CCS Rule Change Notice For:

RULES FOR CLASSIFICATION OF SEA-GOING STEEL SHIPS

Version: 2020. RCN No.4
Effective date: Jan 1, 2021

Beijing

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PART ONE

Brief Introduction

1. Incorporation of UR Z1 (Rev.8 July 2020), revising testing requirements for remote closing of valves for oil.
2. To incorporate URZ18 (Rev.9Apr.2020) uniform requirements for annual and special surveys of the towing winch emergency release system for tugs, and uniformly applied on or after 1 July 2021.
3. Notation “DP-N(CB)/DP-N(CR)（Closed Bus-Tied DP）”is newly added.

CONTENTS

CHAPTER 2 SCOPE AND CONDITIONS OF CLASSIFICATION

Appendix 1 LIST OF CLASS NOTATIONS FOR SEA-GOING SHIPS

Special Equipment and System Notations **Table G**

Class notation	Description		Technical requirements
DP-N(CB)/DP-N(CR)	Closed Bus-Tied DP	Vessels configured with closed bus-tie DP could be granted the notations, among which N should be : 2(CB)— Closed bue tie, but not ring type; 2(CR)— Bue tie is closed ring type; 3(CB)— Closed bue tie, but not ring type; 3(CR)— Bue tie is closed ring type	Guide for closed bus tie DP

CHAPTER 5 SURVEYS AFTER CONSTRUCTION

Section 4 HULL AND EQUIPMENT SURVEYS

5.4.2 Annual surveys

5.4.2.2 Scope of the survey for all ships

(6) Fire-fighting equipment

⑫examining the arrangements for ~~remote closing of valves~~ oil fuel, lubricating oil and other flammable oils and ~~confirming, as far as practicable and as appropriate~~, testing the remote closing of valves for oil fuel, lubricating oil and other flammable oils and the operation of the remote means of closing the valves on the tanks that contain oil fuel, lubricating oil and other flammable oils; examination of flame screens on vents to all bunker tanks;

5.4.2.9 Tugs①

(1) In addition to the survey items in 5.4.2.2, the following additional items are to be carried out for tugs (if applicable):

① operations manual;

② towing hook;

③ release mechanism;

④ towing engine;

⑤ supporting structures.

⑥ towing winch emergency release system.

(2) Survey of towing winch emergency release systems, including:

① Operation of the towing winch emergency release system is to be confirmed with the reference to the documented instructions for surveys provided by the manufacturer. Operation of the winch emergency release system under no load condition is to be verified. Where practical, activation of the emergency release system may be confirmed by observation of the winch brake.

② The function of the alarms associated with the emergency release system is to be verified, as far as practicable and reasonable.

③ The condition of the emergency release system is to be visually examined to confirm it remains in satisfactory condition.

① This revision is to be implemented on or after 1 July 2021.

④ The means of emergency release of the towline in the event of a blackout is to be examined, and where additional sources of energy are arranged for this purpose, the sources of energy are to be visually inspected and operationally tested.

⑤ It is to be verified that the performance capabilities and operating instructions of the emergency release system are documented and made available on board the ship on which the winch has been installed.

5.4.4 Special surveys

5.4.4.4 Tugs[①]

(1) In addition to the applicable survey items in 5.4.4.2, the additional survey of towing winch emergency release systems is to be carried out for tugs , including:

① The Annual Survey requirements in item5.4.2.9(2) are to be carried out, with the additional instructions for special survey provided by the manufacturer, as appropriate, being followed.

② The full functionality of the emergency release system is to be tested to the satisfaction of the surveyor. Testing may be conducted either during a bollard pull test or by applying the load against a strong point on the deck of the tug or the shore that is certified to the appropriate load.

③ The emergency release system is to be tested at a towline load that is equal to the lesser of 30% of the maximum design load or 80% of vessel bollard pull in both a normal power condition and power blackout condition to the satisfaction of the surveyor.

Section 12 SURVEYS OF PROPELLER SHAFTS AND TUBE SHAFTS

5.12.2 Oil lubricated shafts or closed loop system fresh water lubricated shafts (closed system)

5.12.2.2 Shaft extension surveys - Extension types

(3) Extension up to 3 months

The survey is to consist of:

① Visual Inspection of all accessible parts of the shafting system.

② Verification of the effectiveness of the inboard seal.

5.12.3 Water lubricated shafts (open systems)

5.12.3.2 Shaft extension surveys - extension types

(2) Extension up to 3 months

The survey is to consist of:

① Visual Inspection of all accessible parts of the shafting system.

② Verification that the propeller is free of damages which may cause the propeller to be out of balance.

③ Verification of the effectiveness of the inboard seal.

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PART TWO

Brief Introduction

1. Chapter 1 section 9, the provisions relating to the intact stability of towing vessels is deleted harmoniously.

2. Incorporation of UR L5 (Rev.4 June 2020), will be implemented on ships contracted for construction on or after 1 July 2021.

