

1<sup>st</sup> in 2025

# Editorial Correction for Technical Rules and Guidance

Issued on 20 June 2025



Nippon Kaiji Kyokai (ClassNK)

About this document:

This document is a compilation of corrections of editorial corrections of the Society's Technical Rules.

Errata in this document refer to corrections that do not change the requirements, intent, or technical background of the requirements specified in the rules and guidance, e.g., correction of typographical errors or references.

Content:

Rules for the survey and construction of steel ships Part C Part 1 Chapter 3 3.5.2.9-1.....	1
Rules for the survey and construction of steel ships Part C Part 1 Chapter 14 14.11.1.4.....	1
Rules for the survey and construction of steel ships Part C Part 2-1 Chapter 5 5.4.2.....	3
Rules for the survey and construction of steel ships Part C Part 2-1 Chapter 5 5.4.3.....	4
Rules for the survey and construction of steel ships Part C Part 2-1 Annex 5.4 Fig. An1 .....	6
Rules for the survey and construction of steel ships Part C Part 2-1 Annex 5.4 An2.6.....	6
An2.6 Calculation of Hull Girder Ultimate Strength .....	6
An2.6 Calculation of Hull Girder Ultimate Bending Moment Capacity .....	6
Rules for the survey and construction of steel ships Part C Part 2-5 Chapter 4 4.3.1.1.....	7
Rules for the survey and construction of steel ships Part CSR-B&T Part 1 Chapter 5 Section 1 3.4.5.....	8
Rules for the survey and construction of steel ships Part L Chapter 7 7.1.4-1 .....	9
Rules for the survey and construction of steel ships Part L Chapter 7 7.1.4-2 .....	9
Rules for the survey and construction of steel ships Part L Chapter 8 8.1.4-1 .....	10
Rules for the survey and construction of steel ships Part L Chapter 8 8.1.4-2 .....	11
Rules for the Survey and Construction of Passenger Ships Part 3 Chapter 5 5.3.1-2 .....	12
Rules for the Survey and Construction of Passenger Ships Part 5 Chapter 2 2.3.8-1 .....	13
Rules for the Survey and Construction of Inland Waterway Ships Part 2 Chapter 1 1.4.5-1 .....	14
Rules for Marine Engine Emission Verification Chapter 1 1.2.1 .....	15
Guidance for the survey and construction of steel ships Part D D15 D15.2.8-1 .....	21
Guidance for the survey and construction of steel ships Part R R10 R10.5.2-3 .....	22
Guidance for the survey and construction of steel ships Part R R20 R20.4.1 .....	22
Guidance for the survey and construction of steel ships Part R Annex R5.3.1-1 Table 1.....	23
Guidance for the survey and construction of steel ships Part R Annex R5.3.1-1 Table 2.....	24
Guidance for Safety Equipment Chapter 3 3.1.1-10.....	26
Guidance for the Survey and Construction of Passenger Ships Part 3 Chapter 3 3.2.1-1.....	28
Guidance for the Survey and Construction of Inland Waterway Ships Part 2 Chapter 1 1.1.2-1.30	

**Rules for the survey and construction of steel ships Part C Part 1 Chapter 3 3.5.2.9-1**

Correction	Present	Note
<p><b>1</b> The depth of web <math>h_{w-gr}</math> (mm) of edge stiffeners fitted in way of openings (See Fig. 3.5.2-1) is to satisfy the following expression:</p> $h_{w-gr} \geq \max\left(50, 0.05l \sqrt{\frac{\sigma_Y}{235}}\right)$ <p><math>l</math>: Length of edge stiffener in way of opening as defined in Fig. 3.5.2-1 (<del>mm</del>)</p> <p><b>2</b> The thickness of the web and flange of the edge stiffener is to satisfy the requirements specified in 3.5.2.2 and 3.5.2.3.</p>	<p><b>1</b> The depth of web <math>h_{w-gr}</math> (mm) of edge stiffeners fitted in way of openings (See Fig. 3.5.2-1) is to satisfy the following expression:</p> $h_{w-gr} \geq \max\left(50, 0.05l \sqrt{\frac{\sigma_Y}{235}}\right)$ <p><math>l</math>: Length of edge stiffener in way of opening as defined in Fig. 3.5.2-1 (m)</p> <p><b>2</b> The thickness of the web and flange of the edge stiffener is to satisfy the requirements specified in 3.5.2.2 and 3.5.2.3.</p>	<p>Wording correction</p>

**Rules for the survey and construction of steel ships Part C Part 1 Chapter 14 14.11.1.4**

Correction	Present	Note
<p><b>1</b> The design pressure of side scuttles and rectangular windows are to be less than the maximum allowable pressure (See Table 14.11.1-1 and Table 14.11.1-2) determined by their nominal diameters and grades. The design pressure <math>P(kPa)</math> is to be determined using the following equation.</p> $P = 10ac(bf - y)$ <p><math>a</math>, <math>c</math>, <math>b</math> and <math>f</math>: <del>As</del> <u>Coefficients</u> as specified in 4.9.2.2 <del>the</del>. <u>The</u> value of coefficient “<math>a</math>” for side scuttles for spaces below the freeboard deck or spaces within superstructures may be determined using the formula for the first tier deckhouse in the requirements of <del>19.2.1-12</del> <u>19.2.1-11</u></p> <p><math>y</math>: Vertical distance (m) from side scuttle sill to summer load line (or timber load line if given)</p> <p><b>2</b> Notwithstanding the requirement of -1 above, the</p>	<p><b>1</b> The design pressure of side scuttles and rectangular windows are to be less than the maximum allowable pressure (See Table 14.11.1-1 and Table 14.11.1-2) determined by their nominal diameters and grades. The design pressure <math>P(kPa)</math> is to be determined using the following equation.</p> $P = 10ac(bf - y)$ <p><math>a</math>, <math>c</math>, <math>b</math> and <math>f</math>: As specified in 4.9.2.2 the value of coefficient “<math>a</math>” for side scuttles for spaces below the freeboard deck or spaces within superstructures may be determined using the formula for the first tier deckhouse in the requirements of 19.2.1-1</p> <p><math>y</math>: Vertical distance (m) from side scuttle sill to summer load line (or timber load line if given)</p> <p><b>2</b> Notwithstanding the requirement of -1 above, the</p>	<p>Wording correction</p> <p>Reference correction</p>

Editorial Correction for Technical Rules and Guidance

design pressure is not to be less than the minimum design pressure given in <b>Table 14.11.1-3</b> .	design pressure is not to be less than the minimum design pressure given in <b>Table 14.11.1-3</b> .	
--	--	--

**Rules for the survey and construction of steel ships Part C Part 2-1 Chapter 5 5.4.2**

Correction	Present	Note
<p>The following formula is to be satisfied.</p> $\gamma_S M_S + \gamma_W M_W \leq \frac{M_U}{\gamma_M \gamma_{DB}}$ <p><math>\gamma_S</math>: Partial safety factor for the vertical still water bending moment, to be taken as follows.  <math>\gamma_S = 1.0</math></p> <p><math>\gamma_W</math>: Partial safety factor for the vertical wave bending moment, to be taken as follows.  <math>\gamma_W = 1.2</math></p> <p><math>M_S, M_W</math>: Vertical still water bending moment and vertical wave bending moment (<math>kN-m</math>) for the load cases “hogging” and “sagging” as specified in 4.2.2.5</p> <p><math>M_U</math>: The hull girder ultimate <del>bending moment capacity</del> strength (<math>kN-m</math>), which is to be obtained by the method specified in Annex 5.4, Part 1. However, instead of the load-end shortening curves formula <math>\sigma_{CR5} - \epsilon</math> specified in An2.3.8, Annex 5.4, Part 1, the following is to be used.</p> $\sigma_{CR5} = \min \left\{ \begin{array}{l} \sigma_{YP} \Phi \\ \Phi \sigma_{YP} \left[ \frac{s}{l} \left( \frac{2.25}{\beta_E} - \frac{1.25}{\beta_E^2} \right) + 0.1 \left( 1 - \frac{s}{l} \right) \left( 1 + \frac{1}{\beta_E^2} \right)^2 \right] \end{array} \right.$ <p><math>\sigma_{YP}</math>: Standard minimum yield stress of plate material (<math>N/mm^2</math>)</p> <p><math>\Phi, \beta_E, s, l</math>: As prescribed in An2.3.8, Annex 5.4, Part 1.</p> <p><math>\gamma_M</math>: Partial safety factor for the hull girder ultimate strength, to be taken as follows.  <math>\gamma_M = 1.05</math></p> <p><math>\gamma_{DB}</math>: Partial safety factor for the hull girder ultimate <del>bending moment capacity</del> strength, considering</p>	<p>The following formula is to be satisfied.</p> $\gamma_S M_S + \gamma_W M_W \leq \frac{M_U}{\gamma_M \gamma_{DB}}$ <p><math>\gamma_S</math>: Partial safety factor for the vertical still water bending moment, to be taken as follows.  <math>\gamma_S = 1.0</math></p> <p><math>\gamma_W</math>: Partial safety factor for the vertical wave bending moment, to be taken as follows.  <math>\gamma_W = 1.2</math></p> <p><math>M_S, M_W</math>: Vertical still water bending moment and vertical wave bending moment (<math>kN-m</math>) for the load cases “hogging” and “sagging” as specified in 4.2.2.5</p> <p><math>M_U</math>: The hull girder ultimate bending moment capacity (<math>kN-m</math>), which is to be obtained by the method specified in Annex 5.4, Part 1. However, instead of the load-end shortening curves formula <math>\sigma_{CR5} - \epsilon</math> specified in An2.3.8, Annex 5.4, Part 1, the following is to be used.</p> $\sigma_{CR5} = \min \left\{ \begin{array}{l} \sigma_{YP} \Phi \\ \Phi \sigma_{YP} \left[ \frac{s}{l} \left( \frac{2.25}{\beta_E} - \frac{1.25}{\beta_E^2} \right) + 0.1 \left( 1 - \frac{s}{l} \right) \left( 1 + \frac{1}{\beta_E^2} \right)^2 \right] \end{array} \right.$ <p><math>\sigma_{YP}</math>: Standard minimum yield stress of plate material (<math>N/mm^2</math>)</p> <p><math>\Phi, \beta_E, s, l</math>: As prescribed in An2.3.8, Annex 5.4, Part 1.</p> <p><math>\gamma_M</math>: Partial safety factor for the hull girder ultimate strength, to be taken as follows.  <math>\gamma_M = 1.05</math></p> <p><math>\gamma_{DB}</math>: Partial safety factor for the hull girder ultimate bending moment capacity, considering the effect</p>	<p>Wording correction</p>

