflected of IA CS UR M75 R ev.1</p>

Present	Amendment	Note
<p style="text-align: center;"><b>CHAPTER 5 DETECTION AND ALARM</b></p> <p style="text-align: center;"><b>Section 1 General</b></p> <p><b>101. General requirements</b></p> <p>1. In applying <b>101. 1</b> of the Rules, fixed fire detection and fire alarm system are to be type approved by the Society and are also to be complied with the following requirements. <b>【See Rule】</b></p> <p>(1) In applying Ch 9, 2.1.6.4 of the FSS Code, the requirement that a system be so arranged to ensure that any fault occurring in the loop will not render the whole loop ineffective, is considered satisfied when a fault occurring in the loop only renders ineffective a part of the loop not being larger than a section of a system without means of remotely identifying each detector.</p> <p>(2) In applying Ch 9, 2.2.4 of the FSS Code, the ‘30 minutes’ means the last 30 minutes of the periods required under SOLAS Reg. II-1/42 and II-1/43 (18 hours for cargo ships and 36 hours for passenger ships). <i>(2018)</i></p> <p>(3) Power supply to the alarm sounder system when not an integral part of the detection system specified in Ch 9, 2.5.1.1 of the FSS Code.</p> <p>(A) There are to be not less than two sources of power supply for the alarm sounder system used in the operation of the fixed fire detection and fire alarm system, one of which is to be an emergency source of power.</p> <p>(B) In vessels required by SOLAS Reg. II-1/42 and 43 to be provided with a transitional source of emergency electrical power, the alarm sounder system is to be powered from this power source.</p> <p>(4) A space in which a cargo control console is installed, but does not serve as a dedicated cargo control room(e.g. ship’s office, machinery control room), is to be regarded as a cargo control room for the purposes of Ch 9, 2.5.1.3 of the FSS Code, as amended by <b>IMO Res.MSC.339(91)</b>, and therefore be provided with an additional indicating unit. <i>(2017)</i></p>	<p style="text-align: center;"><b>CHAPTER 5 DETECTION AND ALARM</b></p> <p style="text-align: center;"><b>Section 1 General</b></p> <p><b>101. General requirements</b></p> <p>1. In applying <b>101. 1</b> of the Rules, fixed fire detection and fire alarm system are to be type approved by the Society and are also to be complied with the following requirements. <b>【See Rule】</b></p> <p>(1) ~ (4) <b>⟨Omitted⟩</b></p> <p><u>(5) In applying Ch 9, 2.1.2.4.3 of the FSS Code, watertight doors complying with Reg.II-1/16 which also serve as fire doors are not to close automatically in case of fire detection. <i>(2022)</i></u></p>	<p>(Amendment)</p> <p>– reflected of IA CS UI SC 147 Rev.2</p>

