

RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

Part B

Class Surveys

Rules for the Survey and Construction of Steel Ships

Part B

2021 AMENDMENT NO.2

Guidance for the Survey and Construction of Steel Ships

Part B

2021 AMENDMENT NO.2

Rule No.61 / Notice No.58 27 December 2021

Resolved by Technical Committee on 28 July 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

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Class Surveys

RULES

2021 AMENDMENT NO.2

Rule No.61 27 December 2021

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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 B CLASS SURVEYS

Chapter 3 ANNUAL SURVEYS

3.2 Annual Surveys for Hull, Equipment, Fire Extinction and Fittings

3.2.2 General Examination*

At Annual Surveys, examinations of hull, equipment, fire-extinction and fittings listed in **Table B3.2** are to be carried out.

Table B3.2 has been amended as follows.

Table B3.2 General Examination

Items	Examination
1 Shell plating 2 Weather deck plating	<ul style="list-style-type: none"> • Confirmation that areas visible above the load waterline are in good condition.
3 Openings on deck and outside of the hull	<ul style="list-style-type: none"> • Confirmation that the means of securing the weathertightness of cargo hatchways, other hatchways and other openings on the freeboard and superstructure decks are in good condition. • Confirmation that the watertight integrity of the closures to any openings in the ship’s side below the freeboard deck is in good condition. • Confirmation that the side scuttles and deadlights are in good condition.
4 Casings of engine room	<ul style="list-style-type: none"> • Confirmation that the following are in good condition: exposed engine casings and their openings; and skylights of the engine room and boiler room and their closing appliances.
5 Ventilators	<ul style="list-style-type: none"> • Confirmation that the ventilators including their coamings and closing appliances are in good condition.
6 Air pipes	<ul style="list-style-type: none"> • Confirmation that the air pipes including their coamings and closing appliances are in good condition. • For closing appliances, open up examinations may be required depending upon their condition.
7 Watertight bulkhead, superstructure end bulkhead and deckhouses	<ul style="list-style-type: none"> • Confirmation that watertight doors, penetrations and stop valves on watertight bulkheads, and closing appliances of openings in deckhouses or companions protecting hatchways giving access to spaces below freeboard deck are in good condition. • Confirmation that the superstructure end bulkheads and the openings therein are in good condition.
8 Load line marks	<ul style="list-style-type: none"> • Confirmation that deck line and load line markings are appropriate.
9 Bulwark	<ul style="list-style-type: none"> • Confirmation that bulwarks and the shutters of its freeing ports; and hinges and guard rails are in good condition.
10 Means of access	<ul style="list-style-type: none"> • Confirmation that the guardrails, gangways, walkways and other means provided for the protection of the crew and means for safe passage of crew are in good condition.
11 Scuppers, inlets, other discharge pipes and valves	<ul style="list-style-type: none"> • Confirmation that the scuppers, inlets and discharges including their valves are in good condition. • Confirmation that the garbage chutes including their valves are in good condition.

Table B3.2 General Examination (Continued)

