

# Amendments of the Rules

(External Review)

## Pt. 3 Hull Structure



2022. 09

Hull Rule Development Team

# Background and main contents of the amendments

## 1. Background of amendments

### (1) Request for establishment/revision of Classification Technical Rule HUC4100–705–2022 (Pt3 Ch5, Ch10)

#### – Pt3 Ch5 305 Loaded by wheeled vehicles

The thickness of deck plating loaded by wheeled vehicles is to be determined by considering the concentrated loads from the wheeled vehicles.

#### Ch 10 107 Loaded by wheeled vehicles

The section modulus of beams on deck loaded by wheeled vehicles is to be determined by considering the concentrated loads from the wheeled vehicles.

- Currently, the calculation formula for the vehicle deck follows "Pt 7, Ch 7, 301. Application" of the Guidance. Therefore, it is intended to clarify this.

## 2. Main Contents: Refer to the amendments

Present	Amendment	Note
<p style="text-align: center;"><b>〈Rule〉 Pt.3</b></p> <p style="text-align: center;"><b>CHAPTER 5 DECKS</b></p> <p style="text-align: center;">Section 3 Deck Plating</p> <p>301. ~ 304. 〈omit〉</p> <p>305. Loaded by wheeled vehicles The thickness of deck plating loaded by wheeled vehicles is <u>to be determined by considering the concentrated loads from the wheeled vehicles.</u></p> <p>306. ~ 307. 〈omit〉</p> <p style="text-align: center;"><b>CHAPTER 10 BEAMS</b></p> <p style="text-align: center;">Section 1 General</p> <p>101. ~ 106. 〈omit〉</p> <p>107. Loaded by wheeled vehicles The section modulus of beams on deck loaded by wheeled vehicles is <u>to be determined by considering the concentrated loads from the wheeled vehicles.</u></p> <p>108. ~ 109. 〈omit〉</p>	<p style="text-align: center;"><b>〈Rule〉 Pt.3</b></p> <p style="text-align: center;"><b>CHAPTER 5 DECKS</b></p> <p style="text-align: center;">Section 3 Deck Plating</p> <p>301. ~ 304. 〈same as current〉</p> <p>305. Loaded by wheeled vehicles The thickness of deck plating loaded by wheeled vehicles is <u>not to be less than that obtained from the formula in Pt 7 Ch 7 301 of the Guidance.</u></p> <p>306. ~ 307. 〈same as current〉</p> <p style="text-align: center;"><b>CHAPTER 10 BEAMS</b></p> <p style="text-align: center;">Section 1 General</p> <p>101. ~ 106. 〈same as current〉</p> <p>107. Loaded by wheeled vehicles The section modulus of beams on deck loaded by wheeled vehicles is <u>not to be less than that obtained from the formula in Pt 7 Ch 7 301 of the Guidance</u></p> <p>108. ~ 109. 〈same as current〉</p>	<p>– clarification</p> <p>– clarification</p>

# Amendments of the Rules

(External Review)

Pt. 3 Hull Structure

Pt. 10 Hull Structure and Equipment of Small Steel Ships



2022. 09

Hull Rule Development Team

# Background and main contents of the amendments

## 1. Background of amendments

(1) Request for establishment/revision of Classification Technical Rule HUT4000–3588–2021 (Pt3 Ch16, Pt10 Ch16)

- Pt3 Ch16 Thickness of Superstructure end Bulkheads, Pt10 Ch16 Thickness of Bulkhead and wall platings

An error in formula application has been corrected.

