

# Notice No.2

## Rules and Regulations for the Classification of Ships, July 2018

The status of this Rule set is amended as shown and is now to be read in conjunction with this and prior Notices. Any corrigenda included in the Notice are effective immediately.

Please note that corrigenda amends to paragraphs, Tables and Figures are not shown in their entirety.

Issue date: November 2018

Amendments to	Effective date	IACS/IMO implementation (if applicable)
Part 1, Chapter 2, Section 2	1 January 2019	N/A
Part 1, Chapter 3, Sections 1, 2, 5, 7 & 9	1 January 2019	N/A

# Part 1, Chapter 2

## Classification Regulations

### ■ Section 2

#### Character of classification and class notations

#### 2.1 Definitions

(Part only shown)

Table 2.2.2 Special features notations

Special feature notation	Description	See also
<b>SPM4</b>	Single Point Mooring. Assigned to a ship provided with single mooring line arrangement at a single point mooring	<i>Pt 3, Ch 13, 8 Windlass design and testing</i>
<b>Strengthened to carry cargoes which may liquefy (IMSBC Group A)</b>	Assigned to ore carriers which are to carry 'Group A cargo' and which have satisfied the LR requirements for Classification as a specially constructed or fitted cargo ship for confining cargo shift, as stipulated in the IMSBC Code. In accordance with the IMSBC Code, vessels with this notation are eligible for the carriage of Group A cargo where the moisture content rises above the Transportable Moisture Limit (TML) after loading. This notation is assigned at the request of the Owner.	<i>Pt 4, Ch 11, 1.3 Class notation 1.3.4 and 1.3.5</i>
<b>Strengthened for Heavy Cargoes ((-any) Hold (No(-s)) ..... may be empty)</b>	Assigned to a bulk carrier of less than 150 m in length or a ship designed for the carriage of heavy cargoes. If only certain holds are strengthened for heavy cargoes, they will be specified	<i>Pt 4, Ch 1 General Cargo Ships and Pt 4, Ch 7, 1 General</i>

#### 2.3 Class notations (hull)

(Part only shown)

2.3.17 **ShipRight-( )**. Where one or more of LR's ShipRight procedures for the following have been satisfactorily applied, then a notation showing the associated characters of the procedure(s) within brackets will, at the Owner's request, be entered in column 4 of the *Register Book*, preceded by the word **ShipRight**, e.g. **ShipRight(CM, SDA, FDA plus(25,NA))**. The requirements pertaining to these notations and the ShipRight procedures are given in *Pt 3, Ch 16 ShipRight Procedures for the Design, Construction and Lifetime Care of Ships*.

**FDA SPR** This ShipRight notation (Springing Fatigue Assessment) will be assigned when an appraisal has been made of the fatigue performance of the hull structure taking into account the effects due to springing (the continuous vibrational response of the hull girder due to waves) in accordance with the relevant ShipRight procedures.

**MP** This ShipRight notation will be assigned to ore carriers where an assessment for multiple port loading and unloading has been carried out in accordance with the relevant ShipRight procedures and the ShipRight notation **SDA** has been assigned.

**SDA** This ShipRight notation (Structural Design Assessment) will be assigned when direct calculations in accordance with the relevant ShipRight procedures have been applied. The ShipRight notation **SDA** is mandatory upon application of any of the following ShipRight notations: **FDA, FDA plus(), FDA ICE, FDA SPR-, WDA1 and WDA2**.

#### 2.8 Descriptive notes

(Part only shown)

2.8.2 **ShipRight()**. Where one or more of LR's ShipRight procedures for the following have been satisfactorily applied, then a descriptive note showing the associated characters of the procedure(s) within brackets will, at the Owner's request, be entered in column 6 of the *Register Book*, preceded by the word **ShipRight**, e.g. **ShipRight(IHM, SERS)**. The requirements pertaining to these descriptive notes and the ShipRight procedures are given in *Pt 3, Ch 16 ShipRight Procedures for the Design, Construction and Lifetime Care of Ships* and *Pt 5, Ch 2.1 Requirements for Condition Monitoring Systems and Machinery Condition-Based Maintenance Systems*, or directly within the relevant ShipRight procedure document.

**ShaftRight()** This ShipRight descriptive note will be assigned when the main propulsion shafting alignment has been carried out in accordance with ShipRight Procedure *ShaftRight: Main Propulsion Shafting Alignment Procedure*, which LR considers to be best practice during design, construction and trials. The **ShaftRight()** descriptive note with the extension of one or more of the following associated supplementary characters shown in brackets, may be assigned:

<b>E</b>	Existing design. Applicable to vessels having main propulsion shafting and hull arrangements which have been previously implemented and, for which, proven satisfactory service experience is demonstrated;
<b>N</b>	New design. Applicable to a new main propulsion shafting arrangement within a new, or previously implemented, hull design.

