TÜRK LOYDU RULE CHANGE SUMMARY

TL NUMBER: 05/2018 DECEMBER 2018

Latest editions of TL Rules incorporate all rule changes. The latest rule revisions of a published rule are shown with a vertical line. Changes after the publication of the rule are written in red colour.

Please note that within this document added items are written in red and for deleted items strikethrough is applied. After the publication of relevant rule, those revisions are to be indicated with a vertical line. Following Rule Changes presented in English are also implemented into Turkish Version of Rules.

RULE CHANGE SUMMARY

CLASSIFICATION AND SURVEYS

No	Item
01	Section 02
02	Section 03
03	Annex A

CHAPTER 1 - HULL

No	Item
01	Section 01
02	Section 02
03	Section 06
04	Section 07

CHAPTER 4 - MACHINERY

No	Item
01	Section 02
02	Section 03
03	Section 16
04	Section 18

CHAPTER 5 – ELECTRICAL INSTALLATION

No	Item
01	Section 08
02	Section 12
03	Section 13
04	Section 20

CHAPTER 7 – HIGH SPEED CRAFTS

No	Item
01	Section 06
02	Annex 2

CHAPTER 9 – CONSTRUCTION AND CLASSIFICATION OF YACHTS

No	Item
01	Section 03
02	Section 07

CHAPTER 35 – TENTATIVE RULES FOR SHIPS LESS THAN 500 GT

No	Item
01	Section D-04

CHAPTER 50 – CONSTRUCTION AND SURVEY OF LIFTING APPLIANCES

No	Item
01	Section 02

CHAPTER 78 – RULES FOR CLASSIFICATION OF SHIPS USING GASES OR OTHER LOW-FLASHPOINT FUEL

No	Item
01	Section 06

CHAPTER 101 – NAVAL SHIP TECHNOLOGY, CLASSIFICATION AND SURVEYS

No	Item
01	Section 02

CHAPTER 104 – NAVAL SHIP TECHNOLOGY, PROPULSION PLANTS

No	Item
01	Section 07

ADDITIONAL RULE – IMPLEMENTATION OF MARPOL ANNEX VI AND NOx TECHNICAL CODE

No	Item
01	General

ADDITIONAL RULE – SURVEY and CERTIFICATION RULES ON ENERGY EFFICIENCY OF SHIPS (MARPOL 73/78 ANNEX VI, CHAPTER 4)

No	Item
01	General

CLASSIFICATION AND SURVEYS

01. Section 02 – Classification

Revision Date: December 2018

Entry into Force Date: 1 January 2019

A 2.2.5 and 2.2.6 were added as below in accordance with Corrective Action Plan of GBS Initial Audit TL/2018/NC/01:

2.2.5 **TL** is committed to incorporate IACS Resolutions (Unified Requirements including Common Structural Rules, Unified Interpretations, Procedural Requirements) into its rules with same effective date as stated in respective IACS Resolutions. In this context, when a reference given to any IACS Resolution or Recommendation from TL Rules, the latest version of Resolutions/Recommendations are to be considered and applied.

2.2.6 For applicable rule sections for Bulk Carriers and Oil Tankers with **CSR** Notation, refer to Annex A.

Revision Date: December 2018

Entry into Force Date: 1 January 2019

A 2.4.4.1 were revised as below in accordance with Corrective Action Plan of GBS Initial Audit TL/2018/NC/03:

2.4.4.1 **TL** will not disclose any information received or reports made in connection with classification to any other party than those ~~entitled~~ mentioned in IACS PR03 or to those having been given the right to receive information by legislation, court decision or written permission from the owner.

Revision Date: December 2018

Entry into Force Date: 1 January 2019

A new Table 2.4a was added and References to CSR was removed from new Table 2.4b in accordance with Corrective Action Plan of TL/2018/NC/01:

Table 2.4a Ship type notations for bulk carriers designed and constructed in accordance with IACS Common Structural Rules for Bulk Carriers and Oil Tankers (CSR)

Class Notation	Description	Application	Rule Requirement, Design	Rule Requirement, Survey
CSR	Additional **CSR** class notation is mandatory and to be assigned to bulk carriers with a length of 90 m or above contracted for construction on or after 1st April 2006 and complying with the Rules of "IACS Common Structural Rules for Bulk Carriers and Oil	CSR Bulk Carriers	- IACS CSR Part 1 and Part 2 Chapter 1 - Part A Chapter 1 – Hull (Refer to Annex B for applicable sections) Chapter 2 – Material, (In Entirety) Chapter 3 – Welding (Refer to Annex C for applicable sections) - Part B Chapter 4 - Machinery,	IACS CSR Part 1 Chapter 13, IACS UR Z10.2, 10.5 as applicable, Refer Annex A for applicable sections of this rule.

Class Notation	Description	Application	Rule Requirement, Design	Rule Requirement, Survey
	Tankers".		Chapter 4-1 - Automation, Chapter 5 – Electrical Installations	
BULK CARRIER	Ships with L >= 90 m intended primarily to carry dry cargo in bulk and subject to the IACS Common Structural Rules for Bulk Carriers and Oil Tankers	CSR Bulk Carriers	Refer to Rule Requirement, Design for **CSR** Notation	IACS CSR Part 1 Chapter 13, IACS UR Z10.2, 10.5 as applicable
BC-C	Bulk carriers designed to carry dry bulk cargoes of cargo density less than 1.0 t/m^3	L >=150 m	IACS CSR Part 1 and Part 2 Chapter 1	
BC-B	Bulk carries designed to carry dry bulk cargoes of cargo density of 1,0 t/m^3 and above with all cargo holds loaded in addition to **BC-C** conditions	L >=150 m	IACS CSR Part 1 and Part 2 Chapter 1	
BC-A	Bulk carries designed to carry dry bulk cargoes of cargo density of 1,0 t/m^3 and above with specified holds empty at maximum draught in addition to **BC-B** conditions	L >=150 m	IACS CSR Part 1 and Part 2 Chapter 1	
{no MP}	For bulk carrier notations **BC-A**, **BC-B** and **BC-C** not designed for loading and unloading in multiple port		IACS CSR Part 1 and Part 2 Chapter 1	
{maximum cargo density … t/m^3}	Bulk carrier notations **BC-A** and **BC-B** designed for a maximum cargo density 3,0 t/m^3		IACS CSR Part 1 and Part 2 Chapter 1	
{holds a,b,…. may be empty}	For bulk carrier with notation **BC-A**		IACS CSR Part 1 and Part 2 Chapter 1	IACS CSR Part 1 Chapter 13, IACS UR Z10.2, 10.5 as applicable
{block loading}	For bulk carrier notation **BC-A,** when the ship is intended to operate in alternate block load condition		IACS CSR Part 1 and Part 2 Chapter 1	
GRAB [X]	For holds designed for loading /discharging by grabs. In the notation **X** is replaced by the unloaded grab weight.		IACS CSR Part 1 and Part 2 Chapter 1	

Class Notation	Description	Application	Rule Requirement, Design	Rule Requirement, Survey
	For bulk carriers with **BC-A** or **BC-B** the notation **GRAB [X],** with an unladen grab weight X equal to or greater than 20 tons is mandatory.(IACS CSR, Part 1,Ch.1, Sec. 1, 3.2.2) For bulk carriers other than **BC-A** or **BC-B** the Notation **GRAB [X]** is voluntary.			

~~**Table 2.4 Ship type notations for bulk carriers**~~ **Table 2.4b Ship type notations for bulk carriers without CSR Notation**

Class Notation	Description	Application	Rule Requirement, Design (1)	Rule Requirement, Survey
~~**CSR**~~	~~CSR class notation is assigned to ships contracted for construction on or after 1st April 2006 and complying with the Rules of "IACS Common Structural Rules for Bulk Carriers and Oil Tankers" that are applied for structural design of bulk carriers with a length of 90 m or above.~~	~~CSR Bulk Carriers~~	~~- CSR Part 1 and Part 2 Chapter 1 - Part A (Chapter 1 – Hull, Chapter 2 – Material, Chapter 3 – Welding), - Part B (Chapter 4 - Machinery, Chapter 4-1 Automation, Chapter 5 – Electrical Installations), - Relevant requirements given in Part A Chapter 1 Hull that are not covered by IACS Common Structural Rules for Bulk Carriers and Oil Tankers~~	~~CSR Part 1 Chapter 13~~
BULK CARRIER	Ships with L < 90 m intended primarily to carry dry cargo in bulk and not subject to the IACS Common Structural Rules for Bulk Carriers and Oil Tankers. Entries will be made into the Certificate as to whether specified cargo holds may be empty in case of alternating	Bulk carriers	- Part A (Chapter 1 – Hull, Chapter 2 – Material, Chapter 3 – Welding), - Part B (Chapter 4 - Machinery, Chapter 4-1 Automation, Chapter 5 – Electrical Installations), - Part A Chapter 1 Hull, Section 27	Classification and Surveys Section 3 and Section 3, L

Class Notation	Description	Application	Rule Requirement, Design (1)	Rule Requirement, Survey
	loading. Additional indications of the types of cargo for which the ship is strengthened may be entered into the Certificate. ~~For bulk carriers with L ≥ 90 m according to the Common Structural Rules the further Notation **CSR** will be assigned~~			
BC-C (2)	Bulk carriers designed to carry dry bulk cargoes of cargo density less than 1.0 t/m^3		~~**For Non-CSR Ships:**~~ - Part A (Chapter 1 – Hull, Chapter 2 – Material, Chapter 3 – Welding), - Part B (Chapter 4 - Machinery, Chapter 4-1 Automation, Chapter 5 – Electrical Installations), - Part A Chapter 1 Hull, Section 27 ~~**For CSR Ships:**~~ ~~- Part A (Chapter 1 – Hull, Chapter 2 – Material, Chapter 3 – Welding),~~ ~~- Part B (Chapter 4 – Machinery, Chapter 4-1 Automation, Chapter 5 – Electrical Installations),~~ ~~- IACS Common Structural Rules for Bulk Carriers and Oil Tankers~~ ~~- Relevant requirements given in Part A Chapter 1 Hull that are not covered by IACS Common Structural Rules for Bulk Carriers and Oil Tankers~~	
BC-B (2)	Bulk carries designed to carry dry bulk cargoes of cargo density of 1,0 t/m^3 and above with all cargo holds loaded in addition to **BC-C** conditions			
BC-A (2)	Bulk carries designed to carry dry bulk cargoes of cargo density of 1,0 t/m^3 and above with specified holds empty at maximum draught in addition to **BC-B** conditions			

Class Notation	Description	Application	Rule Requirement, Design (1)	Rule Requirement, Survey
{no MP}	For bulk carrier notations **BC-A**, **BC-B** and **BC-C** not designed for loading and unloading in multiple port			
{maximum cargo density … t/m^3}	Bulk carrier notations **BC-A** and **BC-B** designed for a maximum cargo density 3,0 t/m^3			
{holds a,b,…. may be empty}	For bulk carrier notation **BC-A**			
~~**GRAB [X]**~~	~~For ships with the notation **CSR** and with holds designed for loading /discharging by grabs. In the notation X is replaced by the unloaded grab weight.~~ ~~For ships with the notation **CSR** and **BC-A** or **BC-B** the notation **GRAB [X],** with an unladen grab weight X equal to or greater than 20 tons is mandatory.~~ ~~For ships with the notation **CSR** and other related notations than **BC-A** or **BC-B** the Notation **GRAB [X]** is voluntary.~~ ~~For ships without the notation **CSR** and with holds designed~~ For holds designed for loading/discharging by grabs~~, **G** Notation is assigned~~.		See Table 2.20	

(1) *Refer to following TL Technical Circulars as applicable;*

S-P 02/14 *Retrospective IACS Unified Requirements For Non-CSR Bulk Carriers*

S-P 32/13 *Retroactive Application for Strength Requirements for Fore Deck Fittings and Equipment for Ships that are Contracted for Construction prior to 1 January 2004*

S-P 31/13*Retroactive Application for Strength and Securing of Small Hatches on the Exposed Fore Deck for ships that are contracted for construction prior to 1 January 2004*

S-P 30/13 *Retroactive Implementation of IACS Unified Requirements S19 and S22 for Existing Single Side Skin Bulk Carriers*

Class Notation	Description	Application	Rule Requirement, Design (1)	Rule Requirement, Survey
S-P 29/13 *Retroactive Provision of Detailed Information on Specific Cargo Hold Flooding Scenarios (SOLAS XII/9.3)* ***S-P 26/13*** *Bulk carriers not complying with SOLAS XII/9 as of 1 January 2004 (Chapter XII, Regulation 9)* ***S-P 24/13****Retrospective Application for Additional Requirements for Loading Conditions, Loading Manuals and Loading Instrumen ts for Bulk Carriers, Ore Carriers and Combination Carriers* ***S-P 22/13*** *Retrospective Application for Cargo Hatch Cover Securing Arrangements for Bulk Carriers not Built in accordance with UR S21 (Rev.3)* ***S-P 21/13*** *Retroactive Application for Evaluation of Allowable Hold Loading of Cargo Hold No. 1 with Cargo Hold No. 1 Flooded, for Existing Bulk Carriers* ***S-P 20/13*** *Retrospective Application for Evaluation of Scantlings of the Transverse Watertight Corrugated Bulkhead between Cargo Holds Nos. 1 and 2, with Cargo Hold No. 1 Flooded, for Existing Bulk Carriers* ***S-P 12/13*** *Double-side skin construction on bulk carriers* ***S-P 11/13*** *SOLAS XII/6.5.3 in terms of redundancy of stiffening structural members for vessels not designed according to CSR for Bulk Carriers* **(2)** *These notations are assigned to bulk carriers with length of 150 m or longer contracted for construction on 1 July 2003 or later.*				

