



RULES CHANGE NOTICE No.1

October 2022

Part 1 Seagoing Ships

Volume I

RULES FOR CLASSIFICATION AND SURVEYS

Consolidated Edition 2022

Biro Klasifikasi Indonesia

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Foreword

This Rules Change Notice (RCN) No.1 gives new additions and amendments to the “Rules for Classification and Surveys (Pt.1, Vol.I), 2022 Consolidated Edition” along with the effective dates from which these changes are applicable.

Amendments to the preceding Edition are marked by strikethrough, red color, and expanded text. These new additions and amendments are to be read in conjunction with the requirements given in the 2022 Consolidated Edition of the Rules.

The summary of current amendments for each section including the implementation date are indicated in ***Table 1 - Amendments Incorporates in This Notice.***

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Further queries or comments concerning this Rules are welcomed through communication to BKI Head Office.

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Rules Changes Notice No. 1 – October 2022

Table 1 – Amendments Incorporates in This Notice

These amendments will come into force from 1st January 2023 unless specify otherwise below:

Paragraph	Title/Subject	Status/Remark
Section 1 – General Term and Conditions		
H	Disagreement	
2	-	Changing authoritative text related to the event of doubts as to the interpretation of General Terms and Conditions
Section 2 – Classification		
A	General	
1.4.4.1	-	Corrigenda
Table 2.1	Transparency of Classification and Statutory Information	Changing requirements according to IACS PR 3
2	Scope	
2.2	-	Updating reference
2.5	-	Adding new requirement
2.6	-	renumbering
2.7	-	renumbering
2.7.2	-	Adding new reference
B	Validity of Class	
2.2.1.1)	-	Corrigenda
2.2.2.1)	-	Corrigenda
2.3	-	Changing Requirement
5.6	-	Corrigenda
Section 3 – Surveys – General Requirements		
A	General Information	
3.7	Imposing, clearing and controlling Conditions of Class	Supersede requirements according to IACS PR 35
3.7.1 – 3.7.4	-	Supersede requirements according to IACS PR 35
3.7.6	-	Adding new requirements according to IACS PR 35
9.	Remote Classification Surveys	Adding new requirements
B	Surveys for Maintenance of Class	
1.1.2.12)	-	Adding new requirement regarding annual survey of ships carrying container
1.3.2.17)	-	Adding new requirement regarding renewal survey of ships carrying container
Table 3.1	Minimum Requirements for Thickness Measurements at Class Renewal Survey	Changing requirement according IACS UR 27
<i>The amendments are effective from 1 July 2023</i>		
Table 3.3	Minimum Requirements for Internal Examination at Hull Class Renewal Surveys of Fuel Oil, Lube Oil and Fresh Water Tanks	Corrigenda
1.3.5.2); 3)	-	Renumbering

Paragraph	Title/Subject	Status/Remark
1.4.1.1).A)	-	Adding new reference
1.4.1.1).B)	-	Adding new reference
1.4.1.1).B).c)	-	Corrigenda
1.4.1.2).A); B)	-	Adding new reference
1.4.1.3).A): B)	-	Adding new reference
1.4.2.1).B).b)	-	Corrigenda
D	Thickness Measurement	
1.4	-	Adding new requirements and reference
Section 4 – Surveys		
I.	Additional Requirements for Ships with ESP Notation	
C.	Double Hull Oil Tankers	
Table 4-I.5	Class Renewal Surveys of Double Hull Oil Tankers, Ore/Oil Ships etc. Minimum Requirements for Thickness Measurements	Changing requirement according to IACS UR Z10.4
D.	Chemical Tankers	
Table 4-I.8	Class Renewal Surveys of Chemical Tankers Minimum Requirements for Thickness Measurements	Changing requirement according to IACS UR Z10.3
II.	Additional Requirements for Ships Not Subject to ESP Notation	
A.	Liquefied Gas Carrier	
3.3.3	Electrical equipment	Adding new note according to IACS UR Z16
4.7.2.6)	-	Corrigenda
B	General Dry Cargo Ships	
5.	Class Renewal Surveys	Corrigenda
Annex A - Annexes to Section 1-3		
A.1	Procedures for Confined Space Safe Entry	
B.	Definitions	
8.	Toxic Product	Corrigenda according to IACS PR 37
C.	Requirements	
1.2	-	Corrigenda
A.5	Survey of Watertight Cable Transits	
Table A-5.1	Recommendatory Sample-Cable Transit Seal System Register	Corrigenda
A.7	Definition	Corrigenda according to IACS UR Z10.3 and 10.4
Annex B - Annexes to Section 4-I		
B.4	Technical Assessment in Conjunction with the Planning of Enhanced Surveys for Class Renewal Survey Hull	Corrigenda
2.3	Timing	Corrigenda
B.7	Guidelines for the Thickness Measurements of Side Shell Frames and Brackets in Single-Side Skin Bulk Carriers Required to Comply with URS 31	
4.1	-	Corrigenda
B.8	Additional Annual Survey Requirements for the Foremost Cargo Hold of Ships Subject to Regulation XII/9 of the Convention	
2.1.1	-	Corrigenda
2.2	-	Corrigenda
2.2.1	-	Corrigenda

Section 1 General Term and Conditions

H. Disagreement

1. In the event that individual provisions of the contract between BKI and the client or these General Terms and Conditions are or become partly or as a whole ineffective, this will not affect the effectiveness of the remaining terms.