CONTENTS

CHAPTER 1 GENERAL

Section 9 INTACT STABILITY

1.9.4 Requirements for intact stability

~~1.9.4.3 The intact stability of towing vessels is also to comply with the relevant requirements of IACS REC 24:~~

~~(1) the intact stability requirements in 2.2, Chapter 2, Part A of IMO resolution MSC.267(85);~~

~~(2) or alternatively, if applicable, the intact stability requirements in 2.4, Chapter 2, Part B of IMO resolution MSC.267(85);~~

~~(3) additionally:~~

~~① The residual area between a righting lever curve and a heeling lever curve developed from 70% of the maximum bollard pull force acting in 90° to the ship-length direction is not to be less than 0.09 m·rad. The area has to be determined between the first interception of the two curves and the second interception or the angle of down flooding, whichever is less.~~

~~② Alternatively, the area under a righting lever curve is not to be less than 1.4 times the area under a heeling lever curve developed from 70% of the maximum bollard pull force acting in 90° to ship-length direction. The areas are to be determined between 0° and the 2nd interception or the angle of down flooding, whichever is less.~~

~~The heeling lever curve is to be derived by using the following formula:~~

~~where: bh — heeling arm, in m;~~

~~T — maximum bollard pull, in kN;~~

~~H — vertical distance, in m, between the towing hook and the centre of the propeller;~~

~~θ — heeling angle, in °;~~

~~Δ — loading condition displacement, in t.~~

~~(4) Openings required to be fitted with weathertight closing devices under the ICLL but, for operational reasons, are required to be kept open are to be considered as downflooding points in stability calculation.~~

1.9.4.4~~3~~ The intact stability of open-top container ships is to comply with the relevant requirements of MSC/Circ.608/Rev. 1 – Interim Guidelines for Open-Top Container Ships.

1.9.4.5~~4~~ The intact stability of polar ships having class notation PC and ships intended for navigation in ice and having class notation B1* or B1 are also to comply with the relevant requirements of resolution MSC.385(94) – International Code for Ships Operating in Polar Waters (Polar Code).

Appendix 2 IACS UR L5 COMPUTER SOFTWARE FOR ONBOARD STABILITY CALCULATIONS

~~(Rev.3, June 2017)~~
(Rev.4 June 2020)

Application

This Unified Requirement is applicable to software which calculates the stability of actual loading conditions and which is installed on ships and on units subject to compliance with the 1966 Load Line Convention or the 1988 Protocol to the Load Line Convention, as amended, the IMO MODU Code and/or the 2008 IS Code.

The use of onboard computers for stability calculations is not a requirement of class.

Stability software installed onboard shall cover all mandatory class and statutory intact and damage stability requirements applicable to the ship. This UR, requires approval of software installed on onboard computers which is capable of performing stability calculations.

Active and passive systems are defined in paragraph 2. This UR covers passive systems and the off-line operation mode of active systems only.

The requirements in this UR apply to stability software on ships contracted for construction① on or after 1 July 2005②③④.

4 Functional Requirements

4.1 General requirements for any type of stability software

4.1.3 Type 3 software is to include pre-defined relevant damage cases for both sides of the ship according to the applicable rules for automatic check of a given loading condition.

① The "contracted for construction" date means the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. For further details regarding the date of "contracted for construction", refer to IACS Procedural Requirement (PR) No.29.

② Changes introduced in Rev.2 of this UR are to be uniformly applied by IACS Societies on ships contracted for construction on or after 1 January 2007.

③ Changes introduced in Rev.3 of this UR are to be uniformly applied by IACS Societies on ships contracted for construction on or after 1 July 2018.

④ Changes introduced in Rev.4 of this UR are to be uniformly applied by IACS Societies on ships contracted for construction on or after 1 July 2021.

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PART THREE

Brief Introduction

1. New rules and technical requirement of ships installed with exhaust gas recirculation systems for reduction of NOx emission from diesel engines to be added, and point to the EGR guidelines.

CONTENTS

CHAPTER 1 GENARAL

Section 2 GENARAL PROVISIONS

1.2.10 Emission treatment

1.2.10.3 Ships installed with exhaust gas recirculation systems (hereinafter referred to as the EGR systems) and related auxiliary systems for reduction of NOx emission from diesel engines are, in addition to the relevant provisions of this Part, to comply with the requirements of CCS Guidelines for Application of Exhaust Gas Recirculation Systems onboard Ships.

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AMENDMENTS

2020

PART SIX FIRE PROTECTION, DETECTION AND EXTINCTION

Revision explanation

Blue underline is to highlight new insertions, strikethrough line is to highlight deleted contents and cross line may be used to highlight deleted tables or figures.