Revision Date: December 2018

Entry into Force Date: 1 January 2019

A new Table 2.7 was revised in accordance with Corrective Action Plan of TL/2018/NC/01:

Table 2.7 Ship type notations for tankers, general

Class Notation	Description	Application	Rule Requirement, Design (1)	Rule Requirement, Survey
CSR	**CSR** class notation is mandatory and to be assigned to oil tankers and/or product tankers complying with Rules of "IACS Common Structural Rules for Bulk Carriers and Oil Tankers".with a length of 150 m or above and contracted for construction on or after 1st April 2006.	Oil/Product Tankers	-CSR Part 1 and Part 2 Chapter 2 - Part A Chapter 1 – Hull (Refer to Annex B for Applicable Sections) Chapter 2 – Material, (In Entirety) Chapter 3 – Welding (Refer to Annex C for Applicable Sections) - Part B Chapter 4 - Machinery, Chapter 4-1 Automation, Chapter 5 – Electrical Installations	IACS CSR Part 1 Chapter 13, IACS UR Z10.4 Refer also Annex A for applicable sections of this rule.
OIL TANKER	Ships intended for transport of oil in bulk	Oil tankers	For Non-CSR Oil Tankers - Part A (Chapter 1 – Hull, particularly Section 28, Chapter 2 – Material, Chapter 3 – Welding), - Part B (Chapter 4 - Machinery, Chapter 4-1 Automation, Chapter 5	Classification and Surveys Section 3 For CSR Oil Tankers, Refer to Rule

Class Notation	Description	Application	Rule Requirement, Design (1)	Rule Requirement, Survey
			– Electrical Installations), For CSR Oil Tankers, Refer to Rule Requirements for **CSR** Notation.	Requirements for **CSR** Notation.
PRODUCT TANKER	Ships intended for transport of all type of oil product in bulk except crude oil	Product Tankers	For Non-CSR Product Tankers - Part A (Chapter 1 – Hull, particularly Section 28, Chapter 2 – Material, Chapter 3 – Welding), - Part B (Chapter 4 - Machinery, Chapter 4-1 Automation, Chapter 5 – Electrical Installations), For CSR Product Tankers, Refer to Rule Requirements with CSR Notation.	Classification and Surveys Section 3 For CSR Product Tankers, Refer to Rule Requirements for **CSR** Notation.

02. Section 3 – Surveys

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Section 3, A, 1.22 was added according to UR Z7 (Rev.26), Z7.1 (Rev. 14) , 7.2 (Rev. 7), 10.3 (Rev.18)

1.22 Remote Inspection Techniques (RIT) - Remote Inspection Technique is a means of survey that enables examination of any part of the structure without the need for direct physical access of the surveyor (refer to IACS Rec.42)

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Section 3, A, 2.14 was added according to UR Z7.1 Rev. 13

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 requirements of B.3.3, C.3.2 abd D.2.3 (UR Z7.1) are to be applied only to structure in way of the single-side skin cargo hold region.

Revision Date: December 2018

Entry into Force Date: 1 January 2019

In Section 3, A, 5 a note was added to give reference to IACS Rec.111

Note: For passenger ships, see IACS Rec. 111 Rev.1 "Guidelines for Preparation of Hull Structural Surveys".

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Section 3, A, 6.4 was added according to UR Z7 (Rev.26), Z7.1 (Rev. 14) , 7.2 (Rev. 7), 10.3 (Rev.18)

6.4 For Surveys conducted by use of a remote inspection technique, one or more of the following means for access, acceptable to the Surveyor, is to be provided:

- Unmanned robot arm.
- Remotely Operated Vehicles (ROV).
- Unmanned Aerial Vehicles / Drones.
- Other means acceptable to **TL**

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Section 3, A, 8.9 was added according to UR Z7 (Rev.26), Z7.1 (Rev. 14) , 7.2 (Rev. 7), 10.3 (Rev.18)

8.9 Consideration may be given by the attending Surveyor to allow use of Remote Inspection Techniques (RIT) as an alternative to close-up survey. Surveys conducted using a RIT are to be completed to the satisfaction of the attending Surveyor. When RIT is used for a close-up survey, temporary means of access for the corresponding thickness measurements as specified in IACS UR Z7, Z7.1, Z7.2 and Z10.3 is to be provided unless such RIT is also able to carry out the required thickness measurements.

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Section 3, A, 11.2.1.2 and 11.2.2 were revised according to UR Z17 (Rev. 13)

11.2.1.2 Classification and/or Statutory Services

…

- Firms engaged in thickness measurements on ships or mobile offshore units except

  (1) non-ESP ships less than 500 gross tonnage and
  (2) all fishing vessels.

- Firms carrying out an in-water survey on ships and mobile offshore units by diver or Remotely Operated Vehicle (ROV).

…

- Firms engaged in tightness testing of primary and secondary barriers of gas carriers with membrane cargo containment systems for vessels in service.

- Firms engaged in survey using Remote Inspection Techniques (RIT) as an alternative means for Close-up Survey of the structure of ships and mobile offshore units.

…

11.2.2 Where the results of the following service providers are used by a Surveyor of **TL** in making decision affecting classification then that service provider must be approved by **TL**.

- Firms engaged in thickness measurements on ships or mobile offshore units except

  1. non-ESP ships less than 500 gross tonnage and
  2. all fishing vessels.

- Firms carrying out an in-water survey on ships and mobile offshore units by diver or Remotely Operated Vehicle (ROV).

- Firms engaged in tightness testing of closing appliances such as hatches, doors, etc. with ultrasonic equipment.

- Firms engaged in survey using Remote Inspection Techniques (RIT) as an alternative means for Close-up Survey of the structure of ships and mobile offshore units.

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Section 3, A, 14 was added according to UR Z7 (Rev.26), Z7.1 (Rev. 14) , 7.2 (Rev. 7), 10.3 (Rev.18)

14. Remote Inspection Techniques (RIT)

(See A, 8.9)

14.1 The RIT is to provide the information normally obtained from a close-up survey. RIT surveys are to be carried out in accordance with the requirements given here-in and the requirements of 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 **TL.**

14.2 The equipment and procedure for observing and reporting the survey using a RIT are to be discussed and agreed with the parties involved prior to the RIT survey, and suitable time is to be allowed to set-up, calibrate and test all equipment beforehand.

14.3 When using a RIT as an alternative to close-up survey, if not carried out by **TL** itself, it is to be conducted by a firm approved as a service supplier according to UR Z17 and is to be witnessed by an attending surveyor of **TL**.

14.4 The structure to be examined using a RIT is to be sufficiently clean to permit meaningful examination. Visibility is to be sufficient to allow for a meaningful examination. **TL** is to be satisfied with the methods of orientation on the structure.

14.5 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 RIT operator is to be provided.

14.6 If the RIT reveals damage or deterioration that requires attention, the Surveyor may require traditional survey to be undertaken without the use of a RIT.

Revision Date: December 2018

Entry into Force Date: 1 January 2019

A Note was added to Section 3, B. 3.3 according to UR Z7.1Rev13 and Rev.14

Note:

3. Additional requirements given in IACS UR Z7.1 shall also be applied.

Revision Date: December 2018

Entry into Force Date: 1 January 2019

A Note was added to Section 3, B. 3.6 according to UR Z10.1 (Rev. 23) and Z10.3 (Rev.18).

Note:

Additional requirements given in UR Z10.1- Z10.3 & Z10.4 shall also be applied.

Revision Date: December 2018

Entry into Force Date: 1 January 2019

A Note was added to Section 3, B. 3.7 according to UR 7.2 (Rev.7).

Note:

Additional requirements given in UR Z7.2 shall also be applied.

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Section 3, C. 2.1.1 was revised as below in accordance with Corrective Action Plan of TL/2018/OB/03.

2. Documentation on Board Ships

2.1 Documentation on Board for ESP Vessels

2.1.1 For enhanced programme of inspections (ESP) during surveys for bulk carriers and oil tankers, the owner shall obtain, supply and maintain on board the ship documentation as specified in 2.1.1, 2.1.2 and 2.1.3 which shall be readily available for the surveyor.

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Section 3, D. 2.1.1 was added as below according to UR Z7 (Rev.26)

- ...Table 3.4. At class renewal survey no.3 and subsequent class renewal surveys, structural downflooding ducts and structural ventilation ducts are to be internally examined.

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Section 3, D. 3.4.3.4 was revised as below according to UR Z25 Rev.1

Fuel Supply and Bunkering Piping Pressure Relief Valves. Pressure relief valves for the fuel supply and bunkering piping are to be opened for examination, adjusted, and function tested.

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Section 3, J.4.1 was revised as below in accordance with Corrective Action Plan of GBS Initial Audit TL/2018/NC/01:

Where reduced material thicknesses were admitted for the newbuilding (effective system of corrosion protection), the permissible corrosion allowances are to be based on the unreduced rule thicknesses.For bulk carriers or oil tankers with **CSR** Notation, corrosion allowances provided in the structural drawings and accordingly IACS Common Structural Rules for Bulk Carriers and Oil Tankers, Part 1, Section 13 are to be applied.

03. Annex A – Applicable Sections for Bulk Carriers and Double Hull Oil Tankers with CSR Notation

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Annex A is added in accordance with Corrective Action Plan of GBS Initial Audit TL/2018/NC/01:

Annex A - Applicable Sections for Bulk Carriers and Double Hull Oil Tankers with CSR Notation

Sub-section	Paragraph	subparagraph	Sentence	Applicable to CSR Vessels	Remarks
SECTION 1: GENERAL TERMS AND CONDITIONS					
A. GENERAL	-			Y	
B. PROVISO	-			Y	
C. PROTECTIVE RIGHTS	-			Y	
D. FEES	-			Y	
E. PAYMENT OF INVOICES	-			Y	
F. CONFIDENTIALITY	-			Y	
G. RESPONSIBILITY AND LIABILITY	-			Y	
H. APPLICABLE LAW AND JURISDICTION	-			Y	
I. RULES	-			Y	
SECTION 2: CLASSIFICATION					
A. GENERAL PRINCIPLES	1. Definitions			Y	
	2. Classification Process			Y	
B. ASSIGNMENT AND TRANSFER OF CLASS	1. General			Y	
	2. Assignment of Class to a New Ship			Y	
	3. Transfer of Class			Y	
	4. Register			Y	
	5. Transfer of Class at Vessel's Delivery			Y	
C. RETENTION OF CLASS	1. General Requirements			Y	
	2. Definitions			Y	
	3. Survey Procedure			Y	
	4. Class Certificate			Y	
	5. Suspension, Reinstatement and Withdrawal of Class			Y	
	6. Change of Ownership			Y	
	7. Lay-up and Re-Commissioning			Y	
D. CLASSIFICATION NOTATIONS	1. General	1.1		Y	
		1.2		Y	

Sub-section	Paragraph	subparagraph	Sentence	Applicable to CSR Vessels	Remarks
	2. Mandatory Class Notations	2.1 General		Y	
		2.2 Construction symbols	2.2.1	Y	
			2.2.2	Y	
			2.2.3	Y	
			2.2.4	Y	
		2.3 Character of class	2.3.1 Hull	Y	
			2.3.2 Machinery	Y	
		2.4 Service area notations		N	.
		2.5 Ship types		N	Table 2.4a and Table 2.7 as applicable are to be applied
		2.6 Survey scheme		Y	
		2.7 Damage stability		Y	
		2.8 Yachts		N	
		2.9 Multi-point mooring system		N	
	3. Optional Class Notations	3.1 General		Y	
		3.2 Class notations related to cargo	3.2.1 Carriage of dangerous goods	Y	
			3.2.2 Special strengthening	N	
		3.3 Class notations related to service area		Y	
		3.4 Class notations related to survey schemes		Y	
		3.5 Class notations related to design features	3.5.1 Material	N	
			3.5.2 Bridge design on seagoing ships	Y	
			3.5.3 Environmental standards	Y	
			3.5.4 Fuel cell systems	Y	
			3.5.5 Novel designs	N	
		3.6 Class notations related to equipment and systems		Y	
		3.7 Class notations related to helicopter operations		Y	
		3.8 Class notations related to habitability		Y	
		3.9 Laid-Up Ships		Y	