## Part 1, Chapter 3

### Periodical Survey Regulations

#### ■ Section 1

#### General

#### 1.5 Definitions

1.5.16 A **Remote Inspection Technique (RIT)** is a means of survey that enables examination of ship structure without the need for direct physical access of the Surveyor.

*Existing paragraphs 1.5.16 to 1.5.21 have been renumbered 1.5.17 to 1.5.22.*

~~1.5.22~~ 1.5.23 For the application of requirements outlined in Sections *Pt 1, Ch 3, 2 Annual Surveys - Hull and machinery requirements, Pt 1, Ch 3, 3 Intermediate Surveys - Hull and machinery requirements, Pt 1, Ch 3, 4 Bottom Surveys – In Dry-Dock and In-Water - Hull and machinery requirements* and *Pt 1, Ch 3, 5 Special Survey - General - Hull requirements*, a ~~general dry cargo ship~~ **general dry cargo ship** is a self-propelled ship of 500 gross tonnes or above, constructed generally with a 'tween deck and intended to carry solid cargoes, other than:

- bulk carriers;
- ships dedicated to the carriage of containers;
- roll on-roll off ships;
- refrigerated cargo ships;
- dedicated wood chip carriers;
- dedicated cement carriers;
- livestock carriers;
- dock/deck cargo ships;
- general dry cargo ships of double side-skin construction, with double side-skin extending for the entire length of the cargo area, and for the entire height of the cargo hold to the upper deck.

For **general dry cargo ships** with hybrid cargo hold arrangements, e.g. with some cargo holds of single-side skin and others of double-side skin, the relevant survey requirements for **general dry cargo ships** are to be applied only to structure in way of the single-side skin cargo hold region.

*Existing paragraphs 1.5.23 to 1.5.32 have been renumbered 1.5.24 to 1.5.33.*

#### 1.6 Preparation for survey and means of access

*(Part only shown)*

1.6.12 For close-up surveys of the cargo hold shell frames of single skin bulk carriers with a deadweight equal to or greater than 100,000 tonnes, the use of portable ladders is not accepted and one or more of the following means of access is to be provided:

- (c) Notwithstanding the above requirements, the following apply: ~~for single skin bulk carriers greater than 10 years old, at Annual Survey the use of a portable ladder fitted with a mechanical device to secure the upper end of the ladder is acceptable for when the close-up survey of cargo hold shell frames is required.~~
- (i) At Annual Survey, for access to perform the close-up survey of the lower region of cargo hold shell frames, the use of a portable ladder fitted with a mechanical device to secure the upper end of the ladder is acceptable.
  - (ii) The use of hydraulic arm vehicles such as conventional cherry pickers may be accepted by the attending Surveyor for the close-up survey of the upper part of side shell frames or other structures in all cases where the maximum working height is not more than 17 m.

1.6.13 For surveys of the hull structure/s conducted by use of a RIT, one or more of the following means for access, acceptable to the Surveyor, is to be provided:

- (a) Unmanned robot arm.
- (b) Remote Operated Vehicles (ROV).
- (c) Unmanned Aerial Vehicles/Drones.
- (d) Other means acceptable to LR.

Existing paragraphs 1.6.13 to 1.6.16 have been renumbered 1.6.14 to 1.6.17.

## 1.7 Remote Inspection Technique (RIT)

1.7.1 Consideration may be given by LR to allow the use of a RIT as a means to carry out a close-up survey. Surveys conducted using a RIT are to be completed to the satisfaction of the attending Surveyor. The following requirements are applicable:

- (a) The RIT is to provide the information normally obtained by a Surveyor when using traditional means of access to perform the survey.
- (b) Surveys performed with the use of a RIT are to be carried out in accordance with the requirements given in *IACS Recommendation 42 'Guidelines for Use of Remote Inspection Techniques for surveys'*. These considerations are to be included in the proposals for use of a RIT which are to be submitted in advance of the survey so that satisfactory arrangements can be agreed with LR.
- (c) The equipment and procedure for observing and reporting the survey using a RIT are to be discussed and agreed prior to the survey using a RIT.
- (d) Time is to be allowed to set up, calibrate and test all equipment beforehand.
- (e) When using a RIT as a means to carry out a close-up survey, if not carried out by LR itself, it is to be conducted by a firm approved as a service supplier and is to be witnessed by the attending Surveyor.
- (f) The structure to be examined using a RIT is to be sufficiently clean and visibility is to be sufficient to allow a meaningful examination. LR is to be satisfied with the methods of orientation on the structure.
- (g) The Surveyor is to be satisfied with the method of data presentation including pictorial representation, and a good two-way communication between the Surveyor and the RIT operator is to be provided.
- (h) When a RIT is used as a means to carry out a close-up survey, means of access for the corresponding thickness measurements are to be provided unless the RIT is also able to carry out the required thickness measurements.
- (i) If the RIT reveals damage or deterioration that requires attention, the Surveyor may require a further close-up survey to be undertaken without the use of a RIT.