2. In the event of doubts as to the interpretation of the present General Terms and Conditions, the ~~Bahasa Indonesia~~ **English** text shall be authoritative.

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Section 2 Classification

A. General

1. Rules, Regulations and Guidelines

1.4 Responding to Port state control

1.4.4 Reporting of Deficiencies relating to Possible Safety Management System Failures

.1 When deficiencies relating to possible safety management system failures are identified by the Surveyor during a periodical (Annual/Intermediate/**Class** Renewal) survey or occasional survey, Statutory Surveys and additional surveys relevant to Port State Control, a report is to be completed by the Surveyor and sent to BKI Head office. The report are covers the following aspects:

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1.7 Transparency of classification and statutory information

1.7.1 The classification and statutory information which may be released to Ship-owners, Flag State, Port state, Insurance company and Shipyards as relevant and the conditions for their release are indicated in [Table 2.1](#).

Table 2.1 Transparency of Classification and **Statutory** Information

No	Information in Question	Information available to:				
		Owners	Flag State	Port State	Insurance Company*	Ship Yards
1	Class Societies Standing Documents:					
	– Rules and Guidelines (Class and statutory requirements)	1	1	1	1	1
	– Instructions to Surveyors		1			
	– Quality Manual	1	1	1	1	1
	– Register Book	1	1	1	1	1
2	Ship Related Information:					
	A. New buildings					
	– Approved Drawings	6	1			7
	– Formal Approval Letters	1				7
	– Certificates of Important Equipment	2				7
	B. Ships in Operation					
	I. Class Services					
	– Date (month and year) of all Class Surveys	7	1	1	1	
	– Expiry Date of Class Certificate	7	7**	1	1	
	– Certificates/Reports	7	1	6	5	
	– Overdue Surveys	7	7**	1	1	
	– Text of Conditions of Class /Recommendations	7	1	1	5	
	– Text of Overdue Conditions of Class /Recommendations	7	1	1	1	
	– Executive Hull Summary	7	3	3	3	
	II. Statutory Services					
	– Due Dates of Statutory Surveys	7	7**	1	1	
	– Expiry Date of Statutory Certificates	7	7**	1	1	
	– Registered Statutory Rec. Condition	7	7**	1	5***	
	– Overdue Statutory Rec. Condition	7	7**	1	1***	

Table 2.1 Transparency of Classification and **Statutory** Information (*continued*)

No	Information in Question	Information available to:				
		Owners	Flag State	Port State	Insurance Company*	Ship Yards
3	Other Information:					
	– Correspondence File with Yard and/or Owner	6 4	6 4	4	5 & 6 4	
	– Audit of Class Societies QA System	7	7	7	7	
	– Class Transfer Reporting	7	7	7	7	
	– Class Withdrawal Information					
<p>* Insurance Company means P&I Clubs and Hull Underwriters. ** If stated in Agreement. *** Unless prevented by the agreement with the flag State. Key: 1. Available upon request. 5. When accepted by Owners - or through special clause in insurance contract. 2. At delivery of the ship by Shipyard. 6. When accepted by Owner (Master) or Shipyard as applicable. 3. Available under visit on board. 7. Automatically available. 4. Result of audit available on request.</p>						

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2. Scope

2.2 On request, certain installations e. g. refrigerating installations may be classed separately, see 2.67.

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2.5 Where used, the terms “at the discretion of the surveyor” and “as deemed necessary” means the surveyors will use their professional judgement based on objective evidence to decide the level of survey required.

2.56 The truth of documentation and information

2.56.1 The submitted documentation and information from clients, which forms the basis for classification shall, at all times, reflect the true status.

2.56.2 Classification-related documents and information are liable to be invalidated by BKI whenever their object is found to differ from that on which they were based or to be contrary to the applicable requirements.

2.56.3 BKI is not responsible for the consequences arising from any use of the above classification-related documents and information

2.67 Refrigerating installations

2.67.1 For the purpose of the present Rules the following are considered to be refrigerating installations:

- cargo refrigerating installations for the refrigeration of insulated cargo holds
- container refrigerating installations for the refrigeration of insulated containers,

Provided that the refrigerating installations are permanently installed and form an integral part of the ship.

The refrigerating installation includes the technical installations required for power supply.

2.67.2 Reefer units which can be connected to a container and transported in combination therewith, and containers with or without a reefer unit, are subject to the Regulation for Construction, Repair and Testing of Freight Containers [Guidelines for Freight Containers \(Pt.6, Vol.8\)](#).