Sub-section	Paragraph	subparagraph	Sentence	Applicable to CSR Vessels	Remarks
		3.10 Domestic Service		N	
		3.11 Maximum permissible draught		N	
		3.12 Compliance with relevant rules or directives		N	
		3.13 Selective Catalytic Reduction Systems		Y	
		3.14 Ships Using Gases or Other Low-Flashpoint Fuels		Y	
		3.15 Additional Notations (Offshore Service Vessels)		N	
E. CERTIFICATION OF MATERIALS, MACHINERY AND EQUIPMENT	1. General			Y	
	2. Requirements to be Met by the Manufacturer			Y	
	3. Certification Procedure			Y	
F. ALTERNATIVE CERTIFICATION SCHEME	1. General			Y	
	2. Scope			Y	
	3. Conditions			Y	
	4. Information to be Submitted			Y	
	5. Audit Procedure			Y	
SECTION 3: SURVEYS					
A. GENERAL REQUIREMENTS	1. Definitions			Y	
	2. Periodical Surveys			Y	
	3. Documentation			Y	
	4. Survey Schedules			Y	
	5. Conditions and Preparations for Surveys and Maintenance of Surveys			Y	
	6. Access to Structures			Y	
	7. Work at Height			Y	
	8. Survey Extent			Y	
	9. Repair of Structural Damage			Y	
	10. Surveys in Accordance With Flag State Regulations			Y	
	11. External Service Suppliers			Y	
	12. Calibration of measuring equipment			Y	
	13. Survey Programme			Y	
	14. Remote Inspection Techniques (RIT)			N	

Sub-section	Paragraph	subparagraph	Sentence	Applicable to CSR Vessels	Remarks
B. ANNUAL SURVEYS	1. General			Y	
	2. Review of Documentation			Y	
	3. Hull and Equipment			Y	
	4. Machinery and Systems			Y	
C. INTERMEDIATE SURVEYS	1. General			Y	
	2. Documentation on Board Ships			Y	
	3. Hull and Equipment			Y	
	4. Machinery and Systems			Y	
D. CLASS RENEWAL SURVEYS	1. General			Y	
	2. Hull and Equipment			Y	
	3. Machinery and Systems			Y	
E. BOTTOM SURVEY	1. General			Y	
	2. In-Water Surveys			Y	
F. PROPELLER SHAFT SURVEY	1. Propeller Shafts and Tube Shafts			Y	
	2. Propellers			Y	
	3. Other Systems			Y	
G. BOILER SURVEY	1. External Inspection			Y	
	2. Internal Inspection			Y	
	3. Extraordinary Inspection			Y	
	4. Steam Pipes			Y	
H. THERMAL OIL HEATER SURVEY	1. External Inspection			Y	
	2. Internal Inspection			Y	
I. SURVEY AND TESTING OF PRESSURIZED SYSTEMS	1. General			Y	
	2. Supplementary Testings			Y	
	3. CO2 Low-Pressure Fire Extinguishing Systems			Y	
J. THICKNESS MEASUREMENTS AND CORROSION TOLERANCES	1. General			Y	
	2. Authorization			Y	
	3. Scope of Measurements			Y	
	4. Corrosion and Wear Tolerances	4.1		N	
		4.2 Longitudinal strength		N	
		4.3 Local strength		N	
		4.4. Anchor equipment		Y	
		4.5 High Speed craft		N	
K. SURVEYS FOR SPECIAL SHIP TYPES	(All)	(All)		N	
L. ADDITIONAL SAFETY MEASURES FOR BULK CARRIERS	1. Strength Evaluation of the Foremost Cargo Hold			N	
	2. Damage Stability Requirements			N	
	3. Cargo Hold Hatch Cover Securing Arrangements			N	
	4. Side Shell Frames and Brackets			N	

Sub-section	Paragraph	subparagraph	Sentence	Applicable to CSR Vessels	Remarks
	5. Strength and Securing of Small Hatches on Exposed Fore Deck			N	
	6. Strength of for Deck Fittings and Equipment			N	
	7. Restriction from Sailing With any Hold Empty			N	
M. SURVEY OF ELECTRIC EQUIPMENT INSTALLED IN HAZARDOUS AREAS ON TANKERS	1. Application			Y	
	2. General Requirements			Y	
	3. Surveys on New Construction			Y	
	4. Surveys on Ships in Service			Y	

Y :Yes
N : No
CSR : IACS Common Structural Rules for Bulk Carriers and Oil Tankers

PART A – CHAPTER 1 – HULL

01. Section 1 – General, Definitions

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Items A.1 were revised in accordance with Corrective Action Plan of GBS Initial Audit TL/2018/NC/01 as below:

A. Validity, Equivalence

1. The Rules apply to seagoing steel ships classed **1 A 5** whose breadth to depth ratio is within the range common for seagoing ships and the depth **H** of which is not less than:

- **L**/16 for unlimited range of service and **Y** (Restricted International Service)
- **L**/18 for **K50** or **K20** (Coastal Service)
- **L**/19 **L1** or **L2** (Harbour Service).

Smaller depths may be accepted if proof is submitted of equal strength, rigidity and safety of the ship.

~~Hull structural design of bulk carriers with L ≥ 90 m. contracted for construction on or after 1st April 2006, is to be carried out on the basis of the IACS Common Structural Rules for Bulk Carriers and Oil Tankers, Part 1 and Part 2, Chapter 1~~.

Hull structural design and construction of bulk carriers with L≥90m contracted for construction on or after 1st April 2006, shall comply with the IACS Common Structural Rules for Bulk Carriers and Oil Tankers, Part 1 and Part 2, Chapter 1.

Accordingly, hull structural design and construction of double hull oil tankers with L ≥ 150 m, contracted for construction on or after 1st April 2006 shall comply with the IACS Common Structural Rules for Bulk Carriers and Oil Tankers, Part 1 and Part 2, Chapter 2.

For applicable rule sections in addition to IACS Common Structural Rules for Bulk Carriers and Oil Tankers for bulk carriers and oil tankers above each individual length limit given above, refer to Annex B.

~~Accordingly for double hull oil tankers with L ≥ 150 m. the IACS Common Structural Rules for Bulk Carriers and Oil Tankers, Part 1 and Part 2, Chapter 2 are applicable from this date on. For these ships Section 28, A. is to be observed in addition.~~

Item F.1 in Section 1 was revised according to withdrawn Standard ISO 6954 as below:

F. Vibrations and Noise

1. Mechanical Vibrations

The evaluation of vibrations in living and working areas should follow ISO 20283-5~~6954~~ except where other national or international rules or standards are mandatory. It is recommended to use the lower transition curve of ISO 20283-5~~6954~~ as a criteria for design, whereas the upper curve may serve for the evaluation of vibration measurements.

02. Section 2 – Habitability

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Item B.2, item B.4, item B.6.2.1, item B.6.5.1.2, item B.7.2.1, item B.7.2.2, item D.2.1 in Section 2 was revised according to withdrawn Standards as below:

B. Vibration

2. International Vibration Standards

- ISO 20283-5~~6954~~, “Mechanical vibration~~s~~ – Part 5: Guidelines for ~~the~~ measurement, ~~reporting~~evaluation and reporting~~evaluation~~ of vibration with regard to habitability on passenger and merchant ships.”

- ISO 8041-1, “Human response to vibration –Measuring instrumentation – Part 1: General purpose vibration meters”

4. Definitions

The vibration vocabulary, definitions and units are required to agree with ~~TS 2774 and/or~~ the corresponding international standards. Unless stated otherwise, the assumptions, definitions and specifications of the international standards ISO 2041, ISO 20283-2, ISO 20283-3 are valid for the purpose of the present section. The fundamental parameters and units of vibration are applicable as defined in ISO 2041, ISO 20283-2 and ISO 20283-3.

6.2 Instrumentation

6.2.1 The measurement and calibration equipment are to comply with ISO 20283-5~~6954~~ and ISO 8041-1 and the national standards TS EN ISO 8041-1.

6.5 Measurements report

6.5.1.2 The criteria of vibration level are to be expressed in terms of overall frequency-weighted r.m.s. velocity (mm/s) from 1 Hz to 80 Hz as defined by ISO 20283-5~~6954~~

7.2 Vibration limits for habitability

7.2.1 The vibration acceptance criteria are to satisfy the minimum conditions for ship's habitability by crew and passengers. The minimum conditions for ship's habitability are specified by the maximum allowable vibration levels of ISO 20283-5~~6954~~, given in Table 2.2. The frequency weighting to be used is the combined frequency weighting as defined in ISO 2631-2 given in Table 2.3. **TL** may impose additional restrictions if lower levels of vibration are considered to be necessary.

7.2.2 The values are to be expressed in terms of the overall frequency-weighted r.m.s. acceleration (mm/sn^2) and overall frequency-weighted r.m.s. velocity (mm/s) in the range 1 Hz to 80 Hz as shown in Table 2.2. For further information the human sensitivity curve on which the frequency-weighting values of Table 2.3 are based can be found in ISO 20283-5~~6954~~.

D. Climate Control

2. International Standards

2.1 The following international standards are recommended as guidance for design and construction of air conditioning and ventilation systems. The latest edition of each standard shall be applied.

- ANSI/ASHRAE Standard 62.1~~2007~~, "Ventilation for Acceptable Indoor Air Quality".

03. Section 6 – Longitudinal Strength

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Item D.1.2, item I.2.3.2, item I.2.3.3 in Section 6 was revised as below:

D.

1.2 Permissible stresses

~~$\sigma_V = \sqrt{\sigma_L + 3 \cdot \tau_L} \leq \frac{190}{k} \left[N/mm^2\right]$~~

$\sigma_V = (\sigma_L^2 + 3 \tau_L^2)^{0,5} \leq 190/k \quad [N / mm^2]$

I. Longitudinal Strength Standard for Container Ships

2.3.2 Vertical Wave Bending Moments

The distribution of the vertical wave induced bending moments, M_W in kNm, along the ship length is given in Figure 6.17, where:

$$M_{W-Hog} = +1.5 f_R L^3 C_P C_{WPL} \left(\frac{B}{L}\right)^{0.8} f_{NL-Hog}$$

$$M_{W-Sag} = -1.5 f_R L^3 C_P C_{WPL} \left(\frac{B}{L}\right)^{0.8} f_{NL-Sag}$$

f_{NL-Hog}: Non-linear correction for hogging, to be taken as:

$$f_{NL-Hog} = 0.3 \frac{C_B}{C_{WPL}} \sqrt{T}$$ not to be taken greater than 1.1

f_{NL-Sag}: Non-linear correction for sag~~hog~~ging, to be taken as:

$$f_{NL-Sag} = 4.5 \frac{1+0.2 f_{Bow}}{C_{WPL} \sqrt{C_B} L^{0.3}}$$ not to be taken ~~greater~~ less than 1.0~~1.1~~

f_{Bow}: = Bow flare shape coefficient, to be taken as

$$f_{Bow} = \frac{A_{DK} - A_{WL}}{0.2 L z f}$$

2.3.3 Vertical wave shear force

The distribution of the vertical wave induced shear forces, F_W in kN, along the ship length is given in Figure 6.18, where

$$F_W{}^{Aft}_{Hog} = +5.2 f_R L^2 C_p C_{WPL} \left(\frac{B}{L}\right)^{0.8} (0.3 + 0.7 f_{NL-Hog})$$

$$F_W{}^{Fore}_{Hog} = -5.7 f_R L^2 C_p C_{WPL} \left(\frac{B}{L}\right)^{0.8} f_{NL-Hog}$$

$$F_W{}^{Aft}_{Sag} = -5.2 f_R L^2 C_p C_{WPL} \left(\frac{B}{L}\right)^{0.8} (0.3 + 0.7 f_{NL-Sag})$$

$$F_W{}^{Fore}_{Sag} = +5.7 f_R L^2 C_p C_{WPL} \left(\frac{B}{L}\right)^{0.8} (0.25 + 0.75 f_{NL-Sag})$$

$$F_W{}^{Mid} = +4.0 f_R L^2 C_p C_{WPL} \left(\frac{B}{L}\right)^{0.8}$$

04. Section 7 – Plating

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Item C.2.1 in Section 7 was revised as below:

C. Side Shell Plating

2. Side Shell Plating Thickness

2.1 The thickness of the side shell plating ~~within 0.4L amidships~~ corresponding to lateral pressure is not to be less than:

Item D.7.1 in Section 7 was revised as below:

D. Deck Plating

7. Lower Decks

7.1 Thickness of Decks for Cargo Loads

P = Cargo load on deck ($P_{S\_}+P_{D\_}$) as defined in Section 5, C.4 and Section 5, D.6,

05. Section 8 – Supporting Structures

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Item B.3.4.3.4, B.3.4.5, C.1.2.2.1, C.2.2, C.2.2.4, D.3.2 in Section 8 was revised as below:

B. Bottom Structures

3.4.3.4 The section modulus of inner bottom frames is not to be less than:

$W_{BF} = 0{,}44Cs\ell^2P_{T2}k$

$= P_{T1}$, P_{T3} , P_{T4} or P_{T5}

P_{T2} = Design tank pressure load [kN/m^2] according to Section 5, C.3.2.2

3.4.5 Struts

$= P_{T1}$, P_{T2} , P_{T3} , P_{T4} or P_{T5}

C. Framing System

1.2.2 Frames in Tanks

1.2.2.1 The section modulus of frames in tanks or in hold spaces for ballast water is not to be less than the following value:

$W_{FT} = 0.55s\ell^2 P_T c_R k$ [cm^3]

$W_{FT} = 0{,}44s\ell^2 P_{T2} C_R k$

$P_T = P_{ST} + P_{DT}$

$= P_{T1}$, P_{T3} , P_{T4} or P_{T5}

2.2.2 Design load for bottom longitudinals due to tank pressure need not to be taken greater than:

$P = P_{ST} - \rho.g.T_{min} + P_{DT} + P_w^* \leq (P_{ST} + P_{DT})$

* Tmin to be taken as T for P_w calculation

$P_T = P_{ST} + P_{DT}$

$= P_{T1}$, P_{T3} , P_{T4} or P_{T5}

2.2.4 Design load due to tank pressure for side longitudinals below need not to be taken greater than:

$P = P_{ST} - \rho.g.(T_{min} - z) + P_{DT} + P_w^* \leq (P_{ST} + P_{DT})$

* Tmin to be taken as T for P_w calculation

D. Deck Structures

3.2 Scantlings

$= (1 - \frac{ReH}{4\sigma_{EC}})ReH$ for $\sigma_{EC} > 0.5ReH$

06. Section 12 – Tank Structures

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Item A.2 in Section 12 was revised as below:

A. General

2. Definitions

$= P_{ST} - \rho.g.(T_{min} - z) + P_{DT} + P_w^* \leq (P_{ST} + P_{DT})$

* T_{min} to be taken as T for P_w calculation

07. Section 15 – Hatchways

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Item A.4 and Table 15.1 in Section 15 was revised as below:

A. General

4. Definitions

= P_{T1} , P_{T2} , P_{T3} , P_{T4} or P_{T5}

Table 15.1 Corrosion additions for hatch coamings and hatch covers

Application	Structure	t_K [mm]
Weather deck hatches of container ships, car carriers, paper carriers, passenger vessels	Hatch covers	1,0
	Hatch coamings	according to Section 3, B.9
Weather deck hatches of all other ship types (e.g. multi-purpose dry cargo ships)	Hatch covers in general:	2,0
	Weather exposed plating and bottom plating of double skin hatch covers	1,5 (2,0)
	Internal structure of double skin hatch covers and closed box girders	1,0 (1,5)
	Hatch coamings not part of the longitudinal hull structure	1,5
	Hatch coamings part of the longitudinal hull structure	according to Section 3, B.9
	Coaming stays and stiffeners	1,5
Hatches within enclosed spaces	Hatch covers:	
	- Top plating	1,2
	- Remaining structures	1,0
	Hatch coamings	according to Section 3, B.9 to B.9.3

(1) *The t_K values for load cases 2.3, 2.4 ve 2.5, respectively are to be indicated in the drawings.*

(2) *The t_K values in brackets are to be applied to bulk carriers according to the definition of IACS Common structural Rules.*

08. Section 16 – Hull Outfitting

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Item G, Footnote 7 was revised in accordance with Corrective Action Plan of GBS Initial Audit TL/2018/OB/04 as below:

(7) *This sub-section is applicable to oil tankers ≥ 500 GT and bulk carriers ≥ 20.000 GT~~. Refer to UI SC190 and UI SC191 for interpretations acceptable to **TL**. Regardless of its application scope, this sub-section UI SC 190 and UI SC191 is mandatory for bulk carriers subject to GBS~~. and bulk carriers having a length of 150 m or above irrespective of their gross tonnage. IACS UI SC190 and UI SC191 are also to be applied.*

09. Section 17 – Equipment

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Table 17.5 was revised as below:

Table 17.5 Test load values for stud link chain cables

Chain cable diameter [mm]	Grade 1		Grade 2		Grade 3	
	Proof load [kN]	Breaking load [kN]	Proof load [kN]	Breaking load [kN]	Proof load [kN]	Breaking load [kN]
11	35.8	51	51	71.7	71.7	102
12.5	46	65.7	65.7	92	92	132
14	57.9	82	82	116	116	165
16	75.5	107	107	150	150	216
17.5	89	127	127	179	179	256
19	105	150	150	211	211	301

10. Section 27 – Bulk Carriers, Ore Carriers and Ships with Strengthenings for Bulk Cargo and Heavy Cargo

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Item B, 1.2 was deleted, Item B, 1.5 (New 1.4) was revised in accordance with Corrective Action Plan of GBS Initial Audit TL/2018/NC/01remaining items were re-numbered as below:

~~**1.2** For hull structural design of bulk carriers with **L** ≥ 90 m. contract for construction of which was signed on April 1,2006 and after, the IACS Common Structural Rules for Bulk Carriers and Oil Tankers, Part 1 and Part 2, Chapter 1 are applicable.~~

~~In addition to **BULK CARRIER** these ships will be assigned the Notation **CSR**.~~

1.4 The requirements of Sections 1 to 26 apply to bulk carriers without **CSR** Notation unless otherwise mentioned in this Section.

Refer Annex B for applicable rule sections for bulk carriers with **CSR** Notation.

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Item B.11 was revised according to IACS Rec.46 Rev.1 as below:

11. Loading Information for Bulk Carriers, Ore Carriers and Combination Carriers

Note: *For general guidance and information on bulk cargo loading and discharging to reduce the likelihood of over-stressing the hull structure, see IACS Rec. 46, Rev.1.*

11. Section 28 – Oil Tankers

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Item A, 1.1 was revised in accordance with Corrective Action Plan of GBS Initial Audit TL/2018/NC/01 remaining items as below:

~~For double hull oil tankers and product carriers with **L**≥150 m. the IACS Common Structural Rules for Bulk Carriers and Oil Tankers, Part 1 and Part 2, Chapter 2 are applicable.~~

Unless specially mentioned in this Section, the requirements of Sections 1÷21 apply for oil tankers without CSR Notation.

Refer Annex B for applicable rule sections for double hull oil tankers and product carriers with CSR Notation.

12. Annex A – Moments of Inertia and Section Moduli, Load Line Mark, Ice Class Draught Marking

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Annex was changed to Annex A as below and Page Numbering accordingly revised.

Annex **A**– MOMENTS OF INERTIA AND SECTION MODULI, LOAD LINE MARK, ICE CLASS DRAUGHT MARKING

13. Annex B – Applicable Sections for Bulk Carriers and Double Hull Oil Tankers with CSR Notation

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Annex B was added in accordance with Corrective Action Plan of GBS Initial Audit TL/2018/NC/01 as below:

Annex B – Applicable Sections for Bulk Carriers and Double Hull Oil Tankers with CSR Notation

Sub-section	Paragraph	Applicable to CSR Vessels	Remarks
Section 1 – General, Definitions			
A. Validity, Equivalence		Y	
		Y	
		Y	
		Y	
		N	
B. Restricted Service Ranges		N	
		N	
C. Special-Purpose Vessels		N	
D. Accessibility		Y	
E. Stability		Y	
F. Vibrations and Noise		Y	
G. Documents for Approval		N	
H. Definitions		N	
J. International Conventions and Codes		N	
K. Rounding-off Tolerances		N	
L. Regulations of National Administrations		N	
M. Computer Programs		N	
N. Workmanship		N	
O. Definition of Symbols		N	
Section 2 – Habitability			
A. General		Y	
B. Vibration		N	
C. Noise		N	
D. Climate Control		Y	
E. Lighting		Y	
F. Accommodation		Y	
Section 3 – Design Principles			
A. Materials		N	
B. Structural Details		N	
C. Buckling Assessment		N	
D. Fatigue Assessment		N	
E. Testing Procedures of Watertight Compartments		N	
Section 4 – Direct Strength Calculations			
A. General		N	
B. Modelling and Boundary Conditions		N	
C. Loading Approximations		N	
D. Evaluation of Results		N	
Section 5 – Design Loads			
A. Introduction		N	
B. Accelerations		N	
C. Static Local Loads		N	
D. Dynamic Local Loads		N	
E. Impact Loads		N	
Section 6 – Longitudinal Strength			
A. General Definitions		N	
B. Still Water, Wave Bending and Torsional Moments and Shear Force		N	
C. Section Moduli, Moments of Inertia, Shear and Buckling Strength		N	

Sub-section	Paragraph	Applicable to CSR Vessels	Remarks
D. Design Stresses		N	
E. Permissible Still Water Bending Moments		N	
F. Ships With Large Deck Openings		N	
G. Bulk Carriers		N	
H. Loading Guidance Information		N	
I. Longitudinal Strength Standard for Container Ships		N	
Section 7 – Plating			
A. Introduction		N	
B. Bottom Plating		N	
C. Side Shell Plating		N	
D. Deck Plating		N	**D.8** may be applied for oil tankers and bulk carriers with Helicopter Deck Arrangements "
Section 8 – Supporting Structures			
A. Introduction		N	
B. Bottom Structures		N	
C. Framing System		N	
D. Deck Structures		N	
Section 9 – Stems			
A. General		N	
B. Structural Arrangement		N	
C. Stem		N	

Sub-section	Paragraph	Applicable to CSR Vessels	Remarks
Section 10 – Stern Frame			
A. Definitions		N	
B. Stern Frame		N	
C. Propeller Brackets		N	
D. Elastic Stern Tube		N	
Section 11 – Watertight Bulkheads			
A. Introduction		N	
B. Scantlings		N	
C. Shaft Tunnels		N	
Section 12 – Tank Structures			
A. General		N	
B. Scantlings		N	
C. Tanks With Large Lengths or Breadths		N	
D. Vegetable Oil Tanks		N	
E. Detached Tanks		N	
F. Potable Water Tanks		N	
G. Wash Bulkheads		N	
H. Testing for Tightness		N	
Section 13 – Superstructures And Deckhouses			
A. Introduction		N	
B. Side Plating and Decks of Non-Effective Superstructures		N	
C. Superstructure End Bulkheads and Deckhouse Walls		N	
D. Decks of Short Deckhouses		N	
E. Elastic Mounting of Deckhouses		N	
F. Breakwater		N	
Section 14 – Ice Strengthening			
A. General		Y	
B. Definitions		Y	
C. Output of Propulsion Machinery		Y	
D. Ice Strengthening for Class Notations Ice-B4÷Ice-B1		Y	
E. Ice Strengthening for Class Notation Ice-B		Y	
Section 15 – Hatchways			
A. General		N	
B. Hatch Covers		N	
C. Smaller Openings and Hatches		N	
D. Engine And Boiler Room Casings		N	
Section 16 – Hull Outfitting			
A. Side Scuttles, Windows and Skylights		Y	
B. Scuppers, Inlets and Discharges		Y	
C. Freeing Ports		Y	
D. Air Pipes		Y	
E. Ventilators		Y	

Sub-section	Paragraph	Applicable to CSR Vessels	Remarks
F. Protection of The Crew		Y	**F2** is excluded since same subject is also covered by **CSR**
G. Means of Access to The Cargo Areas of Oil Tankers and Bulk Carriers		Y	
H. Signal Masts		Y	
I. Bolted Connections		Y	
Section 17 – Equipment			
A. General		N	
B. Equipment Number		N	
C. Anchors		N	
D. Anchor Chain Cables		N	
E. Installation of The Chain Cables on Board		N	
F. Mooring And Towing Equipment		N	
G. Shipboard Fittings and Supporting Hull Structures Associated with Mooring on Conventional Ships		N	
Section 18 – Rudder And Manoeuvring Arrangement			
A. General		Y	
B. Rudder Force and Torque		Y	
C. Scantlings of The Rudder Stock		Y	
D. Rudder Couplings		Y	
E. Rudder Body, Rudder Bearings		Y	
F. Design Yield Moment of Rudder Stocks		Y	
G. Stopper, Locking Device		Y	
H. Propeller Nozzles		Y	
Section 19 – Engine Mounts And Installation Respects			
A. Design Principles		N	
B. Seatings		N	
C. Dampers and Absorbers		N	
Section 20 – Welded Joints			
A. General		N	
B. Design		N	
C. Stress Analysis		N	
Section 21 – Structural Fire Protection			
A. General		Y	
B. Rules on Fire Protection for Passenger Ships		N	
C. Rules on Fire Protection for Cargo Ships of 500 GT and Over		Y	
D. Rules On Fire Protection For Cargo Ships of Less Than 500 GT		N	
E. Rules on Fire Protection for Oil Tankers and Combination Carriers of 500 GT and Over		Y	
Section 22 – Corrosion Protection			
A. Fundamentals of Corrosion Protection		Y	
B. General Guidelines for Corrosion Protection		Y	