CONTENTS

CHAPTER 3 FIRE SAFETY MEASURES

Section 4 MISCELLANEOUS

3.4.3 Portable instruments for measuring oxygen and flammable vapour concentrations

3.4.3.1 Every oil tanker is to be provided with at least two portable gas detectors capable of measuring flammable vapour concentrations in air (%LEL) and at least two portable O2 analysers. Alternatively, at least two gas detectors, each capable of measuring both oxygen and flammable vapour concentrations in air (%LEL), are to be provided.

3.4.3.2 In addition, for tankers fitted with inert gas systems, at least two portable gas detectors are to be capable of measuring concentrations of flammable vapours in inerted atmosphere (% gas by volume).

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PART EIGHT

Brief Introduction

1. Chapter 20 section 4, the provisions relating to the intact stability of anchor handling vessels is deleted harmoniously.

CONTENTS

CHAPTER 20 ADDITIONAL REQUIREMENTS FOR ANCHOR HANDLING

Section 4 STABILITY

20.4.1 General

20.4.1.1 The stability during anchor handling operations is to comply with the requirements of 20.4.2 of this Section in addition to the relevant requirements of the Administration.

20.4.2 Additional requirements for intact stability

20.4.2.1 The vertical and transverse tensions in the most unfavorable condition are at least to comply with the following requirements:

(1) The maximum acceptable tension in wire/line/chain, including the maximum acceptable transverse tension that can be accepted in order for the ship's maximum heeling to be limited to one of the following angles, whichever occurs first:

① heeling angle equivalent to a GZ value equal to 50% of GZ max;

② the angle which results in water on working deck;

③ 15º.

(2) The heeling moment is to be calculated as the total effect of the horizontal and vertical transverse components of tension in the wire/line/chain. The torque arm of the horizontal components is to be calculated as the distance from the height of the work deck at the guide pins to the center of main propulsion propeller or to center of stern side propeller if this projects deeper. The torque arm of the vertical components is to be calculated from the centre of the outer edge of the stern roller and with a vertical straining point on the upper edge of the stern roller.

20.4.2.2 The following loading conditions intended for anchor handling are to be included in the Stability Booklet:

(1) ship at the maximum load line draft, with full stores and fuel and fully loaded with all liquid and dry cargo distributed below deck and with remaining deadweight distributed as above-deck weight (anchors, chain, etc.) corresponding to the worst service departure condition in which all the relevant stability criteria are met;

(2) ship with 10% stores and fuel and fully loaded cargoes of (1) above, arrival condition;

(3) ship at the maximum load line draft, with full stores, a full set of rig anchors on deck to be deployed during single trip (and rig chains, if appropriate) and fuel loaded to the maximum

deadweight, corresponding to the worst service departure condition in which all the relevant stability criteria are met;

(4) ship with 10% stores and fuel and fully loaded cargoes of (3) above, arrival condition;

(5) ship in the worst anticipated operating condition.

20.4.2.3 The conditions given in 20.4.2.2 of this Section are to include the following items:

(1) the loads on the deck (including the weight of anchors, chains and wires/lines) and winch reels (loaded with heaviest possible wire/line types);

(2) the vertical force from the tension, upon which calculations of trim and curve for righting arm are based;

(3) the weight of the anchors and wires/lines/chains;

(4) the righting arm curve corrected for the free surface (using the vertical centre of gravity), including any roll reduction tanks in use. Consideration is to be given to fuel oil and fresh water used as well as any ballast water necessary during the operations;

(5) if a ship is fitted with rig chain locker(s) below the main deck, the opening(s) is to be considered as a downflooding point for the stability calculations. As an alternative, where the ship's stability is in compliance with the requirements of this Section in the condition of the single chain locker being flooded (and taking the effects of the maximum free surface into account) during the stability calculation, the opening(s) may not be regarded as the downflooding point(s);

(6) if a ship is fitted with open rig chain lockers on the main deck, effective means to drain these lockers are to be provided. If not, the lockers are to be considered flooded and the appropriate free surface effects included in all stability calculations.

20.4.3 Stability information to be supplied to the Master

20.4.3.1 The stability booklet is to include the following items:

(1) Information stating the maximum tension in wire/line/chain, as well as corresponding lateral point of direction according to the calculations, is to be provided and be displayed next to the control desk or at another location where the navigator on duty can easily see the information from his command post.

(2) The displayed information is to be in the form of simple sketches showing the ship's righting moment/arm curves in addition to a table stating the relevant combinations of tension and point of direction which gives the maximum acceptable heeling moment.

~~(3) Any tank restrictions (i.e. ballast tank and roll reduction tank usage, fuel oil burn off sequences, etc.) determined by the stability calculations.~~

~~20.4.3.2 During anchor handling operations, all weathertight access and emergency hatches, and doors on the work deck, are to be kept closed, except when actually being used for transit under safe conditions.~~