<p>the effect of double bottom bending given by the following formula. However, for cross sections where the double bottom breadth of the inner bottom is less than that at amidships or where the double bottom structure differs from at amidships (e.g. engine rooms), the factor <math>\gamma_{DB}</math> for hogging condition may be reduced subject to approval by the Society.</p> <p>For hogging condition, <math>\gamma_{DB} = 1.15</math>                  For sagging condition, <math>\gamma_{DB} = 1.0</math></p>	<p>of double bottom bending given by the following formula. However, for cross sections where the double bottom breadth of the inner bottom is less than that at amidships or where the double bottom structure differs from at amidships (e.g. engine rooms), the factor <math>\gamma_{DB}</math> for hogging condition may be reduced subject to approval by the Society.</p> <p>For hogging condition, <math>\gamma_{DB} = 1.15</math>                  For sagging condition, <math>\gamma_{DB} = 1.0</math></p>	
---	--	--

**Rules for the survey and construction of steel ships Part C Part 2-1 Chapter 5 5.4.3**

Correction	Present	Note
<p>For ships not less than 300 <i>m</i> in length <math>L_c</math> or which exceed 32.26 <i>m</i> in breadth <math>B</math>, in addition to the requirements specified in 5.4.2, the hull girder ultimate bending moment capacity <del>strength</del> is to satisfy the following formula for the hogging condition. Notwithstanding the requirements under this paragraph, the effect of whipping and the hull girder ultimate strength considering the effect of lateral loads can be calculated more directly where deemed appropriate by the Society. This requirement applies to the transverse section located in the vicinity of the centre of the cargo hold at midship.</p> $\gamma_S M_{SV-max} + \gamma_{Wh} M_{WV-h-Mid} \leq M_{U,DB}$ <p><math>\gamma_S</math>: Partial safety factor for the vertical still water bending moment, to be taken as follows.  <math>\gamma_S = 1.0</math></p> <p><math>\gamma_{Wh}</math>: Partial safety factor for the vertical wave bending moment, considering the effect of whipping, to be taken as follows:  <math>\gamma_{Wh} = 1.5</math></p> <p><math>M_{SV-max}</math>: Permissible maximum vertical still water bending moment (<i>kN-m</i>) at the cross</p>	<p>For ships not less than 300 <i>m</i> in length <math>L_c</math> or which exceed 32.26 <i>m</i> in breadth <math>B</math>, in addition to the requirements specified in 5.4.2, the hull girder ultimate bending moment capacity is to satisfy the following formula for the hogging condition. Notwithstanding the requirements under this paragraph, the effect of whipping and the hull girder ultimate strength considering the effect of lateral loads can be calculated more directly where deemed appropriate by the Society. This requirement applies to the transverse section located in the vicinity of the centre of the cargo hold at midship.</p> $\gamma_S M_{SV-max} + \gamma_{Wh} M_{WV-h-Mid} \leq M_{U,DB}$ <p><math>\gamma_S</math>: Partial safety factor for the vertical still water bending moment, to be taken as follows.  <math>\gamma_S = 1.0</math></p> <p><math>\gamma_{Wh}</math>: Partial safety factor for the vertical wave bending moment, considering the effect of whipping, to be taken as follows:  <math>\gamma_{Wh} = 1.5</math></p> <p><math>M_{SV-max}</math>: Permissible maximum vertical still water bending moment (<i>kN-m</i>) at the cross</p>	<p>Wording correction</p>

<p>section under consideration while at sea prescribed in 4.2.2.2.</p> <p><math>M_{WV-h-Mid}</math>: Vertical wave bending moment (kN-m) in the amidship calculated according to the provision of 4.2.2.3.</p> <p><math>M_{U,DB}</math>: Hull girder ultimate bending moment capacity strength (kN-m), considering the effect of lateral loads, to be obtained according to the requirements of Annex 5.4.</p>	<p>section under consideration while at sea prescribed in 4.2.2.2.</p> <p><math>M_{WV-h-Mid}</math>: Vertical wave bending moment (kN-m) in the amidship calculated according to the provision of 4.2.2.3.</p> <p><math>M_{U,DB}</math>: Hull girder ultimate bending moment capacity (kN-m), considering the effect of lateral loads, to be obtained according to the requirements of Annex 5.4.</p>	
--	---	--

**Rules for the survey and construction of steel ships Part C Part 2-1 Annex 5.4 Fig. An1**

Correction	Present	Note
<p style="text-align: center;"><b>Fig. An1 Evaluation Procedure</b></p> <pre> graph TD     A[1. Determination of transverse section to be assessed (A2.2)] --&gt; B[2. Divide bottom shell and bottom longitudinal into stiffener element (A2.3)]     B --&gt; C[3. Derivation of stress acting on stiffener element (A2.4)]     C --&gt; D[4. Derivation of longitudinal stress of stiffener element i considering the stress derived by 3 (A2.5)]     D --&gt; E[5. Calculation of hull girder ultimate strength by average of ultimate strength of all stiffener elements (A2.6)]     D -.-&gt; F(Conduct to all stiffener elements)     F -.-&gt; C     </pre> <p style="text-align: center;">Note: Numbers in parentheses indicate section number</p>		<p>Wording correction</p>

**Rules for the survey and construction of steel ships Part C Part 2-1 Annex 5.4 An2.6**

Correction	Present	Note
<p><b>An2.6 Calculation of Hull Girder Ultimate <del>Bending Moment Capacity</del> Strength</b></p> <p><b>An2.6.1</b> Hull girder ultimate <del>bending moment capacity</del> strength</p>	<p><b>An2.6 Calculation of Hull Girder Ultimate Bending Moment Capacity</b></p> <p><b>An2.6.1</b> Hull girder ultimate bending moment capacity</p>	<p>Wording correction</p>

<p>considering the effect of lateral loads <math>M_{U\_DB}</math> (<math>kN-m</math>) is to be taken as follows:</p> $M_{U\_DB} = \alpha_U \sigma_{US\_avg} Z_B 10^3$ <p><math>\sigma_{US\_avg}</math>: Average of ultimate strength (<math>N/mm^2</math>) of all stiffener elements, to be taken as follows:</p> $\sigma_{US\_avg} = \frac{\sum_{i=1} (\sigma_{USi} A_i)}{\sum_{i=1} A_i}$ <p><math>\sigma_{USi}</math> : As specified in <b>An2.5.1</b> above.  <math>A_i</math>: Area (<math>cm^2</math>) of stiffener element <math>i</math> to be taken as follows:  <math>A_i = A_P + A_S</math></p> <p><math>\alpha_U</math>: Correction factor, to be taken as follows:  <math>\alpha_U = 1.25</math></p>	<p>considering the effect of lateral loads <math>M_{U\_DB}</math> (<math>kN-m</math>) is to be taken as follows:</p> $M_{U\_DB} = \alpha_U \sigma_{US\_avg} Z_B 10^3$ <p><math>\sigma_{US\_avg}</math>: Average of ultimate strength (<math>N/mm^2</math>) of all stiffener elements, to be taken as follows:</p> $\sigma_{US\_avg} = \frac{\sum_{i=1} (\sigma_{USi} A_i)}{\sum_{i=1} A_i}$ <p><math>\sigma_{USi}</math> : As specified in <b>An2.5.1</b> above.  <math>A_i</math>: Area (<math>cm^2</math>) of stiffener element <math>i</math> to be taken as follows:  <math>A_i = A_P + A_S</math></p> <p><math>\alpha_U</math>: Correction factor, to be taken as follows:  <math>\alpha_U = 1.25</math></p>	
---	---	--

**Rules for the survey and construction of steel ships Part C Part 2-5 Chapter 4 4.3.1.1**

Correction	Present	Note
<p><b>1</b> The loads to be considered in the requirements of strength of primary supporting structures specified in <b>Chapter 7</b> and <b>Chapter 7, Part 1</b> are also to be in accordance with <b>4.3</b>.</p> <p><b>2</b> Additional requirements for loads in the maximum load condition are to be in accordance with <b>4.3.2</b>.</p> <p><b>3</b> <u>The loads in the harbour condition may not be considered.</u></p>	<p><b>1</b> The loads to be considered in the requirements of strength of primary supporting structures specified in <b>Chapter 7</b> and <b>Chapter 7, Part 1</b> are also to be in accordance with <b>4.3</b>.</p> <p><b>2</b> Additional requirements for loads in the maximum load condition are to be in accordance with <b>4.3.2</b>.</p>	<p>Wording correction</p>