Sub-section	Paragraph	Applicable to CSR Vessels	Remarks
C. Corrosion Protection by Structural Design		Y	
D. Material Selection Against Corrosion		Y	
E. Coatings		Y	
F. Application of Coating Systems		Y	
G. Testing, Acceptance and Documentation of The Coating Systems		Y	
H. Metallic Coatings On Steel		Y	
I. Certification of Coating Work		Y	
J. Cathodic Corrosion Protection		Y	
K. Standards		Y	
Section 23 – Bow, Stern And Side Doors			
A. Introductıon		N	
B. Bow Doors and Inner Doors		N	
C. Side Shell Doors and Stern Doors		N	
Section 24 – Quality Assurance Requirements For The Hull Construction Of Ships			
A. General		Y	
B. Application		Y	
C. Additional Requirements for Part 2 of The Scheme		Y	
D. Initial Assessment of The Shipyard		Y	
E. Approval of The Shipyard		Y	
F. Maintenance of Approval		Y	
G. Suspension or Withdrawal of Approval		Y	
Section 25 – Requirements For In-Water Surveys In Lieu of Drydocking Surveys			
A. General		Y	
B. Underwater Conditions		Y	
C. Special Arrangements		Y	
D. In-Water Survey Requirements		Y	
Section 26 – Stability			
A. General		Y	As Applicable
B. Intact Stability		Y	As Applicable
C Additional Criteria for Certain Types of Ships		Y	As Applicable
D. Recommended Criteria for Certain Types of Ships		N	
E. Subdivision and Damage Stability of Cargo and Passenger Ships		Y	As Applicable
F. Onboard Stability Instruments		Y	As Applicable
G. Operational Provisions Against Capsizing		Y	As Applicable
Section 27 – Bulk Carriers, Ore Carriers And Ships With Strengthenings For Bulk Cargo And Heavy Cargo			
A. Strengthenings For Bulk Cargo And Heavy Cargo		N	
B. Bulk Carriers		N	

Sub-section	Paragraph	Applicable to CSR Vessels	Remarks
C. Ore Carriers		N	
D. Evaluation of Allowable Hold Loading, Considering Hold Flooding		N	
E. Evaluation of Scantlings Of Corrugated Transverse		N	
F. Harmonised Notations and Corresponding Design Loading Conditions for Bulk Carriers		N	
G. Scantling of Hatch Covers and Hatch Coamings		N	
Section 28 – Oil Tankers			
A. General		N	
B. Definitions		N	
C. Ship Arrangement		N	
D. Stability		N	
E. Hull Outfitting		N	
F. Strength of Girders and Transverses in the Cargo Tank Area		N	
G. Oiltight Longitudinal And Transverse Bulkheads		N	
H. Wash Bulkheads		N	
I. Minimum Thickness		N	
J. Ships for the Carriage of Dry Cargo or Oil in Bulk		N	
K. Product List 1		N	
L. Product List 2		N	
Section 29 – Tugs			
		N	
Section 30 – Passenger Ships			
		N	
Section 31 – Special Purpose Ships			
		N	
Section 32 – Supply Vessels			
		N	
Section 33 – Barges And Pontoons			
		N	
Section 34 – Dredgers			
		N	
Section 35 – Floating Docks			
		N	
Section 36 – Goal-Based Ship Construction Standards For Bulk Carriers And Oil Tankers			
		Y	
Annex A:Moments Of Inertia and Section Moduli, Load Line Mark, Ice Class Draught Marking			
		N	Except **"Marking"** Requirements

Y :Yes
N : No
CSR : IACS Common Structural Rules for Bulk Carriers and Oil Tankers

PART A – CHAPTER 2 – MATERIAL

01. Section 2 – Mechanical and Technological Testing Procedures

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Items H.12.3 and H.12.8.2 were revised according to withdrawn Standart EN 462-3 as below:

12.3 Performing radiographic testing

As a rule radiographic testing is to be performed in accordance with EN 12681, test category A. Thereby the image quality category A according to EN ~~462-3~~ISO 19232-3 shall be fulfilled.

12.8.2 In general, for steel castings of test category A, the image quality class A and for test category B the image quality class B according to EN ~~462-3~~ISO 19232-3 shall be achieved.

02. Section 3 – Rolled Steel Plates, Sections and Bars

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Items A.6.1.1, 6.1.2, 6.1.3, 6.2.2, 6.3.1, 6.3.2, 6.3.4, 6.3.5, 6.4.1, 6.4.2, 6.5.1 were revised and new paragraph added as 6.1.2 according to UR W13 Rev.6 as below:

6.1.1 These requirements apply to the tolerance on thickness of steel plates and wide flats with widths 600 mm or greater (hereinafter referred to as: product or products) with thicknesses of 5 mm and over covering normal and higher strength hull structural steels according to Section 3 B (UR W11), high strength ~~quenched and tempered~~ steels for welded structures according to Section 3 C (UR W16) and steels for machinery structures according to Türk Loydu Material Rules**.**

The thickness tolerances for products below 5 mm are to be in accordance with a national or international standard, e.g. Class B of ISO 7452. However, the minus tolerance shall not exceed 0.3 mm**.**

6.1.2 These requirements do not apply to products intended for the construction of lifting appliances which are subject to decision by the TL.

6.1.~~2~~3 These requirements do not apply to products intended for the construction of boilers, pressure vessels and independent tanks, e.g. for the transportation of liquefied gases or chemicals.

6.1.~~3~~4 Class C of ISO 7452-2013 or equivalent according to national or international standards may be applied in lieu of 6.3, in which case the requirements in 6.4 and 6.5 need not be applied. ~~If Class C of ISO 7452 is to be used, the portion of the footnote of ISO 7452, Table 2, which reads "Also a minus side of thickness of 0.3 mm is permitted." is not to be applied.~~

Additionally, if Class C of ISO 7452-2013 is applied, it is required that the steel mill demonstrates to the satisfaction of the TL that the number of measurements and measurement distribution is appropriate to establish that the mother plates produced are at or above the specified nominal thickness.

6.2.2 The responsibility for storage and maintenance of the delivered product(s) with acceptable level of surface condition rests with the ~~shipyard~~ fabricator before the products are used in fabrication.

6.3.1

Note:

Nominal thickness is stated ~~defined~~ by the purchaser at the time of enquiry and order.

6.3.2 The minus tolerance on nominal thickness of normal and higher strength hull structural steels and high strength ~~quenched and tempered~~ steels for welded structures is 0.3 mm irrespective of nominal thickness.

6.3.4 The tolerances on nominal thickness are not applicable to areas repaired by grinding. For areas repaired by grinding the IACS UR W11 7.4.1 requirements are to be applied, unless stricter requirements as per a recognized standard are considered by the **TL** or purchaser.~~which are to be in accordance with a recognized standard. The IACS Rec.No.12 may be used for this purpose.~~

Table 3.2 Minus tolerances on nominal thickness for products for machinery structures

Nominal thickness (t) [mm]	~~Tolerance~~Minus tolerance on nominal thickness [mm]
3 ≤ t < 5	-0.3
5 ≤ t < 8	**-0.4**
8 ≤ t < 15	**-0.5**
15 ≤ t < 25	**-0.6**
25 ≤ t < 40	**-0.7~~8~~**
40 ≤ t < 80 ~~≥ 40~~	~~-1.0~~0.9
80 ≤ t < 150	-1.1
150 ≤ t < 250	-1.2

6.3.5 The plus tolerances on nominal thickness are to be in accordance with a recognized national or international standard unless required otherwise by the TL or purchaser

6.4.1 The average thickness of ~~a product or~~ products is defined as the arithmetic mean of the measurements made in accordance with the requirements of 6.5.

6.4.2 The average thickness of the normal and higher strength hull structural steels (UR W11) or high strength ~~quenched and tempered~~ steels for welded structures (UR W16) is not to be less than the nominal thickness.

6.5.1 The thickness is to be measured at locations of ~~a product or~~ products as defined in 6.6.

Items A2.3.6.2, 3.6.3, 3.7.4 in Appendix A were revised according to UR W13 Rev.6 as below:

3.6.2

g) The test results are to be in accordance, where applicable, with the requirements specified for the different steel grades in this section (UR W11).

3.6.3 Other tests

Additional tests such as CTOD test, large scale brittle fracture tests (Double Tension test, ESSO test, Deep Notch test, etc.) or other tests may be required in the case of newly developed type of steel, outside the scope of this section (UR W11), or when deemed necessary by **TL**.

3.7.4 Other tests

Additional tests such as cold cracking tests (CTS, Cruciform, Implant, Tekken, Bead-on plate), CTOD, or other tests may be required in the case of newly developed type of steel, outside the scope of this section (UR W11), or when deemed necessary by **TL**.

Items A2.3.6.3, 3.7.8 in Appendix D were revised according to UR W13 Rev.6 as below:

3.6.3 Other tests

Additional tests such as CTOD test on parent plate, large scale brittle fracture tests (Double Tension test, ESSO test, Deep Notch test, etc.) or other tests may be required in the case of newly developed type of steel, outside the scope of UR W16, or when deemed necessary by **TL.**

3.7.8 Other tests

Additional tests may be required in the case of newly developed types of steel, outside the scope of this Section (UR W16), or when deemed necessary by **TL.**

03. Section 4 – Steel Pipes and Fittings

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Table 4.10 in item D was revised according to revised Standart ASTM A312/A312M-18A:

Strength category or pipe grade	EN 10216-4 (1) or EN 10217-4 (2)	EN 10216-3 (1) or EN 10217-3 (2)	EN 10216-5 (1) or EN 10217-7 (2)	ISO 9329-3 (1) or ISO 9330-3 (2)	ISO 9329-4 (1) or ISO 9330-6 (2)	ASTM (3) A 312/A 312M~~-12~~

04. Section 5 – Steel Forgings

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Table 5.8, item D.2.1 and item D.7.3.1 were revised according to revised Standart EN ISO 683-3:

Table 5.8 Suitable steel grades for gears

Steel grade	Standard
42 Cr Mo 4	EN 10083-1
16 Mn Cr 5	EN ~~10084~~ISO 683-3
20 Mn Cr 5	
18 Cr Ni Mo 7-6	

D. Forgings for Gears

2.1 Quenched and tempered steels conforming to EN 10083-1, case hardening steels conforming to EN ~~10084~~ISO 683-3 and nitriding steels conforming to EN 10085, provided that proof has been furnished of the suitability of the individual grade of steel for the intended purpose. Table 5.8 contains a selection of suitable steel grades.

7.3 Tensile test on case-hardening steels

7.3.1 If the diameter of the test specimen is less than 63 mm, in agreement with the surveyor a test specimen with standardized dimensions may be used (e.g. 30 mm diameter according to EN ~~1008~~4 ISO 683-3).

05. Section 6 – Steel Castings

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Table 6.10 in item E.4 was corrected according to revised Standart EN 1559-2:

Table 6.10 Assignment of quality levels

Minimum design **temperature** t	**Quality level according to:** (1) (2) (3) (4)
≥ -105°C	SM4, LM4, AM4 (1), SP4, CP3, LP4, AP4 (2), UV4 (3), RV4 (4)
< -105°C	SM3, LM3, AM3 (1), SP3, CP3, LP3, AP3 (2), UV3 (3), RV3 (4)
Welding edges (5)	SM 01 (1) CP 01 (2)

(1)	EN 1369
(2)	EN 1371-1
(3)	EN 12680-2
(4)	EN 12681 ~~and former EN 1559-2~~
(5)	For surface crack detection linear indications are not allowed.

PART A – CHAPTER 3 – WELDING

01. Section 1 – General Rules

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Item A.1.1 was revised (added below paragraphs) according to GBS - 2018/TL/NC/01 as below:

A. General

1. Scope

1.1 These Rules apply to all welding work performed in the course of new construction, conversion or repairs carried out on ships and their machinery installations, including steam boilers, pressure vessels and pipelines, for which an application for classification has been submitted to Türk Loydu (**TL**) or which have been classified by **TL**.

The design of the welds of ships with **CSR** Notation shall comply with IACS Common Structural Rules for Bulk Carriers and Oil Tankers, Part A, Chapter 12, Section 3.

Refer Annex C for applicable rule sections for bulk carriers and oil tankers with **CSR** Notation.

02. Section 2 – Requirements For Welding Shops, Approval

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Item B.3.3 was revised according to withdrawn Standart EN 1418:

3.3 Operators of fully mechanized or automatic welding equipment and of welding robots must have been trained in the use of the equipment. They must also be capable of setting or programming and operating the equipment in such a way that the required weld quality is achieved. The qualification of such personnel must be demonstrated in accordance with EN ~~1418/~~ISO 14732 on welded test pieces, e.g. in welding procedure or fabrication tests or by means of random tests and operational tests as applicable (please refer to the standards).

03. Section 4 – Welding Procedure Tests, Production Tests

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Item C.1.1 was revised according to withdrawn Standart ISO 857-1:

1.1 To ensure that the description and evaluation of welding processes and positions, test results, etc. are as clear and uniform as possible, use shall be made of the terminology and symbols in the relevant standards (e.g. ISO ~~857-1~~/TR 25901-3, EN ISO 6947, ISO 6520-1, ISO 5817, ISO 10042) and, for internal defects, Table 10.1 in Section 10. The position of a defect or fracture must be indicated and may be designated as follows:

04. Section 11 – Mechanical and Technological Tests

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Preliminary remarks in Section 11 was revised according to withdrawn Standart EN 1321:

Preliminary remarks:

- *EN ~~1321~~ISO 17639*
  Macroscopic and microscopic examinations

05. Section 12 – Welding of Hull Structures

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Item A.1.1 was revised (added below paragraphs) according to GBS - 2018/TL/NC/01 as below:

A. Genel

1. Scope

1.1 These rules apply to all welding work carried out on the ship's hull, including the superstructure and deckhouses, its internal and external structures, and equipment components forming part of the ship's structure, e.g. hatch covers, masts, king posts or crane substructures welded to the ship's hull. See also Section 1, A.1. and A.2.