Present	Amendment	Note
<p style="text-align: center;"><b>CHAPTER 8 FIRE FIGHTING</b></p> <p style="text-align: center;"><b>Section 2 Portable Fire Extinguisher</b></p> <p><b>201. Portable fire extinguisher [See Rule]</b></p> <p>1. All fire extinguishers shall be of approved types and designs based on the guidelines <b>Res. A. 602(15)</b> developed by the IMO.</p> <p style="text-align: center;"><b>Section 3 Fire-extinguishing Arrangements In Cargo Spaces</b></p> <p><b>601. Fixed gas fire-extinguishing systems for general cargo (2018) [See Rule]</b></p> <p>⟨Omitted⟩</p> <p>3. In applying <b>601. 4</b> of the Rule, “cargoes which constitute a low fire risk” means that all cargoes listed in appendix 1, entry for coal of the IMSBC Code and the lists of solid bulk cargoes for which a fixed gas fire-extinguishing system may be exempted of for which a fixed gas fire-extinguishing system is in effective <b>(MSC.1/Circ.1395/Rev.4). (2021)</b></p> <p><b>602. Fixed gas fire-extinguishing systems for dangerous goods [See Rule]</b></p> <p>In applying <b>601. 4</b> of the Rules, all cargo ships, are to be applied the requirement, engaged in the carriage of dangerous goods, of 500 tons gross tonnage and above. And water supplies defined in <b>Ch 12, 201. 1 (2)</b> of the Rules are considered as acceptable protection for cargoes listed in Table 2 of <b>MSC.1/Circ.1395/Rev.3. (2019)</b></p>	<p style="text-align: center;"><b>CHAPTER 8 FIRE FIGHTING</b></p> <p style="text-align: center;"><b>Section 2 Portable Fire Extinguisher</b></p> <p><b>201. Portable fire extinguisher [See Rule]</b></p> <p>1. All fire extinguishers shall be of approved types and designs based on the guidelines <b>Res. A. 602(15)951(23)</b> developed by the IMO.</p> <p style="text-align: center;"><b>Section 3 Fire-extinguishing Arrangements In Cargo Spaces</b></p> <p><b>601. Fixed gas fire-extinguishing systems for general cargo (2018) [See Rule]</b></p> <p>⟨Omitted⟩</p> <p>3. In applying <b>601. 4</b> of the Rule, “cargoes which constitute a low fire risk” means that all cargoes listed in appendix 1, entry for coal of the IMSBC Code and the lists of solid bulk cargoes for which a fixed gas fire-extinguishing system may be exempted of for which a fixed gas fire-extinguishing system is in effective <b>(the latest version of MSC.1/Circ.1395/Rev.4). (2021)(2022)</b></p> <p><b>602. Fixed gas fire-extinguishing systems for dangerous goods [See Rule]</b></p> <p>In applying <b>601. 4</b> of the Rules, all cargo ships, are to be applied the requirement, engaged in the carriage of dangerous goods, of 500 tons gross tonnage and above. And water supplies defined in <b>Ch 12, 201. 1 (2)</b> of the Rules are considered as acceptable protection for cargoes listed in Table 2 of <b>the latest version of MSC.1/Circ.1395/Rev.3. (2019)(2022)</b></p>	<p>(Amendment)</p> <p>– reflected of HUT4 000-3095-2021</p> <p>(Amendment)</p> <p>– reflected of IACS UI SC 159 Corr.1 and the expression is in-lined.</p>

Present	Amendment	Note
<p style="text-align: center;"><b>CHAPTER 8 FIRE FIGHTING</b></p> <p style="text-align: center;"><b>Section 7 Cargo Tank Protection</b></p> <p><b>701. Fixed deck foam systems [See Rule]</b></p> <p>Fixed deck foam systems is also to be complied as follows.</p> <ol style="list-style-type: none"> <li>1. In applying Ch 14, 2.1.2 of the FSS Code, the major equipment such as the foam concentrate tank and the pump may be located in the engine room.</li> <li>2. In applying Ch 14, 2.1.3 of the FSS Code, where the deck foam system is supplied by a common line from the fire main, a common line for fire main and deck foam line can only be accepted provided it can be demonstrated that the hose nozzles can be effectively controlled by one person when supplied from the common line at a pressure needed for operation of the monitors.</li> <li>3. In applying Ch 14, 2.3.2.3 of the FSS Code, port and starboard monitors required may be located in the cargo area above oil bunker tanks adjacent to cargo tanks if capable of protecting the deck below and aft of each other.</li> <li>4. Where an enclosed pipe trunk is situated within the cargo tanks deck area, the pipe trunk: <ol style="list-style-type: none"> <li>(1) should be protected by a fixed fire-extinguishing system in accordance with <b>801.</b> of the Rules. The extinguishing system should be operated from a readily accessible position outside the pipe trunk;</li> <li>(2) is not considered part of the cargo tanks deck area;</li> <li>(3) The area of the pipe trunk need not be included in the calculation of the foam solution rate of supply for the deck foam system required by <b>701.</b> of the Rules.;</li> <li>(4) should be adequately ventilated and protected in accordance with <b>Ch 2, 410. 2, 3</b> of the Rules.; and</li> <li>(5) should contain no flammable gas sources other than pipes and flanges. If the pipe trunk contains any other source of flammable gas, i.e. valves and pumps, it should be regarded as a cargo pump-room.</li> </ol> </li> </ol>	<p style="text-align: center;"><b>CHAPTER 8 FIRE FIGHTING</b></p> <p style="text-align: center;"><b>Section 7 Cargo Tank Protection</b></p> <p><b>701. Fixed deck foam systems [See Rule]</b></p> <p>Fixed deck foam systems is also to be complied as follows.</p> <ol style="list-style-type: none"> <li>1. In applying Ch 14, 2.1.2 of the FSS Code, the major equipment such as the foam concentrate tank and the pump may be located in the engine room.</li> <li>2. In applying Ch 14, 2.1.3 of the FSS Code, where the deck foam system is supplied by a common line from the fire main, a common line for fire main and deck foam line can only be accepted provided it can be demonstrated that the hose nozzles can be effectively controlled by one person when supplied from the common line at a pressure needed for operation of the monitors.</li> <li>3. In applying Ch 14, 2.3.2.3 of the FSS Code, <del>port and starboard monitors required may be located in the cargo area above oil bunker tanks adjacent to cargo tanks if capable of protecting the deck below and aft of each other.</del> <u>the port and starboard monitors required may be located in the cargo area above oil bunker tanks adjacent to cargo tanks if capable of protecting the deck below and aft of each other. (2022)</u></li> <li>4. Where an enclosed pipe trunk is situated within the cargo tanks deck area, the pipe trunk: <ol style="list-style-type: none"> <li>(1) should be protected by a fixed fire-extinguishing system in accordance with <b>801.</b> of the Rules. The extinguishing system should be operated from a readily accessible position outside the pipe trunk;</li> <li>(2) is not considered part of the cargo tanks deck area;</li> <li>(3) The area of the pipe trunk need not be included in the calculation of the foam solution rate of supply for the deck foam system required by <b>701.</b> of the Rules.;</li> <li>(4) should be adequately ventilated and protected in accordance with <b>Ch 2, 410. 2, 3</b> of the Rules.; and</li> <li>(5) should contain no flammable gas sources other than pipes and flanges. If the pipe trunk contains any other source of flammable gas, i.e. valves and pumps, it should be regarded as a cargo pump-room.</li> </ol> </li> </ol>	<p>(Amendment)</p> <p>– reflected of IACS UI SC 169 and clarification made</p>