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B. Validity of Class

2. Prerequisites for validity of Class

2.2.1 The Class Certificate will become invalid and the Class will be automatically suspended in any one of the following cases:

- 1) when **Class** Renewal Survey has not been completed or is not under attendance for completion prior to resuming trading, by the due date, or by the expiry date of any extension granted.

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2.2.2 The Class Certificate will become invalid and the Class may be suspended in accordance with BKI's suspension procedure, in any one of the following cases:

- 1) when the other survey required for maintenance of class (other than Annual, Intermediate and **Class** Renewal survey) is not carried out by the due date and no extension has been granted.

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2.3 BKI Head Office/Branch Office are to be immediately informed about any average or deficiencies and damages to hull and machinery, where these may be of relevance to the vessel's class. A survey will have to be arranged **immediately after** ~~for a date not later than that of~~ vessel's arrival at the next port. If the survey reveals that vessel's class has been affected, the vessel's class will be maintained only on condition that the repairs or modifications demanded by BKI will be carried out within the period specified by the Surveyor. Until full settlement of these conditions, Class will be restricted, see also [4.1](#).

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5. Laid-up ships

5.6 In cases where the vessel has been laid up or has been out of service for a considerable period because of a major repair or modification and the owner elects to carry out only the overdue surveys, the next period of class will start from the expiry date of the **class** renewal survey. If the owner elects to carry out the next Class Renewal survey due, the period of class will start from the survey completion date.

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Section 3 Surveys – General Requirements

A. General Information

3. Documentation, Confirmation of Class

3.7 Imposing, clearing and controlling ~~recommendations~~ **Conditions of Class**

3.7.1 ~~Recommendations~~ **Condition of Class** shall be imposed for the following:

- Repairs and/or renewals related to damages that affect Classification (e.g. grounding, structural damages, machinery damages, wastage over the allowable limits, etc.)
- Supplementary survey requirements
- Temporary repairs

3.7.2 For repairs not completed at the time of survey, a ~~Recommendation~~ **Condition of Class** is to be imposed. In order to provide adequate information to the surveyor attending for survey of the repairs, the ~~Recommendation~~ **Condition of Class** is to be sufficiently detailed with identification of items to be repaired. For identification of extensive repairs, reference may be given to the survey report.

3.7.3 ~~Recommendations~~ **Condition of Class** may require imposing limitations related to navigation and operation that are deemed necessary for continued operation under Classification (e.g. loss of anchor and/or chain, etc).

3.7.4 ~~Recommendations~~ **Condition of Class** are given in writing with a time limit for completion to the owner's representatives/Ship's Master, and are clearly stated on the Certificate of Class or an attachment to the Certificate of Class and/or class survey status or report.

3.7.5 Owners will be notified of these dates and that the vessel's class will be subject to a suspension procedure if the item is not dealt with, or postponed, by the due date.

3.7.6 Clearance of ~~Recommendations~~ **Condition of Class** shall be supported by an Occasional survey report giving details of all associated repairs and/or renewals, or of the supplemental surveys carried out. Repairs carried out shall be reported with identification of:

- Compartment and location
- Structural member
- Repair method
- Repair extent
- NDT/Tests

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9. Remote Classification Surveys

9.1 General

9.1.1 Remote Survey is a process of verifying that a ship and its equipment are in compliance with these Section where the verification is undertaken, or partially undertaken, without attendance on board by a surveyor.

9.1.2 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.

9.2 Application

9.2.1 The survey which may be carried out remotely are limited as specified below.

- Postponement, issuance, deletion of Condition of Class
- Postponement of Class surveys
- Items of Continuous Survey for Machinery or Planned Maintenance Scheme
- Occasional survey for change of ship's name
- Occasional survey for loss of anchor
- Occasional survey for minor machinery or equipment damage
- Occasional survey for minor hull damage
- Occasional survey for minor deficiencies/defects not subject to a Condition of Class
- In-water bottom survey
- 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
- Non-propelled / un-manned barges/pontoon – annual surveys when no survey of hull compartments is due
- Minor retrofit / installation/upgrade of equipment
- Documentary or data based initial / periodical / renewal / occasional verifications and surveys

9.2.2 The request for remote survey will subject to review by BKI Head Office. The technical requirements will be stipulated by BKI after the request is permitted by BKI Head office.

9.2.3 When the classification survey is also related to a statutory item, and BKI is carrying out the statutory survey on behalf of the flag State Administration, then the flag State Administration acceptance is required, and possible additional requirements are to be complied with.

9.2.4 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 BKI Head Office.

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B. Surveys for Maintenance of Class

1. Periodical surveys

1.1 Annual Surveys

1.1.2 Scope

The survey is to consist of 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.

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12) Additional items for container ship, container barge/pontoon, ships equipped for carriage of containers and ships equipped for carriage of ISO tank containers:

- random examination of the accessible fixed cargo securing fittings located on exposed decks, container stanchions and lashing bridges.
- Verification of entries in the maintenance and inspection record book documenting the inspections and maintenance of fixed container securing fittings and loose lashing gear.
- Verification of origin/identity of fixed container securing fittings and loose lashing gear, against approved cargo securing manual on board.

