RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

Part CS Hull Construction and Equipment of Small Ships

Rules for the Survey and Construction of Steel Ships
Part CS 2021 AMENDMENT NO.1
Guidance for the Survey and Construction of Steel Ships
Part CS 2021 AMENDMENT NO.1

Rule No.29 / Notice No.28 30 June 2021
Resolved by Technical Committee on 27 January 2021

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

RULES

Part CS Hull Construction and Equipment of Small Ships

2021 AMENDMENT NO.1

Rule No.29 30 June 2021

Resolved by Technical Committee on 27 January 2021

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

Rule No.29 30 June 2021
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 CS HULL CONSTRUCTION AND EQUIPMENT OF SMALL SHIPS

Amendment 1-1

Chapter 1 GENERAL

1.3 Materials, Scantlings, Welding and End Connections

1.3.1 Materials

Sub-paragraph -8 has been added as follows.

8 Use of the aluminium alloys specified in **Chapter 8, Part K of the Rules** is subject to the following.

(1) The proof stress (N/mm^2) used in this part is not to be less than the minimum ultimate proof stress specified for the base metal except when specified in **Table CS1.3**.

(2) The section modulus of the transverse section of the hull is not to be less than the value obtained by multiplying the following coefficient (K) with the value specified in **Chapter 15**.

$$K = \frac{235}{\sigma_{min.}}$$

where

$\sigma_{min.}$: determined as follows

for 5000 series aluminium alloys of *O* or *H*111: the minimum ultimate proof stress specified for the base metal (N/mm^2)

for 5000 series aluminium alloys other than *O* or *H*111 and 6000 series aluminium alloys: the proof stress specified in **Table CS1.3** (N/mm^2)

(3) With the exception of the requirements in **(2)** above, the construction and scantlings are to be at the discretion of the Society.

Table CS1.3 has been renumbered to Table CS1.4, and Table CS1.3 has been added as follows.

Table CS1.3 Grades and Proof Stresses of Aluminium Alloys for Hull Structures

Grade and symbol of aluminium alloy		Temper condition	Thickness *t* (*mm*)	Proof stress (N/mm^2)
5000 series	5083*P*	*H*116, *H*321	*t*≤50	125 min.
	5383*P*	*H*116, *H*321	*t*≤50	145 min.
	5059*P*	*H*116, *H*321	*t*≤50	160 min.
	5086*P*	*H*112, *H*116	*t*≤50	95 min.
	5456*P*	*H*116, *H*321	*t*≤6.3	130 min.
			6.3<*t*≤50	125 min.
	5083*S*	*H*111	*t*≤50	110 min.
	5383*S*	*H*112	*t*≤50	145 min.
	5086*S*	*H*111	*t*≤50	95 min.
6000 series	6005*AS*	*T*5, *T*6	*t*≤50	115 min.
	6061*P*	*T*6	*t*≤6.5	115 min.
	6061*S*	*T*6	*t*≤50	115 min.
	6082*S*	*T*5, *T*6	*t*≤50	115 min.

1.3.5 Brackets

Sub-paragraph -1 has been amended as follows.

1 The size of brackets is to be determined by **Table CS1.~~3~~4** according to the length of longer arm.

Table CS1.~~3~~4 Brackets

（Table is omitted.）

EFFECTIVE DATE AND APPLICATION (Amendment 1-1)

1. The effective date of the amendments is 30 June 2021.

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

Amendment 1-2

Chapter 13 WATERTIGHT BULKHEADS

13.3 Watertight Doors

13.3.10 Hinged Doors and Rolling Doors

Sub-paragraph -2 has been amended as follows.

2 Hinged and rolling watertight doors except those that are to be permanently closed at sea, are to be of ~~quick acting or~~ single action type which is capable of being closed and secured from both sides of the doors.

EFFECTIVE DATE AND APPLICATION (Amendment 1-2)

1. The effective date of the amendments is 1 July 2021.

2. Notwithstanding the amendments to the Rules, the current requirements apply to ships other than ships that fall under the following:

(1) for which the date of contract for construction* is placed on or after 1 July 2021; or

(2) in the absence of a contract for construction, the keels of which are laid or which are at *a similar stage of construction* on or after 1 January 2022; or

(Note) The term "*a similar stage of construction*" means the stage at which the construction identifiable with a specific ship begins and the assembly of that ship has commenced comprising at least 50 *tonnes* or 1% of the estimated mass of all structural material, whichever is the less.

(3) the delivery of which is on or after 1 July 2024.

* "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 CS Hull Construction and Equipment of Small Ships

2021 AMENDMENT NO.1

Notice No.28 30 June 2021
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Notice No.28 30 June 2021
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 CS HULL CONSTRUCTION AND EQUIPMENT OF SMALL SHIPS

Amendment 1-1

CS1 GENERAL

CS1.1 Application and Equivalency

Paragraph CS1.1.1 has been amended as follows.

CS1.1.1 Application

1 Even where a ship is intended to be classified for restricted services, the provisions in **27.2.4**, **27.3.3** and **27.3.4, Part CS** of the Rules cannot be applied as far as the "International Convention on Load Lines, 1966" (as may be amended) is to apply to the ship.

2 In cases where a ship is engaged in international voyages and is not subject to the "International Convention on Load Lines, 1966" (as may be amended), the Society may require the ship comply with provisions equivalent to those of the "International Convention on Load Lines, 1966" (as may be amended).

~~**2**~~**3** With respect to the provisions of **1.1.1-5, Part CS** of the Rules, bulk carriers as defined in **31A.1.2-1(2), Part C** of the Rules, of 500 *gross tonnage* and above, are to apply the provisions of **31A.6.1-3** and **34.2.1-3, Part C** of the Rules and **C25.2.1-2**. In this case, for the application to ships of less than 65 *m* in length L_f, loading manuals as specified in **C31A.1.2** are to read as stability information booklets as required in **1.2.1-1, Part U** of the Rules. The provisions of **34.2.1-3, Part C** of the Rules need not apply to such ships. Notwithstanding the above, such ships not engaged on international voyages need not to apply the provisions of **C25.2.1-2**.

EFFECTIVE DATE AND APPLICATION (Amendment 1-1)

1. The effective date of the amendments is 30 June 2021.

Amendment 1-2

CS13 WATERTIGHT BULKHEADS

Section CS13.3 has been added as follows.

CS13.3 Watertight Doors

CS13.3.6 Alarms

All watertight doors (including sliding doors) operated by hydraulic door actuators, irrespective of whether their control positions are a central hydraulic unit or local operating position, are to be provided with either a low fluid level alarm, a low gas pressure alarm or some other means as applicable for monitoring the loss of stored energy in the hydraulic accumulators. Such alarms are to be both audible and visible and located on the bridge.

CS13.3.7 Power Sources

Failure of the normal power supply of alarms required to be installed by **13.3.6**, **Part CS of the Rules** and by **CS13.3.6** is to be indicated by an audible and visual alarm. This alarm is to be located on the bridge.

EFFECTIVE DATE AND APPLICATION (Amendment 1-2)

1. The effective date of the amendments is 30 June 2021.

2. Notwithstanding the amendments to the Guidance, the current requirements apply to ships the keels of which were laid or which were at *a similar stage of construction* before 9 June 2017.

(Note) The term "*a similar stage of construction*" means the stage at which the construction identifiable with a specific ship begins and the assembly of that ship has commenced comprising at least 50 *tonnes* or 1% of the estimated mass of all structural material, whichever is the less.