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

**RULES**

**Part B**

**Class Surveys**

**2022            AMENDMENT NO.2**

Rule No.89            27 December 2022

Resolved by Technical Committee on 27 July 2022

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” has been partly amended as follows:

## **Part B CLASS SURVEYS**

### **Amendment 2-1**

## **Chapter 1 GENERAL**

### **1.1 Surveys**

#### **1.1.3 Intervals of Class Maintenance Surveys\***

Sub-paragraph -3 has been amended as follows.

**3** The classed ships are to be subject to Occasional Surveys when they fall under one of the conditions of (1) through (6) below. ~~To implement the survey, in lieu of the traditional ordinary surveys where a surveyor is in attendance, the Society may approve survey methods which it considers to be appropriate.~~ Periodical Surveys may substitute for the Occasional Surveys where the survey items of the Occasional Surveys are inspected as a part of the Periodical Surveys. ((1) to (6) are omitted.)

### **1.3 Definitions**

#### **1.3.1 Terms\***

Sub-paragraph (26) has been amended as follows.

(26) “Remote inspection techniques” is a means of survey that enables examination of any part of the structure using such as unmanned aerial vehicles or drones without the need for direct physical access of the surveyor on site.

Sub-paragraph (29) has been added as follows.

(29) “Remote survey” is a process for verifying that ships and its equipment are in compliance with the Rules of the Society where the verification is undertaken, or partially undertaken, without attendance on site by a Surveyor.

### **1.5 Others**

Paragraph 1.5.3 has been added as follows.

#### **1.5.3 Class Survey Carried by Means of Remote Survey**

Although the survey method for class maintenance survey is generally attendance on site by a Surveyor, the Society may approve survey methods different from the traditional ordinary survey

with attendance by a Surveyor, provided that survey is carried out in accordance with the requirements specified in **Annex 1.5.3 “CLASS MAINTAINANCE SURVEY BY MEANS OF REMOTE SURVEY”**. However, in the case of matters stipulated in international conventions or instructions from Administrations, this may only be done with Administration acceptance.

Annex 1.5.3 has been added as follows

### **Annex 1.5.3 CLASS MAINTAINANCE SURVEY BY MEANS OF REMOTE SURVEY**

#### **An 1 General**

##### **An 1.1 General**

**1** This annex specifies principles and minimum requirements for carrying out remote surveys.

**2** Remote survey will only be appropriate provided the level of assurance is not compromised, and the survey is carried out with the same effectiveness as and is equivalent to, a survey carried out with attendance on board by a Surveyor.

**3** In addition to the requirements of this annex, special attention is to be paid in cases when it is necessary to comply with the domestic laws and regulations of coastal State. In particular, sufficient confirmation is to be taken in advance for selecting the method of communication and communication infrastructure.

##### **An 1.2 Application**

**1** These requirements apply to all vessels, self-propelled or not.

**2** Notwithstanding -1, for survey for mobile offshore drilling units and special purpose barges in **Chapter 12** and survey for floating offshore facilities for crude oil/petroleum gas production, storage and offloading in **Chapter 14**, the Society may permit the application of remote survey methods different from those specified in this Annex where deemed appropriate by the Society.

##### **An 1.3 Definitions**

###### **An 1.3.1 Remote Survey**

A “Remote Survey” is a process of verifying that a ship and its equipment are in compliance with the rules of the Society where the verification is undertaken, or partially undertaken, without attendance on board by a Surveyor.

Notes:

- (1)** “Attendance on board by a Surveyor” means physical attendance on board the ship by a Surveyor.
- (2)** Remote classification activities not requiring a survey, such as some administrative tasks, are not to be considered as remote surveys.
- (3)** An administrative task is a task where a survey decision is not being made, for example reissue of a certificate or record following a correction, or an update to the ship’s records held by the Society or a document review.

###### **An 1.3.2 Information and Communication Technology (ICT)**

Information and Communication Technology (hereinafter referred to as “ICT”) are the technologies used in the scope of remote surveys for gathering, storing, retrieving, processing, analysing, and transmitting information which includes both software and hardware.

#### **An 2 Requirements for Equivalency**

##### **An 2.1 General**

**1** The requirements for equivalency of a remote survey to a survey attended on board by a

Surveyor are to include:

- (1) Eligibility of the remote survey
- (2) Qualification of Surveyors
- (3) Planning of the remote survey
- (4) Performance of the remote survey
- (5) Assessment of the remote survey
- (6) Reporting

**2** Equivalency is obtained when, with the use of available ICT, a Surveyor can perform a survey remotely being able to:

- (1) Obtain the supporting and technical evidence required according to the applicable rules.
- (2) Verify applicable survey items and relevant tests.
- (3) The results of the remote survey provide the same level of assurance obtained with attendance on board by a Surveyor.

### **An 2.2 Eligibility of the Remote Survey**

**1** Eligibility of the remote survey is to be decided based on type and scope of the requested survey, in accordance with **An 3.1** and, if applicable, Administration acceptance and possible instructions, when the class survey is also related to a statutory item, and the Society is carrying out the statutory survey on behalf of the flag State Administration.

**2** A remote survey is deemed eligible when it provides the same level of assurance, according to the requirements for equivalency, as if it was conducted with attendance on board by a Surveyor.

**3** Remote surveys are generally to be carried out with internet connection allowing a live streaming visual examination, although, at the discretion of the Surveyor, a combination of remote survey methods (see **An 2.4**) may be used. For simple/limited verifications, other types of ICT may be accepted by the Surveyor.

### **An 2.3 Planning of the Remote Survey**

**1** Planning of the remote survey is required to ensure that the remote survey is carried out in accordance with the applicable requirements. The content of the planning is to be based on the scope of the remote survey.

**2** To ensure that the Surveyor can properly plan the remote survey and communicate with personnel/crew, so that the survey is carried out according to the applicable rules, adequate means are to be available enabling the Surveyor and allowing the Society to:

- (1) properly interact with personnel/crew involved in the remote survey, before and during the survey process,
- (2) agree on ICT means to be used
- (3) verify that personnel/crew involved in the remote survey are suitably skilled to use the electronic devices and/or software used by the Society to perform the remote survey
- (4) acquire as deemed necessary information on identity and ranking of personnel/crew involved in the remote survey,
- (5) provide the survey item/scope to the personnel/crew involved in facilitating the remote surveys, including the tests that will be performed,
- (6) communicate, during the remote survey, additional actions depending on the evidence to be collected.

Notes:

- (1) Training and qualification of on board personnel/Crew are regulated by the STCW Convention and is a prerogative of the flag State Administration.
- (2) The ship's flag State Administration may require that the Safety Management System of the ship is updated by the Company to include provisions for specific training of the crew engaged in remote surveys.