## 1.8 Thickness measurement at surveys

Existing paragraphs 1.7.1 to 1.7.8 have been renumbered 1.8.1 to 1.8.8.

1.8.9 The acceptance criteria for thickness measurements are according to the LR document *Thickness Measurement and Close-Up Survey Guidance*.

Existing paragraphs 1.7.9 to 1.7.11 have been renumbered 1.8.10 to 1.8.12.

Existing sub-Sections 1.8 and 1.9 have been renumbered 1.9 and 1.10.

## ■ Section 2 Annual Surveys – Hull and machinery requirements

### 2.2 Annual Surveys

(Part only shown)

2.2.1 The survey is to include:

- (a) An examination for the purpose of ensuring, as far as practicable, that the hull, hatch covers, hatch coamings, closing appliances, equipment and related piping are maintained in a satisfactory condition and shall take into account the service history, condition and extent of the corrosion prevention system of ballast tanks and areas identified in the ship's classification records.

(Part only shown)

2.2.2 The following requirements for hatch covers and coamings are applicable:

- (h) For **bulk carriers** the following requirements are also applicable:
  - (iv) Where the cargo hatch securing system does not function properly, repairs are to be carried out under the supervision of the Surveyor. Where hatch covers or coamings undergo substantial repairs, the strength of securing devices shall be upgraded to comply with *Pt 4, Ch 7, 12 Steel hatch covers 12.3*.

## ■ Section 5

### Special Survey – General – Hull requirements

#### 5.3 Examination and testing

5.3.1 All spaces within the hull and superstructure are to be examined unless specified otherwise by this Section.

5.3.2 At Special Survey III and subsequent special surveys, structural downflooding ducts and structural ventilation ducts are to be internally examined.

*Existing paragraphs 5.3.2 to 5.3.24 have been renumbered 5.3.3 to 5.3.25.*

#### 5.6 Thickness measurement

5.6.7 Steel evaluation of hatch covers on exposed decks and hatch coamings and closing arrangements of cargo holds on ships with contract for construction on or after 1 July 2012 is to be in accordance with IACS UR S21A. Further information is provided in the LR document *Thickness Measurement and Close-Up Survey Guidance*.

~~5.6.8~~ Steel renewal is required where the gauged thickness is less than  $t_{net} + 0,5$  mm. For definition of  ~~$t_{net}$~~ , see Pt 4, Ch 7, 12.1 General 12.1.2.

~~5.6.9~~ Where the gauged thickness is within the range  $t_{net} + 0,5$  mm and  $t_{net} + 1,0$  mm, a coating (applied in accordance with coating manufacturer's requirements) or annual gauging may be adopted as an alternative to steel renewal.

## ■ Section 7

### Special Survey – Oil tankers (including ore/oil ships and ore/bulk/oil ships) – Hull requirements

#### 7.6 Close-up Survey

**Table 3.7.3 Minimum requirements for Close-up Survey - Double hull oil tankers**

Special Survey I (Ships 5 years old)	Special Survey II (Ships 10 years old)	Special Survey III (Ships 15 years old)	Special Survey IV (Ships 20 years old and over)
<p>(1) One web frame ring in a complete ballast tank. See Notes 1 and 3.</p> <p>(2) One deck transverse in a cargo tank. See Note 4.</p> <p>(3) One transverse bulkhead in a complete ballast tank. See Notes 1 and 6.</p> <p>(4) One transverse bulkhead in a cargo centre tank. See Notes 2 and 7.</p> <p>(5) One transverse bulkhead in a cargo wing tank. See Notes 2 and 7.</p>	<p>(1) All web frame rings in a complete ballast tank. See Notes 1 and 3.</p> <p>(2) The knuckle area and the upper part (approx. 5 m) of one web frame ring in each remaining ballast tank. See Note 8.</p> <p>(3) One deck transverse in two cargo tanks. See Note 4.</p> <p>(4) One transverse bulkhead in each complete ballast tank. See Notes 1 and 6.</p> <p>(5) One transverse bulkhead in two cargo centre tanks. See Notes 2 and 7.</p> <p>(6) One transverse bulkhead in a cargo wing tank. See Notes 2 and 7.</p>	<p>(1) All web frame rings in all ballast tanks. See Note 3.</p> <p>(2) All web frame rings in a cargo tank. See Note 9.</p> <p>(3) One web frame ring in each remaining cargo tank. See Note 9.</p> <p>(4) All transverse bulkheads— in all cargo and ballast tanks. See Notes 5 and 6.</p> <p>(5) As considered necessary by the Surveyor. See Note 10.</p>	<p>(1) As Special Survey III.</p> <p>(2) Additional transverse areas if deemed necessary by the Surveyor. See Note 10.</p>
<p>Note 1. Complete ballast tank means double bottom tank plus the double side tank and the double deck tank, as applicable, even if these are separate. Apart from the fore and aft peak tanks, the term "ballast tank" has the following meaning:</p> <p>(a) all ballast compartments (hopper tank, side tank and double deck tank, if separate from double bottom tank) located on one side, i.e. port or starboard, additionally double bottom tank on port plus starboard, when the longitudinal central girder is not watertight and, therefore, the double bottom tank is a unique compartment from port to starboard, or</p> <p>(b) all ballast compartments (double bottom tank, hopper tank, side tank and double deck tank) located on one side, i.e. port or starboard, when the longitudinal central girder is watertight and, therefore, the port double bottom tank is separate from the starboard double bottom tank.</p>		<p>Note 6. Transverse bulkhead complete in ballast tanks, including girder system and adjacent structural members including longitudinal bulkheads, girders in double bottom tanks, inner bottom plating, hopper side, connecting brackets.</p> <p>Note 7. Transverse bulkhead lower part in cargo tanks, including girder system, adjacent structural members (including longitudinal bulkheads) and internal structure of lower stool, where fitted.</p> <p>Note 8. The knuckle area and the upper part (approximately 5 m), including adjacent structural members. Knuckle area is the area of the web frame around the connections of the sloping hopper plating to the inner hull bulkhead and the inner bottom plating, up to 2 m from the corners both on the bulkhead and the double bottom.</p>	