The design of the welds of ships with **CSR** Notation shall comply with IACS Common Structural Rules for Bulk Carriers and Oil Tankers, Part A, Chapter 12, Section 3.

Refer Annex C for applicable rule sections for bulk carriers and oil tankers with **CSR** Notation.

06. ANNEX C – Applicable Sections for Bulk Carriers and Double Hull Oil Tankers with CSR Notation

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Annex C was added to the Welding Rules as below:

Annex C - Applicable Sections for Bulk Carriers and Double Hull Oil Tankers with CSR Notation

Sub-section	Paragraph	Applicable to CSR Vessels	Remarks
SECTION 1 - GENERAL RULES			
A. GENERAL		Y	
B. OTHER RULES, STANDARDS AND SPECIFICATIONS		Y	
C. INFORMATION IN WORKING DOCUMENTS		Y	
D. MATERIALS, WELDABILITY		Y	
E. WELDING CONSUMABLES AND AUXILIARY MATERIALS		Y	
F. QUALITY ASSURANCE, RESPONSIBILITY		Y	
G. INSPECTION TESTS, LIABILITY		Y	
SECTION 2 - REQUIREMENTS FOR WELDING SHOPS, APPROVAL			
A. APPROVAL OF WELDING SHOPS		Y	
B. REQUIREMENTS FOR WELDING SHOPS		Y	
C. INSPECTION OF WELDING SHOPS		Y	
D. WELDING PROCEDURE TESTS		Y	
E. CERTIFICATION OF APPROVALS, CERTIFICATES ACCORDING TO EN 729/ISO 3834		Y	
SECTION 3 - WELDER'S QUALIFICATION TESTS			
A. SCOPE		Y	
B. GENERAL		Y	
C. RANGE of QUALIFICATION OF WELDERS		Y	
D. QUALIFICATION TEST		Y	
E. CERTIFICATION		Y	
F. PERIOD OF VALIDITY		Y	
SECTION 4 - WELDING PROCEDURE TESTS, PRODUCTION TESTS			
A. GENERAL		Y	
B. PERFORMANCE OF WELDING PROCEDURE AND PRODUCTION TESTS		Y	
C. EVALUATION OF TEST RESULTS, REQUIREMENTS, REPEAT TEST SPECIMENS, TEST REPORTS		Y	
D. LIMITS OF APPLICATION, PERIOD OF VALIDITY		Y	
SECTION 5 - WELDING CONSUMABLES AND AUXILIARY MATERIALS			
(All Subsections)		Y	
SECTION 6 - OVERWELDABLE SHOP PRIMERS			
(All Subsections)		Y	
SECTION 7 - GENERAL DESIGN PRINCIPLES			
A. GENERAL		Y	
B. INFORMATION CONTAINED IN MANUFACTURING DOCUMENTS		Y	
C. MATERIALS, WELDABILITY		Y	
D. DESIGN DETAILS		N	
E. DIMENSIONING OF WELDED JOINTS		N	
SECTION 8 - EXECUTION OF WELDS			
A. GENERAL		Y	
B. WELD PREPARATION, ASSEMBLY		Y	
C. WEATHER PROTECTION, PREHEATING		Y	
D. WELDING POSITIONS, WELDING SEQUENCE		Y	
E. PERFORMANCE OF WELDING		Y	
F. STRAIGHTENING, TOLERANCES		Y	
G. POST-WELD-TREATMENT OF WELDS		Y	

Sub-section	Paragraph	Applicable to CSR Vessels	Remarks
SECTION 9 - HEAT TREATMENT			
A. SCOPE		Y	
B. EQUIPMENT AND APPLIANCES FOR HEAT TREATMENT		Y	
C. PRINCIPLES RELATING TO HEAT TREATMENT		Y	
D. WEATHER PROTECTION, PREHEATING, HEAT INPUT DURING WELDING		Y	
E. POST-WELD HEAT TREATMENT		Y	
SECTION 10 - NON-DESTRUCTIVE TESTING OF WELDS			
A. GENERAL		Y	
B. TEST METHODS, APPLIANCES AND TEST MEDIA		Y	
C. INSPECTION PERSONNEL, SUPERVISORS		Y	
D. INSPECTION SCHEDULE, INSPECTION REPORTS		Y	
E. TIMING OF INSPECTION, WAITING TIMES		Y	
F. PREPARATION AND PERFORMANCE OF TESTS		Y	
G. EVALUATION OF TEST RESULTS		Y	
H. EXTENSION OF THE SCOPE OF INSPECTION		Y	
I. REPAIRS, RE-INSPECTION		Y	
J. VISUAL INSPECTION		Y	
K. RADIOGRAPHIC INSPECTION		Y	
L. ULTRASONIC INSPECTION		Y	
M. MAGNETIC PARTICLE INSPECTION		Y	
N. LIQUID PENETRANT INSPECTION		Y	
SECTION 11 - MECHANICAL AND TECHNOLOGICAL TESTS			
A. SCOPE		Y	
B. PREPARATION OF SPECIMENS AND TESTING		Y	
C. TENSILE TESTS		Y	
D. BEND TESTS		Y	
E. NOTCHED BAR IMPACT TESTS		Y	
F. HARDNESS TESTING OF WELDS		Y	
G. METALLOGRAPHIC INSPECTIONS		Y	
H. INSPECTION REPORTS		Y	
SECTION 12 - WELDING OF HULL STRUCTURES			
A. GENERAL		Y	
B. APPROVAL OF SHIPYARDS AND WELDING SHOPS, WELDING PERSONNEL		Y	
C. QUALITY INSPECTION, RESPONSIBILITY		Y	
D. MATERIALS, WELDABILITY		Y	
E. WELDING CONSUMABLES AND AUXILIARY MATERIALS		Y	
F. WELDING PROCEDURES, WELDING PROCEDURE TESTS OF STEELS FOR HULL CONSTRUCTION AND MARINE STRUCTURES		Y	

Sub-section	Paragraph	Applicable to CSR Vessels	Remarks
G. DESIGN, DIMENSIONING	1. General	Y	
	2. Characteristics Related to Materials, Corrosion	Y	
	3. Stress Flow, Transitions	Y	
	4. Local Clustering of Welds, Minimum Spacing, Socket Weldments	Y	
	5. Welding Apertures	Y	
	6. Local Reinforcements, Plate Doublings	Y	
	7. Transverse Members, Stress in the Thickness Direction	Y	
	8. Welding of Cold-Formed Sections, Bending Radii.	Y	
	9. Build-up Welds on Rudderstocks and Pintles	Y	
	10. Weld Shapes and Dimensions	N	
	11. Welding at the Ends of Girders and Stiffeners	Y	
	12. Joints Between Section Ends and Plates	Y	
	13. Welded Shaft Bracket Joints	Y	
	14. Rudder Coupling Flanges	Y	
	15. Design Calculations Applied to Welded Joints	Y	
H. EXECUTION OF WELDS		Y	
I. INSPECTION OF WELDED JOINTS		Y	
J. WELDING REQUIREMENTS FOR CARGO TANKS OF GAS TANKERS		N	
SECTION 13 - WELDING OF STEAM BOILERS			
(All Subsections)		Y	
SECTION 14 - WELDING OF PRESSURE VESSELS			
(All Subsections)		Y	
SECTION 15 - WELDING OF PIPELINES			
(All Subsections)		Y	
SECTION 16 - WELDING OF MACHINERY COMPONENTS			
(All Subsections)		Y	
Annex A: Comparison of Equivalent, Internationally Recognized Film System Classes			
(All Subsections)		Y	
Annex B: Welding Positions			
(All Subsections)		Y	

Y :Yes
N : No
CSR : IACS Common Structural Rules for Bulk Carriers and Oil Tankers

PART B – CHAPTER 4 – MACHINERY

01. Section 2 – Internal Combustion Engines And Air Compressors

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Item E.4.3.3.4 was revised according to UR M51 Rev.4 Corr.1 as below:

4.3.3.4 Engines driving generators for auxiliary purposes

Tests to be performed as in Item 4.3.3.3.

02. Section 3 – Thermal Turbomachinery / Steam Turbines

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Item D.2.2.1 in Section 3 was revised according to updating standards as below:

2.2 Balancing

2.2.1 Finished rotors, complete with blades and associated rotating parts and ready for assembly, are to be dynamically balanced in the presence of the Surveyor (The assessment may be based on ISO ~~1940-1~~21940-11 standard "Mechanical vibration-Rotor balancing~~Balance quality requirements of rigid rotors~~" or an equivalent standard.).

03. Section 16 – Pipe Lines, Valves, Fittings and Pumps

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Item B.2.6.5.1 in Section 16 was revised according to withdrawn Standard as below:

2.6.5.1 Internal pressure

The hydrostatic tests confirming the ASTM D1598~~02~~ standard are to be carried out under the following conditions:

These long and short term hydrostatic failure pressures can be found by a combination of prototype testing and calculation. Due to the length of time stipulated for the long term test it is expected that testing will be carried out to a suitable standard, such as ASTM D2837 and ASTM D1598.

03. Section 18 – Fire Protection and Fire Extinguishing Equipment

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Table 18.11 and item Q.1.5.2 were revised as below:

Bulk Cargo Shipping Name (BCSN)	Class	Requirements														
		Fire-extinguishing	Water supplies	Sources of ignition	Temperature measurement	Gas detection	Acidity of bilge water	Ventilation	Additional provisions on ventilation	Bilge pumping	Personnel protection	No smoking signs	Machinery space	Other boundaries	Gas sampling points	Weathertightness	Fuel tanks
METAL SULPHIDE CONCENTRATES, CORROSIVE UN 1759	8	Q.2.1				Q.5.2.5 Q.5.2.7					Q.8.1.2 Q.8.2.1						
MONOAMMONIUM PHOSPHATE (M.A.P.), MINERAL ENRICHED COATING	MHB	Q.2.2.1									Q.8.1.2 Q.8.2.1						
MONOCALCIUMPHOSPHATE (MCP)	MHB	Q.2.2.1									Q.8.1.2 Q.8.2.1						
SAND, MINERAL CONCENTRATE, RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-I) UN 2912	7	Q.2.2.1									Q.8.1.2 Q.8.2.1						
SUGARCANE BIOMASS PELLETS	MHB	Q.2.1									Q.8.2.1						

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Class 8: Corrosive substances

Substances which, by chemical action, will cause severe damage when in contact with living tissue or, in the case of leakage, will materially damage, or even destroy, other goods or the means of transport.

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PART B – CHAPTER 5 – ELECTRICAL INSTALLATION

01. Section 8 – High – Voltage Installations

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Item B.4.1, B.4.3.2, D.2, D.4.3, D.5.1, D.6.1.1 in Section 8 was revised according to UR E11 Rev.3 Corr.1 as below:

4. Degrees of Protection

4.1 Each part of the electrical installation is to be provided with a degree of protection appropriate to the location, as a minimum the requirements of IEC ~~Publication~~ 60092-201 and Table 8.3 are to be complied with, in addition to the provisions of Section 1, Table 1.10.

4.3.2 For switchgear installations it shall be proved that an internal arc test according to IEC ~~Publication~~ 62271-200 Annex A had been passed. The criteria 1 to 5 shall be fulfilled, see also Section 2, G.1.4

D. Electrical Equipment

2. Switchgear

Switchgear and controlgear assemblies are to be constructed according to the I.E.C ~~Publication~~ 62271-200 and the following additional requirements.

2.1 Construction

Switchgear accessible for authorized persons only shall at least comply with accessibility type “A” of IEC ~~Publication~~ 62271-200; Annex AA; AA 2.2.

2.1.1 Switchgear is to be of metal - enclosed type in accordance with I.E.C ~~Publication~~ 62271-200 or of the insulation - enclosed type in accordance with the I.E.C ~~Publication~~ 62271-201.

2.1.4 Switchboards supplying primary essential consumers shall have the service continuity LSC 2 according to IEC ~~Publication~~ 62271-200.

2.1.5 Evidence shall be provided that high-voltage switchboards have passed a type test according to IEC ~~Publication~~ 62271-200.

2.3 Tests

A routine test in accordance with IEC ~~Publication~~ 62271-200 shall be performed in the manufacturer's works in the presence of a **TL** surveyor.

2.3.1 It is recommended that a partial-discharge test be performed in accordance with IEC ~~Publication~~ 62271-200 Annex B, if organic insulating materials or gas-insulated busbar penetrations are used.

2.3.2 High-voltage test

A power-frequency voltage test is to be carried out on any switchgear and control gear assemblies. The test procedure and voltages are to be according to the IEC ~~Publication~~ 62271-200 section 7/ routine test.

4.3 Tests

In addition to the tests normally required for rotating machinery, a high frequency high voltage test in accordance with IEC ~~Publication~~ 60034-15 is to be carried out on the individual coils in order to demonstrate a satisfactory withstand level of the inter-turn insulation to steep fronted switching surges.