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1.3 Class Renewal Surveys

1.3.2 Scope

17) Survey of container ship, container barge/pontoon, ships equipped for the carriage of container, and ships equipped for the carriage of ISO tank container:

- A) Fixed container securing fittings with their supporting structures with respect to cracks, deformations and thickness diminution of:
- Cell guides including supports and connection of guide heads to top ends
 - container stanchions and racks on deck and in holds
 - securing supports and lashing fittings welded to inner bottom, container steps, stanchions, hatch covers, lashing bridges, etc.
- B) Hatch covers:
- Supports and stoppers with respect to condition and operability
 - guide rails and supporting frames including connection to hull with respect to cracks and deformations.
- C) Portable (loose) container securing equipment:
- Random examination for damage
 - Verification of product certificates kept in ship's files confirming that defective equipment has been replaced by equivalent and compatible parts
 - Verification that equipment not in use is collected and stored in appropriate bins, for Pontoon or Barges as far as practicable.

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Table 3.1 Minimum Requirements for Thickness Measurements at Class Renewal Survey

Class Renewal Survey No. I Age < 5	Class Renewal Survey No. II 5 < Age < 10	Class Renewal Survey No. III 10 < Age < 15	Class Renewal Survey No. IV and Subsequent 15 < Age
1) Suspect areas throughout the vessel.	1) Suspect areas throughout the vessel.	1) Suspect areas throughout the vessel.	1) Suspect areas throughout the vessel.
	2) One transverse section of deck plating in way of a cargo space within the amidships 0,5L (in way of a cargo space, if applicable)	2) Two transverse sections within the amidships 0,5L (in way of two different cargo spaces. If applicable)	2) A minimum of three transverse sections in way of cargo spaces within the amidships 0,5L. (in way of cargo spaces, if applicable)
		3) All cargo hold hatch covers and coamings (plating and stiffeners).	3) All cargo hold hatch covers and coamings (plating and stiffeners).
		4) Internals in forepeak and afterpeak tanks.	4) Internals in forepeak and afterpeak tanks.
			5) All exposed main deck plating full length.
			6) Representative exposed superstructure deck plating (poop, bridge, and forecastle deck).
			7) Lowest strake and strakes in way of 'tween decks of all transverse bulkheads in cargo spaces together with internals in way.
			8) All wind and water strakes, port and starboard, full length.
			9) All keel plates full length. Also, additional bottom plates in way of cofferdams, machinery space, and aft end of tanks.
			10) Plating of seachests. Shell plating in way of overboard discharges as considered necessary by the attending surveyor.

Notes:

1. Thickness measurement locations are to be selected to provide the best representative sampling of areas likely to be most exposed to corrosion, considering cargo and ballast history and arrangement and condition of protective coatings.
2. Thickness measurements of internals may be specially considered by the Surveyor if the hard-protective coating is in GOOD condition.
3. For ships less than 100 m in length, the number of transverse sections required at Class Renewal Survey No. III may be reduced to one (1), and the number of transverse sections required at Subsequent Class Renewal Surveys may be reduced to two (2).
4. For ships more than 100 m in length, at Class Renewal Survey No. III, thickness measurements of exposed deck plating within amidship 0,5L may be required.
5. Subject to cargo hold hatch covers of approved design which structurally have no access to the internals, thickness measurement shall be done of accessible parts of hatch covers structures.

Table 3.3 Minimum Requirements for Internal Examination ~~at~~ at Hull Class Renewal Surveys of Fuel Oil, Lube Oil and Fresh Water Tanks

Tank	Class Renewal Survey No. I Age < 5	Class Renewal Survey No. II 5 < Age < 10	Class Renewal Survey No. III 10 < Age < 15	Class Renewal Survey No. IV and Subsequent 15 < Age
Fuel Oil Bunker tanks - Engine Room - Cargo Length Area - If no tanks in Cargo Length Area, additional fuel tank(s) outside of Engine Room (if fitted)	None None None	None One One	One Two One	One Half, minimum 2 Two
Lube Oil	None	None	None	One
Fresh Water	None	One	All	All
Notes: 1) These requirements apply to tanks of integral (structural) type. 2) If a selection of tanks is accepted to be examined, then different tanks are to be examined at each Class Renewal Survey, on a rotational basis. 3) Peak tanks (all uses) are subject to internal examination at each Class Renewal Survey. 4) At Class Renewal Surveys no. III and subsequent surveys, one deep tank for fuel oil in the cargo length area is to be included, if fitted.				

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1.3.5 Surveys based on Condition Monitoring Systems

4-2) Procedures and Conditions for approval of CM and CBM

A) Onboard Responsibility

- The chief engineer shall be the responsible person on board in charge of the CM and CBM.
- Documentation on the overhaul of items covered by CM and CBM schemes shall be reported by the chief engineer.
- Access to computerized systems for updating of the maintenance documentation and maintenance program shall only be permitted by the chief engineer or other authorized person.
- All personnel involved in CM and CBM shall be appropriately qualified.

