

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

GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

**Part N**

**Ships Carrying Liquefied Gases in Bulk**

**Rules for the Survey and Construction of Steel Ships**

**Part N**

**2017 AMENDMENT NO.2**

**Guidance for the Survey and Construction of Steel Ships**

**Part N**

**2017 AMENDMENT NO.2**

Rule No.92 / Notice No.96      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.

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

**Part N**

**Ships Carrying Liquefied Gases in Bulk**

**RULES**

**2017 AMENDMENT NO.2**

Rule No.92      25 December 2017

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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 N SHIPS CARRYING LIQUEFIED GASES IN BULK**

**Chapter 4 CARGO CONTAINMENT**

**4.20 Construction Processes (*IGC Code 4.20*)**

**4.20.3 Testing\***

Sub-paragraph -5 has been amended as follows.

- 1** All cargo tanks and process pressure vessels are to be subjected to hydrostatic or hydropneumatic pressure testing in accordance with **4.21** to **4.26**, as applicable for the tank type.
- 2** All tanks are to be subject to a tightness test which may be performed in combination with the pressure test referred to in **4.20.3-1**.
- 3** Requirements with respect to inspection of secondary barriers are to be decided by the Society in each case, taking into account the accessibility of the barrier (see **4.6.2**).
- 4** The Society may require that for ships fitted with novel type *B* independent tanks, or tanks designed according to **4.27** at least one prototype tank and its supporting structures are to be instrumented with strain gauges or other suitable equipment to confirm stress levels. Similar instrumentation may be required for type *C* independent tanks, depending on their configuration and on the arrangement of their supports and attachments.
- 5** The overall performance of the cargo containment system is to be verified for compliance with the design parameters during the first full loading and discharging of the cargo, in accordance with the survey procedure and requirements in **1.4 of the *IGC Code*** as well as requirements deemed appropriate by the Society. Records of the performance of the components and equipment essential to verify the design parameters, are to be maintained and be available to the Society.
- 6** Heating arrangements, if fitted in accordance with **4.19.1-5** and **4.19.1-6**, are to be tested for required heat output and heat distribution.
- 7** The cargo containment system is to be inspected for cold spots during, or immediately following, the first loaded voyage. Inspection of the integrity of thermal insulation surfaces that cannot be visually checked is to be carried out in accordance with recognized standards.

## Chapter 13 INSTRUMENTATION AND AUTOMATION SYSTEMS

### 13.3 Overflow Control (*IGC Code*13.3)

Title of Paragraph 13.3.6 has been amended as follows.

#### 13.3.6 ~~Level Alarms with Electrical Circuits\*~~Functional Tests for Level Alarms

#### EFFECTIVE DATE AND APPLICATION

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

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**Part N**

**Ships Carrying Liquefied Gases in Bulk**

**GUIDANCE**

**2017 AMENDMENT NO.2**

Notice No.96      25 December 2017

Resolved by Technical Committee on 26 July 2017

Notice No.96 25 December 2017

## 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 N SHIPS CARRYING LIQUEFIED GASES IN BULK**

#### **Amendment 2-1**

### **N13 INSTRUMENTATION AND AUTOMATION SYSTEMS**

#### **N13.3 Overflow Control**

Paragraph N13.3.6 has been deleted.

#### ~~**N13.3.6 Level Alarms with Electrical Circuits**~~

~~For the purpose of the requirements in the requirements in **13.3.6, Part N of the Rules**, it is to be capable of verifying by test (for example, by buzzer test) that all alarm circuits are in normal working condition when verification through actual operation is impossible. However, a special attention is to be paid to those that cannot be always monitored the breaking down of the circuit.~~

#### **EFFECTIVE DATE AND APPLICATION (Amendment 2-1)**

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

## **N13 INSTRUMENTATION AND AUTOMATION SYSTEMS**

### **N13.3 Overflow Control**

Paragraph N13.3.5 has been added as follows.

#### **N13.3.5 Installation and Function Test**

The wording “each dry-docking” specified in **13.3.5, Part N of the Rules** means docking surveys carried out at the times specified in **1.1.3-1(4)(a), Part B of the Rules.**

#### **EFFECTIVE DATE AND APPLICATION (Amendment 2-2)**

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

## N4 CARGO CONTAINMENT

### N4.13 Functional Loads

#### N4.13.4 Thermally Induced Loads

Sub-paragraph -1 has been amended as follows.

**1** For the purpose of the requirements in **4.13.4-1, Part N of the Rules**, arrangements for cooling down are to be provided so as not to cause excessive stress on the tank structures. ~~Further, where cargo with temperature lower than 0°C but not lower than 55°C is carried, such installations for cooling down are also to be provided.~~

#### N4.22 Type B Independent Tanks

Paragraph N4.22.3 has been deleted.

#### ~~N4.22.3 Ultimate Design Condition~~

~~For the purpose of the requirements in **4.22.3-1, Part N of the Rules**, the allowable stress for the primary stress of the prismatic Type B independent tanks is to be in accordance with the requirements in **4.22.3-1(1), Part N of the Rules**.~~

#### N4.24 Membrane Tanks

##### N4.24.9 Testing

Sub-paragraph -2 has been amended as follows.

**2** The leakage test for the “all hold structure supporting the membrane” referred to in the requirements in **4.24.9-2, Part N of the Rules** is to be in accordance with the requirements ~~testing procedure applicable to general hull structures as specified in **2.1.5(1), Part B of the Rules**.~~

## N6 MATERIALS OF CONSTRUCTION AND QUALITY CONTROL

### N6.4 Requirements for Metallic Materials

#### N6.4.1 General Requirements for Metallic Materials

Sub-paragraph -4(1) has been amended as follows.

**4** For the purpose of the requirements in **Table N6.4, Part N of the Rules**, the following requirements **(1)** through **(5)** are to be complied with:

- (1) The use of ~~vertically~~ longitudinally or spirally welded pipes given in Note 1 of the Table is to be in accordance with the requirements in **Chapter 4 and 8, Part K** ~~the preceding -1(1)~~.
- (2) The requirements for forgings and castings given in Note 2 of the Table are to be in accordance with the relevant requirements in the **Part K**, if specified.
- (3) For the design temperature given in Note 3 of the Table lower than -165°C, the provision in the preceding **-3(1)** are to apply.
- (4) The chemical composition limit given in Note 5 of the Table is to be in accordance with the requirements in the preceding **-3(3)**.
- (5) The omission of the impact test given in Note 8 of this Table are to be in accordance with the requirements in the preceding **-3(4)**.

#### EFFECTIVE DATE AND APPLICATION (Amendment 2-3)

1. The effective date of the amendments is 25 June 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.