

RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

Part D

Machinery Installations

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

Part D

Machinery Installations

RULES

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.

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 D MACHINERY INSTALLATIONS

Amendment 1-1

Chapter 13 PIPING SYSTEMS

13.6 Air Pipes

13.6.1 General

Sub-paragraph -1 has been amended as follows.

1 All tanks ~~and~~, cofferdams and similar spaces are to be provided with air pipes having sufficient ~~cross~~ sectional areas to permit easy venting from any part of the tank ~~and~~, cofferdam and similar spaces.

13.6.3 Size of Air Pipes*

Sub-paragraph (3) has been amended as follows.

Sizes of air pipes are to be as follows:

- (1) The total sectional area of air pipes to tanks, which hold liquids and are filled by pumps, is not to be less than 1.25 *times* the total sectional area of the filling pipes. In cases where the tank is provided with an overflow pipe specified in **13.7**, the total sectional area may include that of air pipes to tanks to which overflow pipes are connected. The internal diameter of the air pipes is not to be less than 50 *mm*.
- (2) Provisions are to be made for relieving vacuum when the tanks are being pumped out.
- (3) The internal diameter of air pipes to cofferdams ~~or~~, tanks or similar spaces which form part of ship's structure is not to be less than 50 *mm*.

13.8 Sounding Pipes

13.8.1 General

Sub-paragraph -1 has been amended as follows.

1 All tanks, cofferdams and ~~areas which are difficult to access~~ similar spaces are to be provided with a sounding pipe or a liquid level indicator. These devices are to be capable of checking the liquid levels in such spaces at readily accessible positions at all times.

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.
3. Notwithstanding the provision of preceding 2., the amendments to the Rules may apply to ships for which the date of contract for construction is before the effective date upon request by the owner.

Chapter 1 GENERAL

1.4 Tests

1.4.1 Shop Tests

Sub-paragraph -1 has been amended as follows.

1 Before being installed on board, all equipment and components constituting a machinery installation (excluding auxiliary machinery for specific use etc.) are to be tested at facilities (hereinafter referred to as “Shop Tests”) that have the proper equipment necessary to conduct such tests in accordance with the relevant requirements of this Part. To implement the tests, in lieu of traditional ordinary surveys where the Surveyor is in attendance, the Society may approve other survey methods which it considers to be appropriate.

Chapter 22 EXHAUST GAS CLEANING SYSTEMS AND ASSOCIATED EQUIPMENT

22.4 Requirements for Construction and Arrangements, etc.

22.4.1 Construction and Arrangement

Sub-paragraphs -14 and -15 have been added as follows.

(-1 to -13 are omitted.)

14 Piping systems for washwater used in scrubber chambers are to be constructed of corrosion resistance materials or are to be otherwise appropriately protected, taking into account the corrosive effects of the water.

15 For distance pieces fitted onto the piping systems specified in -14 above, where materials other than hull construction materials are used and where two or more kinds of different metallic materials are arranged adjacent to each other, appropriate measures are to be taken to prevent bimetallic corrosion.

EFFECTIVE DATE AND APPLICATION (Amendment 1-2)

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

Chapter 16 WINDLASSES AND MOORING WINCHES

16.3 Mooring Winches

16.3.2 Tests

Sub-paragraph (2) has been amended as follows.

All mooring winches are to be subjected to the following tests after their installation on board.

- (1) Confirmation tests for abnormalities with all mooring winches being operated for 15 *minutes* in each direction at maximum speed under no loads.
- (2) Functioning tests for confirming the proper operation of drum brakes ~~under the operating conditions specified in (1).~~
- (3) Notwithstanding the requirements of (1) and (2) in -2 above, in cases where there are multiple units of the same type, the period of testing and number of units to be tested may be reduced.

EFFECTIVE DATE AND APPLICATION (Amendment 1-3)

1. The effective date of the amendments is 1 July 2021.
2. Notwithstanding the amendments to the Rules, the current requirements apply to mooring winches used on 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 Rules may apply to mooring winches used on ships for which the date of contract for construction is before the effective date upon request of the applicant.

GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

Part D

Machinery Installations

GUIDANCE

2021 AMENDMENT NO.1

Notice No.28 30 June 2021

Resolved by Technical Committee on 27 January 2021

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 D MACHINERY INSTALLATIONS

Amendment 1-1

D13 PIPING SYSTEMS

D13.5 Bilge and Ballast Piping

D13.5.1 General

Sub-paragraph -1 has been amended as follows.

1 Alternatives to or the Omission of bilge suction piping

~~For small compartments such as echo sounder recesses, etc., the provision of bilge suction pipes may be omitted with Society approval.~~ With respect to bilge piping required by 13.5.1-1, Part D of the Rules, the Society may accept the other measures described in the following (1) and (2).

- (1) For spaces where it is difficult to install bilge piping, other drainage arrangements such as drain plugs may be allowed to be installed as an alternative to the bilge piping.
- (2) For small spaces where there is no risk of water accumulation, the omission of bilge piping may be allowed.

D13.6 Air Pipes

Paragraph D13.6.1 has been added as follows.

D13.6.1 General

1 The word “cofferdams” in 13.6.1-1, Part D of the Rules means spaces between two bulkheads or decks primarily designed as a safeguard against leakage of oil from one compartment to another.

2 The Society may accept the omission of the air pipes required by 13.6.1-1, Part D of the Rules for small spaces which have no permanent means of suction or discharge of bilge by pump (i.e. the small spaces specified in D13.5.1-1(2)).

D13.8 Sounding Pipes

Paragraph D13.8.1 has been added as follows.

D13.8.1 General

1 The word “cofferdams” in 13.8.1-1, Part D of the Rules means the spaces specified in D13.6.1-1.

2 With respect to the sounding pipes and liquid level indicators required by 13.8.1-1, Part D of the Rules, the Society may accept the other measures described in the following (1) and (2).

- (1) For small spaces (i.e. the spaces specified in D13.5.1-1(2)), the omission of sounding pipes

and liquid level indicators may be allowed.

(2) For small spaces which are not covered by D13.5.1-1(2) that comply with the following (a) and (b), the omission of sounding pipes and liquid level indicators may be allowed.

(a) The spaces are readily accessible.

(b) Other means for checking for presence of liquid inside the space are provided.

EFFECTIVE DATE AND APPLICATION (Amendment 1-1)

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

D1 GENERAL

D1.4 Tests

Paragraph D1.4.1 has been added as follows.

D1.4.1 Shop Tests

The wording “the survey methods which it considered to be appropriate” in 1.4.1-1, Part D in this Rules means the survey methods which the Society considers to be able to obtain information equivalent to that obtained through traditional ordinary surveys where the Surveyor is in attendance, notwithstanding any of the requirements in this Part.

EFFECTIVE DATE AND APPLICATION (Amendment 1-2)

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

D11 WELDING FOR MACHINERY INSTALLATIONS

D11.4 Welding of Boilers

D11.4.5 Non-destructive Testing for Longitudinal and Circumferential Joints

Sub-paragraph -2(2) has been amended as follows.

2 The wording “other appropriate non-destructive testing” referred to in **11.4.5-8, Part D of the Rules** means the following (1) or (2):

- (1) The radiographic testing to be carried out in accordance with *ISO* 17636. The criteria and others that are not specified in the *ISO* are to be in accordance with **11.4.5, Part D of the Rules** and **D11.4.5-1**. In cases of the radiographic testing using no radiograph film, the testing plan is to be submitted to and approved by the Society, prior to the testing.
- (2) The ultrasonic testing to be carried out in accordance with **11.4.6, Part D of the Rules** and **D11.4.6-2**. In this case, ~~1.1.2-2 of Annex M1.4.2-3(1) “Guidance for Non-destructive Inspections on Internal Imperfections of the Welded Joints of Hull Constructions”~~, **8.1.2-5, Part M of the Rules** is to be applied.

EFFECTIVE DATE AND APPLICATION (Amendment 1-3)

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