5.1 Design

5.1.1 Power transformers and Liquid cooled transformers shall conform to IEC ~~publication~~ 60076.

5.1.2 Dry-type transformers should be used by preference. They shall conform to IEC ~~publication~~ 60076-11. Exceptions shall be agreed with **TL.**

6. Cables

6.1 General

6.1.1 High-voltage cables shall conform to IEC ~~publication~~ 60092-354 or 60092-353 or other equivalent standard.

02. Section 12 – Cable Network

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Item E was added according to IACS Rec. 67 as below:

E. Requirements for Busbar Trunking Systems intended for the Electrical Supply of Distribution Panels and Single Consumers

For test and installation of busbar trunking systems see IACS Rec. 67, Rev. 1.

03. Section 13 – Additional Rules for Electrical Propulsion Plants

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Item J.2.1.4 in Section 13 was revised according to UR E11 Rev.3 Corr.1 as below:

2.1.4 Testing of the transformers

A complete type and routine test shall be carried out according to IEC ~~publication~~ 60076 or verification thereof submitted. For the temperature-rise test, the effect of the harmonics shall be considered; see Section 20, B.

04. Section 20 – Electrical Equipment

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Item A.4, F.1.4 in Section 20 was revised according to UR E13 Rev.2 Corr.1 and UR E11 Rev.3 Corr.1 as below:

4. Testing of Electrical Machinery

The tests shall be performed in accordance with IEC ~~publication~~ 60092-301 and 60034-1. **TL** reserve the right to stipulate additional tests in the case of new types of machines or where it is required for another particular reason.

4.3.6 Temperature rise test

The temperature rises are to be measured at the rated output, voltage, frequency and the duty for which the machine is rated and marked in accordance with the testing methods specified in IEC ~~Publication~~ 60034-1, or by means of a combination of other tests.

The limits of temperature rise are those specified in Table 1 of IEC ~~Publication~~ 60034-1 adjusted as necessary for the ambient reference temperatures specified in UR M40.

4.3.8 Overload, overcurrent test

Overload test is to be carried out as a type test for generators as a proof of overload capability of generators and excitation system, for motors as a proof of momentary excess torque as required in IEC ~~Publication~~ 60034-1.

4.3.10 Overspeed test

Machines are to withstand the overspeed test as specified in to IEC ~~Publication~~ 60034-1. As proof of mechanical strength, a two-minute over-speed test shall be carried out as follows:

4.3.11 Dielectric strength test (high-voltage test)

Machines are to withstand a dielectric test as specified in IEC ~~Publication~~ 60034-1. For high voltage machine an impulse test is to be carried out on the coils according to UR E11.

Electrical machines with voltage ratings acc. to Section 8 shall be subjected to a lightning impulse withstand voltage test acc. to IEC ~~Publication~~ 60034-15. The test shall be carried out for the coils as a random sample test.

4.3.13 Test of degree of protection

As specified in IEC ~~Publication~~ 60034-5 and Table 1.10

F. Cables and Insulated Wires

1.4 Cables manufactured in accordance with the relevant recommendations of IEC ~~publication~~ 60092-350, 60092-352, 60092-353, 60092-354, 60092-360 (*), 60092-370, 60092-376 will be accepted by **TL** provided that they are tested to its satisfaction.

Note(1) in Item J in Section 20 was revised according to withdrawn Standard ISO 15371 as below:

J. Electrical Heating Equipment

(1) *Re ISO 15371~~:2000~~ "Fire-extinguishing systems for protection of galley ~~deep-fat~~ cooking equipment"*

PART C – CHAPTER 7 – HIGH SPEED CRAFTS

01. Section 6 - Anchoring, Towing and Berthing

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Item 6.5.4 was revised as below:

6.5.4 Chain cables

The proof loads PL and breaking loads BL, in kN, required for the studless link chain cables are given by the following formulae, where d, in mm, is the required diameter of grade K2 and grade K3 stud chain cables taken from Table 6.5.1:

– grade K2:

$BPL_2 = 9{,}807 \cdot d^2 \cdot (44 - 0{,}08 \cdot d) \cdot 10^{-3}$

$BPL_2 = 20{,}5 \cdot PBL_2$

– grade K3:

$PBL_3 = 13{,}73 \cdot d^2 \cdot (44 - 0{,}08 \cdot d) \cdot 10^{-3}$

$BPL_3 = 0{,}52 \cdot PBL_3$

02. Annex 2

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Footnote of Annex 2, Table 1 was revised and corrected according to revised Standard ISO 60812 as below:

Refer to IEC Publication: IEC 60812 ~~(1985)~~, Failure modes and effects analysis (FMEA and FMECA)~~Analysis techniques for system reliability - procedure for failure mode and effects analysis (FMEA)~~.

PART C – CHAPTER 9 – CONSTRUCTION AND CLASSIFICATION OF YACHTS

01. Section 3 – Hull Construction – Wooden Hulls

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Item E.4.2 in Section 3 was corrected as below:

4.2 Bottom and side frames

When a frame and strong frame spacing other than that specified in the Table 3.15 is adopted, the section modulus of the frame is to be modified according to Section 3, D.~~C.~~4.2.

02. Section 7 – Machinery and Auxiliary Systems

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Item B.1 in Section 7 was revised as below:

B. Construction and Tests of Engines

1. Diesel Engines

For propulsion and auxiliary diesel engines installed on yachts up to 24 m in length with (+) M class notation, the following certificates and alarms/indications (see Table 7.5 and Table 7.6) are required:

~~**Certificates:**~~

- Manufacturers' power declaration according to ISO Standard 8665;
- ~~Noise emission according to EN ISO Standard 14509;~~
- Exhaust emission according to EN ISO Standard 8178.

For propulsion and auxiliary diesel engines installed on yachts more than 24 m in length with (+) M class notation, the following certificates and alarms/indicates (see Table 7.5 and Table 7.6) are required:

- Manufacturers' power declaration according to ISO Standard 3046-1.

PART C – CHAPTER 35-D – FIRE SAFETY

01. Section 4 – Structural Fire Protection

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Item D.1.2.2 was deleted and item D.1.3.2 was added in Section 4 as below:

D. Protection of openings in fire- resisting divisions

1.2 Openings in B class divisions

~~**1.2.2** Cabin doors in B-class divisions are to be of a self-closing type. Hold-back hooks are not permitted.~~

1.3.2 Doors required to be self-closing shall not be fitted with hold-back hooks. However, hold-back arrangements fitted with remote release devices of the fail-safe type may be utilized.

PART D – CHAPTER 50 – RULES FOR LIFTING APPLIANCES

01. Section 2 – Design and Calculation Principles

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Item C.3.2.2 in Section 2 was corrected as below:

C. Design loads

3.2.2 Where more accurate information on the wind-load area is not available, wind load calculations may be made as follows.

$$SWL \le 50t : F_N = 0{,}36 \cdot SWL \ , \ [kN]$$

$$SWL > 50t : F_N = \sqrt{6{,}5 \cdot SWL} \ , \ [kN]$$

F_N = Wind Load~~Rüzgar yükü~~, [kN]

SWL = Safe Working Load~~Emniyetli çalışma yükü~~, [t]

PART D – CHAPTER 78 – RULES FOR CLASSIFICATION OF SHIPS USING GASES OR OTHER LOW-FLASHPOINT FUEL

01. Section 6 – Fuel Containment System

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Item 6.3.10 of Part A-1 were revised according to UI GF2 as below:

6.3.10 If liquefied gas fuel storage tanks are located on open deck the ship steel shall be protected from potential leakages from tank connections and other sources of leakage by use of drip trays. The material is to have a design temperature corresponding to the temperature of the fuel carried at atmospheric pressure. The normal operation pressure of the tanks shall be taken into consideration for protecting the steel structure of the ship.

Note: Whether a drip tray is needed or not is to be in accordance with the following:

1. When the tank is located on the open deck, drip trays are to be provided to protect the deck from leakages from tank connections and other sources of leakage.

2. When the tank is located below the open deck but the tank connections are on the open deck, drip trays are to be provided to protect the deck from leakages from tank connections and other sources of leakage.

3. When the tank and the tank connections are located below the deck, all tank connections are to be located in a tank connection space. Drip trays in this case are not required.

PART E – CHAPTER 101 – NAVAL SHIP TECHNOLOGY, CLASSIFICATION AND SURVEYS

01. Section 2 – Class Designation

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Item C.2.1.2 and Table 2.2 in Section 2 was revised according to added new vessel types as below:

C. Notations

2. Hull Notations

2.1 Ship type Notations

2.1.2 Where the intended duties of the ship include support functions which may be described by Notations also used for commercial and/or state operated non-military craft, such Notations may be assigned instead of or in addition to the Notations referred to under 2.1, see **TL** - Classification and Surveys, Section 2, D.

Examples for such Notations are:

PATROL BOAT

OFFSHORE PATROL VESSEL

SUPPLY VESSEL

RESEARCH VESSEL

CADET TRAINING SHIP

AMPHIBIOUS WARFARE SHIP (LPD, LHD, LST, LCT, LCM, etc.)

ACİL MÜDAHALE VE DALIŞ EĞİTİM BOTU

MOSHIP Submarine Rescue Mother Ship

RATSHIP Rescue and Towing Ship

LCT Landing Craft Tank

Table 2.2 Summary of notations for naval ships

Chapter 101 Classification and Surveys	Chapter 102 Hull Structures and Ship Equipment	Chapter 104 Propulsion Plants	Chapter 105/106 Electrical Installations / Automation	Chapter 107 Ship Operation, Installations and Auxiliary Systems
Ship type: **CORVETTE** **FRIGATE** **DESTROYER** **CRUISER** **MINE WARFARE VESSEL** **AMPHIBIOUS WARFARE SHIP** **AIRCRAFT CARRIER** **PATROL BOAT** **OFFSHORE PATROL VESSEL** **SUPPLY VESSEL** **RESEARCH VESSEL** **CADET TRAINING SHIP** **AMPHIBIOUS WARFARE SHIP** (LPD, LHD, LST, LCT, LCM, etc.) **ACİL MÜDAHALE VE DALIŞ EĞİTİM BOTU** **MOSHIP** Submarine Rescue Mother Ship **RATSHIP** Rescue and Towing Ship **LCT** Landing Craft Tank **LCM** Landing Craft Mechanized **LST** Landing Ship Tank **LPD** Landing Platform Dock **PRODUCT TANKER** **TUG (4)** **ESCORT TUG (p,V) (5)**	Ambient conditions: **AC1** **ACS** Material: **(HIGHER STRENGTH HULL STRUCTURAL STEEL)** **ALUMINIUM** **FRP** Residual strength after military effects: **RSM** Rational ship design: **RSD (F25)** **RSD (F30)** **RSD (ACM)** In-water survey: **IWS** Structural fire protection: **SFP** Navigation in ice: **B** Bridge design:	Condition monitoring: **CM1** **CM2** **CM3** **CM4** Redundant propulsion: **RP1** x % **RP2** x % **RP3** x % Dynamic positioning: **DK1** **DK2** **DK3** Fuel Cell Systems: **FC-xxx** **with FC** Navigation in ice: **B** Novel design: **EXP** Air Independent	Automation: **AUT-N** **AUT-Nnh** **AUT-C(NS)** Degaussing: **DEG** Quality of Electrical Power Supplies: **ELS** Integrated Computer Control: **ICC**	Lifting appliances: **LA** **LA (CL)** **LA (CR)** **LA (PL)** Replenishment at sea: **RAS** Flight operation: **FO** NBC protection: **NBC** Diving systems: **DI** Environmental Passport: **EP (6)** Fire Fighting **(7)** : **FF0** **FF1** **FF2** **FF3** **FF1/2** **FF1/3**

PART E – CHAPTER 104 – NAVAL SHIP TECHNOLOGY, PROPULSION PLANTS

01. Section 7 – Propeller

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Item E.4.1 in Section 7 was revised as below:

E. Controllable Pitch Propellers

4. Hydraulic control equipment

4.1 Where the pitch-control mechanism is operated hydraulically, two mutually independent, power driven pump sets are to be fitted. For propulsion plants up to 200 kW, one power-driven pump set is sufficient provided that, in addition, a hand-operated pump is fitted for controlling the blade pitch and that this enables the blades to be moved from ahead to the astern position in a short enough time.

For all operating conditions the adjusting time between design pitch and maximum astern pitch shall be defined in building specification. Guidance values are:

- 22 s maximum for propellers with a diameter D≤3,0 m
- 30 s maximum for propellers with a diameter D>3,0 m

ADDITIONAL RULE – IMPLEMENTATION OF MARPOL ANNEX VI AND NOx TECHNICAL CODE

01. General

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Item UI MPC92, UI MPC102 and UI MPC127 was deleted as below:

~~**MPC**~~

~~**92**~~

~~(Oct 2007)~~

~~**Annex VI Tonnage to be used when applying MARPOL**~~

~~**Regulation 5**~~

~~*Surveys and Inspections*~~

~~(1) Every ship of 400 gross tonnage and above and every fixed and floating drilling rig and other platforms shall be subject to the surveys specified below.~~

(2) In the case of ships of less than 400 gross tonnage, the Administration may establish appropriate measures in order to ensure that the applicable provisions of this Annex are complied with.