3 One or more of the following means is to be provided for planning the remote survey:

- (1) live-streaming video and audio connection
- (2) exchange of data / electronic documents
- (3) other means acceptable to the Society

4 The owner is to provide the necessary facilities for the safe execution of the survey.

#### **An 2.4 Performance of the Remote Survey**

1 To ensure that the Surveyor can properly perform the remote survey according to the applicable rules, the available evidence is to allow the attending Surveyor to:

- (1) Examine and assess a survey item and/or a group of items and/or supporting documents,
- (2) Verify and assess applicable tests and/or services.

2 The evidence provided to the Surveyor is subject to the technical evaluation and final acceptance by the Surveyor with respect to the completeness and accuracy, necessary to perform the requested survey according to the applicable requirements.

3 One or more of the following evidence is to be provided for performing the remote survey:

- (1) live-streaming video and audio
- (2) recorded videos provided by the Owner's representative
- (3) photos provided by the Owner's representative
- (4) other data and/or supporting documents acceptable to the Society.

4 The live videos, recorded videos and still images taken during the remote survey is to be kept confidential and not to be used for any purpose other than to assist the remote surveyor in conducting the remote survey. Further, they are not to be disclosed to any third part, or copied, reported or altered without written consent of the Society.

5 The applicant or any person on its behalf is not to record the videos containing the voice of the remote surveyor.

#### **An 2.5 Assessment of the Remote Survey**

1 The Surveyor is to evaluate all evidence received and accept them before crediting the remote survey.

2 The means used for the remote survey is to allow the Surveyor to collect the necessary evidence that will be examined according to the Surveyor's professional judgement in order to satisfactorily complete and credit the relevant survey items.

3 In case the Surveyor, according to their professional judgement, deems that the remote survey does not provide the same level of assurance as a survey with attendance on board by a Surveyor, the Surveyor may decide not to credit the relevant survey items.

### **An 3 Scope and Procedures**

#### **An 3.1 Scope - Eligible Survey Items**

1 A remote survey will be only appropriate provided it reaches the same level of assurance as, and is equivalent to, a survey attended on board by a Surveyor.

2 A remote survey may be proposed as an alternative to a survey attended on board by a Surveyor for the surveys listed in **Table An 3.1**.

3 When the class survey is also related to a statutory item, and the Society is carrying out the statutory survey on behalf of the Administration, then the Administration acceptance is required, and possible additional requirements are to be complied with.

4 The Surveyor may require to confirm the results of the remote survey, by a survey attended on board by a Surveyor, to credit the relevant survey items, in case the remote survey is not carried out to the Surveyor's satisfaction or it is required by the Society.

**Table An 3.1 Eligible Remote Survey Items**

No.	Surveys and related items eligible to remote survey	Live streaming required (See Notes)
<u>1</u>	<u>Postponement, issuance, deletion of Condition of Class</u>	<u>○ (1)</u>
<u>2</u>	<u>Postponement of Class surveys</u>	<u>○ (1)</u>
<u>3</u>	<u>Items of Continuous Survey for Machinery (UR Z18) or Planned Maintenance Scheme (UR Z20, PMS)</u>	<u>○ (1)</u>
<u>4</u>	<u>Occasional survey for change of ship's name</u>	<u>○ (1)</u>
<u>5</u>	<u>Occasional survey for loss of anchor</u>	<u>○ (1)</u>
<u>6</u>	<u>Occasional survey for minor machinery or equipment damage</u>	<u>○ (1)</u>
<u>7</u>	<u>Occasional survey for minor hull damage</u>	<u>○ (1)</u>
<u>8</u>	<u>Occasional survey for minor deficiencies/defects not subject to a Condition of Class</u>	<u>○(1)</u>
<u>9</u>	<u>In-water bottom survey</u>	<u>○</u>
<u>10</u>	<u>Specified items of a class periodical survey (excluding additional specific items of initial or renewal surveys), including completion of remaining items of a part held class periodical survey</u>	<u>○ (1)(2)</u>
<u>11</u>	<u>Non-propelled / un-manned barges/pontoon – annual surveys when no survey of hull compartments is due</u>	<u>○</u>
<u>12</u>	<u>Minor retrofit / installation/upgrade of equipment</u>	<u>○ (1)</u>
<u>13</u>	<u>Documentary or data based initial / periodical / renewal / occasional verifications and surveys</u>	<u>=</u>

Notes:

- (1) "(1)" means that live streaming may not be required for minor survey scope or that a combination remote survey method, as listed in **An 2.4**, may be used at the sole discretion of the Society.
- (2) "(2)" means that pure documentary verifications are eligible in accordance with item 13.
- (3) Live streaming may be required for surveys not marked "○" in the Table, depending on the survey scope at the sole discretion of the Society.
- (4) "Minor" in the items 6, 7, 8 and 12 means that the item can be surveyed remotely according to requirements for equivalency given in **An 2**.

## **An 3.2 Procedures**

### **An 3.2.1 Eligibility**

Refer to **An 2.1**.

### **An 3.2.2 Digital Information Quality, Completeness, and Accuracy**

**1** Final appraisal of the quality of digital information is at the discretion of the Surveyor, who is to be satisfied with the content and the quality of digital information collected, and the survey carried out, allowing the Surveyor to confirm its completion.

**2** The Owner is responsible for the completeness and accuracy of digital information provided. The digital information submitted by the Owner to the Surveyor is to reflect the real situation of the surveyed item. The date and time, when a photo or video was taken are to be made available to the Surveyor or identifiable from its metadata.

**3** The Society is to collect and store digital information as evidence of the survey. It is not necessary to store all of digital information received; the exact digital information stored is to support the survey decision and is to be decided by the Surveyor crediting the survey.

**4** The remote survey is carried out under the supervision and upon instructions of the Surveyor, who is in charge of crediting the remote surveys. A Surveyor attendance on board may be required to complete the survey, upon the Surveyor's request and at their discretion.

### **An 3.2.3 Requirements for a remote survey when live streaming is not used**

**1** When live streaming is not used, communication and digital information collection are to be performed through an ICT channels (such as emails, data streams and clouds), which is to be accepted



by the Society prior to the survey.

2 The Owner's representative is to confirm the identity of the ship at the commencement of the survey.

#### **An 3.2.4 Requirements for a remote survey when live streaming is used**

1 The Owner's representative is to ensure that:

(1) the Owner's representative is attending onboard and has access to the areas intended to be surveyed.

(2) the Owner's representative has at his disposal a 2-ways visual and audible communication means complying with the requirements in An 4.

(3) ICT solution is available on the communication means and meets the requirement described in An 4.