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5-3) Surveys

A) Installation Survey

- Condition monitoring equipment is to be installed and surveyed in accordance with class society rules, and a set of base line readings is to be taken.

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1.4 Periodical surveys of propeller shafts and tube shafts, propellers, vane wheels and other systems

For maintenance of the Class, periodical surveys and tests of propeller shafts and tube shafts, propellers, vane wheels and other systems of seagoing ships are to be carried out.

1.4.1 Propeller shafts and tube shafts

Unless alternative means are provided to assure the condition of the propeller shaft assembly, these requirements apply to all vessels with conventional shafting fitted with a propeller as follows:

- from 1 January 2016 for ships delivered on or after 1 January 2016;
- after the first shaft survey scheduled on or after 1 January 2016, for ships delivered before 1 January 2016.

1) Oil lubricated shafts

A) Survey intervals (see Table 3.6)

For surveys completed within 3 months before the shaft survey due date, the next period will start from the shaft survey due date.

a) Flanged propeller connection

The following Methods are applicable:

- i) Method 1 every 5 years, or
- ii) Method 2 every 5 years (pre-requisites have to be fulfilled), or
- iii) Method 3 every 5 years (pre-requisites have to be fulfilled).

b) Keyless propeller connection

The following Methods are applicable:

- i) Method 1 every 5 years, or
- ii) Method 2 every 5 years (pre-requisites have to be fulfilled), or
- iii) Method 3 every 5 years (pre-requisites have to be fulfilled). The maximum interval between two surveys carried out according to Method 1 or Method 2 shall not exceed 15 years, except in the case when one extension for no more than three months is granted.

c) Keyed propeller connection

The following Methods are applicable:

- i) Method 1 every 5 years, or
- ii) Method 2 every 5 years (pre-requisites have to be fulfilled).

B) Survey extensions (see Table 3.6)

For all types of propeller connections, the interval between two consecutive surveys may be extended after the execution of extension survey as follows:

- a) Extension up to a maximum of 2,5 years: no more than one extension can be granted. No further extension, of other type, can be granted.
- b) Extension up to a maximum of 1 year: no more than two consecutive “one year extensions” can be granted. No further extension, of other type, can be granted.

In the event an additional extension is requested, the requirements of the “2,5 year extension” are to be carried out and the shaft survey due date, prior to the previous extension(s), is extended for a maximum of 2,5 years.

- c) Extension up to a maximum of 3 months: no more than one “three months extension” can be granted. In the event an additional extension is requested, the requirements of the “one year extension” or “2,5 years extension” are to be carried out and the shaft survey due date, prior to the previous extension, is extended for a maximum of one year or 2,5 years.

~~In the event an additional extension is requested, the requirements of the “one year extension” or “2,5 years extension” are to be carried out and the shaft survey due date, prior to the previous extension, is extended for a maximum of one year or 2,5 years.~~

The extension survey should normally be carried out within 1 month of the shaft survey due date and the extension counts from the shaft survey due date.

If the extension survey is carried out more than 1 month prior to the shaft survey due date, then the period of extension counts from the date of the extension survey was completed

2) Closed loop system fresh water lubricated shafts

The maximum interval between two surveys carried out according to Method 1 shall not exceed 15 years. An extension for no more than three months can be granted.

A) Survey intervals (see Table 3.6)

For surveys completed within 3 months before the shaft survey due date, the next period will start from the shaft survey due date.

a) Flanged propeller connection

The following Methods are applicable:

- i) Method 1 every 5 years, or
- ii) Method 2 every 5 years (pre-requisites have to be fulfilled), or
- iii) Method 3 every 5 years (pre-requisites have to be fulfilled).

b) Keyless propeller connection

The following Methods are applicable:

- i) Method 1 every 5 years, or
- ii) Method 2 every 5 years (pre-requisites have to be fulfilled), or
- iii) Method 3 every 5 years (pre-requisites have to be fulfilled).

c) Keyed propeller connection

The following Methods are applicable:

- i) Method 1 every 5 years, or
- ii) Method 2 every 5 years (pre-requisites have to be fulfilled).

B) Survey extensions (see Table 3.6)

For all types of propeller connections, the interval between two consecutive surveys may be extended after the execution of extension survey as follows:

- a) Extension up to a maximum of 2,5 years, no more than one extension can be granted. No further extension, of other type, can be granted.
- b) Extension up to a maximum of 1 year, no more than two consecutive extensions can be granted. No further extension, of other type, can be granted.

In the event an additional extension is requested, the requirements of the “2,5 year extension” are to be carried out and the shaft survey due date, prior to the previous extension(s), is extended for a maximum of 2,5 years.

- c) Extension up to a maximum of 3 months, no more than one “three months extension” can be granted.

In the event an additional extension is requested, the requirements of the “one year extension” or “2,5 years extension” are to be carried out and the shaft survey due date, prior to the previous extension, is extended for a maximum of one year or 2,5 years.