Regulation 6

Issue of International Air Pollution Prevention Certificate

(1) An International Air Pollution Prevention Certificate shall be issued, after survey in accordance with the provisions of regulation 5 of this Annex, to:

(a) any ship of 400 gross tonnage or above engaged in voyages to ports or offshore terminals under the jurisdiction of other Parties; and

Interpretation

1) This UI pertains to the gross tonnage to be used when applying MARPOL Annex VI.

2) When applying MARPOL Annex VI the gross tonnage as calculated in accordance with the tonnage measurements regulations contained in Annex I to the International Convention on Tonnage Measurements of Ships, 1969 or any successor Convention is to be used.

Note:

1. This Unified Interpretation is to be applied to ships the keels of which are laid after 1 January 2008.

MPC

102

(July 2012)

Surveys and certification relating to the Ship Energy Efficiency Management Plan (SEEMP)

(MARPOL Annex VI Regulation 5.4.4)

Regulation 5.4 as amended by Resolution MEPC.203(62) reads:

4 Ships to which Chapter 4 applies shall also be subject to the surveys specified below, taking into account Guidelines adopted by the Organization1:

4. For existing ships, the verification of the requirement to have a SEEMP on board according to regulation 22 shall take place at the first intermediate or renewal survey identified in paragraph 1 of this regulation, whichever is the first, on or after 1 January 2013

Regulation 6.4 as amended by Resolution MEPC.203(62) reads:

4 An International Energy Efficiency Certificate for the ship shall be issued after a survey in accordance with the provisions of regulation 5.4 to any ship of 400 gross tonnage and above before that ship may engage in voyages to ports or offshore terminals under the jurisdiction of

other Parties.

Interpretation

1. The International Energy Efficiency Certificate (IEEC) shall be issued for both new and existing ships.

2. For existing ships a Ship Energy Efficiency Management Plan (SEEMP) required in accordance with Regulation 22, shall be verified onboard according to Regulation 5.4.4, and an IEEC shall be issued, not later than the first Intermediate or Renewal MARPOL Annex VI Chapter 2 survey, whichever is the sooner, on or after 1 January 2013, i.e. a survey connected to a intermediate/renewal survey of the IAPP Certificate.

3. The Intermediate or Renewal survey referenced in 2. relates solely to the timing for the verification of the SEEMP onboard, i.e. these IAPPC survey windows will also become the IEEC initial survey date for existing ships. The SEEMP is however a survey item solely under the new MARPOL Annex VI Chapter 4, and is not a survey item relating to IAPPC surveys.

4. In the event that the SEEMP is not found onboard during the first intermediate/renewal survey of the IAPP Certificate on or after 1 January 2013, then the RO should seek the advice of the Administration concerning the issuance of an IEEC and be guided accordingly. However, the validity of the IAPP Certificate is not impacted by the lack of a SEEMP as the SEEMP is a survey item solely under the new MARPOL Annex VI, Chapter 4, and not under the IAPPC surveys.

Note:

1. This Unified Interpretation is to be uniformly implemented from 1 January 2013.

MPC

127

(Feb 2016)

Annex I of MARPOL 73/78

Regulation 14.7

Regulation 14 *Oil filtering equipment*

Regulation 14.7 reads:

7 Oil filtering equipment referred to in paragraph 2 of this regulation shall comply with paragraph 6 of this regulation. In addition, it shall be provided with alarm arrangement to indicate when this level cannot be maintained. The system shall also be provided with arrangements to ensure that any discharge of oily mixtures is automatically stopped when the oil content of the effluent exceeds 15 parts per million. In considering the design of such equipment and approvals, the Administration shall have regard to the specification recommended by the Organization.*

The footnote to regulation 14.7 reads:

* Refer to the Recommendation on International Performance and Test Specification for Oily Water Separating Equipment and Oil Content Meters, adopted by the Organization by Assembly resolution A.393(X), or the Guidelines and specifications for Pollution Prevention equipment for Machinery space Bilges of Ships, adopted by the Marine Environment Protection Committee by resolution MEPC.60(33), or the 2011 Guidelines and specifications for add-on equipment for upgrading resolution MEPC.60(33) - compliant oil filtering equipment, adopted by resolution MEPC.205(62), or the revised guidelines and specification for pollution prevention equipment for machinery space bilges of ships, adopted by the Marine Environment Protection Committee by resolution MEPC.107(49).

Operative paragraph 4.2.11 in the Annex of resolution MEPC.107(49) reads:

4.2.11 The accuracy of the 15 ppm Bilge Alarms should be checked at IOPP Certificate renewal surveys according to the manufacturer's instructions. Alternatively the unit may be replaced by a calibrated 15 ppm Bilge Alarm. The calibration certificate for the 15 ppm Bilge Alarm, certifying date of last calibration check, should be retained onboard for inspection purposes. The accuracy checks can only be done by the manufacturer or persons authorized by the manufacturer.

Operative paragraphs (OA) 1.2.1.18, (OIn) 1.3.1.1 and (OR) 1.4.1.2 in the Annex 3 of resolution

A.1104(29) read:

(OA) 1.2.1.18 verifying, if applicable, that the 15 ppm bilge alarm has been calibrated by the manufacturer or a person authorized by the manufacturer and that a valid calibration certificate is available on board.

(OIn) 1.3.1.1 the provisions of (OA) 1.2.1.

~~*(OR) 1.4.1.2 verifying that, if applicable, the 15 ppm bilge alarm has been calibrated by the manufacturer or a person authorized by the manufacturer and that a valid calibration certificate is available on board.*~~

~~**Interpretation**~~

~~For application of resolution MEPC.107(49), the phrase "The accuracy of the 15 ppm Bilge Alarms should be checked at IOPP Certificate renewal surveys according to the manufacturer's instructions" in 4.2.11 shall be interpreted as follows considering resolution A.1104(29):~~

~~a) The validity of calibration certificate should be checked at IOPP annual/intermediate/renewal surveys.~~
~~b) The accuracy of 15 ppm bilge alarms is to be checked by calibration and testing of the equipment conducted by a manufacturer or persons authorized by the manufacturer and should be done at intervals not exceeding five years or within the term specified in the manufacturer's instructions, whichever is shorter.~~

~~Note:~~

~~1. This Unified Interpretation is to be uniformly implemented not later than 1 January 2017.~~

ADDITIONAL RULE – TURK LOYDU SURVEY AND CERTIFICATION RULES ON ENERGY EFFICIENCY OF SHIPS (MARPOL 73/78 ANNEX VI, CHAPTER 4)

01. General

Revision Date: December 2018

Entry into Force Date: 1 January 2019

Content is revised as below:

.....

Annex 2: B- Applicability of Phases specified in table 1 of regulation 21 (required EEDI) of MARPOL Annex VI to new ships according to MEPC.1/Circ 795/Rev.3

Item 1 is revised as below:

.....

(**TL note:** For the application of phases specified in regulation 21 (required EEDI) to "new ship", refer to Annex 2 B of these guidelines or MEPC.1/Circ 795/Rev.3)

.....

(**Additional information:** Unified Interpretations for major conversion (MEPC.1/Circ 795/Rev.3)):
.....

Item 2.1 is revised as below:

.....

That falls into one or more of the categories defined in Regulation 2.25 to 2.35, 2.38 and 2.39 of MARPOL 73/78 ANNEX VI, attained EEDI shall be calculated in accordance with IMO Resolution MEPC 308(73) "2018 GUIDELINES ON THE METHOD OF CALCULATION OF THE ATTAINED ENERGY EFFICIENCY DESIGN INDEX (EEDI) FOR NEW SHIPS".

Item 5 is revised as below:

.....

That falls into one or more of the categories defined in Regulation 2.25 to 2.35, 2.38 and 2.39 of MARPOL 73/78 ANNEX VI. Attained EEDI shall be calculated in accordance with IMO Resolution MEPC 308(73) "2018 GUIDELINES ON THE METHOD OF CALCULATION OF THE ATTAINED ENERGY EFFICIENCY DESIGN INDEX (EEDI) FOR NEW SHIPS".

.....

(Additional information: In determining a ship's attained Energy Efficiency Design Index (EEDI) as per resolution MEPC 308(73) a lower threshold for the minimum installed propulsion power for bulk carriers, oil and chemical tankers and combination carriers is needed……

.....

EEDI verification is conducted in accordance with MEPC.254(67) as amended by MEPC 261(68) and MEPC 309(73) "2014 GUIDELINES ON SURVEY AND CERTIFICATION OF THE ENERGY EFFICIENCY DESIGN INDEX (EEDI)" and IACS PR 38/Rev.1.

.....

In line with the MEPC.254(67) as amended by MEPC 261(68) and MEPC 309(73) "2014 GUIDELINES ON SURVEY AND CERTIFICATION OF THE ENERGY EFFICIENCY DESIGN INDEX (EEDI)" (4.1.2), it is recognized that the documents submitted for verification may contain confidential information of submitters, which requires Intellectual Property Rights (IPR) protection.

.....

Parameter	Description	Unit
C_F	The conversion factor of the fuel type used for EIAPP cert. in NO_X Tech. File of all main and auxiliary engines (MEPC.308(73))	g CO_2/g fuel
Δ	The displacement should be taken from the loading manual / preliminary trim and stability booklet.	t
DWT	The deadweight should be taken from the loading manual / preliminary trim and stability booklet, alternatively a freeboard calculation.	t
$f_{eff(i)}$	The availability factor for each innovative energy efficiency technology shall be based on comprehensive documentation of the determination for each innovative energy efficiency technology For waste heat recovery systems $f_{eff(i)}$ shall be set to one.	
f_i	For ice-classed ships f_i is determined by the standard given in MEPC. 308(73) Documentation on intended ice class	
f_j	For ships with planned ice class f_j is given in MEPC. 308(73) Documentation on intended ice class	
f_w	Refer to MEPC.1/Circ. 796	

f_c	Cubic capacity correction factor given in MEPC. 308(73)	
f_l	For general cargo ships equipped with cranes and other cargo-related gear to compensate in a loss of deadweight of the ship	
P_{AE}	- If Σ $MCR_{ME(i)} > 10{,}000$ Kw, P_{AE} shall be calculated as: $P_{AE} = 0.025 \cdot (MCR_{ME} + 250)$ - If Σ $P_{ME(i)} < 10{,}000$ Kw, P_{AE} shall be: $P_{AE} = 0.05 \cdot MCR_{ME}$ - For LNG Carriers with a reliquiefaction system or compressor(s) extra items, in accordance with MEPC. 308(73), to be added to above P_{AE} formulations, is to be provided. - For ship where the P_{AE} value calculated as above is significantly different from the total power used at normal seagoing condition, The P_{AE} calculation in accordance with MEPC. 308(73), (see also MEPC. 308(73) Appendix 2 for guidance), is to be provided.	kW

Item 6 is revised as below:

.....

According to regulation 5 of chapter 2 of MARPOL 73/78 Annex VI, ships to which chapter 4 applies shall also be subject to the surveys specified below, taking into account MEPC. 254(67) as amended by MEPC 261(68) and MEPC 309(73) "2014 Guidelines on Survey and Certification of the Energy Efficiency Design Index" adopted by the Organization:

.....

Annex 1 is revised as below:

.....

.27 "Tanker" in relation to chapter 4 means an oil tanker as defined in MARPOL Annex I, regulation 1 or a chemical tanker or an NLS tanker as defined in MARPOL Annex II, regulation 1. (**Additional information:** Fruit Juice carriers shall be categorized as "Refrigerated cargo carriers" as agreed by MEPC 64, refer to MEPC.1/Circ 795/Rev.3)

.....

Annex 2 is revised as below:

.....

B- Applicability of Phases specified in table 1 of regulation 21 (required EEDI) of MARPOL Annex VI to new ships according to MEPC.1/Circ 795/Rev.3

.....

USEFUL REFERENCE DOCUMENTS, IMO DOCUMENTS is revised as below:

.....

RESOLUTION MEPC.308(73): 2018 GUIDELINES ON THE METHOD OF CALCULATION OF THE ATTAINED ENERGY EFFICIENCY DESIGN INDEX (EEDI) FOR NEW SHIPS

RESOLUTION MEPC.282(70): 2016 GUIDELINES FOR THE DEVELOPMENT OF A SHIP ENERGY EFFICIENCY MANAGEMENT PLAN (SEEMP)

RESOLUTION MEPC.254(67) as amended by MEPC 261(68) and MEPC 309(73): 2014 GUIDELINES ON SURVEY AND CERTIFICATION OF THE ENERGY EFFICIENCY DESIGN INDEX (EEDI)

RESOLUTION MEPC.231(65): 2013 GUIDELINES FOR CALCULATION OF REFERENCE LINES FOR USE WITH THE ENERGY EFFICIENCY DESIGN INDEX (EEDI)

MEPC.1/Circ.684: GUIDELINES FOR VOLUNTARY USE OF THE SHIP ENERGY EFFICIENCY OPERATIONAL INDICATOR (EEOI)

MEPC.1/Circ 795/Rev.3: UNIFIED INTERPRETATIONS TO MARPOL ANNEX VI

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