

Common Structural Rules for Bulk Carriers, January 2006

Background Document

CHAPTER 2 – GENERAL ARRANGEMENT DESIGN

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SECTION 1 – SUBDIVISION ARRANGEMENT

1. NUMBER AND ARRANGEMENT OF TRANSVERSE WATERTIGHT BULKHEADS

1.1 Number of watertight bulkheads

1.1.1 General

1.1.1.a This regulation is based on 1.1.1, Sec. 1, Chapter 2, Part B, of the RINA Rules, and is related to Reg. II-1/11 of the SOLAS Convention.

1.1.2 Additional bulkheads

1.1.2.a This is a regulation based on 1.1.2, Sec. 1, Chapter 2, Part B of the RINA Rules.

2. COLLISION BULKHEAD

2.1 Arrangement of collision bulkhead

2.1.1

2.1.1.a This regulation is according to 2.1.1, Sec. 1, Chapter 2, Part B of the RINA Rules, and is based on Reg. II-1/11.2 of the SOLAS Convention.

2.1.2

2.1.2.a This regulation is according to 2.1.2, Sec. 1, Chapter 2, Part B of the RINA Rules, and is based on Reg. II-1/11.3 of the SOLAS Convention.

2.1.3

2.1.3.a This regulation is according to 2.1.3, Sec. 1, Chapter 2, Part B of the RINA Rules, and is based on the first sentence in Reg. II-1/11.4 of the SOLAS Convention.

3. AFTER PEAK, MACHINERY SPACE BULKHEADS AND STERN TUBES

3.1

3.1.1 General

3.1.1.a This regulation is according to 3.1.1, Sec. 1, Chapter 2, Part B of the RINA Rules, and is based on Reg. II-1/11.8 of the SOLAS Convention, in principle. However, it complies with the requirements for passenger ships of Reg. 11-1/10.7 of the SOLAS Convention.

3.1.2 Sterntubes

3.1.2.a This regulation is according to 3.1.2, Sec. 1, Chapter 2, Part B of the RINA Rules, and is based on Reg. II-1/11.9 of the SOLAS Convention.

4. NUMBER AND ARRANGEMENT OF TANK BULKHEADS

4.1 Bulkheads in compartments intended for the carriage of liquid cargoes

4.1.1

4.1.1.a This regulation is based on 4.1.1, Sec. 1, Chapter 2, Part B of the RINA Rules.

5. ARRANGEMENT OF TRANSVERSE WATERTIGHT BULKHEADS

5.1 General

5.1.1

5.1.1.a This regulation is according to 5.1.2, Sec. 1, Chapter 2, Part B of the RINA Rules, and is based on Reg. II-1/14.2.1 of the SOLAS Convention.

6. OPENINGS IN WATERTIGHT BULKHEADS

6.1 General

6.1.1

6.1.1.a This regulation is according to 6.1.1, Sec. 1, Chapter 2, Part B of the RINA Rules, and is based on Reg. II-1/25.9.1 of the SOLAS Convention, and on the IMO Resolution A.684 (17).

6.1.2

6.1.2.a This regulation is according to 6.1.2, Sec. 1, Chapter 2, Part B of the RINA Rules, and complies with the requirements for passenger ships of Reg. II-1/15.3.1.1 of the SOLAS Convention.

6.1.3

6.1.3.a This regulation is according to 6.1.3, Sec. 1, Chapter 2, Part B of the RINA Rules, and complies with the requirement for passenger ships of Reg. II-1/15.2 of the SOLAS Convention.

6.1.4

6.1.4.a This regulation is according to 6.1.4, Sec. 1, Chapter 2, Part B of the RINA Rules, and complies with the requirement for passenger ships of Reg. II-1/15.2 of the SOLAS Convention.

6.1.5

6.1.5.a This regulation is based on 6.1.5, Sec. 1, Chapter 2, Part B of the RINA Rules and on IACS UR SC156.

6.2 Openings in the watertight bulkheads below the freeboard deck

6.2.1

6.2.1.a This regulation is according to 6.2.1, Sec. 1, Chapter 2, Part B of the RINA Rules, and is based on Reg. II-1/25-9.2 of the SOLAS Convention.

6.2.2

6.2.2.a This regulation is according to 6.2.2, Sec. 1, Chapter 2, Part B of the RINA Rules, and is based on Reg. II-1/25-9.3 of the SOLAS Convention.

6.2.3

6.2.3.a This regulation is according to 6.2.3, Sec. 1, Chapter 2, Part B of the RINA Rules, and is based on Reg. II-1/25-9.4 of the SOLAS Convention.

