RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

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

Rules for the Survey and Construction of Steel Ships
Part PS 2015 AMENDMENT NO.1
Guidance for the Survey and Construction of Steel Ships
Part PS 2015 AMENDMENT NO.1

Rule No.16 / Notice No.13 27th February 2015
Resolved by Technical Committee on 2nd February 2015
Approved by Board of Directors on 23rd February 2015

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RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

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

2015 AMENDMENT NO.1

Rule No.16 27th February 2015

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Rule No.16 27th February 2015
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

3.3 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**, **Part C** and **Part ~~CSR-T~~CSR-B&T**.

3.4 Hull Construction

3.4.2 Structural Arrangements

Sub-paragraph -1 has been amended as follows.

1 Tank sizes are to be sufficient enough to avoid any motion due to resonance of the natural period of oscillation of liquid in the tanks with the natural periods of rolling and pitching of Floating Offshore Facilities. In case where such motion is not avoidable, swash bulkheads are to be provided inside tanks. However, in cases where the structural member of tanks possess sufficient strength against loads caused by the motion of liquids in such tanks in accordance with the requirements specified in **3.5.2-3**; or, such structural members comply with relevant requirements specified in **Part ~~CSR-T~~CSR-B&T**, the above requirements need not apply.

3.5 Structural Strength for Ship-Type Floating Offshore Facility

3.5.1 Overall Strength

Sub-paragraphs -4 and -5 have been amended as follows.

4 The structural strength of cargo holds is to be evaluated based on the corrosion margins specified in **3.8** and the allowable stresses specified in **Part ~~CSR-T~~CSR-B&T** or **Table P7.1, Part P**.

5 With respect to those areas designed by the Society in the neighborhood of openings such as moonpools, etc. and those areas at which detailed strength evaluations are required in accordance with **Part ~~CSR-T~~CSR-B&T**, fine mesh structural strength analysis is to be carried out to assess and verify any stress. Such stress is not to be more than the criteria of allowable stress specified in **Part ~~CSR-T~~CSR-B&T**.

3.5.2 Local Strength

Sub-paragraph -1 has been amended as follows.

1 Shell plating, decks, tank bulkheads, helicopter decks and the stiffeners which support them are to be in accordance with the relevant requirements of **7.3**, **7.6** and **17.3.1**, **Part P**, **Part C**, or **Part ~~CSR-T~~CSR-B&T**. In such cases, corrosion margins are to be in accordance with **3.8.3**.

3.6 Structural Strength for Column-Stabilized and Other Type Floating Offshore Facilities

3.6.1 General

Sub-paragraph -2 has been amended as follows.

2 Local Strength is to be in accordance with relevant requirements specified in **Part P**, **Part C**, or **Part ~~CSR-T~~CSR-B&T**. In such cases, applied corrosion margins are to be in accordance with **3.8.3**.

3.8 Corrosion Control Means and Corrosion Margins

3.8.3 Corrosion Margin

Sub-paragraphs -3 and -4 have been amended as follows.

3 In cases where the scantlings of structural members are to comply with the requirements given

in **Part ~~CSR-T~~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 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-T~~CSR-B&T**.

EFFECTIVE DATE AND APPLICATION

1. The effective date of the amendments is 1 July 2015.

2. Notwithstanding the amendments to the Rules, the current requirements may apply to ships for which the date of contract for construction* is before the effective date.

* "contract for construction" is defined in the latest version of IACS Procedural Requirement (PR) No.29.

IACS PR No.29 (Rev.0, July 2009)

1. The date of "contract for construction" of a vessel is the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. This date and the construction numbers (i.e. hull numbers) of all the vessels included in the contract are to be declared to the classification society by the party applying for the assignment of class to a newbuilding.

2. The date of "contract for construction" of a series of vessels, including specified optional vessels for which the option is ultimately exercised, is the date on which the contract to build the series is signed between the prospective owner and the shipbuilder.
For the purpose of this Procedural Requirement, vessels built under a single contract for construction are considered a "series of vessels" if they are built to the same approved plans for classification purposes. However, vessels within a series may have design alterations from the original design provided:
(1) such alterations do not affect matters related to classification, or
(2) If the alterations are subject to classification requirements, these alterations are to comply with the classification requirements in effect on the date on which the alterations are contracted between the prospective owner and the shipbuilder or, in the absence of the alteration contract, comply with the classification requirements in effect on the date on which the alterations are submitted to the Society for approval.
The optional vessels will be considered part of the same series of vessels if the option is exercised not later than 1 year after the contract to build the series was signed.

3. If a contract for construction is later amended to include additional vessels or additional options, the date of "contract for construction" for such vessels is the date on which the amendment to the contract, is signed between the prospective owner and the shipbuilder. The amendment to the contract is to be considered as a "new contract" to which **1.** and **2.** above apply.

4. If a contract for construction is amended to change the ship type, the date of "contract for construction" of this modified vessel, or vessels, is the date on which revised contract or new contract is signed between the Owner, or Owners, and the shipbuilder.

Note:
This Procedural Requirement applies from 1 July 2009.

GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

GUIDANCE

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

2015 AMENDMENT NO.1

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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. 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) ~~**Appendix C, Part CSR-T**~~**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, ~~**Appendix C, Part CSR-T**~~**Chapter 9, Part 1, Part CSR-B&T of the Rules**

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2. The date of "contract for construction" of a series of vessels, including specified optional vessels for which the option is ultimately exercised, is the date on which the contract to build the series is signed between the prospective owner and the shipbuilder.
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(1) such alterations do not affect matters related to classification, or
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effect on the date on which the alterations are contracted between the prospective owner and the shipbuilder or, in the absence of the alteration contract, comply with the classification requirements in effect on the date on which the alterations are submitted to the Society for approval.

The optional vessels will be considered part of the same series of vessels if the option is exercised not later than 1 year after the contract to build the series was signed.

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