Note 2. Where there are no centre tanks, the transverse bulkheads in wing tanks are to be subject to Close-up Survey. Where there are no wing tanks, the transverse bulkheads in centre tanks are to be subject to Close-up Survey.

Note 3. Web frame ring in a ballast tank includes the vertical web in side tank, hopper web in hopper tank, floor in double bottom tank and deck transverse in a double deck tank and adjacent structural members. In peak tanks a web frame means a complete transverse web frame, including adjacent structural members.

Note 4. Deck transverse including adjacent deck structural members (or external structure on deck in way of the tank, where applicable).

Note 5. Transverse bulkhead complete in cargo tanks, including girder system, adjacent structural members (including longitudinal bulkheads) and internal structure of lower and upper stools, where fitted.

Note 9. Web frame ring in cargo tank includes deck transverse, longitudinal bulkhead vertical girder and cross ties, where fitted, and adjacent structural members.

Note 10. Additional complete transverse web frame ring.

## Section 9

### Ships for liquefied gases

#### 9.1 General

9.1.5 The survey requirements of *Pt 1, Ch 3, 9.2 Annual Surveys – Basic requirements* to *Pt 1, Ch 3, 9.11 Special Survey III and Special Surveys thereafter (ships 15 years old and over)* shall additionally be applied to gas fuel tanks and their associated systems, as applicable.

#### 9.4 Annual Surveys – ~~Methane~~ Gas fuel burning equipment and other equipment components

9.4.1 The following components are to be generally examined externally. If insulation is fitted, this need not be removed, but any deterioration of insulation, or evidence of dampness which could lead to external corrosion of the vessels or their connections, is to be investigated:

- (a) Heat exchangers and pressure vessels for use with ~~methane~~ gas fuel burning in boilers or machinery.
- (b) Cargo heaters, vaporisers, masthead heaters and other miscellaneous pressure vessels.

9.4.5 Ventilation systems are to be checked for satisfactory operation, if separate from the cargo venting arrangements.

9.4.6 Fuel tanks and relief valves are to be externally examined, where applicable.

#### 9.9 Special Survey I (ships five years old) – ~~Methane~~ Gas fuel burning equipment

9.9.1 Where ~~methane~~ gas fuel is used as fuel for main propulsion purposes, the associated compressors and heat exchangers are to be opened out and examined as for reliquefaction/refrigeration equipment. The ~~steam side of steam heaters glycol/water or steam side of the heaters~~ is to be hydraulically tested to 1,5 times the design pressure.

9.9.2 ~~Methane gas~~ Gas fuel pipe trunks or casings are to be generally examined and the exhaust or inerting arrangements for these trunks are to be verified.

9.9.3 All alarms associated with the ~~methane~~ gas fuel burning systems are to be verified.

#### 9.10 Special Survey II and Special Surveys thereafter (ships 10 years old and over)

9.10.3 All other pressure vessels in the reliquefaction/refrigeration system, ~~methane~~ gas fuel burning system and other handling systems are to be pneumatically tested to a pressure equal to the designed working pressure.

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Published by Lloyd's Register Group Limited  
*Registered office* (Reg. no. 08126909)  
71 Fenchurch Street, London, EC3M 4BS  
United Kingdom

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