2 In the case these requirements cannot be fulfilled, the remote survey may be rejected.

3 The Surveyor is to verify the identity of the ship at the commencement of the survey by live streaming.

#### **An 3.3 Hardware and ICT Solution**

1 Refer to An 4.1.

#### **An 3.4 Requirements for Connectivity**

1 The Owner's representative is to ensure that internet connectivity tests are carried out before the survey and that proper connectivity is available and maintained during the survey.

2 When remote survey by live streaming is being undertaken, a connection that enables live streaming between the Surveyor and the Owner's representative attending on board is required. The quality of the live streaming connection (audio and video) is to ensure proper communication and to allow the Surveyor to carry out the survey remotely, to the Surveyor's satisfaction.

3 In the case where a live streaming connection with the Surveyor is not possible or is not continuous at the place of the survey (e.g., Engine Room), partly online sequences (where the Owner is able to capture pictures and videos offline of those items not covered by live streaming) may be accepted by the Surveyor.

### **An 4 ICT**

#### **An 4.1 General**

1 This An 4.1 outlines the minimum requirements for the use of ICT that can capture images, record video and/or live stream video or other data from a ship as considered acceptable to the Society.

2 Applicants are to arrange the equipment to be used on the ships.

3 The method for sharing large-capacity data such as photos and videos will be specified by the Society after receiving the application for remote survey.

4 Both equipment for information collection and communicating equipment for two-way communication are to be selected with careful consideration for reliability of both hardware and software.

5 The data formats of recorded video and still images are to be general-purpose.

6 In principle, the means specified by the Society (specified application, etc.) are to be used for sharing large volumes of data such as recorded videos and still images. However, from the viewpoint of information security, when using the means for information sharing specified by the applicant, the applicant is to provide an environment that the Society can receive and brows data in.

7 Select a communication infrastructure which is sufficiently reliable in terms of information security, considering risk of data leakage, etc. Also, it is to be ensured that a communication environment can stably send and receive still images and recorded videos with the quality required

by the remote Surveyor.

**8** Both hardware (smartphone or tablet, etc.) and software (application for communication) for communicating equipment for two-way communication are to be selected with careful consideration for information security.

#### **An 4.2 Hardware**

**1** The Owner is responsible for ensuring that all hardware installations on board used for the remote survey is to comply with the applicable requirements relevant for use and location on board, including hazardous areas.

**2** The ICT is to typically consist of:

- (1) A host computer device, to receive the streaming of images/data/video. This is usually a laptop or desktop computer compatible with the software application used for the remote survey.
- (2) On board standalone device which may include digital cameras capable of capturing videos/photos/data.
- (3) On board smart device compatible with the applicable software/technology.
- (4) Communication accessories like headphones and microphone for the noisy environment as applicable and as deemed necessary.

Notes:

The smart device may be a smartphone, tablet, computer, wearable device, smart glass, digital camera, or any other device which can be connected to the network and capable of transmitting the necessary data/images to shore.

**3** The communication equipment used for the live streaming is to have the following minimum functionality:

- (1) Both ends are to simultaneously see the same image/videos in near real-time (i.e., live streaming).
- (2) Two-way direct voice communication
- (3) Possibility to take screenshots

**4** When using a portable device on board for live streaming, the movement of the handheld device may affect the stability of the video and the image, leading to lower quality outputs. When necessary, a suitable anti-shake device is to be used to provide proper stability.

Notes:

- (1) The host computer screen is to be able to present an image quality that is sufficient to enable a survey decision to be made.
- (2) Portable equipment on board is to be equipped with a power capacity suitable for the intended scope and time of the survey.

#### **An 4.3 Internet Connectivity (Coverage and Speed)**

**1** For internet connectivity requirements on board, refer to An 3.4.

**2** The on board smart devices are to have the capability of transmitting the images/video/data over a Cellular, Wi-Fi or Satellite Connection to the remote Surveyor.

**3** When live streaming communication is applied, the internet connection is to have sufficient and stable bandwidth capacity to ensure quality (such as resolution and frame rate) of the direct colour image/video and voice communication to the remote survey location to the satisfaction of the Surveyor.

#### **An 4.4 Software and Data Security**

**1** The software used for the remote survey is to be acceptable to the Society. The overall function and ability of the software used to ensure the security of data is to be evaluated prior to use as per the below requirements in this An 4.4.

**2** The Surveyor is to normally control the live video call, providing instructions to the on-site personnel/crew and supervising survey activities for capturing relevant information. The on board device is to have the capability of transmitting the data over a Cellular, Wi-Fi, or Satellite Connection

to the Surveyor.

3 The software used to perform the remote survey may also be provided with technologies that support the Surveyor in the process of making a decision, such as:

- (1) Artificial Intelligence (AI) for the recognition and the classification of defects
- (2) Internet of things (IoT) for collecting parameters and evaluating acceptability/working condition of machinery and equipment
- (3) Data driven verification or other means considered acceptable by the Society

4 The above software and technologies are to be evaluated and accepted by the Society in each case.

5 When considering the use of software/applications and other technologies, data protection is to be considered in accordance with applicable requirements of the Society before the remote survey is commenced. The software/application used to perform the remote survey is to be compatible with the technical requirements detailed in this paragraph; in addition, the software used is to comply with the Society's applicable requirements:

- (1) Cybersecurity
- (2) Data protection and confidentiality for the transmitted data

6 When not provided by the Society itself, the audio/video software or application used to perform the remote survey is to be accepted by the Society.

7 During the survey preparation, it is the Owner's responsibility to ensure that their data security policies are implemented as per the Company's Safety Management System.

Notes:

- (1) The Company's SMS may take into account *IMO Res. MSC.428 (98)*, *MSC-FAL.1/Circ.3* and *IACS Recommendation No.166*.

## **An 5 Recording of Evidence and Reporting of Survey**

### **An 5.1 Recording of Evidence**

#### **An 5.1.1 Required Evidence**

1 In principle, live streaming video and audio is to be applied to remote surveys as a primary means (refer to **Table 1 An 3.1**).

2 Additionally, and/or alternatively, one or more of the following evidence may be submitted or verified as requested by the Surveyor during remote survey so that the Surveyor is able to verify conditions of survey items:

- (1) Recorded video and audio
- (2) Photos
- (3) Master's/chief engineer's statement
- (4) Ship's logbook
- (5) Owner's confirmation

3 Live streaming video and audio

Live streaming video and audio using ICT are to be in accordance with the requirements in **An**

4.

4 Recorded videos/photos

For the recorded videos/photos, the following information is to be available:

- (1) Confirmation that they were actually taken on the ship by the Owner's representative
- (2) Date and time when they were taken
- (3) Identity of the personnel/crew responsible for taking evidence

5 Master's/chief engineer's statement

Recorded videos/photos provided by the Owner's representative may be supplemented with a

statement signed by the master and/or the chief engineer confirming the condition of the items shown in the evidence. The final evaluation of the remote survey by the Surveyor is to be based on all of the provided evidence, and it does not delegate the responsibility to the master/chief engineer's statement only.