Present	Amendment	Note
<p style="text-align: center;"><b>CHAPTER 13 PROTECTION OF VEHICLE SPECIAL CATEGORY AND RO-RO SPACES</b></p> <p><b>Section 2 Precaution against ignition of flammable vapours in closed vehicle spaces closed ro-ro spaces and special category spaces</b></p> <p><b>202. Electrical equipment and wiring [See Rule]</b></p> <p>1. In applying <b>202. 1</b> and <b>203.</b> of the Rules, the electrical equipment "a type suitable for use in explosive petrol and air mixture" is to be of certified safe type and wiring, if fitted, and is to be suitable for use in Zone 1 areas as defined in <b>IEC 60079</b>(Gas Group IIA, and Temperature Class T3), and ventilation fan of non-sparking type is to be provided and complied with the requirements specified in <b>Ch 3, 104.</b> of the Rules. The windlass and opening for chain lockers are to be regarded as sources of ignition.</p> <p>2. In applying <b>202. 2</b> of the Rules, "electrical equipment of a type so enclosed and protected as to prevent the escape of sparks" means a certified safe equipment with an enclosure of at least IP55 or suitable for use in Zone 2 areas as defined in <b>IEC 60079.</b></p>	<p style="text-align: center;"><b>CHAPTER 13 PROTECTION OF VEHICLE SPECIAL CATEGORY AND RO-RO SPACES</b></p> <p><b>Section 2 Precaution against ignition of flammable vapours in closed vehicle spaces closed ro-ro spaces and special category spaces</b></p> <p><b>202. Electrical equipment and wiring <u>(2022)</u> [See Rule]</b></p> <p>1. In applying <b>202. 1</b> and <b>203.</b> of the Rules, <del>the electrical equipment "a type suitable for use in explosive petrol and air mixture" is to be of certified safe type and wiring, if fitted, and is to be suitable for use in Zone 1 areas as defined in IEC 60079</del>(Gas Group IIA, and Temperature Class T3); <del>the electrical equipment "shall be of a type suitable for use in explosive petrol and air mixtures", "shall be of a type approved for use in explosive petrol and air mixtures" means to be realized by requiring certified safe equipment suitable for use in Zone 1 areas as defined in IEC 60079-10-1:2015</del> (Gas Group IIA and Temperature Class T3) (Refer to <u>IEC 60079-14:2013 for types of protection suitable for use in Zone 1 areas</u>), and ventilation fan of non-sparking type is to be provided and complied with the requirements specified in <b>Ch 3, 104.</b> of the Rules. The windlass and opening for chain lockers are to be regarded as sources of ignition.</p> <p>2. In applying <b>202. 2</b> of the Rules, "electrical equipment of a type so enclosed and protected as to prevent the escape of sparks" <del>means a certified safe equipment with an enclosure of at least IP55 or suitable for use in Zone 2 areas as defined in IEC 60079.</del> <u>means to be realized by requiring an enclosure of at least IP55, or apparatus suitable for use in Zone 2 areas as defined in IEC 60079-10-1:2015. Refer to IEC 60079-14:2013 for types of protection suitable for use in Zone 2 areas.</u></p>	<p>(Amendment) – reflected of IACS UI SC 43</p> <p>(Amendment) – reflected of IACS UI SC 42</p>