**Rules for the survey and construction of steel ships Part CSR-B&T Part 1 Chapter 5 Section 1 3.4.5**

Correction	Present	Note
<p>3.4.5 Vertical force on double bottom</p> <p>The maximum vertical resulting force on the double bottom in a tank, <math>F_{db}</math> is in no case to be less than that given by the minimum conditions given in <b>Table 5</b>.</p> <p>The maximum resulting force on the double bottom in a tank, <math>F_{db}</math> in <math>kN</math>, is to be taken as:</p> $F_{db} = g W_{CT} + W_{CTBT}W_{CWBT} - \rho b_2 \ell_{tk} T_{mean} $ <p>where:</p> <p><math>W_{CT}</math>: Weight of cargo, in tonnes, as defined in <b>Table 6</b>.</p> <p><math>W_{CWBT}</math>: Weight of ballast, in tonnes, as defined in <b>Table 6</b>.</p> <p><math>b_2</math>: Breadth, in <math>m</math>, as defined in <b>Table 6</b>.</p> <p><math>\ell_{tk}</math>: Length of cargo tank, in <math>m</math>.</p> <p><math>T_{mean}</math>: Draught at the mid length of the tank for the loading condition considered, in <math>m</math>.</p>	<p>3.4.5 Vertical force on double bottom</p> <p>The maximum vertical resulting force on the double bottom in a tank, <math>F_{db}</math> is in no case to be less than that given by the minimum conditions given in <b>Table 5</b>.</p> <p>The maximum resulting force on the double bottom in a tank, <math>F_{db}</math> in <math>kN</math>, is to be taken as:</p> $F_{db} = g W_{CT} + W_{CTBT} - \rho b_2 \ell_{tk} T_{mean} $ <p>where:</p> <p><math>W_{CT}</math>: Weight of cargo, in tonnes, as defined in <b>Table 6</b>.</p> <p><math>W_{CWBT}</math>: Weight of ballast, in tonnes, as defined in <b>Table 6</b>.</p> <p><math>b_2</math>: Breadth, in <math>m</math>, as defined in <b>Table 6</b>.</p> <p><math>\ell_{tk}</math>: Length of cargo tank, in <math>m</math>.</p> <p><math>T_{mean}</math>: Draught at the mid length of the tank for the loading condition considered, in <math>m</math>.</p>	<p>Wording correction</p>

**Rules for the survey and construction of steel ships Part L Chapter 7 7.1.4-1**

Correction	Present	Note
<p><b>1</b> Main frame, glassholder, glass retaining ring and deadlight</p> <p>The materials used for the main components of the side scuttles (main frame, glassholder, glass retaining ring and deadlight) are to be in accordance with the requirements as given in <b>Table L7.4</b>. These materials are to have the following properties in (1) and (2).</p> <p>(1) resistant corrosion;</p> <p>(2) minimum mechanical properties as given in <b>Table L7.5</b>. (One tensile test specimen is to be taken from each cast. Where the number of <del>casting</del><u>castings</u> from one cast exceeds 50, an additional specimen is to be taken from each 50 castings <del>of</del><u>or</u> fraction thereof. For aluminium extruded shapes, one tensile test specimen is to be taken per each lot. Extruded shapes of similar thickness made from the same melting and heat treated simultaneously are treated as one lot. Where the <del>numbersize</del> <u>size</u> of <del>identical lots</del><u>a lot</u> exceeds 50, an additional specimen is to be taken for each 50 <del>lots</del><u>or</u> fraction thereof.)</p>	<p><b>1</b> Main frame, glassholder, glass retaining ring and deadlight</p> <p>The materials used for the main components of the side scuttles (main frame, glassholder, glass retaining ring and deadlight) are to be in accordance with the requirements as given in <b>Table L7.4</b>. These materials are to have the following properties in (1) and (2).</p> <p>(1) resistant corrosion;</p> <p>(2) minimum mechanical properties as given in <b>Table L7.5</b>. (One tensile test specimen is to be taken from each cast. Where the number of casting from one cast exceeds 50, an additional specimen is to be taken from each 50 castings of fraction thereof. For aluminium extruded shapes, one tensile test specimen is to be taken per each lot. Extruded shapes of similar thickness made from the same melting and heat treated simultaneously are treated as one lot. Where the number of identical lots exceeds 50, an additional specimen is to be taken for each 50 lots or fraction thereof.)</p>	<p>Wording correction</p>

**Rules for the survey and construction of steel ships Part L Chapter 7 7.1.4-2**

Correction	Present	Note
<p><b>2</b> Closing device</p> <p>The materials used for the closing devices of the side scuttles (swingbolts, pins and nuts) are to have the following properties in (1) to (3). For aluminium alloy side scuttles, the swingbolts and hinge pins are to be made of non-corrodible steel, stainless steel or such alloys which are not likely to cause corrosion of side scuttles, bolts or pins.</p> <p>(1) resistant to corrosion;</p> <p>(2) no effect on the corrosion resistance of other parts;</p>	<p><b>2</b> Closing device</p> <p>The materials used for the closing devices of the side scuttles (swingbolts, pins and nuts) are to have the following properties in (1) to (3). For aluminium alloy side scuttles, the swingbolts and hinge pins are to be made of non-corrodible steel, stainless steel or such alloys which are not likely to cause corrosion of side scuttles, bolts or pins.</p> <p>(1) resistant to corrosion;</p> <p>(2) no effect on the corrosion resistance of other parts;</p>	<p>Wording correction</p>

<p>(3) minimum mechanical properties as given in <b>Table L7.6</b>. (One tensile test specimen is to be taken from each cast. Where the number of <del>eastings</del>castings from one cast exceeds 50, an additional specimen is to be taken from each 50 castings <del>of</del>for fraction thereof. For aluminium extruded shapes, one tensile test specimen is to be taken per each lot. Extruded shapes of similar thickness made from the same melting and heat treated simultaneously are treated as one lot. Where the <del>numbers</del>size of <del>identical lots</del>a lot exceeds 50, an additional specimen is to be taken for each 50 <del>lots</del>or fraction thereof.)</p>	<p>(3) minimum mechanical properties as given in <b>Table L7.6</b>. (One tensile test specimen is to be taken from each cast. Where the number of casting from one cast exceeds 50, an additional specimen is to be taken from each 50 castings of fraction thereof. For aluminium extruded shapes, one tensile test specimen is to be taken per each lot. Extruded shapes of similar thickness made from the same melting and heat treated simultaneously are treated as one lot. Where the number of identical lots exceeds 50, an additional specimen is to be taken for each 50 lots or fraction thereof.)</p>	
--	--	--

**Rules for the survey and construction of steel ships Part L Chapter 8 8.1.4-1**

Correction	Present	Note
<p><b>1</b> Main frame, glassholder and glass retaining frame The materials used for the main components of the rectangular windows (main frame, glassholder and glass retaining frame) are to be in accordance with the requirements as given in <b>Table L8.3</b>. These materials are to have the following properties in (1) and (2). (1) resistant corrosion; (2) minimum mechanical properties as given in <b>Table L8.4</b>. (One tensile test specimen is to be taken from each cast. Where the number of <del>eastings</del>castings from one cast exceeds 50, an additional specimen is to be taken from each 50 castings <del>of</del>for fraction thereof. For aluminium extruded shapes, one tensile test specimen is to be taken <del>for one piece</del> per each lot. Extruded shapes of similar thickness made from the same melting and heat treated simultaneously are treated as one lot. Where the <del>numbers</del>size of <del>identical lots</del>a lot exceeds 50, an additional specimen is to be taken for each 50 <del>lots</del>or fraction thereof.)</p>	<p><b>1</b> Main frame, glassholder and glass retaining frame The materials used for the main components of the rectangular windows (main frame, glassholder and glass retaining frame) are to be in accordance with the requirements as given in <b>Table L8.3</b>. These materials are to have the following properties in (1) and (2). (1) resistant corrosion; (2) minimum mechanical properties as given in <b>Table L8.4</b>. (One tensile test specimen is to be taken from each cast. Where the number of casting from one cast exceeds 50, an additional specimen is to be taken from each 50 castings of fraction thereof. For aluminium extruded shapes, one tensile test specimen is to be taken for one piece per each lot. Extruded shapes of similar thickness made from the same melting and heat treated simultaneously are treated as one lot. Where the number of identical lots exceeds 50, an additional specimen is to be taken for each 50 lots or fraction thereof.)</p>	<p>Wording correction</p>