**6 Ship's logbook**

The Master is to make entries into ship's logbook on the following occasions and submit copies of the relevant pages when requested by the Surveyor:

- (1) when a remote survey is carried out by the Surveyor
- (2) when videos/photos are taken and submitted to the Surveyor with the master's/chief engineer's statement and additional documents as applicable.

**7 Owner's confirmation**

The Owner's representative or the master is to confirm the correctness and completeness of the provided information and evidence (if any) relevant to the condition of the items requested to be surveyed. This confirmation may be included in the survey application.

**An 5.1.2 Retaining/Filing Evidence**

1 The evidence submitted by the Owner's representative or master is to be retained/filed in accordance with the Society's procedures which is to include:

- (1) type of evidence to be retained/filed
- (2) duration/location to be retained/filed

2 It is not required for the Society to record and save live streaming video and audio as evidence unless the Surveyor considers it necessary.

**An 5.1.3 Other Supporting Documents**

1 The Surveyor may request the Owner's representative or master to submit supplementary documents such as ship's maintenance reports and record for the operation of machinery, and equipment and service reports issued by manufacturers, service suppliers or service providers.

2 While the Surveyor is to verify that the documents are duly prepared and issued to the ship, they may not be required to be retained/filed by the Society as evidence.

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

- 1.** The effective date of the amendments is 1 January 2023.
- 2.** Notwithstanding the amendments to the Rules, the current requirements apply to the remote surveys for which the application is submitted to the Society before the effective date.

## Chapter 1 GENERAL

### 1.3 Definitions

#### 1.3.1 Terms\*

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

- (1) “Ballast tank” is a tank which is being used ~~solely~~ primarily for salt water ballast. For a space which is used for both cargo and salt water ballast, the followings requirements of **(a)** and **(b)** below are applied.
  - (a) The space is treated as a Ballast Tank when substantial corrosion has been found in that space.
  - (b) For oil tankers and ships carrying dangerous chemicals in bulk with integral tanks, the tanks used for the carriage of cargo or ballast water as a routine part of the vessel’s operation are treated as Ballast Tanks. Cargo tanks in which water ballast might be carried only in exceptional cases per **MARPOL Annex I/18.3** are to be treated as cargo tanks.

## Chapter 5 SPECIAL SURVEYS

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

#### 5.2.6 Thickness Measurements\*

Table B5.10-1 has been amended as follows.

Table B5.10-1 Requirements of Thickness Measurements for Oil Tankers and Ships Carrying Dangerous Chemicals in Bulk with integral tanks

Special Surveys	Structural members subject to thickness measurement
<u>Requirements for Double Hull Oil Tankers and Ships Carrying Dangerous Chemicals in Bulk</u>	
1 Special Survey for ships up to 5 years of age (Special Survey No.1)	<ul style="list-style-type: none"> <li>(1) Suspect areas</li> <li><del>(2) One section of deck plating for the full beam of the ship within the cargo area (in way of a ballast tank, if any, or a cargo tank used primarily for water ballast)</del></li> <li><del>(3) Structural members subject to close-up survey for general assessment and recording of corrosion pattern</del></li> <li><del>(4)</del> (2) Cargo oil, fuel oil, ballast, vent pipes including vent masts and headers, inert gas pipes and all other piping in pump room and on weather decks, when deemed necessary by the Surveyor as a consequence of general examinations specified in <b>5.2.2</b></li> </ul>
2 Special Survey for ships over 5 years and up to 10 years of age (Special Survey No.2)	<ul style="list-style-type: none"> <li>(1) Suspect areas</li> <li>(2) Within the cargo area: <ul style="list-style-type: none"> <li>(a) Each deck plate</li> <li>(b) One transverse section. When the selected section is a transversely framed section, adjacent frames and their end connections in way of the transverse section are to be included.</li> </ul> </li> <li>(3) Structural members subject to close-up survey for general assessment and recording of corrosion pattern</li> <li>(4) Selected wind and water strakes outside the cargo area</li> <li>(5) Cargo oil, fuel oil, ballast, vent pipes including vent masts and headers, inert gas pipes and all other piping in pump room and on weather decks, when deemed necessary by the Surveyor as a consequence of general examinations specified in <b>5.2.2</b></li> </ul>
3 Special Survey for ships over 10 years and up to 15 years of age (Special Survey No.3)	<ul style="list-style-type: none"> <li>(1) Suspect areas</li> <li>(2) Within the cargo area: <ul style="list-style-type: none"> <li>(a) Each deck plate</li> <li>(b) Two transverse sections. When the selected section is a transversely framed section, adjacent frames and their end connections in way of the transverse section are to be included.</li> </ul> </li> <li>(3) Structural members subject to close-up survey for general assessment and recording of corrosion pattern</li> <li>(4) Selected wind and water strakes outside the cargo area</li> <li>(5) All wind and water strakes within the cargo area</li> <li>(6) Internals in fore and aft. peak ballast tank</li> <li>(7) Cargo oil, fuel oil, ballast, vent pipes including vent masts and headers, inert gas pipes and all other piping in pump room and on weather decks, when deemed necessary by the Surveyor as a consequence of general examinations specified in <b>5.2.2</b></li> <li>(8) For ships carrying dangerous chemicals in bulk, selected steel cargo pipes outside cargo tanks and ballast pipes passing through cargo tanks</li> </ul>

**Table B5.10-1 Requirements of Thickness Measurements for Oil Tankers and Ships Carrying Dangerous Chemicals in Bulk with integral tanks (Continued)**