Present	Amendment	Note
<p style="text-align: center;"><b>CHAPTER 2 PROBABILITY OF IGNITION</b></p> <p style="text-align: center;"><b>Section 4 Cargo Areas of Tankers</b></p> <p><b>403. Cargo tank venting</b></p> <p>⟨Omitted⟩</p> <p>3. In applying <b>403. 4</b> (1) of the Rules, 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 and the classes of hazardous areas are to be referred to <b>Pt 7, Ch 1, 1101. 2</b> of the Rules. <b>【See Rule】</b></p>	<p style="text-align: center;"><b>CHAPTER 2 PROBABILITY OF IGNITION</b></p> <p style="text-align: center;"><b>Section 4 Cargo Areas of Tankers</b></p> <p><b>403. Cargo tank venting</b></p> <p>⟨Omitted⟩</p> <p>3. <del>In applying <b>403. 4</b> (1) of the Rules, 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 and the classes of hazardous areas are to be referred to <b>Pt 7, Ch 1, 1101. 2</b> of the Rules.</del> In applying <b>403. 4 (1) (C) and (D)</b> of the Rules, electrical equipment fitted in compliance with <u>IEC 60092-502:1999</u> is not considered a source of ignition or ignition hazard. <b>(2022)</b> <b>【See Rule】</b></p>	<p>(Amendment)</p> <p>– reflected of IACS UI SC 57 and deletion of wrongly inserted regulation.</p>



Present	Amendment	Note
<p style="text-align: center;"><b>CHAPTER 9 STRUCTURAL INTEGRITY</b></p> <p style="text-align: center;"><b>Section 5 Protection of Cargo Tank Structure Against Pressure Or Vacuum In Tankers</b></p> <p><b>502. Openings for small flow by thermal variations [See Rule]</b>  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 and the classes of hazardous areas are to be referred to <b>Pt 7, Ch 1, 1101. 2</b> of the Rules.</p>	<p style="text-align: center;"><b>CHAPTER 9 STRUCTURAL INTEGRITY</b></p> <p style="text-align: center;"><b>Section 5 Protection of Cargo Tank Structure Against Pressure Or Vacuum In Tankers</b></p> <p><b>502. Openings for small flow by thermal variations <u>(2022)</u> [See Rule]</b>  <del>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 and the classes of hazardous areas are to be referred to Pt 7, Ch 1, 1101. 2 of the Rules.</del>   <u>Area Classification is to be carried out in accordance with the principles laid down in IEC 60092-502:1999 and the classes of hazardous areas are to be referred to Pt 7, Ch 1, 1101. 2 of the Rules.</u>   <u>(1) 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.</u>   <u>(2) Areas within 4m beyond the zone specified in (1) above are defined as Zone 2 as specified by IEC 60092-502:1999 para 4.2.3.2.</u>   <u>(3) 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.</u></p>	<p>(Amendment)  – reflected of IACS UI SC 70 with original sentences.</p>