**Rules for the survey and construction of steel ships Part L Chapter 8 8.1.4-2**

Correction	Present	Note
<p><b>2</b> Closing device</p> <p>The materials used for the closing devices of the rectangular windows (bolts, pins and nuts) are to have the following properties in (1) to (3). For aluminium alloy rectangular windows, the swingbolts and hinge pins are to be made of non-corrodible steel, stainless steel or such alloys which are not likely to cause corrosion of rectangular windows, bolts or pins.</p> <p>(1) resistant to corrosion;</p> <p>(2) no effect on the corrosion resistance of other parts;</p> <p>(3) minimum mechanical properties as given in <b>Table L8.5</b>. (For casting, one tensile test specimen is to be taken from each cast. Where the number of <del>eastings</del><u>castings</u> from one cast exceeds 50, an additional specimen is to be taken from each 50 castings <del>of</del><u>for</u> fraction thereof. For aluminium extruded shapes, one tensile test specimen is to be taken <del>for one piece</del> per each lot. Extruded shapes of similar thickness made from the same melting and heat treated simultaneously are treated as one lot. Where the <del>numbersize</del> <u>size</u> of <del>identical lots</del><u>a lot</u> exceeds 50, an additional specimen is to be taken for each 50 <del>lots</del><u>or fraction thereof</u>.)</p>	<p><b>2</b> Closing device</p> <p>The materials used for the closing devices of the rectangular windows (bolts, pins and nuts) are to have the following properties in (1) to (3). For aluminium alloy rectangular windows, the swingbolts and hinge pins are to be made of non-corrodible steel, stainless steel or such alloys which are not likely to cause corrosion of rectangular windows, bolts or pins.</p> <p>(1) resistant to corrosion;</p> <p>(2) no effect on the corrosion resistance of other parts;</p> <p>(3) minimum mechanical properties as given in <b>Table L8.5</b>. (For casting, one tensile test specimen is to be taken from each cast. Where the number of casting from one cast exceeds 50, an additional specimen is to be taken from each 50 castings of fraction thereof. For aluminium extruded shapes, one tensile test specimen is to be taken for one piece per each lot. Extruded shapes of similar thickness made from the same melting and heat treated simultaneously are treated as one lot. Where the number of identical lots exceeds 50, an additional specimen is to be taken for each 50 lots or fraction thereof.)</p>	<p>Wording correction</p>

**Rules for the Survey and Construction of Passenger Ships Part 3 Chapter 5 5.3.1-2**

Correction	Present	Note
<p><b>2</b> Where decks are supported by longitudinal beams and web beams, the section modulus of tween deck frames supporting web beams is not to be less than that obtained from the following formula, in addition to those in -1.</p> $4.17K \left\{ 1.10 + 0.56n \frac{h_1}{h} \left( \frac{l_1}{l} \right)^2 \right\} Shl^2 \text{ (cm}^3\text{)}$ <p>Where :</p> <p><math>n</math> : Ratio of spacing of web beams to tween deck frame spacing.</p> <p><math>h_1</math> : Deck load stipulated in <b>8.21</b> for the deck beam at the top of frame (<math>kN/m^2</math>).</p> <p><math>l_1</math> : Horizontal distance from ship's side to deck girder supporting deck transverse, bulkhead or pillar (<math>m</math>).</p> <p><math>h</math> : Vertical distance from the middle of <math>l</math> to the point <math>d + 0.038 L'</math> above top of keel (<math>m</math>). Where, however, <math>h</math> is to be greater than the following value according to the location of tween deck frame.</p> <p><math>0.03L</math> (<math>m</math>) : where the tween deck frame is located below freeboard deck.</p> <p><math>0.03L \sqrt{\frac{D}{D+2h_s}}</math> (<math>m</math>) : Where the tween deck frame is located at the superstructure side shell plating until the level at a height of <math>2h_s</math> above the freeboard deck.</p> <p><math>0.03L \sqrt{\frac{D}{D_s}}</math> (<math>m</math>) : Where the tween deck frame is located at the superstructure side shell plating until the level at a height of <math>2h_s</math></p>	<p><b>2</b> Where decks are supported by longitudinal beams and web beams, the section modulus of tween deck frames supporting web beams is not to be less than that obtained from the following formula, in addition to those in -1.</p> $4.17K \left\{ 1.10 + 0.56n \frac{h_1}{h} \left( \frac{l_1}{l} \right)^2 \right\} Shl^2 \text{ (cm}^3\text{)}$ <p>Where :</p> <p><math>n</math> : Ratio of spacing of web beams to tween deck frame spacing.</p> <p><math>h_1</math> : Deck load stipulated in <b>8.2</b> for the deck beam at the top of frame (<math>kN/m^2</math>).</p> <p><math>l_1</math> : Horizontal distance from ship's side to deck girder supporting deck transverse, bulkhead or pillar (<math>m</math>).</p> <p><math>h</math> : Vertical distance from the middle of <math>l</math> to the point <math>d + 0.038 L'</math> above top of keel (<math>m</math>). Where, however, <math>h</math> is to be greater than the following value according to the location of tween deck frame.</p> <p><math>0.03L</math> (<math>m</math>) : where the tween deck frame is located below freeboard deck.</p> <p><math>0.03L \sqrt{\frac{D}{D+2h_s}}</math> (<math>m</math>) : Where the tween deck frame is located at the superstructure side shell plating until the level at a height of <math>2h_s</math> above the freeboard deck.</p> <p><math>0.03L \sqrt{\frac{D}{D_s}}</math> (<math>m</math>) : Where the tween deck frame is located at the superstructure side shell plating until the level at a height of <math>2h_s</math></p>	<p>Reference correction</p>

above the freeboard deck below the strength deck. <i>K, h<sub>s</sub>, S and l</i> : Values stipulated in -1.	above the freeboard deck below the strength deck. <i>K, h<sub>s</sub>, S and l</i> : Values stipulated in -1.	
--	--	--

**Rules for the Survey and Construction of Passenger Ships Part 5 Chapter 2 2.3.8-1**

Correction	Present	Note
<b>1</b> The depth of bilge wells constructed in double bottom and the height from the bottom plating to the bottom of bilge wells are to comply with the requirements in <b>4.21.1-4, Part 3.</b>	<b>1</b> The depth of bilge wells constructed in double bottom and the height from the bottom plating to the bottom of bilge wells are to comply with the requirements in <b>4.2.1-4, Part 3.</b>	Reference correction

**Rules for the Survey and Construction of Inland Waterway Ships Part 2 Chapter 1 1.4.5-1**

Correction	Present	Note
<p><b>1 Inclining Test</b> Where alterations or repairs which might greatly affect the ship’s stability have been made and/or the Surveyor deems it necessary, <b>2.53.1-25, Part B of the Rules for Survey and Construction of Steel Ships</b> is to be followed to determine the need for re-inclining tests, and the need for amending stability information.</p>	<p><b>1 Inclining Test</b> Where alterations or repairs which might greatly affect the ship’s stability have been made and/or the Surveyor deems it necessary, <b>2.5.1-2, Part B of the Rules for Survey and Construction of Steel Ships</b> is to be followed to determine the need for re-inclining tests, and the need for amending stability information.</p>	<p>Reference correction</p>

**Rules for Marine Engine Emission Verification Chapter 1 1.2.1**

Correction	Present	Note
<p>Terms used in the Rules are defined as follows:</p> <p>(1) “Engine” means diesel engine of rating exceeding 130 <i>kW</i>.</p> <p>(2) “Diesel engine” means any reciprocating internal combustion engine operating on liquid or dual fuel or that which is gas fuelled, including booster/compound systems.</p> <p>(3) “<i>NOx Technical Code</i>” means the Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines adopted by the International Conference of Parties to <i>MARPOL 73/78</i> in 1997 as resolution 2, as amended by the <i>IMO</i>, provided that such amendments are adopted and brought into force in accordance with the provisions of article 16 of the present Convention.</p> <p>(4) “Engine manufacturer, etc.” means the engine manufacturer or other responsible party who applies for the emission verification, component confirmation, emission testing, document examination and survey, etc. listed in <b>2.2.1(2) of the Rules and 2.1.34-5(3)(b), Part 2 of the Rules for Marine Pollution Prevention Systems.</b></p> <p>(5) “Measurement procedures for emission verification on a test bed” means procedure specified in Chapter 5 of the <i>NOx Technical Code</i>.</p> <p>(6) “On-board simplified measurement method” means method specified in 6.3 of the <i>NOx Technical Code</i>.</p> <p>(7) “On-board direct measurement and monitoring method” means method specified in 6.4 and Appendix VIII of the <i>NOx Technical Code</i>.</p> <p>(8) “Engine Family” means a series of engines to which the guidance specified in 4.3.8 of the <i>NOx Technical</i></p>	<p>Terms used in the Rules are defined as follows:</p> <p>(1) “Engine” means diesel engine of rating exceeding 130 <i>kW</i>.</p> <p>(2) “Diesel engine” means any reciprocating internal combustion engine operating on liquid or dual fuel or that which is gas fuelled, including booster/compound systems.</p> <p>(3) “<i>NOx Technical Code</i>” means the Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines adopted by the International Conference of Parties to <i>MARPOL 73/78</i> in 1997 as resolution 2, as amended by the <i>IMO</i>, provided that such amendments are adopted and brought into force in accordance with the provisions of article 16 of the present Convention.</p> <p>(4) “Engine manufacturer, etc.” means the engine manufacturer or other responsible party who applies for the emission verification, component confirmation, emission testing, document examination and survey, etc. listed in <b>2.2.1(2) of the Rules and 2.1.3-5(3)(b), Part 2 of the Rules for Marine Pollution Prevention Systems.</b></p> <p>(5) “Measurement procedures for emission verification on a test bed” means procedure specified in Chapter 5 of the <i>NOx Technical Code</i>.</p> <p>(6) “On-board simplified measurement method” means method specified in 6.3 of the <i>NOx Technical Code</i>.</p> <p>(7) “On-board direct measurement and monitoring method” means method specified in 6.4 and Appendix VIII of the <i>NOx Technical Code</i>.</p> <p>(8) “Engine Family” means a series of engines to which the guidance specified in 4.3.8 of the <i>NOx Technical</i></p>	<p>Reference correction</p>