6.2.4

6.2.4.a This regulation is according to 6.2.4, Sec. 1, Chapter 2, Part B of the RINA Rules, and is based on Reg. II-1/25- 9.5 of the SOLAS Convention.

6.3 Openings in the bulkheads above the freeboard deck

6.3.1 General

6.3.1.a This regulation is based on 6.3.1, Sec. 1, Chapter 2, Part B, of the RINA Rules, and is related to Reg. II-1/25-6.1.1 of the SOLAS Convention.

6.3.2 Doors used while at sea

6.3.2.a This regulation is according to 6.3.2, Sec. 1, Chapter 2, Part B of the RINA Rules, and is based on Reg. II-1/25-9.2 of the SOLAS Convention.

6.3.3 Doors normally closed at sea

6.3.3.a This regulation is according to 6.3.3, Sec. 1, Chapter 2, Part B of the RINA Rules, and is based on Reg. II-1/25-9.3 of the SOLAS Convention.

6.3.4 Openings kept permanently closed at sea

6.3.4.a This regulation is according to 6.3.4, Sec. 1, Chapter 2, Part B of the RINA Rules, and is based on Reg. II-1/25- 9.5 of the SOLAS Convention.

SECTION 2 – COMPARTMENT ARRANGEMENT

1. DEFINITIONS

1.1 Cofferdam

1.1.1

1.1.1.a This regulation is based on the regulations of 2, Section 1, Chapter 2, Part A of the RINA Rules.

1.2 Machinery spaces of Category A

1.2.1

1.2.1.a This regulation is according to 1.2.1, Sec. 2, Chapter 2, Part B of the RINA Rules, and is based on Reg. II-1/3.31 of the SOLAS Convention.

2. COFFERDAM

2.1 Cofferdam arrangement

2.1.1.a This regulation is based on 2.1.1, Sec. 2, Chapter 2, Part B of the RINA Rules.

2.1.2

2.1.2.a This regulation is based on 2.1.2, Section 2, Chapter 2, Part B of the RINA Rules.

2.1.3

2.1.3.a This regulation is based on the first sentence of 2.1.3, Section 2, Chapter 2, Part B of the RINA Rules.

2.1.4

2.1.4.a This regulation is based on 2.1.4, Section 2, Chapter 2, Part B of the RINA Rules.

3. DOUBLE BOTTOMS

3.1 General

3.1.1.a This regulation is according to 3.1.1, Sec. 2, Chapter 2, Part B, of the RINA Rules, and is based on Reg. II-1/12-1.1 of the SOLAS Convention.

3.1.2

3.1.2.a This regulation is according to 3.1.2, Sec. 2, Chapter 2, Part B, of the RINA Rules, and is based on Reg. II-1/12-1.2 of the SOLAS Convention.

3.1.3

3.1.3.a This regulation is according to 3.1.3, Sec. 2, Chapter 2, Part B, of the RINA Rules, and is based on Reg. II-1/12-1.3 of the SOLAS Convention.

3.1.4

3.1.4.a This regulation is according to 3.1.4, Sec. 2, Chapter 2, Part B, of the RINA Rules, and is based on Reg. II-1/12-1.4 of the SOLAS Convention.

4. COMPARTMENT FORWARD OF THE COLLISION BULKHEAD

4.1 General

4.1.1

4.1.1.a This regulation is according to 4.1.1, Sec. 2, Chapter 2, Part B, of the RINA Rules, and is based on Reg. II-2/4-2.2.3.1 of the SOLAS Convention.

5. MINIMUM BOW HEIGHT

5.1 General

5.1.1

5.1.1.a These regulations are according to Sec. 2, Chapter 2, Part B of the RINA Rules, and they are based on Reg. 39 (1), (2), (3), (4)(a) and (4)(b) of the International Convention on Load Lines (hereafter referred to as the "LL Convention").

5.1.2

5.1.2.a These regulations are according to Sec. 2, Chapter 2, Part B of the RINA Rules, and they are based on Reg. 39 (1), (2), (3), (4)(a) and (4)(b) of the International Convention on Load Lines (hereafter referred to as the "LL Convention").

5.1.3

5.1.3.a These regulations are according to Sec. 2, Chapter 2, Part B of the RINA Rules, and they are based on Reg. 39 (1), (2), (3), (4)(a) and (4)(b) of the International Convention on Load Lines (hereafter referred to as the "LL Convention").

5.1.4

5.1.4.a These regulations are according to Sec. 2, Chapter 2, Part B of the RINA Rules, and they are based on Reg. 39 (1), (2), (3), (4)(a) and (4)(b) of the International Convention on Load Lines (hereafter referred to as the "LL Convention").

