

IACS Common Structural Rules for Double Hull Oil Tankers, January 2006

Background Document

SECTION 5 – STRUCTURAL ARRANGEMENTS

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Enquiries should be addressed to the Permanent Secretary,
International Association of Classification Societies Ltd,
36 Broadway
London, SW1H 0BH
Telephone: +44 (0)20 7976 0660
Fax: +44 (0)20 7808 1100
Email: PERMSEC@IACS.ORG.UK

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1 GENERAL

1.1 Introduction

1.1.1 Scope

- 1.1.1.a The intent is to identify the National and International Regulations that have a structural requirement content and make the relevant requirements a part of the Classification requirements by either re-stating the requirements or clearly referencing the applicable regulations. The Classification requirements in this Section do not replace the corresponding National and International Regulations but are additional requirements that have to be complied with.

2 WATERTIGHT SUBDIVISION

2.1 Watertight Bulkhead Arrangement

2.1.1 General

2.1.1.a The text is based on SOLAS II-1/11 and common requirements in the LR Rules Pt 3, Ch 3,4, ABS Part 3 Ch 2, Sec 9, and the January 2000 DNV Rules Pt.3 Ch.1 Sec.3 A. Requirements/recommendations for the minimum number of bulkheads in the cargo area have not been included since requirements limiting tank size for outflow and requirements for damage stability lead to arrangements with a sufficient number of bulkheads. The load line length is to be calculated in accordance with the latest Load Line requirements, therefore, the criteria of the Protocol of 1988 is to be applied.

2.1.2 Minimum number and disposition of watertight bulkheads

2.1.2.a It is considered that for this topic, no information in addition to that shown in the Rules, is necessary to explain the background.

2.2 Position of Collision Bulkhead

2.2.1 General

2.2.1.a The text is extracted from SOLAS II-1/Part B Regulation 11.

2.3 Position of Aft Peak Bulkhead

2.3.1 General

2.3.1.a The text is based on SOLAS II-1/11 Part B Regulation 11 and common requirements in the LR Rules Pt 3, Ch 3,4, ABS Part 3 Ch 2, Sec 9 and DNV Rules.

3 DOUBLE HULL ARRANGEMENT

3.1 General

3.1.1 Protection of cargo tanks

3.1.1.a Text is extracted from applicable regulations in MARPOL 73/78 (Regulation 13F).

3.1.2 Capacity of ballast tanks

3.1.2.a Text is extracted from applicable regulations in MARPOL 73/78 (Regulation 13).

3.1.3 Limitation of size and arrangement of cargo tanks

3.1.3.a Text provides a general reference to the fact that there are regulations on the limitation of size and arrangement of cargo tanks. Applicable regulations are located in MARPOL 73/78, Regulation 24.

3.2 Double Bottom

3.2.1 Double bottom depth

3.2.1.a Text is extracted from applicable regulations in MARPOL 73/78 (Regulation 13F).

3.3 Double side

3.3.1 Double side width

3.3.1.a Text is extracted from applicable regulations in MARPOL 73/78 (Regulation 13F).

4 SEPARATION OF SPACES

4.1 Separation of Cargo Tanks

4.1.1 General

4.1.1.a The text briefly summarizes the main arrangement considerations related to the separation of cargo tanks from other spaces. Applicable requirements are contained in SOLAS II-2/4.5.1.

4.2 Cofferdam Spaces

4.2.1 General

4.2.1.a The information provided is common to LR, ABS and DNV Rules.

5 ACCESS ARRANGEMENTS

5.1 Access into and Within Spaces in, and Forward of, the Cargo Tank Region

5.1.1 General

- 5.1.1.a The text incorporates the requirements of SOLAS II-1/3.6, as required by the Flag Administration, for details and arrangements of openings and attachments to hull structure for access to and within spaces in, and forward of, the cargo tank region, sometimes referred to as the SOLAS requirements for Permanent Means of Access. The present Rule requirements do not specify strength/scantling requirements for supporting structure for permanent means of access facilities, except where that supporting structure is a part of hull structure. Future updates to the rules will give consideration to specifying or providing guidance for the application of corrosion margins for supporting structure for permanent means of access.
- 5.1.1.b Additional text is based on LR Rules Pt 4, Ch 9,13.2 and ABS Rules 5-1-1/5.19.
- 5.1.1.c The information provided is common to LR, ABS and DNV Rules.
- 5.1.1.d The text “At least one horizontal access opening of 600 mm by 800 mm clear opening is to be fitted in each horizontal girder in the vertical wing ballast space and weather deck ...” is an extra safety measure employed by LR in their Rules, in excess of the SOLAS minimum requirements. In addition, text has been added to permit acceptance of a 600 mm by 600 mm opening were the 600 mm by 800 mm opening is impractical due to structural arrangements.