<p><i>Code</i> applies. These engines are series produced, proven to have similar NOx emission characteristics through their design, used as produced, and, during installation on board, and require no adjustments or modifications which could adversely affect the NOx emissions.</p> <p>(9) “Engine Group” means a series of engines to which the guidance specified in 4.4.6 of the <i>NOx Technical Code</i> applies. These engines form a smaller series, produced for similar engine application, and may require minor adjustments and modifications during installation or in service on board.</p> <p>(10) “Parent Engine” means an engine selected as the one which has the highest NOx emission level among all of the engines in an Engine Family in accordance with the provisions specified in 4.3.9 of the <i>NOx Technical Code</i> and that chosen for the Engine Group in accordance with the provisions specified in 4.4.8 of the <i>NOx Technical Code</i>.</p> <p>(11) “Components” of an engine mean those interchangeable parts which influence the NOx emissions performance, identified by their design/parts number.</p> <p>(12) “Operating values” of an engine mean engine data, like cylinder peak pressure, exhaust gas temperature, etc., from the engine log which are related to the NOx emission performance. These data are load-dependent.</p> <p>(13) “Technical File” means a record containing all details of parameters, including components and settings of an engine, which may influence the NOx emission of the engine.</p> <p>(14) “Setting” of an engine means adjustment of an adjustable feature influencing the NOx emissions</p>	<p><i>Code</i> applies. These engines are series produced, proven to have similar NOx emission characteristics through their design, used as produced, and, during installation on board, and require no adjustments or modifications which could adversely affect the NOx emissions.</p> <p>(9) “Engine Group” means a series of engines to which the guidance specified in 4.4.6 of the <i>NOx Technical Code</i> applies. These engines form a smaller series, produced for similar engine application, and may require minor adjustments and modifications during installation or in service on board.</p> <p>(10) “Parent Engine” means an engine selected as the one which has the highest NOx emission level among all of the engines in an Engine Family in accordance with the provisions specified in 4.3.9 of the <i>NOx Technical Code</i> and that chosen for the Engine Group in accordance with the provisions specified in 4.4.8 of the <i>NOx Technical Code</i>.</p> <p>(11) “Components” of an engine mean those interchangeable parts which influence the NOx emissions performance, identified by their design/parts number.</p> <p>(12) “Operating values” of an engine mean engine data, like cylinder peak pressure, exhaust gas temperature, etc., from the engine log which are related to the NOx emission performance. These data are load-dependent.</p> <p>(13) “Technical File” means a record containing all details of parameters, including components and settings of an engine, which may influence the NOx emission of the engine.</p> <p>(14) “Setting” of an engine means adjustment of an adjustable feature influencing the NOx emissions</p>	
--	--	--

<p>performance of an engine.</p> <p>(15) “Substantial modification” of an engine means as follows.</p> <p>(a) For engines installed on ships at beginning stage of construction on or after 1 January 2000 (19 May 2005 for ships not engaged in international voyages), substantial modification means any modification to an engine that could potentially cause the NOx emission from the engine to exceed the limits specified in 2.2.2-1. Routine replacement of components of an engine by parts specified in the Technical File that do not alter NOx emission characteristics is not be considered a “substantial modification”.</p> <p>(b) For engines installed on ships at beginning stage of construction before 1 January 2000 (19 May 2005 for ships not engaged in international voyages), substantial modification means any modification made to an engine which increases its existing NOx emission characteristics in excess of the limits established by the on-board simplified measurement method. These changes include, but are not limited to, changes in its operations or in its technical parameters (e.g., changing camshafts, fuel injection systems, air systems, combustion chamber configuration, or timing calibration of the engine). However, the installation of a certified approved method pursuant to <i>Regulation 13.7.1.1 of Annex VI</i> or certification pursuant to <i>Regulation 13.7.1.2 of Annex VI</i> is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2).</p> <p>(16) “Major conversion” of an engine means a</p>	<p>performance of an engine.</p> <p>(15) “Substantial modification” of an engine means as follows.</p> <p>(a) For engines installed on ships at beginning stage of construction on or after 1 January 2000 (19 May 2005 for ships not engaged in international voyages), substantial modification means any modification to an engine that could potentially cause the NOx emission from the engine to exceed the limits specified in 2.2.2-1. Routine replacement of components of an engine by parts specified in the Technical File that do not alter NOx emission characteristics is not be considered a “substantial modification”.</p> <p>(b) For engines installed on ships at beginning stage of construction before 1 January 2000 (19 May 2005 for ships not engaged in international voyages), substantial modification means any modification made to an engine which increases its existing NOx emission characteristics in excess of the limits established by the on-board simplified measurement method. These changes include, but are not limited to, changes in its operations or in its technical parameters (e.g., changing camshafts, fuel injection systems, air systems, combustion chamber configuration, or timing calibration of the engine). However, the installation of a certified approved method pursuant to <i>Regulation 13.7.1.1 of Annex VI</i> or certification pursuant to <i>Regulation 13.7.1.2 of Annex VI</i> is not considered to be a substantial modification for the purpose of the application of (16) and 2.2.2-1(2).</p> <p>(16) “Major conversion” of an engine means a</p>	
--	--	--

<p>modification of an engine on or after 1 January 2000 (19 May 2005 for ships not engaged in international voyages) which corresponds to any of the following (a) to (c).</p> <p>(a) The engine is replaced or supplemented with a non-identical engine manufactured.</p> <p>(b) Any substantial modification of an engine is made to the engine.</p> <p>(c) The maximum continuous output (referred to in <b>2.1.23, Part A of the Rules for the Survey and Construction of Steel ships</b>, hereinafter the same) of the engine is increased to more than 10%.</p> <p>(17) “Emission Control Areas” means an area where the adoption of special mandatory measures for emissions from ships is required to prevent, reduce and control air pollution from NO<sub>x</sub> or SO<sub>x</sub> and particulate matter or all three types of emissions and their attendant adverse impacts on human health and the environment. Emission Control Areas are to include those listed in, or designated under the following (18).</p> <p>(18) “NO<sub>x</sub> Emission Control Areas” means the following areas:</p> <p>(a) The North American Area</p> <p>i) The sea area located off the Pacific coasts of the United States and Canada, enclosed by geodesic lines connecting the coordinates specified in Appendix VII.1 to <i>Annex VI</i>.</p> <p>ii) The sea areas located off the Atlantic coasts of the United States, Canada, and France (Saint-Pierre-et-Miquelon) and the Gulf of Mexico coast of the United States enclosed by geodesic lines connecting the coordinates specified in Appendix VII.2 to <i>Annex VI</i>.</p>	<p>modification of an engine on or after 1 January 2000 (19 May 2005 for ships not engaged in international voyages) which corresponds to any of the following (a) to (c).</p> <p>(a) The engine is replaced or supplemented with a non-identical engine manufactured.</p> <p>(b) Any substantial modification of an engine is made to the engine.</p> <p>(c) The maximum continuous output (referred to in <b>2.1.23, Part A of the Rules for the Survey and Construction of Steel ships</b>, hereinafter the same) of the engine is increased to more than 10%.</p> <p>(17) “Emission Control Areas” means an area where the adoption of special mandatory measures for emissions from ships is required to prevent, reduce and control air pollution from NO<sub>x</sub> or SO<sub>x</sub> and particulate matter or all three types of emissions and their attendant adverse impacts on human health and the environment. Emission Control Areas are to include those listed in, or designated under the following (18).</p> <p>(18) “NO<sub>x</sub> Emission Control Areas” means the following areas:</p> <p>(a) The North American Area</p> <p>i) The sea area located off the Pacific coasts of the United States and Canada, enclosed by geodesic lines connecting the coordinates specified in Appendix VII.1 to <i>Annex VI</i>.</p> <p>ii) The sea areas located off the Atlantic coasts of the United States, Canada, and France (Saint-Pierre-et-Miquelon) and the Gulf of Mexico coast of the United States enclosed by geodesic lines connecting the coordinates specified in Appendix VII.2 to <i>Annex VI</i>.</p>	
--	--	--