Special Surveys	Structural members subject to thickness measurement
<p>4 Special Survey for ships over 15 years of age (Special Survey No.4 and subsequent Special Surveys)</p>	<p>(1) Suspect areas</p> <p>(2) Within the cargo area:</p> <p>(a) Each deck plate</p> <p>(b) Three transverse sections. When the selected section is a transversely framed section, adjacent frames and their end connections in way of the transverse section are to be included.</p> <p>(c) Each bottom plate</p> <p>(3) Structural members subject to close-up survey for general assessment and recording of corrosion pattern</p> <p>(4) All wind and water strakes</p> <p>(5) Internals in fore peak tank and after peak ballast tank</p> <p>(6) All exposed main deck plating outside the cargo area</p> <p>(7) Representative exposed superstructure deck plating (poop, bridge and forecastle deck)</p> <p>(8) All keel plates, full length, and an appropriate number of bottom plates in way of cofferdams, machinery space, and aft end of tanks</p> <p>(9) Plating of sea chests, and shell plating in way of overboard discharges (as deemed necessary by the Surveyor)</p> <p>(10) Cargo oil, fuel oil, ballast, vent pipes including vent masts and headers, inert gas pipes and all other piping in pump room and on weather decks, when deemed necessary by the Surveyor as a consequence of general examinations specified in <b>5.2.2</b></p> <p>(11) For ships carrying dangerous chemicals in bulk, selected steel cargo pipes outside cargo tanks and ballast pipes passing through cargo tanks</p>
Requirements for Ships Other Than Double Hull Oil Tankers	
<p>1 Special Survey for ships up to 5 years of age (Special Survey No.1)</p>	<p>(1) Suspect areas</p> <p>(2) One section of deck plating for the full beam of the ship within the cargo area (in way of a ballast tank, if any, or a cargo tank used primarily for water ballast)</p> <p>(3) Structural members subject to close-up survey for general assessment and recording of corrosion pattern</p> <p>(4) Cargo oil, fuel oil, ballast, vent pipes including vent masts and headers, inert gas pipes and all other piping in pump room and on weather decks, when deemed necessary by the Surveyor as a consequence of general examinations specified in <b>5.2.2</b></p>
<p>2 Special Survey for ships over 5 years and up to 10 years of age (Special Survey No.2)</p>	<p>Same as required for Special Survey No.2 for Double Hull Oil Tankers and Ships Carrying Dangerous Chemicals in Bulk</p>
<p>3 Special Survey for ships over 10 years and up to 15 years of age (Special Survey No.3)</p>	<p>Same as required for Special Survey No.3 for Double Hull Oil Tankers and Ships Carrying Dangerous Chemicals in Bulk</p>
<p>4 Special Survey for ships over 15 years of age (Special Survey No.4 and subsequent Special Surveys)</p>	<p>Same as required for Special Survey No.4 and subsequent Special Surveys for Double Hull Oil Tankers and Ships Carrying Dangerous Chemicals in Bulk</p>

Table B5.15 has been amended as follows.

**Table B5.15 Requirements of Thickness Measurements for Bulk Carriers**

Special Surveys	Structural members subject to thickness measurement
<p>1 Special Survey for ships up to 5 years of age (Special Survey No.1)</p>	<p>(1) Suspect areas</p> <p><del>(2) At least structural members subject to close-up survey for general assessment and recording of corrosion pattern</del></p> <p><del>(3) Air pipes and sounding pipes in cargo holds in way of tank top. Depending upon the results of close-up surveys, measurements may be omitted at the discretion of the Surveyor.</del></p> <p><del>(4) All cargo hold hatch coamings (plating and stiffeners)</del></p> <p><del>(5) All cargo hold hatch covers (plating and stiffeners)</del></p>
<p>2 Special Survey for ships over 5 years and up to 10 years of age (Special Survey No.2)</p>	<p>(1) Suspect areas</p> <p>(2) Structural members within the cargo length area:</p> <p>(a) Two transverse sections of deck plating, outside the line of cargo hatch openings</p> <p>(b) All strength deck plating, where log cargoes or other cargoes that are prone to accelerate corrosion are loaded</p> <p>(3) At least structural members subject to close-up survey for general assessment and recording of corrosion pattern</p> <p>(4) All piping arrangements in cargo holds. Depending upon the results of close-up surveys, may be omitted at the discretion of the Surveyor.</p> <p>(5) All cargo hold hatch coamings (plating and stiffeners)</p> <p>(6) All cargo hold hatch covers (plating and stiffeners)</p> <p>(7) Wind and water strakes in way of the transverse sections of (2)(a) above</p> <p>(8) Selected wind and water strakes outside the cargo length area</p>
<p>3 Special Survey for ships over 10 years and up to 15 years of age (Special Survey No.3)</p>	<p>(1) Suspect areas</p> <p>(2) Structural members within the cargo length area:</p> <p>(a) Each deck plating outside the line of cargo hatch openings</p> <p>(b) Two transverse sections, one in the midship area, outside the line of cargo hatch openings. When the selected section is a transversely framed section, adjacent frames and their end connections in way of the transverse section are to be included.</p> <p>(3) At least structural members subject to close-up survey for general assessment and recording of corrosion pattern</p> <p>(4) All piping arrangements in cargo holds. Depending upon the results of close-up surveys, may be omitted at the discretion of the Surveyor.</p> <p>(5) All cargo hold hatch coamings (plating and stiffeners)</p> <p>(6) All cargo hold hatch covers (plating and stiffeners)</p> <p>(7) Internals in fore and aft peak ballast tanks</p> <p>(8) All wind and water strakes within the cargo length area</p> <p>(9) Selected wind and water strakes outside the cargo length area</p>



**Table B5.15 Requirements of Thickness Measurements for Bulk Carriers (Continued)**

Special Surveys	Structural members subject to thickness measurement
<p>4 Special Survey for ships over 15 years of age (Special Survey No.4 and subsequent Special Surveys)</p>	<p>(1) Suspect areas</p> <p>(2) Structural members within the cargo length area:</p> <p>(a) Each deck plating outside the line of cargo hatch openings</p> <p>(b) Three transverse sections, one in the midship area, outside the line of cargo hatch openings. When the selected section is a transversely framed section, adjacent frames and their end connections in way of the transverse section are to be included.</p> <p>(c) Each bottom plate</p> <p>(3) At least structural members subject to close-up survey for general assessment and recording of corrosion pattern</p> <p>(4) All piping arrangements in cargo holds. Depending upon the results of close-up surveys, may be omitted at the discretion of the Surveyor.</p> <p>(5) All cargo hold hatch coamings (plating and stiffeners)</p> <p>(6) All cargo hold hatch covers (plating and stiffeners)</p> <p>(7) Internals in fore and aft peak ballast tanks</p> <p>(8) All exposed main deck plating outside the cargo length area</p> <p>(9) Representative exposed superstructure deck plating (poop, bridge and forecastle deck)</p> <p>(10) All keel plates, full length, and an appropriate number of bottom plates in way of cofferdams, machinery space, and aft end of tanks</p> <p>(11) Plating of sea chests, and shell plating in way of overboard discharges (as deemed necessary by the Surveyor)</p> <p>(12) All wind and water strakes</p>

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

1. The effective date of the amendments is 1 January 2023.
2. Notwithstanding the amendments to the Rules, the current requirements apply to the surveys for which the application is submitted to the Society before the effective date.

## Chapter 1 GENERAL

### 1.4 Preparation for Survey and Other Items

#### 1.4.5 Procedure for Tests, Wear and Tear, etc.\*

Sub-paragraph -2 has been amended as follows.

#### 2 Inclining Test

~~An Inclining test is to be carried out at the Class Maintenance Survey, w~~Where alterations or repairs which might greatly affect the ship's stability have been made and/or the Surveyor deems it necessary, ~~2.5.1-2~~ 2.5.1-2 is to be followed to determine the need for re-inclining tests, and the need for amending stability information.