Amendment	Note
<p style="text-align: center;"><b>CHAPTER 12 CARRIAGE OF DANGEROUS GOODS</b></p> <p style="text-align: center;"><b>Section 2 Special Requirements</b></p> <p><b>201. Special requirements</b></p> <p>⟨Omitted⟩</p> <p><b>2. Source of ignition <i>(2002)</i> [See Rule]</b></p> <p>The electrical equipment are to be complied with the following requirements.</p> <ol style="list-style-type: none"> <li>(1) The electrical equipment provided in the enclosed cargo spaces or vehicle spaces which are regarded as hazardous environment are to be of those approved by the Society taking into account the requirements of IMDG Code. However, even electrical equipment not approved by the Society may be provided in the above-mentioned spaces if they are of IP55 or equivalent, provided that they are not used while dangerous goods are loaded in such spaces.</li> <li>(2) In case where electric cables, which are used while dangerous substances are loaded likely to evolve explosive mixture gases, are arranged in cargo spaces, the following requirements are to apply: <ol style="list-style-type: none"> <li>(A) Cables are to be mineral-insulated copper sheathed cables, lead sheathed and armoured cables or non-metal sheathed and armoured cables.</li> <li>(B) Through runs of cables and those led to electrical equipment installed in cargo spaces are to be protected by metal coverings or the like.</li> </ol> </li> <li>(3) For electrical equipment other than specified in (A) and (B) above, refer to <b>IEC 60092-506:2003</b>.</li> <li>(4) the following requirements are to be regarded as sources of ignition, and they are not to be installed in the proximity of the openings of ventilation for cargo spaces: <ol style="list-style-type: none"> <li>(A) Electrical equipment other than those of safe type approved for use in hazardous environment</li> <li>(B) Windlasses and openings for chain lockers</li> </ol> </li> <li>(5) Reference is to be made to <b>IEC 60092-506:2003</b>, <del>Special features—Ships carrying specific dangerous goods and materials hazardous only in bulk.</del></li> <li>(6) For pipes having open ends(e.g., ventilation and bilge pipes, etc.) in hazardous area, the pipe itself is to be classified as hazardous area. See <b>IEC 60092-506:2003 table B1, item B</b>).</li> <li>(7) When carrying flammable liquids having flashpoints less than 23 °C as Class3, 6.1 or 8 in cargo spaces, the bilge pipes with flanges, valves, pumps, etc. constitute a source of release and the enclosing spaces (e. g. pipe tunnels, bilge pump rooms, etc.) are to be classified as an extended hazardous area (comparable with Zone 2) unless these spaces are continuously mechanically ventilated with a capacity for at least six air changes per hour. Except where the space is protected with redundant mechanical ventilation capable of starting automatically, equipment not certified for Zone 2 are to be automatically disconnected following loss of ventilation while essential systems such as bilge and ballast systems are to be certified for Zone 2.</li> </ol> <p>Where redundant mechanical ventilation is employed, equipment and essential systems not certified for zone 2 shall be interlocked so as to prevent inadvertent operation if the ventilation is not operational. Audible and visible alarm shall be provided at a manned station if failure occurs. <i>(2019)</i></p>	<p>(Amendment)</p> <p>– reflected of IACS UI SC 79</p>

