RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

RULES

Part PS Floating Offshore Facilities for Crude Oil/ Petroleum Gas Production, Storage and Offloading

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.

Rule No.29 30 June 2023
AMENDMENT TO THE RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

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

Part PS FLOATING OFFSHORE FACILITIES FOR CRUDE OIL/PETROLEUM GAS PRODUCTION, STORAGE AND OFFLOADING

Chapter 3 HULL CONSTRUCTION AND EQUIPMENT

3.1 General

3.1.3 Loading Manual, Stability Information and Instruction for Operation

Sub-paragraph -1 has been amended as follows.

1 In order to avoid the occurrence of unacceptable stress in Floating Offshore Facility structures corresponding to all oil and ballast loading conditions and to enable the master or the person-in-charge of loading operations to adjust the loading of cargo and ballast, Floating Offshore Facilities are to be provided with loading manuals approved by the Society. Such loading manuals are to at least include the following items as well as relevant provisions given in ~~**Chapter 34**~~ **3.8, Part 1, Part C**. ((1) to (4) are omitted.)

3.3 Stability

3.3.1 General

Sub-paragraph -2 has been amended as follows.

2 The arrangements of watertight compartments, watertight bulkheads and closing devices are to be in accordance with the requirements specified in **Chapter 5**, **Part P**, ~~**Chapter 4, Chapter 13 and Chapter 29,**~~ **2.2.2, 2.3, 6.3, 10.5** and **Part 2-7, Part C** and **Part CSR-B&T**.

3.4 Hull Construction

3.4.1 General

Sub-paragraph -2 has been amended as follows.

2 The designs of welded joints are to be in accordance with the requirements specified in ~~**1.2**~~ **Chapter 12, Part 1, Part C**. In cases where consideration is given to the welded joints of parts where the stresses may concentrate and the shapes of welded joints for fatigue strength design, data relative to them is to be submitted for Society approval.

3.5 Structural Strength for Ship-type Floating Offshore Facility

3.5.1 Overall Strength

Sub-paragraph -1 has been amended as follows.

1 In the case of ship-type Floating Offshore Facilities, longitudinal strength is to comply with the requirements given in **Chapter ~~15~~ 5, Part 1 Part C**.

3.8 Corrosion Control Means and Corrosion Margins

Paragraph 3.8.3 has been amended as follows.

3.8.3 Corrosion Margin

1 Corrosion margins according to the corrosive environment to which structural members are exposed are to be in accordance with the values given in **Table PS3.3**. In cases where a corrosive environment is clearly severer than assumed, values that are bigger than the values given in **Table PS3.3** or additional corrosion control means considered appropriate will be required as deemed necessary by the Society.

~~**2** In cases where the scantlings of structural members are to comply with the requirements given in **Part C**, they are to follow **(1)** or **(2)** below:~~

~~(1) In cases where the scantling is determined by plate thickness~~

~~The value for $+\alpha$ specified in the end of the formula is to be provided by the value given in **Table PS3.3**.~~

~~(2) In cases where the scantling is determined by section modulus~~

~~For stiffeners having section modulus obtained by dividing the formula by 1.2, each scantling of web and face plates may be determined, and the values given in **Table PS3.3** are to be added to the determined thickness of each web and face plate.~~

~~**3**~~**2** In cases where the scantlings of structural members are to comply with the requirements given in **Part C** and **Part CSR-B&T**, they are to follow **(1)** or **(2)** below:

(1) In cases where the scantling is determined by plate thickness

The values given in **Table PS3.3** are to be added to the value calculated by the formula and rounded up to the nearest 0.5 *mm*.

(2) In cases where the scantling is determined by the section modulus

For stiffeners having section modulus given in the formula, each scantling of web and face plates may be determined, and the values given in **Table PS3.3** are to be added to the determined thickness of each web and face plate and rounded up to the nearest 0.5 *mm*.

~~**4**~~**3** In the application of **-2** ~~**and -3**~~ above, loads calculated in accordance with **Chapter 2** may be able to be used instead of those loads specified in **Part C** and **Part CSR-B&T**.

Table PS3.3 One Side Corrosion Margin for Structural Members

Corrosive environment			One Side Corrosion Margin (*mm*)	
			Period intended to operate: 20 *years*	Period intended to operate: 30 *years*
In oil tank	Under tank top surface		1.5	1.8
	Upper bottom plating surface		2.0	2.3
	Other than those shown above	Face of girder	1.0	1.3
		Other than shown in above	0.8	1.0
In ballast tank	Face of girder		1.0	1.3
	Other than those shown above		0.8	1.0
Exposed to air			1.0	1.1
Exposed to sea water			0.5	0.6
Other than those shown above			0.5	0.6

Note)

In cases where the period intended to operate assumes an intermediate value of **Table PS3.3**, the period intended to operate is to be determined by linear interpolation and rounded up to one decimal place. In cases where the period intended to operate exceeds 30 *years*, the period intended to operate is to be determined by linear extrapolation using the values equal to those in cases where the period intended to operate is 20 *years* and 30 *years* and rounded up to one decimal place.

3.9 Hull Equipment, etc.

3.9.2 Guardrails, Fenders, etc.*

Sub-paragraph -1 has been amended as follows.

1 The guardrails or bulwarks specified in ~~**Chapter 23**~~**14.8, Part C** are to be provided on weather decks. In cases where guardrails will become hindrances to the taking-off and landing of helicopters, means to prevent falling such as wire nets, etc. are to be provided.

Sub-paragraph -3 has been amended as follows.

3 Freeing arrangements, cargo ports and other similar openings, side scuttles, rectangular windows, ventilators and gangways are to be in accordance with the requirements for tankers specified in ~~**Chapter 23**~~**14.9** to **14.13, 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.

GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

GUIDANCE

Part PS Floating Offshore Facilities for Crude Oil/ Petroleum Gas Production, Storage and Offloading

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 PS FLOATING OFFSHORE FACILITIES FOR CRUDE OIL/PETROLEUM GAS PRODUCTION, STORAGE AND OFFLOADING

PS3 HULL CONSTRUCTION AND EQUIPMENT

PS3.7 Fatigue Strength

Paragraph PS3.7.2 has been amended as follows.

PS3.7.2 Fatigue Strength Evaluation

Fatigue Strength may be estimated using cumulative fatigue damage ratio in correspondence to **Appendix P1, Part P of the Guidance** ~~or one of the following requirements~~**, Chapter 9, Part 1, Part C of the Rules** or **Chapter 9, Part C Part CSR-B&T of the Rules**. ~~However, the reference stresses of stiffeners are to be calculated in accordance with the 10^{-4} probability level of design loads.~~

~~(1) In the case of longitudinal stiffeners~~

~~(a) **Annex C1.1.23-1, Part C of the Guidance,** in cases where correction coefficients are 1.0.~~

~~(b) **Chapter 9, Part 1, Part CSR-B&T of the Rules**~~

~~(2) In the case of the members, excluding longitudinal stiffeners, of ship-type Floating Offshore Facilities, **Chapter 9, Part 1, Part CSR-B&T of the Rules**~~

EFFECTIVE DATE AND APPLICATION

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(1) ships for which the date of contract for construction is before the effective date; or

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