## 2. Main Contents: Refer to the amendments

Present	Amendment	Note
<p style="text-align: center; color: blue;">〈Rules〉 – Pt 3</p> <p style="text-align: center;"><b>Ch. 16 SUPERSTRUCTURES</b></p> <p style="text-align: center;"><b>Section 2 Superstructure End Bulkheads</b></p> <p>201. 〈omit〉</p> <p>202. Thickness</p> <p>1. The thickness of superstructure end bulkhead plating is not to be less than that obtained from the following formula:</p> $t = 3S\sqrt{hK} \quad (\text{mm})$ <p>where:  <math>h</math> = head of water specified in <b>201.</b> (m).  <math>S</math> = spacing of stiffeners. (m)</p> <p>2. The thickness of bulkhead plating is not to be less than that obtained from the following formula, irrespective of the provisions in <b>Par 1.</b></p> <p>Bulkhead plating of the first tier superstructure : <math>t = \frac{L'}{100} + 4.0 \quad (\text{mm})</math>  Plating of other bulkheads : <math>t = \frac{L'}{100} + 3.0 \quad (\text{mm})</math></p> <p>where:  <math>L'</math> = as specified in <b>Table 3.16.1.</b></p> <p>203. ~ 204. 〈omit〉</p>	<p style="text-align: center; color: blue;">〈Rules〉 – Pt 3</p> <p style="text-align: center;"><b>Ch. 16 SUPERSTRUCTURES</b></p> <p style="text-align: center;"><b>Section 2 Superstructure End Bulkheads</b></p> <p>201. 〈same as current〉</p> <p>202. Thickness</p> <p>1. The thickness of superstructure end bulkhead plating is not to be less than that obtained from the following formula:</p> $t = 3S\sqrt{hK} \quad (\text{mm})$ <p>where:  <math>h</math> = head of water specified in <b>201.</b> (m).  <math>S</math> = spacing of stiffeners. (m)</p> <p>2. The thickness of bulkhead plating is not to be less than that obtained from the following formula <u>or 5 mm, whichever is the greater</u>, irrespective of the provisions in <b>Par 1.</b></p> <p>Bulkhead plating of the first tier superstructure : <math>t = \frac{L'}{100} + 4.0 \quad (\text{mm})</math>  Plating of other bulkheads : <math>t = \frac{L'}{100} + 3.0 \quad (\text{mm})</math></p> <p>where:  <math>L'</math> = as specified in <b>Table 3.16.1.</b></p> <p>203. ~ 204. 〈same as current〉</p>	

Present	Amendment	Note
<p style="text-align: center;"><b>〈Rules〉 – Pt 10</b></p> <p style="text-align: center;"><b>Ch. 16 SUPERSTRUCTURES AND DECKHOUSE</b></p> <p style="text-align: center;"><b>Section 2 Construction</b></p> <p>201. 〈omit〉</p> <p>202. Thickness of bulkhead and wall platings</p> <p>1. The thickness of <u>unprotected front bulkhead and side wall plating at the first and second tier for ships not less than 50 m in length</u>, is not to be less than obtained from the following formula, <del>however, it is not to be less than that obtained from the formula in Par 2.</del></p> $t = 3S\sqrt{h} \text{ (mm)}$ <p>where:</p> <p><math>h</math> = head of water specified in <b>201.</b> (m)</p> <p><math>S</math> = spacing of stiffeners (m)</p> <p>2. <u>The thickness of bulkhead and wall platings other than that specified in Par 1 is not to be less than that obtained from the following formulae or 5 mm, whichever is the greater.</u></p> <p>For the first tier: <math>t = \frac{L}{100} + 4.0 \text{ (mm)}</math></p> <p>For others: <math>t = \frac{L}{100} + 3.0 \text{ (mm)}</math></p> <p>203. 〈omit〉</p>	<p style="text-align: center;"><b>〈Rules〉 – Pt 10</b></p> <p style="text-align: center;"><b>Ch. 16 SUPERSTRUCTURES AND DECKHOUSE</b></p> <p style="text-align: center;"><b>Section 2 Construction</b></p> <p>201. 〈same as current〉</p> <p>202. Thickness of bulkhead and wall platings</p> <p>1. The thickness of <u>superstructure end bulkhead plating and side wall plating</u> is not to be less than that obtained from the following formula.</p> $t = 3S\sqrt{h} \text{ (mm)}$ <p>where:</p> <p><math>h</math> = head of water specified in <b>201.</b> (m)</p> <p><math>S</math> = spacing of stiffeners (m)</p> <p>2. <u>Regardless of the requirements in Par 1, the thickness of bulkhead plating and side wall plating is not to be less than 5 mm.</u></p> <p>203. 〈same as current〉</p>	<p>- mistranslation</p>

