17-502

RULES FOR THE SURVEY AND CONSTRUCTION OF INLAND WATERWAY SHIPS

GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF INLAND WATERWAY SHIPS

Rules for the Survey and Construction of Inland Waterway Ships
2017 AMENDMENT NO.2
Guidance for the Survey and Construction of Inland Waterway Ships
2017 AMENDMENT NO.2

Rule No.95 / Notice No.101 25 December 2017
Resolved by Technical Committee on 26 July 2017

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 INLAND WATERWAY SHIPS

RULES

2017 AMENDMENT NO.2

Rule No.95 25 December 2017

Resolved by Technical Committee on 26 July 2017

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

Rule No.95 25 December 2017
AMENDMENT TO THE RULES FOR THE SURVEY AND CONSTRUCTION OF INLAND WATERWAY SHIPS

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

Amendment 2-1

Part 5 HULL CONSTRUCTION AND EQUIPMENT OF BARGES

Chapter 16 TANK BARGES

16.2 Structural Members in Cargo Oil Spaces

16.2.1 Longitudinal Strength

Sub-paragraph -1 has been amended as follows.

1 The section modulus of the transverse section of the hull for the midship part is not to be less than obtained from the following formulae, whichever is greater:

~~$Z_1 = 0.88(0.03L+5)\,L^2B\,(C_b+0.7)\ (cm^3)$~~

~~$Z_2 = 6.15C\left\{1.28(0.0028L+0.46)L^2BC_b(1+0.04L/B)+Ms\right\}(cm^3)$~~

$$Z_1 = 0.49(0.03L+5)L^2B(C_b+0.7)\ \ (cm^3)$$

$$Z_2 = 6.83C\left\{(0.0018L+0.3)L^2BC_b\left(1+\frac{0.04L}{B}\right)+M_S\right\}\ \ (cm^3)$$

C_b: Block coefficient

C: As given in **Table 5.16.1**

Ms: Longitudinal bending moment (kN-m) in still water specified in **-3**

2 Additional requirements concerning special considerations for longitudinal strength, for example where cargoes are loaded inhomogeneously, may be required where deemed necessary by the Society.

3 The longitudinal bending moments in still water, *Ms*, are taken the maximum sagging and hogging moments calculated for all of designed loaded and ballast conditions by the method deemed appropriate by the Society. Furthermore, in a pusher barge, the effect of the joint part is to be considered to the longitudinal bending moment.

4 For tank barges less than 60 *metres* in length the requirement of Z_2 in **-1** above may be dispensed with. However, longitudinal bending moment in still water are to be calculated for tank barges designed for special loading or ballasting.

Table 5.16.1 Coefficient *C*

	Sagging condition	Hogging condition
Upper deck	1.00	1.03
Bottom	1.06	1.03

Part 8 ELECTRICAL INSTALLATIONS

Chapter 2 ELECTRICAL INSTALLATIONS AND SYSTEM DESIGN

2.12 Semiconductor Converters for Power

2.12.5 Shop Tests*

Sub-paragraph -2 has been amended as follows.

2 Temperature rise tests for converters and their accessories are to be carried out under normal working conditions, and ~~test results are~~ temperature rise for the interiors of converters is not to exceed manufacturer specified values and the temperature rise for the exteriors of converters (e.g., the connecting parts of busbars and cables for switchboards as well as coils, contactors and resistors) is not to exceed those values specified in the requirements given in **2.8.3**. Furthermore, temperature test methods for semiconductor element connections are to be as deemed appropriate by the Society.

EFFECTIVE DATE AND APPLICATION (Amendment 2-1)

1. The effective date of the amendments is 25 December 2017.

Amendment 2-2

Part 7 MACHINERY INSTALLATIONS

Chapter 1 GENERAL

1.3 General Requirements for Machinery Installations of Tugs and Pushers

1.3.1 General*

Sub-paragraph -8 has been added as follows.

8 The exhaust gas treatment systems specified in the following **(1)** and **(2)** fitted onto machinery installations are to be to the satisfaction of the Society.
(1) Selective catalytic reduction (SCR) systems
(2) Exhaust gas cleaning systems (EGCS) (excluding those specified in **2.1.1-5**)

Chapter 2 DIESEL ENGINES

2.1 General

2.1.1 General*

Sub-paragraph -5 has been added as follows.

5 Diesel engines fitted with exhaust gas recirculation (EGR) systems are to be in accordance with requirements specified otherwise by the Society in addition to those in this Chapter.

Chapter 11 PIPING SYSTEMS

11.15 Exhaust Gas Piping Arrangements

Paragraph 11.15.1 has been amended as follows.

11.15.1 Exhaust Gas Pipes from Diesel Engines

1 In principle, the exhaust gas pipes of two or more diesel engines are not to be connected together except in the following **(1)** and **(2)** cases:~~.~~ ~~In cases where these pipes are connected to a common silencer, effective means are to be provided to prevent the exhaust gas from returning into any cylinders of non-operating engines.~~

(1) In cases where exhaust gas pipes of two or more diesel engines are connected to common silencers and effective means are provided to prevent any exhaust gas from returning into the cylinders of non-operating engines.
(2) In cases where exhaust gas pipes of two or more diesel engines are connected to common exhaust gas cleaning systems deemed appropriate by the Society.