Present	Amendment	Note
<p style="text-align: center;"><b>CHAPTER 8 FIRE FIGHTING</b></p> <p><b>Section 3 Fixed Fire-extinguishing Systems</b></p> <p><b>301. Types of fixed fire extinguishing systems</b></p> <p>1. In applying <b>301. 1</b> (1) of the Rules, fixed gas fire-extinguishing system is also to be complied with as follows. <b>【See Rule】</b></p> <p>(1) Spare parts for the fixed gas fire-extinguishing system specified in Ch 5, 2.1.2.3 of the FSS Code are to be stored on board as below (A) ~ (C) &lt;Omitted&gt;</p> <p>(2) In applying Ch 5, 2.1.2.6 of the FSS Code, these requirements may be checked by suitable calculations.</p> <p>(3) Fixed gas fire-extinguishing systems for machinery spaces and cargo pump rooms, whose agent containers are stored within the area it protects are to comply with the following requirements. (A) ~ (C) &lt;Omitted&gt;</p> <p>(4) In applying Ch 5, 2.2.1.7 of the FSS Code, the "quantity of gas" means that quantity required for the largest cargo space in accordance with the provisions of paragraph 2.1.1.1 of chapter 5. <i>(2018)</i></p> <p>(5) The requirements in Ch 5, 2.2.2 of the FSS Code apply to the spaces identified in Ch 5, 2.1.3.2 of the FSS Code. Conventional cargo spaces specified in Ch 5, 2.1.3.2 of the FSS Code means cargo spaces other than ro-ro spaces or container holds equipped with integral reefer containers, and they need not be provided with means for automatically giving audible and visual warning of th release.</p> <p>(6) In applying Ch 5, 2.2.3 of the FSS Code, after installation, all pipes are to be tested with working pressure. From main isolating value to discharge nozzles also should be tested at a pressure of not less than 7 bar.</p>	<p style="text-align: center;"><b>CHAPTER 8 FIRE FIGHTING</b></p> <p><b>Section 3 Fixed Fire-extinguishing Systems</b></p> <p><b>301. Types of fixed fire extinguishing systems</b></p> <p>1. In applying <b>301. 1</b> (1) of the Rules, fixed gas fire-extinguishing system is also to be complied with as follows. <b>【See Rule】</b></p> <p>(1) Spare parts for the fixed gas fire-extinguishing system specified in Ch 5, 2.1.2.3 of the FSS Code are to be stored on board as below (A) ~ (C) &lt;Omitted&gt;</p> <p>(2) In applying Ch 5, 2.1.2.6 of the FSS Code, these requirements may be checked by suitable calculations.</p> <p>(3) Fixed gas fire-extinguishing systems for machinery spaces and cargo pump rooms, whose agent containers are stored within the area it protects are to comply with the following requirements. (A) ~ (C) &lt;Omitted&gt;</p> <p>(4) In applying Ch 5, 2.2.1.7 of the FSS Code, the "quantity of gas" means that quantity required for the largest cargo space in accordance with the provisions of paragraph 2.1.1.1 of chapter 5. <i>(2018)</i></p> <p>(5) The requirements in Ch 5, 2.2.2 of the FSS Code apply to the spaces identified in Ch 5, 2.1.3.2 of the FSS Code. Conventional cargo spaces specified in Ch 5, 2.1.3.2 of the FSS Code means cargo spaces other than ro-ro spaces or container holds equipped with integral reefer containers, and they need not be provided with means for automatically giving audible and visual warning of th release.</p> <p>(6) In applying Ch 5, 2.2.3 of the FSS Code, after installation, all pipes are to be tested with working pressure. From main isolating value to discharge nozzles also should be tested at a pressure of not less than 7 bar.</p> <p><u>(7) Where a low-pressure CO<sub>2</sub> system is fitted, the piping system is to be designed in such a way that the CO<sub>2</sub> pressure at the nozzles should not be less than 1 N/mm<sup>2</sup>. (2022)</u></p>	<p>(Amendment) – reflected of IACS UR F46</p>

# Amendments of the Guidance Relating to the Rules for Classification of Steel Ships

(Development Review : For external opinion inquiry)

## Pt. 8 Fire Protection and Fire Extinction



2021.09.

Machinery Rule Development Team

## - Main Amendments -

(1) Effective date : 1 January 2022 (based on contract date for construction)

- reflected of IACS UI SC17 (Rev.3 Nov 2020) amendment
- reflected of IACS UI SC87 (Rev.2 Mar 2021) amendment
- reflected of IACS UI SC91(Rev.1 Corr.1 Nov 2020) amendment
- reflected of IACS UI SC128 deletion
- reflected of IACS UI SC 62 (Rev.2 Dec 2020) amendment

(2) Effective date : 1 July 2022 (based on contract date for construction)

- reflected of Request for establishment or revision of Classification Technical Rules\_ULS4700-279-2021