# Amendments of the Guidance

(External Review)

## Pt. 7 Ships of Special Service

Annex 7-2 Guidance for the Container Securing Arrangements



2022. 09

Hull Rule Development Team



# Background and main contents of the amendments

## 1. Background of amendments

(1) Correct the deviation of the cell guide bar from its intended line

refer to shipyard practice and other Class Rules

- Clearances

*Guidance note:*

*When building tolerance of cell guides is taken into consideration, the limits above may be increased by 6 mm in transverse and longitudinal directions.*

tolerance : A shipyard longi./trans. 7mm, B shipyard longi./trans. 6mm, C shipyard longi. 5mm/trans. 6mm

(IACS Rec. 47 table 7.1 Alignment (fillet weld  $\leq t/2$ )

## 2. Main Contents: Refer to the amendments

Present	Amendment	Note
<p style="text-align: center;"><b>〈Guidance〉 Pt.7</b></p> <p style="text-align: center;"><b>Annex 7-2 Guidance for the Container Securing Arrangements</b></p> <p>1. ~ 5. 〈omission〉</p> <p>6. Container securing arrangements for stowage using cell guides</p> <p>(1) General 〈omission〉</p> <p>(2) Arrangement and construction</p> <p>(A) Cell guides are to have sufficient vertical extent and continuity to provide efficient support to containers. Guide bars are to be effectively attached to the supporting structure to prevent tripping or distortion resulting from container loading.</p> <p>(B) , (C) 〈omission〉</p> <p>(D) The cell guides are to give a total clearance between the container and guide bars not exceeding 25 mm in the transverse direction and 40 mm in the longitudinal direction. The deviation of the cell guide bar from its intended line is not generally to exceed <u>4 mm in the transverse direction and 5 mm in the longitudinal direction.</u></p> <p>(E) ~ (G) 〈omission〉</p> <p>(3) ~ (5) 〈omission〉</p> <p>7. ~ 9. 〈omission〉</p>	<p style="text-align: center;"><b>〈Guidance〉 Pt.7</b></p> <p style="text-align: center;"><b>Annex 7-2 Guidance for the Container Securing Arrangements</b></p> <p>1. ~ 5. 〈same as current〉</p> <p>6. Container securing arrangements for stowage using cell guides</p> <p>(1) General 〈same as current〉</p> <p>(2) Arrangement and construction</p> <p>(A) Cell guides are to have sufficient vertical extent and continuity to provide efficient support to containers. Guide bars are to be effectively attached to the supporting structure to prevent tripping or distortion resulting from container loading.</p> <p>(B) , (C) 〈same as current〉</p> <p>(D) The cell guides are to give a total clearance between the container and guide bars not exceeding 25 mm in the transverse direction and 40 mm in the longitudinal direction. <u>When building tolerance of cell guides is taken into consideration, the clearance above may be increased by 6 mm in transverse and longitudinal directions.</u></p> <p>(E) ~ (G) 〈omission〉</p> <p>(3) ~ (5) 〈same as current〉</p> <p>7. ~ 9. 〈same as current〉</p>	<p>- refer other Class rule, shipyard practice</p>

# Amendments of the Rules / Guidance

Pt. 3 Hull Structure  
(External opinion inquiry)



2022. 9

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# Amendments of the Rules / Guidance

## Pt. 10 Hull Structure and Equipment of Small Steel Ships (External opinion inquiry)



2022. 9

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