

# Rules for the Classification of Steel Ships Revision

## (Part 4 Hull Equipment)



Present	Amendment	Reason
<p style="text-align: center;"><b>CHAPTER 1 RUDDERS</b></p> <p><b>Section 9 Bearings of Rudder Stocks and Pintles</b></p> <p>901. &lt;same as the present Rules&gt;</p> <p>902. Length of bearings</p> <p><u>The length of the bearing is to be accordance with the following.</u></p> $d_{sl} \leq h_b \leq 1.2d_{sl}$ <p><math>d_{sl}</math> = Actual pintle diameter measured on the outside of <u>rudder stock or liners.</u></p> <p>&lt;hereafter, same as the present Rules&gt;</p>	<p style="text-align: center;"><b>CHAPTER 1 RUDDERS</b></p> <p><b>Section 9 Bearings of Rudder Stocks and Pintles</b></p> <p>901. &lt;same as the present Rules&gt;</p> <p>902. Length of bearings <u>(2020)</u></p> <p><u>The length/diameter ratio of the bearing surface is not to be greater than 1.2.</u></p> <p><u>The bearing length <math>h_b</math> of the pintle is to be such that</u></p> $d_{sl} \leq h_b \leq 1.2d_{sl}$ <p><math>d_{sl}</math> = Actual pintle diameter measured on the outside of <u>liners.</u></p> <p>&lt;hereafter, same as the present Rules&gt;</p>	<p>* Amended to match some different provisions with IACS UR S10</p>

Present	Amendment	Reason
<p style="text-align: center;"><b>CHAPTER 2 HATCHWAYS AND OTHER DECK OPENINGS</b></p> <p style="text-align: center;"><b>Section 1 General</b></p> <p>101. ~ 103. &lt;same as the present Rules&gt;</p> <p>104. Hatch covers <a href="#">[See Guidance]</a></p> <p>1. Hatch covers on exposed decks are to be weathertight.</p> <p>Hatch covers in closed superstructures need not be weathertight. However, hatch covers fitted in way of ballast tanks, fuel oil tanks or other tanks are to be watertight.</p> <p>2. In the case of sand carriers and dredgers, hatchway covers may be omitted at the discretion of the Society.</p> <p>3. &lt;newly added&gt;</p> <p>&lt;hereafter, same as the present Rules&gt;</p>	<p style="text-align: center;"><b>CHAPTER 2 HATCHWAYS AND OTHER DECK OPENINGS</b></p> <p style="text-align: center;"><b>Section 1 General</b></p> <p>101. ~ 103. &lt;same as the present Rules&gt;</p> <p>104. Hatch covers <a href="#">[See Guidance]</a></p> <p>1. Hatch covers on exposed decks are to be weathertight.</p> <p>Hatch covers in closed superstructures need not be weathertight. However, hatch covers fitted in way of ballast tanks, fuel oil tanks or other tanks are to be watertight.</p> <p>2. In the case of sand carriers and dredgers, hatchway covers may be omitted at the discretion of the Society.</p> <p>3. <u>Ship's hatch covers complying with the provisions of Guidelines for the Assignment of Reduced Freeboards for Dredgers(Annex 1 of Rules for the Classification of Dredgers) may be omitted in accordance with Guidelines for the Assignment of Reduced Freeboards for Dredgers. (2020)</u></p> <p>&lt;hereafter, same as the present Rules&gt;</p>	<p>* Specified the exemption of ship's hatch covers complying with the provisions of Guidelines for the Assignment of Reduced Freeboards for Dredgers</p>