2 Exhaust gas piping lines that are led overboard near the water line are to be so arranged as to prevent water from being siphoned back into the cylinders.

3 Boiler uptakes and exhaust piping lines from diesel engines are not to be connected together except in the following **(1)** and **(2)** cases:~~, except in cases where the boilers are arranged to utilize waste heat from the diesel engines.~~

(1) In cases where boilers are arranged to utilize waste heat from diesel engines.
(2) In cases where boiler uptakes and exhaust piping lines from diesel engines are connected to common exhaust gas cleaning systems deemed appropriate by the Society.

EFFECTIVE DATE AND APPLICATION (Amendment 2-2)

1. The effective date of the amendments is 1 January 2018.

2. Notwithstanding the amendments to the Rules, the current requirements apply to SCR systems, EGR systems and EGCS whose applications for approval are submitted to the Society before the effective date installed on 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 INLAND WATERWAY SHIPS

GUIDANCE

2017 AMENDMENT NO.2

Notice No.101 25 December 2017
Resolved by Technical Committee on 26 July 2017

Notice No.101 25 December 2017
AMENDMENT TO THE GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF INLAND WATERWAY SHIPS

"Guidance for the survey and construction of inland waterway ships" has been partly amended as follows:

Amendment 2-1

Part 8 ELECTRICAL INSTALLATIONS

Chapter 2 ELECTRICAL INSTALLATIONS AND SYSTEM DESIGN

2.12 Semiconductor Converters for Power

Paragraph 2.12.1 has been amended as follows.

2.12.1 General

The wording "standards are to be deemed appropriate by the Society" given in **2.12.1-2, Part 8 of the Rules** means the current ~~standards~~ versions of *IEC* 60146 and *IEC* 61800.

EFFECTIVE DATE AND APPLICATION (Amendment 2-1)

1. The effective date of the amendments is 25 December 2017.

Amendment 2-2

Part 1 GENERAL RULES

Chapter 1 GENERAL

1.1 General

Paragraph 1.1.8 has been added as follows.

1.1.8 Crafts Using Low-flashpoint Fuels

In applying **Part GF of the Rules for the Survey and Construction of Steel Ships** with respect to requirement **1.1.8, Part 1 of the Rules**, the wording "docking surveys carried out at the times specified in **1.1.3-1(4)(a), Part B of the Rules for the Survey and Construction of Steel Ships**" in **GF15.4.2, Part GF of the Guidance for the Survey and Construction of Steel Ships** is to be interpreted to mean "docking surveys carried out at the times specified in **1.1.3-1(4)(a)** and **(b)i), Part 2 of the Rules for the Inland Water Ships**".

EFFECTIVE DATE AND APPLICATION (Amendment 2-2)

1. The effective date of the amendments is 1 January 2018.

Amendment 2-3

Part 7 MACHINERY INSTALLATIONS

Chapter 1 GENERAL

1.3 General Requirements for Machinery Installations of Tugs and Pushers

1.3.1 General

Sub-paragraph -8 has been added as follows.

8 With respect to the wording "the satisfaction of the Society" specified in **1.3.1-8, Part 7 of the Rules**, the following **(1)** and **(2)** apply:

(1) Selective catalytic reduction (SCR) systems are to comply with **Annex D1.3.1-5(1)** "GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF SELECTIVE CATALYTIC REDUCTION SYSTEMS AND ASSOCIATED EQUIPMENT", **Part D of the Guidance for the Survey and Construction of Steel Ships**.

(2) Exhaust gas cleaning systems (EGCS) are to comply with **Annex D1.3.1-5(2)** "GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF EXHAUST GAS CLEANING SYSTEMS AND ASSOCIATED EQUIPMENT", **Part D of the Guidance for the Survey and Construction of Steel Ships**.

Chapter 2 DIESEL ENGINES

2.1 General

2.1.1 General

Sub-paragraph -3 has been added as follows.

3 The wording "requirements specified otherwise by the Society" referred to in **2.1.1-5, Part 7 of the Rules** means **Annex D2.1.1-5** "Guidance for the Survey and Construction of Exhaust Gas Recirculation Systems and Associated Equipment", **Part D of the Guidance for the Survey and Construction of Steel Ships**.

Chapter 11 PIPING SYSTEMS

Section 11.15 has been added as follows.

11.15 Exhaust Gas Piping Arrangements

11.15.1 Exhaust Gas Pipes from Diesel Engines

1 The wording "common exhaust gas cleaning systems deemed appropriate by the Society" specified in **11.15.1-1(2)** and **11.15.1-3(2), Part 11 of the Rules** means systems complying with **1.4.1-6** of **Annex D1.3.1-5(2)** "GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF EXHAUST GAS CLEANING SYSTEMS AND ASSOCIATED EQUIPMENT", **Part D of the Guidance for the Survey and Construction of Steel Ships**.

EFFECTIVE DATE AND APPLICATION (Amendment 2-3)

1. The effective date of the amendments is 1 January 2018.

2. Notwithstanding the amendments to the Guidance, the current requirements apply to SCR systems, EGR systems and EGCS whose applications for approval are submitted to the Society before the effective date installed on 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.