<p>iii) The sea area located off the coasts of the Hawaiian Islands of Hawaii, Maui, Oahu, Molokai, Niihau, Kauai, Lanai, and Kahoolawe, enclosed by geodesic lines connecting the coordinates specified in Appendix VII.3 to <i>Annex VI</i>.</p> <p>(b) The United States Caribbean Sea Area The sea area located off the Atlantic and Caribbean coasts of the Commonwealth of Puerto Rico and the United States Virgin Islands, enclosed by geodesic lines connecting the coordinates specified in Appendix VII.3 to <i>Annex VI</i>.</p> <p>(c) The Baltic Sea Area The Baltic Sea proper with the Gulf of Bothnia, the Gulf of Finland and the entrance to the Baltic Sea bounded by the parallel of the Skaw in the Skagerrak at 57°44.8'N.</p> <p>(d) The North Sea Area The North Sea proper including seas therein with the boundary between:</p> <ul style="list-style-type: none"> <li>i) the North Sea southwards of latitude 62° N and eastwards of longitude 4° W;</li> <li>ii) the Skagerrak, the southern limit of which is determined east of the Skaw by latitude 57° 44.8'N; and</li> <li>iii) the English Channel and its approaches eastwards of longitude 5 ° W and northwards of latitude 48° 30'N.</li> </ul> <p>(e) A sea area, including port areas, designated by the <i>IMO</i> in accordance with criteria and procedures set forth in Appendix III to <i>Annex VI</i> other than those specified in (a) to (d) above.</p>	<p>iii) The sea area located off the coasts of the Hawaiian Islands of Hawaii, Maui, Oahu, Molokai, Niihau, Kauai, Lanai, and Kahoolawe, enclosed by geodesic lines connecting the coordinates specified in Appendix VII.3 to <i>Annex VI</i>.</p> <p>(b) The United States Caribbean Sea Area The sea area located off the Atlantic and Caribbean coasts of the Commonwealth of Puerto Rico and the United States Virgin Islands, enclosed by geodesic lines connecting the coordinates specified in Appendix VII.3 to <i>Annex VI</i>.</p> <p>(c) The Baltic Sea Area The Baltic Sea proper with the Gulf of Bothnia, the Gulf of Finland and the entrance to the Baltic Sea bounded by the parallel of the Skaw in the Skagerrak at 57°44.8'N.</p> <p>(d) The North Sea Area The North Sea proper including seas therein with the boundary between:</p> <ul style="list-style-type: none"> <li>i) the North Sea southwards of latitude 62° N and eastwards of longitude 4° W;</li> <li>ii) the Skagerrak, the southern limit of which is determined east of the Skaw by latitude 57° 44.8'N; and</li> <li>iii) the English Channel and its approaches eastwards of longitude 5 ° W and northwards of latitude 48° 30'N.</li> </ul> <p>(e) A sea area, including port areas, designated by the <i>IMO</i> in accordance with criteria and procedures set forth in Appendix III to <i>Annex VI</i> other than those specified in (a) to (d) above.</p>	
---	---	--

<p>(19) “A ship at beginning stage of construction” is a ship whose keel is laid or a ship at a similar stage of construction. For this purpose, the term “a similar stage of construction” means the stage at which:</p> <ul style="list-style-type: none"> <li>(a) construction identifiable with a specific ship begins; and</li> <li>(b) assembly of that ship has commenced comprising at least 50 <i>tonnes</i> or 1% of the estimated mass of all structural material, whichever is less.</li> </ul> <p>(20) “<i>Annex VI</i>” means the annex VI of Protocol of 1997 to amend the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto.</p>	<p>(19) “A ship at beginning stage of construction” is a ship whose keel is laid or a ship at a similar stage of construction. For this purpose, the term “a similar stage of construction” means the stage at which:</p> <ul style="list-style-type: none"> <li>(a) construction identifiable with a specific ship begins; and</li> <li>(b) assembly of that ship has commenced comprising at least 50 <i>tonnes</i> or 1% of the estimated mass of all structural material, whichever is less.</li> </ul> <p>(20) “<i>Annex VI</i>” means the annex VI of Protocol of 1997 to amend the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto.</p>	
--	--	--

**Guidance for the survey and construction of steel ships Part D D15 D15.2.8-1**

Correction	Present	Note
<p><b>1</b> Interpretation of “Suitable arrangements to ensure working access to steering gear machinery and controls” required in <b>15.2.8-2, Part D of the Rules</b> is as follows:</p> <p>(1) Access ways to steering gears and controls</p> <p>(a) Walkways for approaching steering gears and controls from entrances of steering gear rooms are to be arranged.</p> <p>(b) Standard widths of such walkways are to be 600 <i>mm</i> and they are to be provided with non-slip surfaces.</p> <p>(c) Adequate handrails are to be placed at least in on one side of such walkways. Handrails, in principle, are to be of a fixed type and made of steel. In cases where installation of such fixed types seems to be impracticable, stanchions and ropes (wires) of disconnection types may be used.</p> <p>(2) Handrails and work areas around steering gears</p> <p>(a) Steel handrails and work areas for ensuring working conditions are to be arranged around or in the vicinity of steering gears.</p> <p>(b) Work areas with 600 <i>mm</i> standard width and non-slip surfaces are to be arranged around or in the vicinity of steering gears.</p> <p>(3) The wording “non-slip surface floor” means gratings (grids), <del>buckboards</del><u>duckboards</u>, floors with surface covering material for the non-slip and non-slip coating floors. Non-slip surface covering materials are to be durable enough to be able to be used for long periods of time.</p>	<p><b>1</b> Interpretation of “Suitable arrangements to ensure working access to steering gear machinery and controls” required in <b>15.2.8-2, Part D of the Rules</b> is as follows:</p> <p>(1) Access ways to steering gears and controls</p> <p>(a) Walkways for approaching steering gears and controls from entrances of steering gear rooms are to be arranged.</p> <p>(b) Standard widths of such walkways are to be 600 <i>mm</i> and they are to be provided with non-slip surfaces.</p> <p>(c) Adequate handrails are to be placed at least in on one side of such walkways. Handrails, in principle, are to be of a fixed type and made of steel. In cases where installation of such fixed types seems to be impracticable, stanchions and ropes (wires) of disconnection types may be used.</p> <p>(2) Handrails and work areas around steering gears</p> <p>(a) Steel handrails and work areas for ensuring working conditions are to be arranged around or in the vicinity of steering gears.</p> <p>(b) Work areas with 600 <i>mm</i> standard width and non-slip surfaces are to be arranged around or in the vicinity of steering gears.</p> <p>(3) The wording “non-slip surface floor” means gratings (grids), buckboards, floors with surface covering material for the non-slip and non-slip coating floors. Non-slip surface covering materials are to be durable enough to be able to be used for long periods of time.</p>	<p>Wording correction</p>

**Guidance for the survey and construction of steel ships Part R R10 R10.5.2-3**

Correction	Present	Note
<p><b>3</b> The wording “the fuel and lubricating oil pressure systems, <u>gearing and other fire hazards</u>” specified in <b>10.5.2-2(2), Part R of the Rules</b> means, for example, valves, strainers, etc. of the internal combustion engines, fuel oil transfer pumps, oil burning pumps, lubricating oil coolers, oil purifiers, reversing gears, reduction gears and hydraulic piping.</p>	<p><b>3</b> The wording “the fuel and lubricating oil pressure systems” specified in <b>10.5.2-2(2), Part R of the Rules</b> means, for example, valves, strainers, etc. of the internal combustion engines, fuel oil transfer pumps, oil burning pumps, lubricating oil coolers, oil purifiers, reversing gears, reduction gears and hydraulic piping.</p>	<p>Wording correction</p>

**Guidance for the survey and construction of steel ships Part R R20 R20.4.1**

Correction	Present	Note
<p><del><b>2</b></del> The wording “an overall response time” specified in <b>20.4.1, Part R of the Rules</b> means an operating time specified in <del><b>R29.2.3-2</b></del>.</p> <p><b>3<del>2</del></b> The detector sections in vehicle and ro-ro spaces may be provided with an arrangement, (e.g. a timer) for disconnecting detector sections during loading and unloading of vehicles to avoid “false” alarms. The time of disconnection is to be adapted to the time of loading/unloading. The central unit is to indicate whether the detector sections are disconnected or not. However, manual call points are not to be capable of being disconnected by the arrangements referred to above.</p>	<p><b>2</b> The wording “an overall response time” specified in <b>20.4.1, Part R of the Rules</b> means an operating time specified in <b>R29.2.3-2</b>.</p> <p><b>3</b> The detector sections in vehicle and ro-ro spaces may be provided with an arrangement, (e.g. a timer) for disconnecting detector sections during loading and unloading of vehicles to avoid “false” alarms. The time of disconnection is to be adapted to the time of loading/unloading. The central unit is to indicate whether the detector sections are disconnected or not. However, manual call points are not to be capable of being disconnected by the arrangements referred to above.</p>	<p>Wording correction</p>

**Guidance for the survey and construction of steel ships Part R Annex R5.3.1-1 Table 1**

Correction		Present						Note
<b>Table 1 Method IC</b>								
Requirements	Non combustible material	Non combustible material	Low flame spread	Equivalent volume	Calorific value	Smoke production	Not readily ignited	
Part R of the Rules	5.3.1-2	5.3.1-1	5.3.2-4	5.3.2-3(1)	5.3.2-2	6	4.4.4	
1) Moulding				○				
2) Panel	○							
3) Painted surface or Veneer or Fabric or Foils			○	○	○	○ <sup>(2)</sup>		
4) Painted surface or Veneer or Fabric or Foils			○	○	○	○ <sup>(2)</sup>		
5) Decoration				○		○		
6) Painted surface or Veneer or Fabric or Foils				○	○	○ <sup>(2)</sup>		
7) Skirting board				○				
8) Insulation		○ <sup>(1)</sup>						
9) Surfaces and paints in concealed or inaccessible spaces			○					
10) Draught stop	○							
11) Grounds and supports	○		○					
12) Lining	○							
13) Primary deck covering 1st layer						○	○	
14) Floor finishing			○ <sup>(3)</sup>			○		
15) Window box	○							
16) Window box surface			○	○	○	○		
17) Window box surface in concealed or inaccessible spaces			○					
18) Ceiling panel	○							
Notes:								