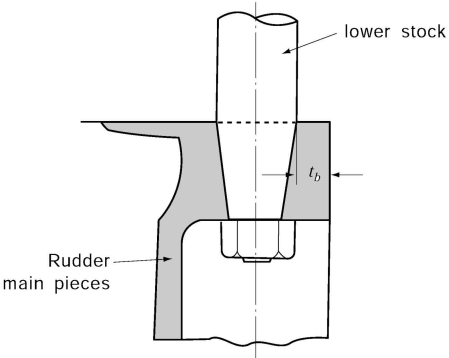
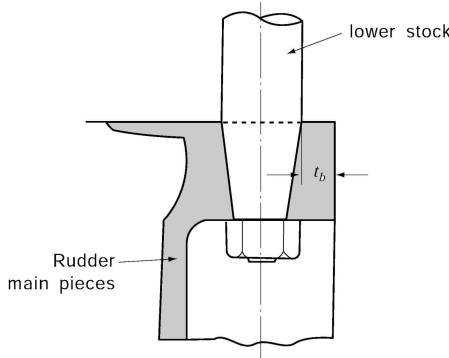
Present	Amendment	Reason
<p style="text-align: center;"><b>CHAPTER 3 BOW DOORS, SIDE AND STERN DOORS</b></p> <p style="text-align: center;"><b>Section 2 Side and Stern Doors</b></p> <p><b>201. General</b></p> <p>1. &lt;same as the present Rules&gt;</p> <p><b>2. Arrangement</b></p> <p>(1) Stern doors for passenger vessels are to be situated above the freeboard deck. Stern doors for ro-ro cargo ships and side shell doors may be either below or above the freeboard deck.</p> <p>(2) The side and stern doors are to be so fitted as to ensure tightness and structural integrity commensurate with their location and the surrounding structure.</p> <p>(3) In general, the lower edge of door openings is not to be below a line drawn parallel to the freeboard deck at side, <u>which has at its lowest point the upper edge of the uppermost load line.</u></p> <p>(4) Where side door and stern door are unavoidably provided below the line as stipulated in above (3), the following conditions are to be satisfied.</p> <p>(A) Compartment being equivalent to watertight-bulkhead in strength and watertightness is to be provided and the second door is to be fitted for the compartment.</p> <p>(B) Detecting device for sea water leakage is to be provided in the compartment and drainage means of the compartment with a screw-down stop valve capable of being controlled from easily accessible position is to be provided.</p> <p>&lt;hereafter, same as the present Rules&gt;</p>	<p style="text-align: center;"><b>CHAPTER 3 BOW DOORS, SIDE AND STERN DOORS</b></p> <p style="text-align: center;"><b>Section 2 Side and Stern Doors</b></p> <p><b>201. General</b></p> <p>1. &lt;same as the present Rules&gt;</p> <p><b>2. Arrangement</b></p> <p>(1) Stern doors for passenger vessels are to be situated above the freeboard deck. Stern doors for ro-ro cargo ships and side shell doors may be either below or above the freeboard deck.</p> <p>(2) The side and stern doors are to be so fitted as to ensure tightness and structural integrity commensurate with their location and the surrounding structure.</p> <p>(3) In general, the lower edge of door openings is not to be below a line drawn parallel to the freeboard deck at side, <u>which is at its lowest point at least 230 mm above the upper edge of the uppermost load line. (2020)</u></p> <p>(4) Where side door and stern door are unavoidably provided below the line as stipulated in above (3), the following conditions are to be satisfied.</p> <p>(A) Compartment being equivalent to watertight-bulkhead in strength and watertightness is to be provided and the second door is to be fitted for the compartment.</p> <p>(B) Detecting device for sea water leakage is to be provided in the compartment and drainage means of the compartment with a screw-down stop valve capable of being controlled from easily accessible position is to be provided.</p> <p>&lt;hereafter, same as the present Rules&gt;</p>	<p>* Amended to match some different provisions with ICLL (Reg. 21)</p>

Present	Amendment	Reason
<p style="text-align: center;"><b>CHAPTER 8 EQUIPMENT NUMBER AND EQUIPMENT</b></p> <p style="text-align: center;"><b>Section 9 Rectangular Windows</b></p> <p>901. ~ 902. &lt;same as the present Rules&gt;</p> <p>903. Construction and dimensions</p> <p>The construction and dimensions of the main parts of the rectangular windows are to be in accordance with the requirements in the following Sub-paragraphs and are determined in <b>Table 4.8.27</b> and <b>Table 4.8.28</b> in accordance with their nominal diameters and classes.</p> <p>(1) ~ (5) &lt;same as the present Rules&gt;</p> <p>(6) &lt;newly added&gt;</p> <p>&lt;hereafter, same as the present Rules&gt;</p>	<p style="text-align: center;"><b>CHAPTER 8 EQUIPMENT NUMBER AND EQUIPMENT</b></p> <p style="text-align: center;"><b>Section 9 Rectangular Windows</b></p> <p>901. ~ 902. &lt;same as the present Rules&gt;</p> <p>903. Construction and dimensions</p> <p>The construction and dimensions of the main parts of the rectangular windows are to be in accordance with the requirements in the following Sub-paragraphs and are determined in <b>Table 4.8.27</b> and <b>Table 4.8.28</b> in accordance with their nominal diameters and classes.</p> <p>(1) ~ (5) &lt;same as the present Rules&gt;</p> <p>(6) For laminated toughened safety glass, the total required thickness, in mm, shall be in accordance with the following formula: (2020)</p> $t_l = \sqrt{\frac{\sum_{i=1}^n t_i^3}{t_{\max}}} \geq t_i$ <p><math>t_l</math> : equivalent thickness of laminated toughened safety glass in mm.</p> <p><math>t_i</math> : thickness of toughened safety glass, in mm, as obtained from (1)</p> <p><math>n</math> : number of laminated layers</p> <p><math>t_i</math> : thickness of each glass pane layer in the laminate in mm</p> <p><math>t_{\max}</math> : the largest thickness of the n panes in mm</p> <p>The minimum thickness however for any glass pane layer is not to be less than 4 mm.</p> <p>&lt;hereafter, same as the present Rules&gt;</p>	<p>* A new formula for laminated toughened safety glass corresponding to toughened safety glass has been newly added.</p>