The extension survey should normally be carried out within 1 month of the shaft survey due date and the extension counts from the shaft survey due date.

If the extension survey is carried out more than 1 month prior to the shaft survey due date, then the period of extension counts from the date of the extension survey was completed.

The maximum interval between two surveys carried out according to Method 1 shall not exceed 15 years, except in the case when one extension for no more than three months is granted.

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3) Water Lubricated shafts (open systems)

A) Survey Intervals (see Table 3.7)

The following survey intervals between surveys according to Method 4 are applicable to all types of propeller connections.

- For keyless propeller connections, the maximum interval between two consecutive dismantling and verifications of the shaft cone by means of non-destructive examination (NDE) shall not exceed 15 years.
- For surveys completed within 3 months before the shaft survey due date, the next period will start from the shaft survey due date.
- a) Configurations allowing 5 year intervals
 - i) Single shaft operating exclusively in fresh water.
 - ii) Single shaft provided with adequate means of corrosion protection, single corrosion resistant shaft.
 - iii) All kinds of multiple shafts arrangements.

b) Other systems

Shaft not belonging in one of the configurations listed in 3).A).a) above has to be surveyed according to Method 4 every 3 years.

B) Survey extensions (see Table 3.7)

For all types of propeller connections, the interval between two consecutive surveys may be extended after the execution of extension survey as follows:

- a) Extension up to a maximum of 1 year: no more than one extension can be granted. No further extension, of other type, can be granted.
- b) Extension up to a maximum of 3 months: no more than one “three months extension” can be granted. In the event an additional extension is requested the requirements of the “one year extension” are to be carried out and the shaft survey due date prior to the previous extension is extended for a maximum of one year.

The extension survey should normally be carried out within 1 month of the shaft survey due date and the extension counts from the shaft survey due date.

If the extension survey is carried out more than 1 month prior to the shaft survey due date, then the period of extension counts from the date of the extension survey was completed.

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1.4.2 Shaft Survey Methods

1) Oil Lubricated shafts or Closed Loop System Fresh Water Lubricated Shafts (closed system)

B) METHOD 2

- a) For keyed and keyless connections:
 - i) Removing the propeller to expose the forward end of the taper,

- ii) Performing a non-destructive examination (NDE) by an approved surface crack-detection Method all around the shaft in way of the forward portion of the taper section, including the keyway (if fitted).
- b) For flanged connection:
 - i) Whenever the coupling bolts of any type of flange-connected shaft are removed or the flange radius is made accessible in connection with overhaul, repairs or when deemed necessary by the surveyor, the coupling bolts and flange radius are to be examined by means of an approved surface crack detection Method.
- c) Checking and recording the bearing wear down measurements.
- d) Visual Inspection of all accessible parts of the shafting system.
- e) Verification that the propeller is free of damages which may cause the propeller to be out of balance.
- f) Seal liner found to be or placed in a satisfactory condition.
- g) Verification of the satisfactory re-installation of the propeller including verification of satisfactory conditions of inboard and outboard seals.

Pre-requisites to satisfactorily verify in order to apply METHOD 2:

- a) Review of service records.
- b) Review of test records of:
 - i) Lubricating Oil analysis (for oil lubricated shafts), or
 - ii) Fresh Water Sample test (for closed system fresh water lubricated shafts).
- c) Oil sample Examination (for oil lubricated shafts), or Fresh Water Sample test (for closed system fresh water lubricated).
- d) Verification of no reported repairs by grinding or welding of shaft and/or propeller.

-----end-----

D. Thickness Measurement

1. Procedural Requirements

1.4 Thickness measurement is normally to be carried out by means of ultrasonic test equipment. The accuracy of the equipment is to be proven to the Surveyor as required in A.7. BKI provides guidance for thickness measurements using ultrasonic test equipment in *Petunjuk Pelaksanaan Standar Pengukuran Ketebalan Konstruksi Lambung (Pt.1, Vol.X)* which can be used by operators, shipyards and service suppliers.

The thickness measurements are to be carried out by a firm authorized by BKI

-----end-----

Section 4 Surveys

I. Additional Requirements for Ships with ESP Notation

C. Double Hull Oil Tankers

Table 4-I.5 Class Renewal Surveys of Double Hull Oil Tankers, Ore/Oil Ships etc. Minimum Requirements for Thickness Measurements

Class Renewal Survey No. I age ≤ 5	Class Renewal Survey No. II 5 < age ≤ 10	Class Renewal Survey No. III 10 < age ≤ 15	Class Renewal Survey No. IV and Subsequent age > 15
1. Suspect areas	1. Suspect areas	1. Suspect areas	1. Suspect areas
2. One section of deck plating for the full beam of the ship within the cargo area	2. Within the cargo area: .1 Each deck plate .2 One transverse section	2. Within the cargo area: .1 Each deck plate .2 Two transverse sections ⁽¹⁾ .3 All wind and water strakes	2. Within the cargo area: .1 Each deck plate .2 Three transverse sections ⁽¹⁾ .3 Each bottom plate
	3. Selected wind and water strakes outside	3. Selected wind and water strakes outside	3. All wind and water strakes, full length
3. Measurements, for general assessment and recording of corrosion pattern, of those structural members subject to close-up survey according to Table 4-I.4.	4. Measurements, for general assessment and recording of corrosion pattern, of those structural members subject to close-up survey according to Table 4-I.4.	4. Measurements, for general assessment and recording of corrosion pattern, of those structural members subject to close-up survey according to Table 4-I.4.	4. Measurements, for general assessment and recording of corrosion pattern, of those structural members subject to close-up survey according to Table 4-I.4.
⁽¹⁾ at least one section is to include a ballast tank within 0,5L amidships.			