Reference correction

Editorial Correction for Technical Rules and Guidance

<p>(1) Vapour barriers used on pipes for cold services (see R5.3.1-2) may be combustible materials providing that their surface has low flame spread characteristics. (5.3.1-1, Part R of the Rules)</p> <p>(2) Applicable to paints, varnishes and other finishes (6.2.1, Part R of the Rules)</p> <p>(3) Only in corridors and stairway enclosures</p>	
--	--

**Guidance for the survey and construction of steel ships Part R Annex R5.3.1-1 Table 2**

Correction		Present						Note
<b>Table 2 Method IIC and IIIC</b>								
Requirements	Non combustible material	Non combustible material	Low flame spread	Equivalent volume	Calorific value	Smoke production	Not readily ignited	
Part R of the Rules	5.3.1-2	5.3.1-1	5.3.2-4	5.3.2-3(1)	5.3.2-2	6	4.4.4	
1) Moulding				○ <sup>(3)</sup>				
2) Panel	○ <sup>(4)</sup>							
3) Painted surface or Veneer or Fabric or Foils			○	○	○	○ <sup>(5)</sup>		
4) Painted surface or Veneer or Fabric or Foils			○	○ <sup>(3)</sup>	○ <sup>(2)</sup>	○ <sup>(5)</sup>		
5) Decoration				○ <sup>(3)</sup>		○		
6) Painted surface or Veneer or Fabric or Foils				○ <sup>(3)</sup>	○ <sup>(2)</sup>	○ <sup>(5)</sup>		
7) Skirting board				○ <sup>(3)</sup>				
8) Insulation		○ <sup>(1)</sup>						
9) Surfaces and paints in concealed or inaccessible spaces			○					
10) Draught stop	○ <sup>(4)</sup>							
11) Grounds and supports	○ <sup>(4)</sup>		○					
12) Lining	○ <sup>(4)</sup>							
13) Primary deck covering 1st layer						○	○	
14) Floor finishing			○ <sup>(6)</sup>			○		
15) Window box	○ <sup>(4)</sup>							
16) Window box surface			○ <sup>(3)</sup>	○ <sup>(3)</sup>	○ <sup>(2)</sup>	○		

Reference correction

Editorial Correction for Technical Rules and Guidance

17)	Window box surface in concealed or inaccessible spaces			○				
18)	Ceiling panel	○ <sup>(4)</sup>						

Notes:

- (1) Vapour barriers used on pipes for cold services (see **R5.3.1-2, Part R of the Guidance**) may be combustible materials providing that their surface has low flame spread characteristics. (**5.3.1-1, Part R of the Rules**)
- (2) Where the material is fitted on non-combustible bulkheads, ceiling on lining in accommodation and service spaces. (**5.3.2-2, Part R of the Rules**)
- (3) To be applied to those accommodation and service spaces bounded by non-combustible bulkheads, ceiling and linings. (**5.3.2-3(1), Part R of the Rules**)
- (4) Only in corridors and stairway enclosures serving accommodation and service spaces and control stations. (**5.3.1-2(2), Part R of the Rules**)
- (5) Applicable to paints, varnishes and other finishes (**6.2.1, Part R of the Rules**)
- (6) Only in corridors and stairway enclosures

**Guidance for Safety Equipment Chapter 3 3.1.1-10**

Correction	Present	Note
<p><b>10</b> Additional liferafts as required by <b>Regulation 31.1.4, Chapter III of the Annex to the Convention</b> are to be regarded as "remotely located survival craft" with regard to <b>Regulation 7.2.1.4, Chapter III of the Annex to the Convention</b>. The followings are to be provided in the areas where these remotely located survival crafts are stowed.</p> <ul style="list-style-type: none"> <li>(1) At least 2 lifejackets and 2 immersion suits.</li> <li>(2) Adequate means of illumination complying with <b>Regulation 16.7, Chapter III of the Annex to the Convention</b>, either fixed or portable, which are to be capable of illuminating the liferaft stowage position as well as the area of water into which the liferaft should be launched. Portable lights, when used, are to have brackets to permit their positioning on both sides of the vessel.</li> <li>(3) The portable lights required by (2) may be self-contained battery-powered lamps. In such cases, the battery-powered lamps are to satisfy the following (a) to (f): <ul style="list-style-type: none"> <li>(a) The lamps are to be capable of being recharged from the ship's main and emergency sources of electrical power.</li> <li>(b) The lamps are to be stowed under charge in storage spaces close to the liferaft and the embarkation ladder they are intended to serve except when being used.</li> <li>(c) The lamps are to give a minimum duration of 3 hours of undiminished performance when disconnected from their power sources.</li> <li>(d) The lamps are to comply with the requirements in <i>LSA Code</i> section 1.2.3.</li> <li>(e) The degree of protection of the lamps is to be</li> </ul> </li> </ul>	<p><b>10</b> Additional liferafts as required by <b>Regulation 31.1.4, Chapter III of the Annex to the Convention</b> are to be regarded as "remotely located survival craft" with regard to <b>Regulation 7.2.1.4, Chapter III of the Annex to the Convention</b>. The followings are to be provided in the areas where these remotely located survival crafts are stowed.</p> <ul style="list-style-type: none"> <li>(1) At least 2 lifejackets and 2 immersion suits.</li> <li>(2) Adequate means of illumination complying with <b>Regulation 16.7, Chapter III of the Annex to the Convention</b>, either fixed or portable, which are to be capable of illuminating the liferaft stowage position as well as the area of water into which the liferaft should be launched. Portable lights, when used, are to have brackets to permit their positioning on both sides of the vessel.</li> <li>(3) The portable lights required by (2) may be self-contained battery-powered lamps. In such cases, the battery-powered lamps are to satisfy the following (a) to (f): <ul style="list-style-type: none"> <li>(a) The lamps are to be capable of being recharged from the ship's main and emergency sources of electrical power.</li> <li>(b) The lamps are to be stowed under charge in storage spaces close to the liferaft and the embarkation ladder they are intended to serve except when being used.</li> <li>(c) The lamps are to give a minimum duration of 3 hours of undiminished performance when disconnected from their power sources.</li> <li>(d) The lamps are to comply with the requirements in <i>LSA Code</i> section 1.2.3.</li> <li>(e) The degree of protection of the lamps is to be</li> </ul> </li> </ul>	

<p>IP55.</p> <p>(f) The batteries for such lamps are to comply with <b>Table B2.2-1.6, Part B of the Rules for the Survey and Construction of Steel Ships</b> as well as <b>1.1.8 and 2.11.5, Part H of the Rules for the Survey and Construction of Steel Ships</b> irrespective of whether they are marked with their expiration dates by their manufacturers.</p> <p>(4) An embarkation ladder or other means of embarkation enabling descent to the water in a controlled manner as per <b>Regulation 11.7, Chapter III of the Annex to the Convention.</b></p>	<p>IP55.</p> <p>(f) The batteries for such lamps are to comply with <b>2.1.6, Part B of the Rules for the Survey and Construction of Steel Ships</b> as well as <b>1.1.8 and 2.11.5, Part H of the Rules for the Survey and Construction of Steel Ships</b> irrespective of whether they are marked with their expiration dates by their manufacturers.</p> <p>(4) An embarkation ladder or other means of embarkation enabling descent to the water in a controlled manner as per <b>Regulation 11.7, Chapter III of the Annex to the Convention.</b></p>	<p>Reference correction</p>
---	--	-----------------------------

**Guidance for the Survey and Construction of Passenger Ships Part 3 Chapter 3 3.2.1-1**

Correction	Present	Note
<p><b>1</b> Compressive buckling strength at the midship part of ships having long multi-deckhouses on strength deck is to be in accordance with the follows:</p> <p>(1) The requirements of <b>3.3.1-1, Part 3</b> of the Rules are to be complied with.</p> <p>(2) The application of the compressive buckling strength of the deck which requires the examination specified in <b>3.1.1</b> of the Rules and all shell platings, decks, superstructure side platings and plate members of longitudinal bulkhead which is located below the deck and contribute to the longitudinal strength, compressive buckling, torsional buckling of its longitudinal stiffeners and compressive buckling strength of web are to be in accordance with the requirements in <b>Annex 5.3, Part 1, Part C of the Rules for the Survey and Construction of Steel Ships</b>. In this case, the determination of moment of inertia for the hull cross section is to be in accordance with the requirements in <b>An3.1.1(2), Annex 5.3, Part 1, Part C of the Rules</b>, except for proviso. And, the minimum value of the compressive stress of members specified in <b>5.3.2, Part 1, Part C of the Rules for the Survey and Construction of Steel Ships</b> needs not to be taken <math>30/K (N/mm^2)</math>, hereinafter <math>K</math> is the material factor and is in accordance with the requirements in <b>5.2.1-1(1), Part 3</b> of the Rules. Where, however, longitudinal plate member that compressive buckling strength is not enough and which is considered to give no contribution to the longitudinal strength is located above the strength deck, the sagging moment which arises under navigation is to be in accordance with the</p>	<p><b>1</b> Compressive buckling strength at the midship part of ships having long multi-deckhouses on strength deck is to be in accordance with the follows:</p> <p>(1) The requirements of <b>3.3.1-1, Part 3</b> of the Rules are to be complied with.</p> <p>(2) The application of the compressive buckling strength of the deck which requires the examination specified in <b>3.1.1</b> of the Rules and all shell platings, decks, superstructure side platings and plate members of longitudinal bulkhead which is located below the deck and contribute to the longitudinal strength, compressive buckling, torsional buckling of its longitudinal stiffeners and compressive buckling strength of web are to be in accordance with the requirements in <b>Annex 5.3, Part 1, Part C of the Rules for the Survey and Construction of Steel Ships</b>. In this case, the determination of moment of inertia for the hull cross section is to be in accordance with the requirements in <b>An3.1.1(2), Annex 5.3, Part 1, Part C of the Rules</b>, except for proviso. And, the minimum value of the compressive stress of members specified in <b>5.3.2, Part 1, Part C of the Rules for the Survey and Construction of Steel Ships</b> needs not to be taken <math>30/K (N/mm^2)</math>, hereinafter <math>K</math> is the material factor and is in accordance with the requirements in <b>5.2.1-1(1), Part 3</b> of the Rules. Where, however, longitudinal plate member that compressive buckling strength is not enough and which is considered to give no contribution to the longitudinal strength is located above the strength deck, the sagging moment which arises under navigation is to be in accordance with the</p>	<p>Reference correction</p>

