

RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

Part GF

Ships Using Low-Flashpoint Fuels

Rules for the Survey and Construction of Steel Ships
Part GF **2018 AMENDMENT NO.2**
Guidance for the Survey and Construction of Steel Ships
Part GF **2018 AMENDMENT NO.2**

Rule No.134 / Notice No.103 25 December 2018

Resolved by Technical Committee on 1 August 2018

ClassNK
NIPPON KAIJI KYOKAI

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

Part GF

Ships Using Low-Flashpoint Fuels

RULES

2018 AMENDMENT NO.2

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Resolved by Technical Committee on 1 August 2018

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

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 GF SHIPS USING LOW-FLASHPOINT FUELS

Chapter 7 MATERIAL AND GENERAL PIPE DESIGN

7.4 Regulations for Materials (with reference to IGF Code 7.4)

7.4.1 Metallic Materials*

Sub-paragraph -6 has been added as follows.

6 Metallic materials specified in this Part, according to the requirements in 1.1.2-2, Part K of the Rules, are to comply with the requirements of Part K of the Rules in addition to those specified in this Part.

Table GF7.5 has been amended as follows.

Table GF7.5 Plates and Sections for Hull Structures Required by 6.4.13-1(1)(b)

Minimum design temperature of hull structure (°C)	Maximum thickness (mm) for steel grades							
	A	B	D	E	AH	DH	EH	FH
0 and above -5 and above	In accordance with the relevant requirements in other Part							
down to -5	15	25	30	50	25	45	50	50
down to -10	×	20	25	50	20	40	50	50
down to -20	×	×	20	50	×	30	50	50
down to -30	×	×	×	40	×	20	40	50
Below -30	In accordance with Table GF7.2 except that the thickness limitation given in Table GF7.2 and in footnote 2 of that table does not apply.							

Note

×: means steel grade not to be used.

EFFECTIVE DATE AND APPLICATION

1. The effective date of the amendments is 25 December 2018.

GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

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GUIDANCE

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Notice No.103 25 December 2018

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 GF SHIPS USING LOW-FLASHPOINT FUELS

Amendment 2-1

GF6 FUEL CONTAINMENT SYSTEM

Section GF6.8 has been added as follows.

GF6.8 Loading Limit for Liquefied Gas Fuel Tanks

GF6.8.1 Loading Limit

The requirement on loading limits specified in 6.8.1.2, Part GF of the Rules is only applicable when a loading limit calculated using the formulae in 6.8.1.1, Part GF of the Rules gives a lower value than 95%.

GF11 FIRE SAFETY

GF11.3 Fire Protection (IGF Code 11.3)

Paragraph GF11.3.1 has been amended as follows.

GF11.3.1 General

1 The wording “not deemed necessary by the Society” in **11.3.1-2, Part GF of the Rules** refers to cases where the Administration has decided on the voluntary early implementation of the amendments in resolution *MSC.422(98)* in accordance with *MSC.1/Circ.1568*.

2 The following “other rooms with high fire risk” (as referred to in 11.3.1-3, Part GF of the Rules) are as a minimum to be considered, but not be restricted to:

- (1) cargo spaces except cargo tanks for liquids with flashpoint above 60°C and except cargo spaces exempted in accordance with 10.7.1-2, Part R of the Rules;
- (2) vehicle and ro-ro spaces; and
- (3) service spaces (high risk): galleys, pantries containing cooking appliances, saunas, paint lockers and store-rooms having areas of 4 m² or more, spaces for the storage of flammable liquids and workshops other than those forming part of the machinery space, as provided in 9.2.3-2(9) and 9.2.4-2(9), Part R of the Rules.

GF15 CONTROL, MONITORING AND SAFETY SYSTEMS

Section GF15.3 has been added as follows.

GF15.3 General

GF15.3.2 Level Indicators and Temperature Sensors in Bilge Well

The “level indicator” specified in 15.3.2, Part GF of the Rules is understood to be required for the purposes of indicating an alarm status only; a level switch (float switch) is an instrument example considered to meet this requirement.

GF16 MANUFACTURE, WORKMANSHIP AND TESTING

GF16.3 Welding of Metallic Materials and Non-destructive Testing for the Fuel Containment System

Paragraph GF16.3.3 has been amended as follows.

GF16.3.3 Welding Procedure Tests for Fuel Tanks and Process Pressure Vessels

(-1 to -4 are omitted.)