Present	Amendment	Note
<p style="text-align: center;"><b>CHAPTER 1 GENERAL</b></p> <p style="text-align: center;"><b>Section 1 General</b></p> <p>101. ~ 102. &lt;omitted&gt;</p> <p>103. Definitions</p> <p>1. ~ 4. &lt;omitted&gt;</p> <p>5. In applying <b>103. 18</b> of the Rules, the following are to be included. <b>[See Rule]</b></p> <p>(1) <u>Spaces containing, for instance, the following battery sources should be regarded as control stations regardless of the battery capacity:</u></p> <p>(A) <u>Emergency batteries in separate battery room for power supply from black-out until start of emergency generator;</u></p> <p>(B) <u>Emergency batteries in separate battery room as reserve source of energy to radio telegraph installation;</u></p> <p>(C) <u>Batteries for start of emergency generator; and</u></p> <p>(D) <u>In principle, all emergency batteries required in pursuance of the related provisions of <b>Pt 6, Ch 1</b> to the Rules.</u></p> <p>(2) <u>Main navigational equipment includes, in particular, the steering stand and the compass, radar and direction-finding equipment. However, steering gear rooms containing an emergency steering position are not considered to be control stations.</u></p> <p>(3) <u>Where in the fixed fire-extinguishing systems there are no specific requirements for the centralization within a control station of major components of a system, such major components may be placed in spaces which are not considered to be a control station.</u></p>	<p style="text-align: center;"><b>CHAPTER 1 GENERAL</b></p> <p style="text-align: center;"><b>Section 1 General</b></p> <p>101. ~ 102. &lt;same as the present&gt;</p> <p>103. Definitions</p> <p>1.~ 4. &lt;same as the present&gt;</p> <p>5. In applying <b>103. 18</b> of the Rules, the following are to be included. <u>(2022)</u> <b>[See Rule]</b></p> <p>(1) <u>Main navigational equipment includes, in particular, the steering stand and the compass, radar and direction-finding equipment.</u></p> <p>(2) <u>Steering gear rooms containing an emergency steering position are not considered to be control stations.</u></p> <p>(3) <u>Where in the regulations of this Part relevant to fixed fire-extinguishing systems there are no specific requirements for the centralization within a control station of major components of a system, such major components may be placed in spaces which are not considered to be a control station.</u></p> <p>(4) <u>Spaces containing, for instance, the following battery sources should be regarded as control stations regardless of the battery capacity:</u></p> <p>(A) <u>Emergency batteries in separate battery room for power supply from black-out until start of emergency generator;</u></p> <p>(B) <u>Emergency batteries in separate battery room as reserve source of energy to radio telegraph installation;</u></p> <p>(C) <u>Batteries for start of emergency generator; and</u></p> <p>(D) <u>In principle, all emergency batteries required in pursuance of the related provisions of <b>Pt 6, Ch 1</b> to the Rules.</u></p>	<p>(amendment)</p> <p>– IACS UI SC17 (Rev.3 Nov 2020)</p>

Present	Amendment	Note
<p style="text-align: center;"><b>CHAPTER 4 SMOKE GENERATION POTENTIAL AND TOXICITY</b></p> <p style="text-align: center;"><b>Section 2 Primary Deck Coverings</b></p> <p><b>201. Primary deck coverings [See Rule]</b></p> <p>"Primary deck coverings" means the first combustible layer of a floor construction which is applied directly on the top of deck plating and is inclusive of any primary coat, anti-corrosive compound or adhesive which is necessary to provide protection or adhesion to the deck plating. In this case, "the first layer" means the materials forming deck covering excluding "A" class deck (including insulation materials), non-combustible materials and fire retardant surface floorings. Finishes such as plastic tile and latex used as primary deck covering are also to comply with <u>IMO Res. A.687(17)</u>. ⚓</p> <p style="text-align: center;"><b>CHAPTER 12 CARRIAGE OF DANGEROUS GOODS</b></p> <p style="text-align: center;"><b>Section 2 Special Requirements</b></p> <p><b>201. Special requirements</b></p>	<p style="text-align: center;"><b>CHAPTER 4 SMOKE GENERATION POTENTIAL AND TOXICITY</b></p> <p style="text-align: center;"><b>Section 2 Primary Deck Coverings</b></p> <p><b>201. Primary deck coverings [See Rule]</b></p> <p>"Primary deck coverings" means the first combustible layer of a floor construction which is applied directly on the top of deck plating and is inclusive of any primary coat, anti-corrosive compound or adhesive which is necessary to provide protection or adhesion to the deck plating. In this case, "the first layer" means the materials forming deck covering excluding "A" class deck (including insulation materials), non-combustible materials and fire retardant surface floorings. Finishes such as plastic tile and latex used as primary deck covering are also to comply with <u>FTP Code</u>. ⚓</p> <p style="text-align: center;"><b>CHAPTER 12 CARRIAGE OF DANGEROUS GOODS</b></p> <p style="text-align: center;"><b>Section 2 Special Requirements</b></p> <p><b>201. Special requirements [See Rule]</b></p>	<p>(amendment) -ULS4700-279-2021 (amended by MSC Res. 61(67))</p>