## Chapter 2 CLASSIFICATION SURVEYS

### 2.5 Alterations

Paragraph 2.5.1 has been amended as follows.

#### 2.5.1 Examinations of Altered Parts\*

1 In cases where ships classified by the Society undergo repairs, alternations, modifications and outfitting related thereto (hereinafter referred to as “modifications, etc.”), such ships are to continue to at least comply with any previously applicable requirements. Moreover, such ships, if constructed before the date on which any relevant amendments enter into force, are, as a rule, to comply with any requirements for ships constructed on or after that date to at least the same extent as they did before undergoing such modifications, etc. The modification, etc. of any main particulars are to satisfy the requirements for ships constructed on or after the date on which any relevant amendments enter into force. In cases where ships undergo modifications, etc. which affect main particulars, unless otherwise permitted by the Society, the concerned ship is to comply with requirements in force at the time of such modifications, etc.

2 Where ships undergo alterations or repairs that may affect their main ship particulars, Table B2.5.1-1, Part B of the Guidance is to be followed.

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

1. The effective date of the amendments is 1 January 2023.

## Annex 2.3.1-2 PROCEDURES FOR ON BOARD NOISE MEASUREMENTS

### Chapter 4 MAXIMUM ACCEPTABLE SOUND PRESSURE LEVELS

#### An 4.1 General

Measurement results are not to be more than the noise level limits specified in **Table An 4.1**. In large rooms with many measurement positions the individual positions are to be compared to the limits.

Table An 4.1 has been added as follows.

Table An 4.1 Noise Level Limits (Unit: *dB(A)*)

Designation of rooms and spaces	Ship size	
	1,600 up to 10,000 GT	≥10,000 GT
Work spaces		
Machinery spaces <sup>1,2</sup>	110	110
Machinery control rooms	75	75
Workshops other than those forming part of machinery spaces <sup>3</sup>	85	85
Non-specified work spaces (other work areas)	85	85
Navigation spaces		
Navigating bridge and chartrooms <sup>24</sup>	65	65
Look-out posts, incl. navigating bridge wings and windows <sup>25</sup>	70	70
Radio rooms <sup>46</sup> (with radio equipment operating but not producing audio signals)	60	60
Radar rooms	65	65
Accommodation spaces		
Cabin and hospitals <sup>67</sup>	60	55
Messrooms	65	60
Recreation rooms	65	60
Open recreation areas (external recreation areas)	75	75
Offices	65	60
Service spaces		
Galleys, without food processing equipment operating	75	75
Serveries and pantries	75	75
Normally unoccupied spaces		
Spaces referred to in section 3.8	90	90

Notes:

1. If the maximum noise levels in **Table An 4.1** are exceeded when machinery is operating, stay is to be limited to very short periods if dispensation is granted by the Administration.
2. Workshops(including workbenches and workstations) in machinery spaces are to be regarded as “machinery spaces”.
3. Notwithstanding 2. above, enclosed workshops located in machinery spaces are to be regarded as “workshops other than those forming part of machinery spaces” in cases where the enclosed workshops are separated from machinery spaces by bulkheads, which may include access doors with acoustic insulating properties equivalent to the bulkhead.
24. A navigating bridge provided with radio equipment is to be regarded as a “navigating bridge”.
25. With respect to the enclosed type navigating bridge wings, navigating bridge wings without solid separation (e.g. wall and door),

and those with solid separation (e.g. wall and door) are to be regarded as “navigating bridge” and “navigating bridge wings” respectively. (See **Fig. An 4.1**)

~~46.~~ “Radio rooms” mean separate rooms dedicated for sending/receiving radio messages.

~~57.~~ A room consisting of day-room and bedroom is to be regarded as a single “cabin” in cases where the room is for single occupancy.

## EFFECTIVE DATE AND APPLICATION (Amendment 2-4)

1. The effective date of the amendments is 1 January 2023.
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 the surveys for which the application is submitted to the Society before the effective date upon request by the owner.  
\* “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.

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

**Part B**

**Class Surveys**

**GUIDANCE**

**2022 AMENDMENT NO.2**

Notice No.64      27 December 2022

Resolved by Technical Committee on 27 July 2022

## 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

#### Amendment 2-1

#### B1 GENERAL

##### B1.1 Surveys

##### B1.1.2 Class Maintenance Surveys

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

**1** Modifications and changes that are subject to Occasional Surveys referred to in **1.1.2-2(3), Part B of the Rules** are as specified in **(1)** through **(5)** below:

((1) to (3) are omitted.)

(4) Change in the loading manuals, the stability information and other similar documents

When a modification is intended that alters the principal data of the ship, ~~following (a) to (d)~~ **B2.5.1-7 to -9** apply.

~~(a) When the differences between the original values of lightweight and lightship centre of gravity and the values calculated after conversion exceed either of the following deviation limits, an inclining test is to be carried out. In addition, the loading manual and stability information are to be amended using the altered principal data of the ship and then be approved by the Society:~~

~~i) Lightweight: 2%~~

~~ii) Lightship longitudinal centre of gravity: 1% of length for freeboard ( $L_f$ ), as applicable. For ships other than those of 500 gross tonnage and above engaged on international voyages, 1% of length of ship ( $L$ ) can be applied.~~

~~iii) Lightship vertical centre of gravity: 1%~~

~~(b) When a ship does not exceed the deviation limits specified in (a) above, but exceeds either of the following deviation limits, the loading manual and stability information are to be amended using the altered principal data and then be approved by the Society:~~

~~i) Lightweight: 1%~~

~~ii) Lightship longitudinal centre of gravity: 0.5% of length for freeboard ( $L_f$ ), as applicable. For ships other than those of 500 gross tonnage and above engaged on international voyages, 0.5% of length of ship ( $L$ ) can be applied.~~

~~iii) Lightship vertical centre of gravity: 0.5%~~

~~(c) When multiple alterations are made to a ship in service over a period of time and each alternation is within the deviation limits specified in (a) and (b) above, the deviation limits specified in (a) and (b) above are also to be applied to the cumulative total changes to the principal data from the most recent inclining or lightweight measurement.~~

~~(d) When the differences in the original values for draught, still water bending moment and~~

~~shear force and the values calculated after conversion exceed 2%, the loading manual and stability information are to be amended using the altered principal data of the ship and then be approved by the Society.~~

((5) is omitted.)

## B2 CLASSIFICATION SURVEYS

### B2.5 Alterations

Paragraph B2.5.1 has been amended as follows.