<p>following requirements in <b>(a)</b> and <b>(b)</b>.</p> <p>(a) The sub-paragraph <b>(2)</b> is to be applied only considering frame members, provided the longitudinal plate member that compressive buckling strength is not enough and which is considered to give no contribution to the longitudinal strength is removed from inclusion member of hull cross section modulus and moment of inertia.</p> <p>(b) Frame members may be in accordance with the requirements in <b>3.1.1-1(2)(b)</b> of the Rules.</p> <p>(3) Where an approval by the Society is obtained, buckling strength may be examined by other method which is specially considered, notwithstanding the provisions of <b>(1)</b> and <b>(2)</b>.</p>	<p>following requirements in <b>(a)</b> and <b>(b)</b>.</p> <p>(a) The sub-paragraph <b>(2)</b> is to be applied only considering frame members, provided the longitudinal plate member that compressive buckling strength is not enough and which is considered to give no contribution to the longitudinal strength is removed from inclusion member of hull cross section modulus and moment of inertia.</p> <p>(b) Frame members may be in accordance with the requirements in <b>3.1.1-1(2)(b)</b> of the Rules.</p> <p>(3) Where an approval by the Society is obtained, buckling strength may be examined by other method which is specially considered, notwithstanding the provisions of <b>(1)</b> and <b>(2)</b>.</p>	
--	--	--

**Guidance for the Survey and Construction of Inland Waterway Ships Part 2 Chapter 1 1.1.2-1**

Correction	Present	Note
<p><b>1</b> Modifications and changes that are subject to Occasional Surveys referred to in <b>1.1.2-2(3), Part 2 of the Rules</b> are as specified in (1) through (5) below:</p> <p>(1) Change in the purpose of combined deep water tank/oil tank/cargo hold When such dual-purpose holds are intended to be used for cargoes exclusively, the Owner is to submit an application for the change of purpose to the Society. A part of the oil/ballast suction line is to be removed and blank flanges are to be fitted at the end of the line. Hydrostatic tests for the holds need not be carried out after the change.</p> <p>(2) Change in the loading conditions When ships are loaded in an extremely different way from the conditions specified in the approved plans, the longitudinal strength, shearing force and local strength are to be verified and approved by the Society.</p> <p>(3) Amendment of the loading manuals, the stability information and other similar documents When a modification is intended that alters the principal data of the ship, <del>B2.5.1-7 to -9, Part B of the Guidance for Survey and Construction of Steel Ships</del><b>2.3.1, Part B of the Rules</b> are to be followed to determine the need for re-inclining tests, and the need for amending stability information.</p> <p>(4) Other changes and modifications As changes and modifications may require approval by the Society, the Owner is to notify the Society in such a case. In general, modifications to the main hull structure require approval by the Society. Reference is made to the provisions of <b>2.4.1, Part 2</b></p>	<p><b>1</b> Modifications and changes that are subject to Occasional Surveys referred to in <b>1.1.2-2(3), Part 2 of the Rules</b> are as specified in (1) through (5) below:</p> <p>(1) Change in the purpose of combined deep water tank/oil tank/cargo hold When such dual-purpose holds are intended to be used for cargoes exclusively, the Owner is to submit an application for the change of purpose to the Society. A part of the oil/ballast suction line is to be removed and blank flanges are to be fitted at the end of the line. Hydrostatic tests for the holds need not be carried out after the change.</p> <p>(2) Change in the loading conditions When ships are loaded in an extremely different way from the conditions specified in the approved plans, the longitudinal strength, shearing force and local strength are to be verified and approved by the Society.</p> <p>(3) Amendment of the loading manuals, the stability information and other similar documents When a modification is intended that alters the principal data of the ship, <b>B2.5.1-7 to -9, Part B of the Guidance for Survey and Construction of Steel Ships</b> are to be followed to determine the need for re-inclining tests, and the need for amending stability information.</p> <p>(4) Other changes and modifications As changes and modifications may require approval by the Society, the Owner is to notify the Society in such a case. In general, modifications to the main hull structure require approval by the Society.</p>	<p>Reference correction</p>

<p><b>of the Rules.</b></p> <p>(5) Ships Using Low-flashpoint Fuels</p> <p>(a) For ships that fall under the following <b>i)</b> or <b>ii)</b>, a survey is to be carried out to verify compliance with the requirements of <b>1.1.8, Part 1 of the Rules</b> before using low-flashpoint fuels or undertaking to use different low-flashpoint fuels than specified:</p> <p>i) Ships which convert to using low-flashpoint fuels on or after 1 January 2017; or</p> <p>ii) Ships which, on or after 1 January 2017, undertake to use low-flashpoint fuels different from those which they were originally approved to use before 1 January 2017.</p> <p>(b) For ships that fall under the following <b>i)</b> or <b>ii)</b>, a survey is to be carried out to verify compliance with the requirements of <b>GF11.3.1-1, GF11.3.1-2, GF12.5.2-2 and GF15.10.1, Part GF of the Guidance for the Survey and Construction of Steel Ships</b> before using low-flashpoint fuels or undertaking to use different low-flashpoint fuels than specified:</p> <p>i) Ships which convert to using low-flashpoint fuels on or after 1 July 2019; or</p> <p>ii) Ships which, on or after 1 July 2019, undertake to use low-flashpoint fuels different from those which they were originally approved to use before 1 July 2019.</p> <p>(c) For ships that fall under the following <b>i)</b> or <b>ii)</b>, a survey is to be carried out to verify compliance with the requirements of <b>11.8.1, Part GF of the Rules for the Survey and Construction of Steel</b></p>	<p>Reference is made to the provisions of <b>2.4.1, Part 2 of the Rules.</b></p> <p>(5) Ships Using Low-flashpoint Fuels</p> <p>(a) For ships that fall under the following <b>i)</b> or <b>ii)</b>, a survey is to be carried out to verify compliance with the requirements of <b>1.1.8, Part 1 of the Rules</b> before using low-flashpoint fuels or undertaking to use different low-flashpoint fuels than specified:</p> <p>i) Ships which convert to using low-flashpoint fuels on or after 1 January 2017; or</p> <p>ii) Ships which, on or after 1 January 2017, undertake to use low-flashpoint fuels different from those which they were originally approved to use before 1 January 2017.</p> <p>(b) For ships that fall under the following <b>i)</b> or <b>ii)</b>, a survey is to be carried out to verify compliance with the requirements of <b>GF11.3.1-1, GF11.3.1-2, GF12.5.2-2 and GF15.10.1, Part GF of the Guidance for the Survey and Construction of Steel Ships</b> before using low-flashpoint fuels or undertaking to use different low-flashpoint fuels than specified:</p> <p>i) Ships which convert to using low-flashpoint fuels on or after 1 July 2019; or</p> <p>ii) Ships which, on or after 1 July 2019, undertake to use low-flashpoint fuels different from those which they were originally approved to use before 1 July 2019.</p> <p>(c) For ships that fall under the following <b>i)</b> or <b>ii)</b>, a survey is to be carried out to verify compliance with the requirements of <b>11.8.1, Part GF of the</b></p>	
---	---	--

<p><b>Ships and GF11.3.1-2, Part GF of the Guidance for the Survey and Construction of Steel Ships</b> before using low-flashpoint fuels or undertaking to use different low-flashpoint fuels than specified:</p> <ul style="list-style-type: none"><li>i) Ships which convert to using low-flashpoint fuels on or after 1 January 2024; or</li><li>ii) Ships which, on or after 1 January 2024, undertake to use low-flashpoint fuels different from those which they were originally approved to use before 1 January 2024.</li></ul>	<p><b>Rules for the Survey and Construction of Steel Ships and GF11.3.1-2, Part GF of the Guidance for the Survey and Construction of Steel Ships</b> before using low-flashpoint fuels or undertaking to use different low-flashpoint fuels than specified:</p> <ul style="list-style-type: none"><li>i) Ships which convert to using low-flashpoint fuels on or after 1 January 2024; or</li><li>ii) Ships which, on or after 1 January 2024, undertake to use low-flashpoint fuels different from those which they were originally approved to use before 1 January 2024.</li></ul>	
---	--	--

End of Document.