5 For the purpose of the requirements in **16.3.3-5(3), Part GF of the Rules**, ~~when the design temperature of a material falls under the higher temperature range than the specified one for the material in **Table GF7.3** and **Table GF7.4, Part GF of the Rules**, the impact test temperature given in **Table GF7.1** to **Table GF7.4, Part GF of the Rules** correspondingly to the design temperature may be used instead of the impact test temperature depending on the material. For example, in the case of 2.25%Ni steel pipes used at the design temperature of 45°C, the impact test temperature may be 50°C, while in the case of 3.5%Ni steel plates used at the design temperature of 61°C, the impact test temperature may be 70°C.~~ the test temperature of impact tests may be determined in accordance with the requirements in **GF6.4.13-2**.

6 For the purpose of the requirements in **16.3.3-7, Part GF of the Rules**, the test temperature of impact tests is to be the temperature prescribed for the base material being joined. However, this temperature may be determined in accordance with the requirements in **GF6.4.13-2**.

GF16.3.5 Production Weld Tests

Sub-paragraph -1(8) has been amended as follows.

1 Production weld tests are to be in accordance with the requirements specified in **16.3.5, Part GF** and **Chapter 11, Part D of the Rules** and are also to comply with the following requirements:

((1) to (7) are omitted.)

(8) Impact test

The specified value for the impact test are ~~as given in **Table M4.8, Part M of the Rules**~~ to be the value prescribed for the base material being joined. However, test temperature may be determined in accordance with the requirements in **GF6.4.13-2**.

EFFECTIVE DATE AND APPLICATION (Amendment 2-1)

1. The effective date of the amendments is 25 December 2018.

Annex 2 GUIDANCE FOR GAS-FUELLED BOILERS

Chapter 1 GENERAL

1.3 Submission of Plans and Documents

Sub-paragraph (1) has been amended as follows.

The plans and documents to be submitted are as follows.

- (1) Plans and documents for approval
 - (a) (Omitted)
 - (b) Items specified in **18.1.3(1)(a)**, ~~**(3)(c)**~~ and ~~**(5)(e)**~~, **Part D of the Rules**
((c) to (l) are omitted.)
- (2) (Omitted)

Annex 3 GUIDANCE FOR HIGH PRESSURE GAS-FUELLED ENGINES

Chapter 1 GENERAL

1.3 Submission of Plans and Documents

Sub-paragraph (1) has been amended as follows.

The plans and documents to be submitted are as follows.

- (1) Plans and documents for approval
 - (a) (Omitted)
 - (b) Drawings and data specified in **18.1.3(1)(a)**, ~~**(2)(b)**~~ and ~~**(3)(e)**~~, **Part D of the Rules**
((c) to (r) are omitted.)
- (2) (Omitted)

Annex 4 GUIDANCE FOR LOW PRESSURE GAS-FUELLED ENGINES

Chapter 1 GENERAL

1.3 Submission of Plans and Documents

Sub-paragraph (1) has been amended as follows.

The plans and documents to be submitted are as follows.

- (1) Plans and documents for approval
 - (a) (Omitted)
 - (b) Drawings and data specified in **18.1.3(1)(a)**, ~~(2)(b)~~ and ~~(5)(e)~~, **Part D of the Rules**
 - ((c) to (p) are omitted.)
- (2) (Omitted)

EFFECTIVE DATE AND APPLICATION (Amendment 2-2)

1. The effective date of the amendments is 25 December 2018.
2. Notwithstanding the amendments to the Guidance, the current requirements apply to ships for which the date of contract for construction* is before the effective date.
3. Notwithstanding the provision of preceding 2., the amendments to the Guidance may apply to ships for which the date of contract for construction* is before the effective date upon request by the owner or the manufacturer.

* “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.

GF6 FUEL CONTAINMENT SYSTEM

GF6.3 General

GF6.3.1 General

Sub-paragraph -3 has been added as follows.

1 In applying **6.3.1-5, Part GF of the Rules**, means deemed necessary based on the specific design, including safety precautions against damage of piping connections, are to be provided as in addition to applying **6.3.1-9, Part GF of the Rules**.

2 The wording “other sources of leakage” specified in **6.3.1-10, Part GF of the Rules** includes flange connections, valves, etc.

3 Whether the “drip tray” referred to in **6.3.1-10, Part GF of the Rules** is needed or not is to be in accordance with the following (1) to (3):

- (1) When the liquefied gas fuel storage tank is located on the open deck, drip trays are to be provided to protect the deck from leakages from tank connections and other sources of leakage.
- (2) When the liquefied gas fuel storage tank is located below the open deck but the tank connections are on the open deck, drip trays are to be provided to protect the deck from leakages from tank connections and other sources of leakage.
- (3) When the liquefied gas fuel storage tank and the tank connections are located below the deck, all tank connections are to be located in a tank connection space. Drip trays in this case are not required.

EFFECTIVE DATE AND APPLICATION (Amendment 2-3)

1. The effective date of the amendments is 1 January 2019.
2. Notwithstanding the amendments to the Guidance, the current requirements 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.