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# **RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS**

**Part Q**

**Steel Barges**

**RULES**

**2023 AMENDMENT NO.1**

Rule No.29      30 June 2023

Resolved by Technical Committee on 25 January 2023

An asterisk (\*) after the title of a requirement indicates that there is also relevant information in the corresponding Guidance.

“Rules for the survey and construction of steel ships” has been partly amended as follows:

## **Part Q STEEL BARGES**

### **Chapter 2 MATERIALS, CONSTRUCTION, ETC.**

#### **2.1 General for Materials, Construction, etc.**

##### **2.1.1 Materials and Welding**

Sub-paragraph -3 has been amended as follows.

**3** Application of steels used for hull construction is to be in accordance with the provision in ~~1.1.11 of 3.2.2, Part 1, Part C.~~

Sub-paragraph -7 has been amended as follows.

**7** Welding to be used in hull construction and important equipment is to be in accordance with the requirements in **Chapter 12, Part 1, Part C** and **Part M**.

Paragraph 2.1.5 has been amended as follows.

##### **2.1.5 Ceilings and Sparrings**

Ceilings and sparrings in hold are to be as specified in ~~Chapter 24 of Part C~~ **Chapter 22, Part CS.**

Paragraph 2.1.6 has been amended as follows.

##### **2.1.6 Cementing and Painting**

Cementing and painting are to be as specified in ~~Chapter 25 of Part C (except 25.2.2-1, Part C)~~ **Chapter 22, Part CS.**

### **Chapter 17 HATCHWAYS AND OTHER DECK OPENINGS**

#### **17.1 General**

##### **17.1.1 Application**

Sub-paragraph -2 has been amended as follows.

**2** For the barges of 24 *metres* and above in length and engaged on international voyages, the hatchways and other deck openings on the exposed parts of upper deck are to be in accordance with the requirements in ~~Chapter 20, 14.6 and 14.7, Part 1, Part C~~ or **Chapter 19, Part CS.**

## Chapter 18 BULWARKS, GUARDRAILS, FREEING ARRANGEMENTS, VENTILATORS AND GANGWAYS

### 18.1 General

#### 18.1.1 Application

Sub-paragraph -2 has been amended as follows.

2 The barges specified in **17.1.1-2** are to be in accordance with the requirements in ~~Chapter 23, 14.8, 14.9, 14.12 and 14.13, Part 1, Part C, Part C~~ (except **23.8, Part C**).

### 18.3 Freeing Arrangements

Paragraph 18.3.1 has been amended as follows.

#### 18.3.1 Freeing Arrangements

On the weather parts of upper or superstructure deck, freeing arrangements are to be provided with in accordance with the requirements in ~~Chapter 23, 14.9, Part 1, Part C~~.

## Chapter 19 EQUIPMENT

### 19.1 Anchors, Chain Cables and Ropes

#### 19.1.5 Mooring Lines

Sub-paragraph -2 has been amended as follows.

2 The number and strength of mooring lines for barges with equipment numbers greater than 2,000 (EN > 2,000) are to be in accordance with ~~Chapter 27, Part C of the Rules~~ **14.4, Part 1, Part C**.

### EFFECTIVE DATE AND APPLICATION

1. The effective date of the amendments is 1 July 2023.
2. Notwithstanding the amendments to the Rules, the current requirements apply to the following ships:
  - (1) ships for which the date of contract for construction is before the effective date; or
  - (2) sister ships of ships subject to the current requirements for which the date of contract for construction is before 1 January 2025.

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# **GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS**

**Part Q**

**Steel Barges**

**GUIDANCE**

**2023 AMENDMENT NO.1**

Notice No.28      30 June 2023

Resolved by Technical Committee on 25 January 2023

Notice No.28 30 June 2023

AMENDMENT TO THE GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

“Guidance for the survey and construction of steel ships” has been partly amended as follows:

**Part Q STEEL BARGES**

**Q12 LONGITUDINAL STRENGTH**

**Q12.1 Longitudinal Strength**

Paragraph Q12.1.3 has been amended as follows.

**Q12.1.3 Loading Manual**

The requirements in ~~€34.1.2~~ **3.8.2, Part 1, Part C of the Rules** are applied with necessary modifications to the loading manual required to the steel barge.

## Q13 SHELL PLATINGS

### Q13.6 Local Compensation of Shell Plating

Paragraph Q13.6.2 has been amended as follows.

#### Q13.6.2 Shell Plating with Transverse Framing

**1** Where both deck and side constructions are transversely framed, calculations for the buckling strength are to be submitted for the approval.