-----end-----

D. Chemical Tankers

Table 4-I.8 Class Renewal Surveys of Chemical Tankers Minimum Requirements for Thickness Measurements

Class Renewal Survey [No.] and ship's age [years]			
I. age ≤ 5	II. 5 < age ≤ 10	III. 10 < age ≤ 15	IV. and subsequent, age > 15
One section of deck plating for the full beam of the ship within the cargo area (preferably in way of a ballast tank, if any, or a cargo tank used primarily for water ballast)	Within the cargo area: – each deck plate – one transverse section ¹	Within the cargo area: – each deck plate – two transverse sections ¹	Within the cargo area: – each deck plate – three transverse sections ¹ – each bottom plate

Table 4-I.8 Class Renewal Surveys of Chemical Tankers Minimum Requirements for Thickness Measurements (*continued*)

Class Renewal Survey [No.] and ship's age [years]			
I. age ≤ 5	II. 5 < age ≤ 10	III. 10 < age ≤ 15	IV. and subsequent, age > 15
Measurements of structural members subject to Close-Up Survey according to Table 4-I.7.1 and 4-I.7.2 for general assessment and recording of corrosion pattern	Measurements of structural members subject to Close-Up Survey according to Table 4-I.7.1 and 4-I.7.2 for general assessment and recording of corrosion pattern		
Suspect Areas			
	Selected wind and water strakes, outside the cargo area		All wind and water strakes full length
	All wind and water strakes within the cargo area		
¹ At least one section is to include a ballast tank within 0,5L amidships.			

-----end-----

II. Additional Requirements for Ships Not Subject to ESP Notation

A. Liquefied Gas Carrier

3. Intermediate Surveys

3.3 Surveys of Cargo Installation

3.3.3 Electrical equipment

Electrical equipment in gas-dangerous spaces and zones is to be examined as far as practicable with particular respect to the following:

- Protective earthing (Spot check).
- Integrity of enclosures.
- Damage of outer sheath of cables.
- Function testing of pressurized equipment and of associated alarms.
- Testing of systems for de-energizing non-certified safe electrical equipment located in spaces protected by air-locks, such as electrical motor-rooms, cargo control rooms, etc.
- Testing of insulation resistance of circuits. Such measurements are only to be made when the ship is in a gas-free or inerted condition. Where proper records of testing are maintained consideration may be given to accepting recent readings by the ship's crew.

Note:

See also IACS Rec. No.120 Survey of electrical equipment installed in hazardous areas on tankers

-----end-----

4. Class Renewal Surveys

4.7 Surveys of Cargo Installation

4.7.2 Cargo containment survey

- 6) At every other Class Renewal Survey (i.e., 2nd, 4th, 6th, etc.), all independent cargo tanks type C are to be either:

- A) Hydraulically or hydro-pneumatically tested to 1,25 times MARVS, followed by nondestructive testing in accordance with 3).A), or
B) Subjected to a thorough, planned non-destructive testing.

This testing is to be carried out in accordance with a programme specially prepared for the tank design. If a special programme does not exist, the following applies:

- cargo tank supports and anti-rolling/anti-pitching devices,
- stiffening rings,
- Y-connections between tank shell and a longitudinal bulkhead of bilobe tanks,
- swash bulkhead boundaries,
- dome and sump connections to the tank shell,
- foundations for pumps, towers, ladders etc.,
- pipe connections.

At least 10% of the length of the welded connections in each of the above mentioned areas is to be tested. This testing is to be carried out internally and externally as applicable. Insulation is to be removed as necessary for the required non-destructive testing. ~~(The individual Societies may choose to include any one or both of the above listed two alternatives in their Rules.)~~

-----end-----

B. General Dry Cargo Ships

5. **Class** Renewal Surveys

-----end-----

Annex A Annexes to Section 1-3

A.1 Procedures for Confined Space Safe Entry

B. Definitions

8. Toxic Product

A Toxic Product means any chemical liquid, gas or solid material, which can give toxic vapor and which is assigned with suffix "T" in column "k" of table given in Chapter 17 of IBC Code, or assigned with suffix "T" or "F+T" in column "f" of table given in Chapter 19 of IGC Code, or classified as a Toxic Substance (Class/Division 6.1) within the part 2 of IMDG Code, or any other product which has a toxic symbol in the data sheet or is hazard classified as a toxic.