Items	Examination
12 Securing arrangement for on-deck timber	<ul style="list-style-type: none"> Confirmation that securing arrangement for on-deck timber including eye plates, lashing wires, etc. is in good condition regardless of timber freeboard markings.
13 Anchoring and mooring arrangement	<ul style="list-style-type: none"> Confirmation that the anchoring and mooring arrangements including their accessories are in good condition as far as can be seen. Confirmation that the means provided to minimize water ingress through the spurling pipes and chain lockers are in good condition.
14 Fire extinguishing arrangement	<ul style="list-style-type: none"> Confirmation that the fire extinguishing arrangement is in good condition and the fixed fire extinguishing system, semi-portable and portable fire extinguishers, firefighters' outfits, emergency fire pumps and the international shore connection are maintained in good order.
15 Fire protection arrangement and means of escape	<ul style="list-style-type: none"> Confirmation that no alteration has been made to these arrangements since the last survey. (This includes the confirmation that emergency escape breathing devices (EEBDs) are complete and in good condition.)
16 Sails and their accessories	<ul style="list-style-type: none"> Confirmation that sails and their accessories are in good condition. They are to be in place and ready for unfolding at the time of examination.
17 Towing and mooring fittings	<ul style="list-style-type: none"> Confirmation that the marks of Safe Towing Load (<i>TOW</i>) on towing fittings and Safe Working Load (<i>SWL</i>) on mooring fittings as specified in 27.2.2 or 27.2.3, Part C or 23.2.2 or 23.2.3, Part CS are clearly visible and these fittings are in good condition.
18 Loading computer	<ul style="list-style-type: none"> Confirmation that the computer of ships required to have one in accordance with the provisions of 34.1.1 and 34.3.2, Part C is maintained in good order.
19 Ship Identification Number	<ul style="list-style-type: none"> Confirmation that the markings of the ship's identification number for ships required to be so marked are in good condition.
20 Means of embarkation and disembarkation	<ul style="list-style-type: none"> Confirmation that the means of embarkation and disembarkation are in good condition.
21 Bow doors, inner doors, side shell doors and stern doors	<ul style="list-style-type: none"> Confirmation that the bow doors, inner doors, side shell doors and stern doors are in good condition.
22 Hearing protectors	<ul style="list-style-type: none"> Confirmation that hearing protectors are in good condition
23 Portable gas detecting instruments	<ul style="list-style-type: none"> Confirmation that portable gas detecting instruments are in good condition. (This includes the confirmation of calibration records.)
24 Helicopter facilities	<ul style="list-style-type: none"> Confirmation that the helicopter facilities, such as helidecks, means of escape, fire-fighting appliances, helicopter refuelling and hanger facilities, are in good condition, and that operations manual is provided.
25 Special arrangements for carrying dangerous goods	<ul style="list-style-type: none"> Confirmation, when appropriate, that the special arrangements for carrying dangerous goods are in good condition. (This includes the check of the electrical equipment and wiring, the ventilation, the provision of protective clothing and portable appliances.)
Additional Requirement for Tankers, Ships Carrying Dangerous Chemicals in bulk and Ships Carrying Liquefied Gases in bulk	
26 Piping	<ul style="list-style-type: none"> Confirmation that cargo oil, fuel oil, ballast, vent pipes including vent masts and headers, inert gas pipes and all other piping in cargo pump room, cargo compressor rooms and on weather decks are in good condition. Confirmation that the earthing between hull structures and cargo piping systems (cargo oil pipes, vent pipes, tank washing pipes, etc.) is in good condition.
27 Cargo tank	<ul style="list-style-type: none"> Confirmation that the cargo tank openings, including gaskets, covers, coamings and screens are in good condition. Confirmation that the cargo tank pressure/vacuum valves and devices to prevent the passage of flame are in good condition. Confirmation that the cargo tank venting, cargo tank purging and gas-freeing and other ventilation systems are in good condition. Confirmation that the earthing between hull structures and the cargo tank is in good condition.
28 Wire gauze to prevent the passage of flame	<ul style="list-style-type: none"> Confirmation, as far as practicable, that the wire gauze to prevent the passage of flame on vents to all bunker, oily-ballast and oily-slop tanks and void spaces are in good condition.
29 Safe access to the bow	<ul style="list-style-type: none"> Confirmation that the means of safe access to the bow is in good condition.

Table B3.2 General Examination (Continued)

Items	Examination
30 Emergency towing arrangements	<ul style="list-style-type: none"> Confirmation that emergency towing arrangements for ships of not less than 20,000 tonnes deadweight are in good condition.
Additional Requirement for Bulk Carriers over 10 years of age	
31 Piping in the cargo holds	<ul style="list-style-type: none"> Confirmation that all piping and penetrations in cargo holds, including overboard piping, are in good condition.
Additional Requirement for General Dry Cargo Ships of not less than 500 gross tonnage and over 15 years of age	
32 Piping in the cargo holds	<ul style="list-style-type: none"> Confirmation that all piping and penetrations in cargo holds, including overboard piping, are in good condition.
Additional Requirement for Container Carriers	
33 <u>Block-to-block butt joints of strength decks and hatch side coamings (including top plates and attached longitudinal stiffeners)</u>	<ul style="list-style-type: none"> <u>In the case of container carriers using extremely thick steel plates which comply with 32.13, Part C of the Rules, it is to be confirmed, as far as practicable, that block-to-block butt joints of strength decks and hatch side coamings (including top plates and attached longitudinal stiffeners) are in good condition.</u>

Note:

Examination of suspect areas identified at previous surveys is to be carried out.

Chapter 5 SPECIAL SURVEYS

5.2 Special Surveys for Hull, Equipment, Fire Extinction and Fittings

5.2.2 General Examination*

Sub-paragraph -5 has been added as follows.

5 At Special Surveys for container carriers using extremely thick steel plates which comply with 32.13, Part C of the Rules, in addition to -1, the block-to-block butt joints of strength decks, hatch side coamings (including top plates and attached longitudinal stiffeners), sheer strakes, and the topmost strakes of inner hulls and bulkheads (only one strake adjacent to strength decks) are to be examined from both sides as far as practicable. Furthermore, additional non-destructive inspections may be required based upon the results of such examination when deemed necessary by the attending surveyor.

EFFECTIVE DATE AND APPLICATION

1. The effective date of the amendments is 27 December 2021.

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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 B CLASS SURVEYS

B8 PROPELLER SHAFT AND STERN TUBE SHAFT SURVEYS

B8.1 Propeller Shaft and Stern Tube Shaft Surveys

B8.1.2 Partial Surveys

Sub-paragraph -1(2) has been amended as follows.