5.1.5

5.1.5.a These regulations are according to Sec. 2, Chapter 2, Part B of the RINA Rules, and they are based on Reg. 39 (1), (2), (3), (4)(a) and (4)(b) of the International Convention on Load Lines (hereafter referred to as the "LL Convention").

6. SHAFT TUNNELS

6.1 General

6.1.1

- 6.1.1.a This regulation is according to 6.1.1, Sec. 2, Chapter 2, Part B, of the RINA Rules, and complies with the regulation related to passenger ships in Reg. II-1/10-8 of the SOLAS Convention.

7. WATERTIGHT VENTILATORS AND TRUNKS

7.1 General

7.1.1

- 7.1.1.a This regulation is according to 7.1.1, Sec. 2, Chapter 2, Part B, of the RINA Rules, and is based on the regulation at the end of Reg. II-1/19-1 of the SOLAS Convention.

8. FUEL OIL TANKS

8.1 General

8.1.1

- 8.1.1.a This regulation is in accordance with Reg. II-2/4.2.2 of the SOLAS Convention.

8.1.2

- 8.1.2.a This regulation is in accordance with Reg. II-2/4.2.2 of the SOLAS Convention.

8.1.3

- 8.1.3.a This regulation is in accordance with Reg. II-2/4.2.2 of the SOLAS Convention.

8.1.4

- 8.1.4.a These regulations are according to 8.1.4, Sec. 2, Chapter 2, Part B of the RINA Rules.

SECTION 3 – ACCESS ARRANGEMENT

1. GENERAL

1.1 Means of access to cargo and other spaces

1.1.1

1.1.1.a This regulation is in accordance with the SOLAS Convention.

1.1.2

1.1.2.a This regulation is in accordance with the SOLAS Convention

1.1.3

1.1.3.a This regulation is in accordance with the SOLAS Convention

1.2

1.2.1

1.2.1.a This regulation is in accordance with the SOLAS Convention and with the related IACS UI.

1.2.2

1.2.2.a This regulation is in accordance with the SOLAS Convention

1.2.3

1.2.3.a This regulation is in accordance with the SOLAS Convention

1.3

1.3.1

1.3.1.a This regulation is in accordance with the SOLAS Convention and with the related IACS UI.

1.3.2

1.3.2.a This regulation is in accordance with the SOLAS Convention and with the related IACS UI.

2. TECHNICAL PROVISIONS FOR MEANS OF ACCESS

2.1 Definitions

2.1.1 Rung

2.1.1.a This regulation is in accordance with Reg. II-1/3-6 of the SOLAS Convention and the IMO Resolution.

2.1.2 Tread

2.1.2.a This regulation is in accordance with Reg. II-1/3-6 of the SOLAS Convention and the IMO Resolution.

2.1.3 Flight of a ladder

2.1.3.a This regulation is in accordance with Reg. II-1/3-6 of the SOLAS Convention and the IMO Resolution.

2.1.4 Stringer

2.1.4.a This regulation is in accordance with Reg. II-1/3-6 of the SOLAS Convention and the IMO Resolution.

2.1.5 Vertical ladder

2.1.5.a This regulation is in accordance with Reg. II-1/3-6 of the SOLAS Convention and the IMO Resolution.

2.1.6 Overhead obstructions

2.1.6.a This regulation is in accordance with Reg. II-1/3-6 of the SOLAS Convention and the IMO Resolution.

2.1.7 Distance below deck head

2.1.7.a This regulation is in accordance with Reg. II-1/3-6 of the SOLAS Convention and the IMO Resolution.

2.1.8 Cross deck

2.1.8.a This regulation is in accordance with Reg. II-1/3-6 of the SOLAS Convention and the IMO Resolution.

2.2 Permanent means of access

2.2.1

2.2.1.a This regulation is in accordance with the IMO Resolution MSC.158 (78).

2.2.2

2.2.2.a This regulation is in accordance with the IMO Resolution MSC.158 (78) and with the related IACS UI.

2.2.3

2.2.3.a This regulation is in accordance with the IMO Resolution MSC.158 (78).

2.3 Construction of ladders

2.3.1 General

2.3.1.a This regulation is in accordance with the IMO Resolution MSC.158 (78).

2.3.2 Inclined ladders

2.3.2.a This regulation is in accordance with the IMO Resolution MSC.158 (78).

2.3.3 Vertical or spiral ladders

2.3.3.a This regulation is in accordance with the IMO Resolution MSC.158 (78).

2.4 Access through openings

2.4.1 Access through horizontal opening, hatches or manholes

2.4.1.a This regulation is in accordance with the IMO Resolution MSC.158 (78).