-----end-----

C. Requirements

1. Training

1.2 Competency in the areas covered by the training identified in 1.1 shall be periodically assessed, either as part of activity monitoring or some other suitable means. The maximum period between these assessments of competency is 3 years. Appropriate refresher training shall be provided as determined necessary from the competency assessment. The delivery mechanism for this refresher training is for the individual societies to determine.

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A.5 Survey of Watertight Cable Transits

B. Cable Transit Seal Systems Register

1 New Construction

1.1 A Cable Transit Seal Systems Register (Register) is to be provided by the shipbuilder for all watertight cable transits fitted to the ship. For an example of a register see [Table A-5.1](#). The Register can be in either a hard copy or digitized media. It is to include a marking / identification system, documentation referencing manufacturer manual(s) for each type of cable transit installed, the Type Approval certification for each type of transit system, applicable installation drawings, and a recording of each installed transit documenting the as built condition after final inspection in the shipyard. It is to include sections to record any inspection, modification, repair and maintenance.

Table A-5.1 Recommendatory Sample-Cable Transit Seal System Register

Name of Ship :		Sample	
IMO No. :		12345	
Place :		Hamburg	
Date :		XX/XX/2017	
Inspected by :		Smith	
Transits		4	
Total Openings		4	

TRANSIT			Inspected side		BRAND	FRAME		Type Approved	CONDITION (G.F.P)	INSPECTED	REPAIRED	MODIFIED	MAINTAINED	NOTES :	Checked by	DATE
Drawing number	ID	Location	F	B		Type	Opening number									
GIA-07-1047-000-883	TT-MCT-011				C	d=50	X							NVD	PTO	26/02/2015
GIA-07-1047-000-883	TT-MCT-012				C	450x200	X							NVD	PTO	26/02/2015
GIA-07-1047-000-883	TT-MCT-013				C	550x200	X							NVD	PTO	26/02/2015
GIA-07-1047-000-883	TT-MCT-014				C	750x200	X							Open, drilled hole not closed	PTO	26/02/2015

-----end-----

A.7 Definition

Ballast Tank

A tank which is used ~~solely~~ **primarily** for salt water ballast, or, where applicable, a space which is used for both cargo and salt water ballast will be treated as a Ballast tank when substantial corrosion has been found in that space. A Double Side Tank is to be considered as a separate tank even if it is in connection to either the topside tank or the hopper side tank.

Chemical Tanker

A ship constructed or adapted and used for the carriage in bulk of any liquid product listed in Chapter 17 of the International Code for The Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk, IBC Code.

The ship type notation "CHEMICAL TANKER", or equivalent, and the notation "ESP" shall be assigned to sea going self-propelled ships⁷ which are constructed generally with integral tanks and intended primarily to carry chemicals in bulk. This type notation shall be assigned to tankers of both single or double hull construction, as well as tankers with alternative structural arrangements. Typical midship sections are given in [Fig. A.7.2](#).

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Annex B Annexes to Section 4-I

B.4 Technical Assessment in Conjunction with the Planning of Enhanced Surveys for **Class** Renewal Survey Hull

2. Purpose and principles

2.3. Timing

As with other aspects of survey planning, the technical assessments described in these Annex should be completed by the owner or operator in cooperation with BKI in advance of the commencement of the **class** renewal survey, i.e. prior to commencing the survey and normally at least 12 to 15 months before the survey's completion due date.

B.7 Guidelines for the Thickness Measurements of Side Shell Frames and Brackets in Single-Side Skin Bulk Carriers Required to Comply with URS 31

4. Thickness measurement methodology

4.1 Numbers of side frames to be measured should be equivalent to those of the **class** renewal survey or intermediate survey corresponding to the ship's age. Representative thickness measurements should be taken for each zone as specified below.

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B.8 Additional Annual Survey Requirements for the Foremost Cargo Hold of Ships Subject to Regulation XII/9 of the Convention

2. Extent of survey

2.1 For bulk carriers of 5 to 15 years of age

2.1.1 An overall survey of the foremost cargo hold, including close-up survey of sufficient extent, minimum 25 per cent of frames, should be carried out to establish the condition of:

- shell frames including their upper and lower end attachments, adjacent shell plating, and transverse bulkheads; and
- areas found to be suspect areas at the previous **class** renewal survey.

-----end-----

2.2 For bulk carriers exceeding 15 years of age

An overall survey of the foremost cargo hold, including close-up survey should be carried out to establish the condition of:

- all shell frames including their upper and lower end attachments, adjacent shell plating, and transverse bulkheads; and
- areas found to be suspect areas at the previous **class** renewal survey.

– Extent of thickness measurement

2.2.1. Thickness measurement should be carried out to an extent sufficient to determine both general and local corrosion levels at areas subject to close-up survey, as described in [2.1](#) and [2.2](#) above. The minimum requirement for thickness measurements are areas found to be suspect areas at the previous **class** renewal survey. Where substantial corrosion is found, the extent of thickness measurements should be increased with the requirements of [Annex B.5](#).