#### B2.5.1 Examination of Altered Parts

**1** In applying ~~the requirements specified in 2.5.1-1, Part B of the Rules~~, in the case of the “application of modification, etc. which affects a main particular of a ship” (hereinafter referred to as “application of major conversion”), the following are to apply, except in cases where specified by the Society or Administration:

- (1) A “Major Conversion”, for example, refers to (but is not limited to) the following cases:
  - (a) Alteration of the dimensions of a ship; for example, the lengthening of a ship by adding a new midbody.
  - (b) Change of ship type; for example, the conversion from tanker to bulk carrier.
  - (c) Modification of construction which affects necessary requirements related to ship subdivisions. For ships not falling under any of the following **i)** to **iii)**, with respect to Required Subdivision Index (*R*) and Attained Subdivision Index (*A*) that are specified in **4.2, Part C of the Rules**, it is demonstrated that the *A/R* ratio calculated for the ship after such a modification is not less than the *A/R* ratio calculated for the ship before the modification. However, in cases where the ship’s *A/R* ratio before modification is equal to or greater than 1, it is necessary that the ship’s *A/R* ratio after modification be equal to or greater than 1.
    - i) Ships for which the building contract is placed on or after 1 January 2020
    - ii) In the absence of a building contract, the keel of ships is laid or which are at a similar stage of construction on or after 1 July 2020
    - iii) The delivery of ships is on or after 1 January 2024.

((2) and (3) are omitted.)

**2** In applying ~~the requirements specified in 2.5.1-1, Part B of the Rules~~, in cases where single hull oil tankers are converted to double hull oil tanker or bulk carriers, except where specified by the Society or Administration, in addition the above requirement **-1**, the following requirements are to be complied with:

- (1) With respect to the ~~requirements on~~ subdivision specified in **Chapter 4, Part C of the Rules**, the requirements in accordance with ship’s type after conversion are to be complied with.
- (2) With respect to the ~~requirements on~~ stability, the following requirements are to be complied with:
  - (a) In the case of a conversion to a double hull oil tanker, **3.2.2, Part 3 of Rules for Marine Pollution Prevention Systems** is to still be applied.
  - (b) In the case of a conversion to a bulk carrier, **(5)** is to be applied.
- (3) The requirements on protective coating in seawater ballast tank, etc. specified in **25.2.2-1, Part C of the Rules** are not required to be complied with, except in cases where the entire internal structure of the seawater ballast tank ~~are~~is newly made. However, the requirements specified in **25.2.2-2, Part C of the Rules** are to be applied.
- (4) The requirements on towing and mooring equipment specified in **27.2, Part C of the Rules** are to be applied.
- (5) In the case of conversion to a bulk carrier, ~~the requirements specified in 31A and 34.2, Part C of the Rules~~ are to be applied. However, the requirements on permanent means of access are to comply with **(6)**.
- (6) The requirements on permanent means of access, except in the case of the addition of substantial



new structures, are not required to be complied with. The wording “addition of substantial new structures” refers to hull structures that are entirely renewed or augmented by new double bottom and/or double side construction (e.g., replacing the entire structure within cargo areas or adding a new double bottom and/or double side section to existing cargo areas). Additionally, an approved access manual is to be provided.

- (7) In the case of conversion to a bulk carrier, the requirements on dewatering arrangements and water level detection and alarm systems specified in **13.5.10 and 13.8.5, Part D of the Rules** are to be applied.
- (8) The requirements on navigation bridge visibility specified in **2.1, Part W of the Rules** are to be applied unless navigation bridge visibility at the ballast loading condition prior to the conversion is maintained after the conversion.
- (9) The requirements on fire protection, escape and fire fighting specified in **Part R of the Rules** may be applied only to those parts which are altered.
- (10) In the case of a conversion to a double hull oil tanker, the requirements related to assignment of freeboard specified in **2.2.1, Part V of the Rules** are to be applied when the parameters used to determine the minimum freeboard are different before and after conversion or when there is a decrease in magnitude of freeboard assigned after the conversion.
- (11) The requirements specified in **18.3, 19.2.3, Chapter 20, 23.1, 23.2, 23.4, 23.5, 23.6, 23.7, 27.1.7 and 34.1.1-1, Part C of the Rules** and **13.4 and 13.6, Part D of the Rules** are to be applied when structures or equipment are newly added, replaced or modified.

**3** In applying ~~the requirements specified in 2.5.1-1, Part B of the Rules~~, “permitted by the Society” refers to those cases where the Society agrees that it is difficult to apply a new requirement, and the Administration agrees to waive the concerned requirement.

**4** In applying ~~the requirements specified in 2.5.1-1, Part B of the Rules~~, the tightness of such boundaries ~~are~~ is to be verified by the tests stipulated in **Annex 2.1.5 “Testing Procedures of Watertight Compartments”** in cases where any modifications or repairs have been carried out which affects the tightness of the watertight boundary.

**5** In applying **2.5.1-1, Part B of the Rules**, the astern response characteristics of ships considered by the Society to have undergone significant repairs which impact the response characteristics of their propulsion systems are to be verified after such repairs are carried out by correspondingly applying the requirements for the astern tests carried out at Classification Surveys during Construction (~~See~~ **2.3.1, Part B of the Rules** and **B2.1.4**). The tests are to demonstrate the satisfactory operation of the equipment or system under realistic service conditions at least over the manoeuvring range of the propulsion plant, for both ahead and astern directions. Depending on the actual extent of the repair, the Society may accept a reduction of the test plan.

**6** In applying ~~the provisions of 2.5.1-1, Part B of the Rules~~, for ships where selective catalytic reduction systems, exhaust gas cleaning systems or exhaust gas recirculation systems are newly installed, applicable surveys to the relevant systems are to be carried out in accordance with **2.1, Part B of the Rules**.

**7** In applying **2.5.1-2, Part B of the Rules, Table B2.5.1-1** is to be followed to determine the need for re-inclining tests, and the need for amending stability information. For such purposes, the term “lightweight calculation”, “lightship properties” and “stability information” are defined as follows:

- (1) “Lightweight calculation” means a detailed calculation of weights added to, removed from, and relocated on a ship, resulting from all alterations to the ship since the date of the last approved inclining test to determine the adjusted lightship properties. The documented weights and their centres of gravity are to be verified on board or on site by the attending Society surveyor.
- (2) “Lightship properties” means weight and the centre of gravity of ships.
- (3) “Stability information” includes any document (whether on paper or electronic) or electronic

means of calculation of stability which includes lightship properties. This may include, but is not limited to, approved stability books, computer software for onboard calculations of stability, approved strength books and loading instruments.