Present	Amendment	Note
<p style="text-align: center;"><b>Part 4 &lt;Rules&gt;</b></p> <p style="text-align: center;"><b>CHAPTER 2 HATCHWAY AND OTHER DECK OPENINGS</b></p> <p style="text-align: center;"><b>Section 1 General</b></p> <p><b>101. Application</b></p> <p>1. The requirements apply to all ships except bulk carriers, ore carriers and combination carriers and are for hatch covers and coaming in position 1 and 2 on weather decks. The requirements in <b>Ch 9.</b> apply to steel hatch covers of small hatches fitted on the exposed fore deck. 【See Guidance】</p> <p>2. The construction and means for securing the weathertightness of cargo and other hatchways in position 1 and 2 as defined 102. shall be equivalent to the requirements of hatchways closed by weathertight covers of steel or other equivalent materials, unless approved by the Administration.</p> <p>101. ~ 107. &lt;omission&gt;</p> <p style="text-align: center;"><b>Section 2 ~ Section 7 &lt;omission&gt;</b></p> <p style="text-align: right;">↓</p>	<p style="text-align: center;"><b>Part 4 &lt;Rules&gt;</b></p> <p style="text-align: center;"><b>CHAPTER 2 HATCHWAY AND OTHER DECK OPENINGS</b></p> <p style="text-align: center;"><b>Section 1 General</b></p> <p><b>101. Application</b></p> <p>1. The requirements apply to all ships except bulk carriers, <u>SUBC(Self-Unloading Bulk Carrier)</u>, ore carriers and combination carriers and are for hatch covers and coaming in position 1 and 2 on weather decks. The requirements in <b>Ch 9.</b> apply to steel hatch covers of small hatches fitted on the exposed fore deck. 【See Guidance】</p> <p>2. The construction and means for securing the weathertightness of cargo and other hatchways in position 1 and 2 as defined 102. shall be equivalent to the requirements of hatchways closed by weathertight covers of steel or other equivalent materials, unless approved by the Administration.</p> <p>101. ~ 107. &lt;omission&gt;</p> <p style="text-align: center;"><b>Section 2 ~ Section 7 &lt;omission&gt;</b></p> <p style="text-align: right;">↓</p>	<p>- IACS UR S21A (Corr.2)</p>

Amended Guidance Relating to the Rules for  
the Classification of Steel Ships  
(Part 4 Hull Equipment)



Present	Amendment	Reason
<p style="text-align: center;"><b>CHAPTER 1 RUDDERS</b></p> <p style="text-align: center;"><b>Section 7 Couplings between Rudder Stocks and Main Pieces</b></p> <p>701. ~ 702. &lt;same as the present Rules&gt;</p> <p>703. Cone coupling <a href="#">[See Rule]</a></p> <p><b>1. General</b></p> <p>(1) The lower stock is to be securely connected to the rudder body with slugging nuts or hydraulic arrangements. Shipbuilders are to submit data on this connection to the Society.</p> <p>(2) Special attention is to be paid to corrosion of the lower stock.</p> <p>(3) The minimum thickness <math>t_b</math> is of the cast steel part of rudder body (See <b>Fig 4.1.12</b> of the Guidance) not to be less than 0.25 times the required diameter of the lower stock.</p> <div style="text-align: center;">  </div> <p style="text-align: center;"><b>Fig 4.1.12 Coupling between rudder lower stock and rudder main pieces</b></p>	<p style="text-align: center;"><b>CHAPTER 1 RUDDERS</b></p> <p style="text-align: center;"><b>Section 7 Couplings between Rudder Stocks and Main Pieces</b></p> <p>701. ~ 702. &lt;same as the present Rules&gt;</p> <p>703. Cone coupling <a href="#">[See Rule]</a></p> <p><b>1. General (2020)</b></p> <p>(1) The lower stock is to be securely connected to the rudder body with slugging nuts or hydraulic arrangements. Shipbuilders are to submit data on this connection to the Society.</p> <p>(2) Special attention is to be paid to corrosion of the lower stock.</p> <p>(3) <del>The minimum thickness <math>t_b</math> is of the cast steel part of rudder body (See <b>Fig 4.1.12</b> of the Guidance) not to be less than 0.25 times the required diameter of the lower stock.</del></p> <div style="text-align: center;">  </div> <p style="text-align: center;"><b>Fig 4.1.12 Coupling between rudder lower stock and rudder main pieces</b></p>	<p>- deleted because it conflicts with the provisions of 703. 2 (6) of the Rules.</p>
<p>&lt;hereafter, same as the present Rules&gt;</p>	<p>&lt;hereafter, same as the present Rules&gt;</p>	