2.4.2 Access through vertical openings, or manholes

2.4.2.a This regulation is in accordance with the IMO Resolution MSC.158 (78).

2.5 Access ladders to cargo holds and other spaces

2.5.1 General

2.5.1.a This regulation is in accordance with the IMO Resolution MSC.158 (78).

2.5.2

2.5.2.a This regulation is in accordance with the IMO Resolution MSC.158 (78).

2.5.3

2.5.3.a This regulation is in accordance with the IMO Resolution MSC.158 (78).

2.5.4

2.5.4.a This regulation is in accordance with the IMO Resolution MSC.158 (78).

2.5.5

2.5.5.a This regulation is in accordance with the IMO Resolution MSC.158 (78).

2.5.6

2.5.6.a This regulation is in accordance with the IMO Resolution MSC.158 (78).

2.5.7

2.5.7.a This regulation is in accordance with the IMO Resolution MSC.158 (78).

2.6 Access ladder to tanks

2.6.1

2.6.1.a This regulation is in accordance with the IMO Resolution MSC.158 (78).

2.7 Access to underdeck structure of cargo holds

2.7.1

2.7.1.a This regulation is in accordance with the IMO Resolution MSC.158 (78).

2.7.2

2.7.2.a This regulation is in accordance with the IMO Resolution MSC.158 (78).

2.7.3

2.7.3.a This regulation is in accordance with the IMO Resolution MSC.158 (78).

2.7.4

2.7.4.a This regulation is in accordance with the IMO Resolution MSC.158 (78) and with related IACS UI.

2.7.5

2.7.5.a This regulation is in accordance with the IMO Resolution MSC.158 (78).

2.8 Access to double side skin tanks in double side bulk carriers

2.8.1

2.8.1.a This regulation is in accordance with the IMO Resolution MSC.158 (78).

2.9 Access to vertical structures of cargo holds in single side bulk carriers

2.9.1

2.9.1.a This regulation is in accordance with the IMO Resolution MSC.158 (78).

2.9.2

2.9.2.a This regulation is in accordance with the IMO Resolution MSC.158 (78).

2.9.3

2.9.3.a This regulation is in accordance with the IMO Resolution MSC.158 (78).

2.9.4

2.9.4.a This regulation is in accordance with the IMO Resolution MSC.158 (78).

2.9.5

2.9.5.a This regulation is in accordance with the IMO Resolution MSC.158 (78).

2.10 Access to vertical structures of cargo holds in double side bulk carriers

2.10.1

2.10.1.a This regulation is in accordance with the IMO Resolution MSC.158 (78).

2.11 Access to top side ballast tanks in single side bulk carriers

2.11.1

2.11.1.a This regulation is in accordance with the IMO Resolution MSC.158 (78).

2.11.2

2.11.2.a This regulation is in accordance with the IMO Resolution MSC.158 (78).

2.11.3

2.11.3.a This regulation is in accordance with the IMO Resolution MSC.158 (78).

2.11.4

2.11.4.a This regulation is in accordance with the IMO Resolution MSC.158 (78).

2.12 Access to bilge hopper ballast tanks

2.12.1

2.12.1.a This regulation is in accordance with the IMO Resolution MSC.158 (78) and with related IACS UI.

2.12.2

2.12.2.a This regulation is in accordance with the IMO Resolution MSC.158 (78).

2.12.3

2.12.3.a This regulation is in accordance with the IMO Resolution MSC.158 (78).

2.13 Access to fore peak tanks

2.13.1

2.13.1.a This regulation is in accordance with the IMO Resolution MSC.158 (78).

2.13.2

2.13.2.a This regulation is in accordance with the IMO Resolution MSC.158 (78).

2.13.3

2.13.3.a This regulation is in accordance with the IMO Resolution MSC.158 (78).

3. SHAFT TUNNELS

3.1 General

3.1.1

3.1.1.a This regulation is based on 4.1.1, Section 3, Chapter 2, Part B of the BV rules.

3.1.2

3.1.2.a This regulation is according to 4.1.2, Sec. 3, Chapter 2, Part B of the BV Rules, and they are related to Reg. II-2/13.4.3 of the SOLAS Convention.

4. ACCESS TO STEERING GEAR COMPARTMENT

4.1 General

4.1.1

4.1.1.a This regulation is according to 5.1.1, Sec. 3, Chapter 2, Part B of the BV Rules, and is based on Reg. II-1/29.13.1 of the SOLAS Convention.

4.1.2

4.1.2.a This regulation is according to 5.1.2, Sec. 3, Chapter 2, Part B of the BV Rules, and is based on Reg. II-1/29.13.2 of the SOLAS Convention.