**Table B2.5.1-1 The need for re-inclining tests and amending stability information**

<u>Result of lightweight calculation</u>	<u>Need for inclining test</u>	<u>Need for an amendment to stability information</u>
<u>Lightweight change &gt; 2 %</u>	<u>Yes</u>	<u>Yes, using new inclining test result</u>
<u>LCG change &gt; 1 % of ship length for freeboard (<math>L_f</math>), either forward or aft</u> <u>(For ships other than those of 500 gross tonnage and above engaged on international voyages, 1 % of length of ship (<math>L</math>) can be applied.)</u>	<u>Yes</u>	<u>Yes, using new inclining test result</u>
<u>VCG change &gt; 1 %</u>	<u>Yes</u>	<u>Yes, using new inclining test result</u>
<u>1 % &lt; Lightweight change &lt; 2 %</u>	<u>No</u>	<u>Yes, using the calculated lightweight</u>
<u>0.5 % of ship length for freeboard (<math>L_f</math>) &lt; LCG change &lt; 1 % of ship length for freeboard (<math>L_f</math>), either forward or aft</u> <u>(For ships other than those of 500 gross tonnage and above engaged on international voyages, 0.5 % of length of ship (<math>L</math>) can be applied.)</u>	<u>No</u>	<u>Yes, using the calculated lightweight</u>
<u>0.5 % &lt; VCG change &lt; 1 %</u>	<u>No</u>	<u>Yes, using the calculated lightweight</u>
<u>Lightweight change ≤ 1 %</u>	<u>No</u>	<u>No</u>
<u>LCG change ≤ 0.5 % of ship length for freeboard (<math>L_f</math>), either forward or aft</u> <u>(For ships other than those of 500 gross tonnage and above engaged on international voyages, 0.5 % of length of ship (<math>L</math>) can be applied.)</u>	<u>No</u>	<u>No</u>
<u>VCG change ≤ 0.5 %</u>	<u>No</u>	<u>No</u>

Notes

- (1) Longitudinal centre of gravity is abbreviated as “LCG” and vertical centre of gravity is abbreviated as “VCG”.
- (2) When multiple alterations are made to a ship in service over a period of time and each alternation is within the deviation limits specified in the table above, the cumulative total changes to the principal data from the most recent inclining test or lightweight calculation are to be used.
- (3) Both upward and downward changes to the vertical centre of gravity are to be considered.
- (4) When the differences in the original values for draught, still water bending moment and shear force and the values calculated after conversion exceed 2 %, the stability information are to be amended using the altered principal data of the ship and then be approved by the Society.
- (5) Lightship properties are to be consistent in all documents which use them (e.g. loading manual, stability manual, computer data).
- (6) A change in lightweight will result in a change in deadweight unless there is an associated change in freeboard. The consequences of the change could have an impact on compliance with other regulations (e.g. MARPOL Annex VI).

**8** In applying 2.5.1-2, Part B of the Rules, where the stability information has been amended in accordance with -7 to reflect the lightship properties derived from the lightweight calculation, it is to be approved by the Society and provided to the master with instruction that it is now to be used for all stability calculations.

**9** In applying 2.5.1-2, Part B of the Rules, when neither an inclining test nor an amendment to stability information has been done in accordance with -7, which means that addition, removal or relocation of any weight results in lightship properties are within the tolerable limits specified in the

**Table B2.5.1-1, the following (1) and (2) are to be followed:**

- (1) a copy of the lightweight calculation report endorsed by the Society is to be provided on board for future reference with no further amendments required to the stability information; and**
- (2) that deviation of lightship properties are, however, still to be noted in the stability information on board for reference and applied to all future references and stability/loading calculations.**

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

- 1. The effective date of the amendments is 1 January 2023.**

## B1 GENERAL

### B1.1 Surveys

#### B1.1.3 Intervals of Class Maintenance Surveys

Sub-paragraph -5 has been deleted.

~~5 The wording “the Society may approve the survey methods which it considers to be appropriate.” in 1.1.3-3, Part B of the Rules means survey methods which the Society considers to be able to obtain information equivalent to that obtained through traditional ordinary surveys where a surveyor is in attendance.~~

Sub-paragraph -6 has been renumbered to Sub-paragraph -5.

~~6~~<sup>5</sup> With respect to the wording “whenever the survey is considered necessary by the Society” in **1.1.3-3(6), Part B of the Rules** means, for example, a case where abnormal conditions are observed from the measurement data of vibration measurement system or Fe-density measurement system used instead of the temperature sensors and the temperature recorder of the azimuth thrusters which adopts roller bearings for propeller shafts bearings. In this case, abnormal conditions are to be reported to the Society immediately. Upon review of the reports, the Society may request an occasional survey when considered necessary.

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

1. The effective date of the amendments is 1 January 2023.
2. Notwithstanding the amendments to the Guidance, the current requirements apply to the remote surveys for which the application is submitted to the Society before the effective date.

## **B3 ANNUAL SURVEYS**

### **B3.3 Annual Surveys for Machinery**

#### **B3.3.2 Performance Tests**

Sub-paragraph -6 has been renumbered to Sub-paragraph -7, and Sub-paragraph -6 has been added as follows.

**6** In applying **3.3.2-1, Part B of the Rules**, the tests referred in **1.2.7, Annex 2.11.1-2, Part H of the Rules** are to be carried out for ships equipped with accumulator battery systems to which **Annex 2.11.1-2, Part H of the Rules** is applied.

~~**6**~~**7** In applying item 1 of **Table B3.8, Part B of the Rules**, the following **(1)** to **(3)** are also to be applied.

((1) to (3) are omitted.)

## **B4 INTERMEDIATE SURVEYS**

### **B4.3 Intermediate Surveys for Machinery**

#### **B4.3.1 General Examinations**

Sub-paragraph -3 has been added as follows.

**3** In applying **4.3.1, Part B of the Rules**, the conditions of accumulator battery systems are to be examined in detail with measuring the insulation resistance of main circuit of accumulator battery systems and associated equipment. In addition, it is to be confirmed that the maintenance, management, etc. of such systems are properly carried out in accordance **1.2.8, Annex 2.11.1-2, Part H of the Rules for ships equipped with accumulator battery systems to which Annex 2.11.1-2, Part H of the Rules** is applied.

## **B5 SPECIAL SURVEYS**

### **B5.2 General**

#### **B5.2.2 General Examination**

Sub-paragraph -4 has been added as follows.

**4** In applying item 2 of **Table B5.25, Part B of the Rules**, the conditions of accumulator battery systems are to be examined in detail with measuring the insulation resistance of main circuit of accumulator battery systems and associated equipment. In addition, it is to be confirmed that the maintenance, management, etc. of such systems are properly carried out in accordance with **1.2.8, Annex 2.11.1-2, Part H of the Rules for ships equipped with accumulator battery systems to which Annex 2.11.1-2, Part H of the Rules** is applied.

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

1. The effective date of the amendments is 1 January 2023.
  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 the surveys for which the application is submitted to the Society before the effective date upon request by the owner.
- \* “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.