**2** Carlings (100×10 FB as standard) are to be fitted in a longitudinal direction at the carling spaces which satisfy the following formula to the side plating of a transverse system when the strength deck and bottom plating is of a transverse system, and the strength deck plating of a transverse system in the midship part; except where approved otherwise by the Society.

$$16.6 \left( \frac{t}{10S} \right)^2 \left( 1 + \frac{S^2}{C^2} \right)^2 \geq \alpha \gamma$$

$t$  : Thickness ( $mm$ ) of deck or shell plating

$C$  : Spacing ( $m$ ) of carling

$S$  : Spacing ( $m$ ) of transverse beams

$\alpha$  : As given by the following

$$\frac{-(M_{S,\min} + M_W(-))}{Z_D} \times 10^3 \quad (N/mm^2) \text{ for strength deck}$$

$$\frac{(M_{S,\max} + M_W(+))}{Z_B} \times 10^3 \quad (N/mm^2) \text{ for bottom shell}$$

$M_{S,\min}$  and  $M_{S,\max}$  : Min. and Max. values respectively, of longitudinal bending moment ( $kN-m$ ) in still water as required in **12.1.1-2, Part Q of the Rules**

$M_W(-)$  and  $M_W(+)$  : As specified in **4.3.2.3, Part 1, Part C of the Rules**

$Z_D$  and  $Z_B$  : Actual section moduli ( $cm^3$ ) of transverse section of hull whose values are determined against the strength deck and ship bottom according to the requirements in **12.1.2, Part Q of the Rules**

$\gamma$  : 1.0 for strength deck plating and bottom shell plating, and the value given by the following for side shell plating:

$$\frac{y_1}{y_D} \text{ for members located above the neutral axis of athwartship considered}$$

$$\frac{y_2}{y_B} \text{ for members located below the neutral axis of athwartship considered}$$

$y_D$  : Vertical distance ( $m$ ) from neutral axis to deck

$y_B$  : Vertical distance ( $m$ ) from base line to neutral axis

$y_1$  : Vertical distance ( $m$ ) from neutral axis to upper edge of each strake, but it does not need to be greater than  $y_D$

$y_2$  : Vertical distance ( $m$ ) from neutral axis to lower edge of each strake, but it does not need to be greater than  $y_B$

Appendix 1 has been amended as follows.

## Appendix 1 APPLICATION OF PART ~~C~~CS OF THE GUIDANCE

The **Part ~~C~~CS** of the Guidance is to be correspondingly applied as the Guidance for the prescriptions in **Part Q of the Rules**, as shown in the **Table Q** correspondence Table of Guidance.

Table Q Correspondence Table of Guidance

| Part Q           | Part <del>C</del> CS                          | Part Q | Part <del>C</del> CS        | Part Q            | Part <del>C</del> CS                      |
|------------------|---|--------|-----------------------------|-------------------|---|
| 1.1.1            | <del>C1.1.3</del> CS1.1.3                     | 8.2.1  | <del>C11.2.1</del> CS11.2.1 | 13.3.3            | <del>C16.3.3</del> CS16.3.3               |
| 1.1.6            | <del>C1.1.10</del> CS26.1                     | 9.1.3  | <del>C12.1.3</del> CS12.1.3 | 14.1.1-1          | <del>C10.2.1</del> CS17.1.1 <sup>1)</sup> |
| <del>2.1.1</del> | <del>C1.1.11</del><br>&<br><del>C1.1.12</del> | 9.1.4  | <del>C12.1.4</del> CS12.1.4 | 14.2.1            | <del>C17.1.1</del> CS17.2.1               |
|                  |   | 9.2.1  | <del>C12.2.1</del> CS12.2.1 | 14.2.3            | <del>C17.1.4</del> CS17.2.4               |
| 2.1.2            | <del>C1.1.7</del> CS1.3.1                     | 10.2.3 | <del>C13.2.3</del> CS13.2.3 | 14.3.2            | <del>C17.2.2</del> CS17.3.2               |
| 7.1.2            | <del>C10.1.2</del> CS10.1.2                   | 11.1.3 | <del>C14.1.3</del> CS14.1.3 | 14.4.1            | <del>C17.3.1</del> CS17.4.1               |
| 7.3.2            | <del>C10.4.2</del> CS10.3.2                   | 11.2.2 | <del>C14.2.3</del> CS14.2.3 | 15.3.1            | <del>C18.3.1</del> CS18.3.1               |
|                  |   |        |                             | <del>19.1.1</del> | <del>CS23.1.1</del>                       |
| 8.1.1            | <del>C11.1.2</del> CS11.1.2                   | 12.1.1 | <del>C15.2.1</del> CS15.2.1 | 19.1.3            | <del>C27.1.2</del> CS23.1.2               |
| <del>8.1.1</del> | <del>C11.1.2</del>                            | 12.1.2 | <del>C15.2.3</del> CS15.2.3 | <del>19.1.5</del> | <del>C27.1.5</del> <sup>2)</sup>          |

Remark

- 1) In ~~C10.2.1, Part C of the Guidance~~CS17.1.1, “~~10.2.1 1(2), Part C~~17.1.1-1, Part CS of the Rules” is to be construed as “14.1.1-1(2), Part Q of the Rules”.
- 2) In ~~C27.1.5, Part C of the Guidance~~, “~~27.1.5, Part C of the Rules~~” is to be construed as “~~19.1.5, Part Q of the Rules~~”.

### EFFECTIVE DATE AND APPLICATION

1. The effective date of the amendments is 1 July 2023.
2. Notwithstanding the amendments to the Guidance, the current requirements apply to the following ships:
  - (1) ships for which the date of contract for construction is before the effective date; or
  - (2) sister ships of ships subject to the current requirements for which the date of contract for construction is before 1 January 2025.