1 The “reference standards deemed appropriate by the Society” referred to in **8.1.2-1(2)(b)i)**, **Part B of the Rules** means the reference standards specified in the following **(1)** and **(2)**:

(1) (Omitted)

(2) The following (a) and (b) upper limits for IR Oxidation and separated water; however, in the case of environmentally acceptable lubricants (EAL), regardless of the following (a), observation of any trends (such as TAN (total acid number), viscosity and change in colour etc.) based on periodical oil analysis ~~can~~ may be made. In such cases, observations of TAN trends are to be made based on sequential analysis in conjunction with limits for continued use in service defined by oil makers.

(a) IR oxidation @ $5.85\mu\text{m}$: 10 (Abs.unit/cm)

(b) Separated water: 1.0 %

Table B8.1.3-1 has been amended as follows.

Table B8.1.3-1 Approval Procedure of Preventive Maintenance System for Oil Lubricated Propeller Shafts

Item	Procedures
1 General	(Omitted)
2 Application	(Omitted)
3 Approval and Notation	(Omitted)
4 Approval Conditions	(Omitted)
5 After Approval	<p>(-1 to -3 are omitted.)</p> <p>-4 The ship is, no later than the survey due date specified in 1.1.3-1(6)(a)i, Part B of the Rules^{1, 2}, to be subject to a Partial Survey in accordance with (a) to (i) of 8.1.2-1(1), Part B of the Rules^{3, 4} after the examinations specified in the following (1) to (4) are carried out and the shaft condition is confirmed to be satisfactory. However, for propeller shafts with keyless connections, the maximum interval of two consecutive surveys according to the requirements applied to Partial Surveys, including survey items 2 and 9 specified in Table B8.1, Part B of the Rules or Ordinary Surveys (specified in 8.1.1, Part B of the Rules) is not to exceed 15 years^{5, 6}. In all cases where the results of the examinations specified in the following (1) to (4) or the Partial Survey are not satisfactory, an Ordinary Survey specified in 8.1.1, Part B of the Rules is to be carried out.</p> <p>(1) Review of service records, including those specified in (2) and (3) of 4-3, is to be carried out.</p> <p>(2) Review of test records of the lubricating oil analysis is to be carried out to confirm that the reference standards specified in 4-3 are complied with. <u>In the case of environmentally acceptable lubricants (EAL), however, observations of trends (such as TAN (total acid number), viscosity and colour change, etc.) based on periodical oil analysis may be made instead regardless of the criteria for the parameters in 4-3. In such cases, observations of TAN trends are to be made based on sequential analysis in conjunction with the limits for continued use in service defined by oil makers.</u></p> <p>(3) An oil sample examination is to be carried out.</p> <p>(4) Verification of no reported repairs by grinding or welding of shafts and/or propellers is to be carried out.</p>
6 Cancellation of Approval	(Omitted)

(Notes) is omitted.)

B9 PLANNED MACHINERY SURVEYS

B9.1 Planned Machinery Surveys

B9.1.4 Condition Based Maintenance Scheme (CBM)

Sub-paragraph -5(2) has been amended as follows.

5 Approval of CBM

Conditions for approval of CBM are as follows:

((1) is omitted.)

(2) Condition monitoring system

The condition monitoring system is to satisfy the following requirements specified in **(a)** to **(h)**. In cases where this system is modified, that modification is to be approved by the Society.

((a) is omitted.)

(b) The hardware and software of the computer is to comply with **B9.1.3-4(5)(a)** to **(e)** and **Annex ~~D18.1.1 "COMPUTER BASED SYSTEMS"~~, Part D of the Guidance Rules.**

((c) to (h) are omitted.)

((3) to (7) are omitted.)

Annex B1.1.3-7 ALTERNATIVE PROPELLER SHAFT AND STERN TUBE SHAFT SURVEY METHODS

Chapter 2 SHAFT SURVEYS

2.2 Surveys of Oil Lubricated Shafts

2.2.1 Surveys

Sub-paragraph -2 has been amended as follows.

2 Before carrying out surveys in accordance with **Table 2.2** or **2.3**, the examinations specified in the following **(1)** to **(3)** are to be carried out. When the results of the examinations specified in the following **(1)** to **(3)** or the results of surveys in accordance with the following **Table 2.2** or **2.3** are not satisfactory, a survey in accordance with **Table 2.1** is to be carried out.

- (1)** Review of service records, including confirmation of bearing temperature records, is to be carried out.
- (2)** Review of test records of lubricating oil analysis is to be carried out to confirm that the standards specified in **B8.1.2-1, Part B of the Guidance** are complied with.
- (3)** Oil sample examinations are to be carried out.
- ~~**(4)**~~ Verification of no reported repairs by grinding or welding of shafts and/or propellers is to be carried out.

EFFECTIVE DATE AND APPLICATION

- 1.** The effective date of the amendments is 1 January 2022.