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ANY OTHER BUSINESS

Clarification on the minimum width of the double-side skin construction of general dry cargo ships of less than 150 m in length which occasionally carry dry cargoes in bulk

Submitted by IACS

SUMMARY

Executive summary: This document seeks clarification on the application of the minimum width of double-side skin construction to general dry cargo ships which are less than 150 m in length and occasionally carry dry cargoes in bulk

Strategic direction, if applicable: 6

Output: Not applicable

Action to be taken: Paragraph 11

Related documents: None

Background

1 The guidance in paragraph 1.6 of the *Clarification of the term "bulk carrier" and guidance for application of regulations in SOLAS to ships which occasionally carry dry cargoes in bulk and are not determined as bulk carriers in accordance with regulation XII/1.1 and chapter II-1* (resolution MSC.277(85)) states:

- "6 permit ships other than those described in paragraphs 1.3 and 1.5 to occasionally carry dry cargoes in bulk, provided:
- .1 they are of double-side skin construction (where "double-side skin construction" is as defined in SOLAS chapter XII in relation to bulk carriers);
 - .2 the freeboard assigned is type B without reduced freeboard; and

- .3 they comply with SOLAS regulations as applicable to bulk carriers to the extent indicated below:

SOLAS regulation
Regulation II-1/3-2.2 (Protective coatings of dedicated seawater ballast tanks in all types of ships and double-side skin spaces of bulk carriers)
Regulations XII/6.2, 6.3 and 6.4 (Structural and other requirements for bulk carriers)
Regulation XII/10 (Solid bulk cargo density declaration)
Regulation XII/11 (Loading instrument)
Regulation XII/12 (Hold, ballast and dry space water ingress alarms)
Regulation XII/13 (Availability of pumping systems)"

2 The definitions of the terms "bulk carrier" and "double-side skin" are provided in paragraphs 1 to 4 of SOLAS regulation XII/1, which state:

"1 *Bulk carrier* means a ship which is intended primarily to carry dry cargo in bulk, including such types as ore carriers and combination carriers.

2 *Bulk carrier of single-side skin construction* means a bulk carrier as defined in paragraph 1, in which:

- .1 any part of a cargo hold is bounded by the side shell; or
- .2 where one or more cargo holds are bounded by a double-side skin, the width of which is less than 760 mm in bulk carriers constructed before 1 January 2000 and less than 1,000 mm in bulk carriers constructed on or after 1 January 2000 but before 1 July 2006, the distance being measured perpendicular to the side shell.

Such ships include combination carriers in which any part of a cargo hold is bounded by the side shell.

3 *Bulk carrier of double-side skin construction* means a bulk carrier as defined in paragraph 1, in which all cargo holds are bounded by a double-side skin, other than as defined in paragraph 2.2.

4 *Double-side skin* means a configuration where each ship side is constructed by the side shell and a longitudinal bulkhead connecting the double bottom and the deck. Hopper side tanks and top-side tanks may, where fitted, be integral parts of the double-side skin configuration."

3 SOLAS regulation XII/6.2.2 specifies the minimum width of the double-side skin construction for bulk carriers of 150 m in length and upwards as follows:

"2 Bulk carriers of 150 m in length and upwards constructed on or after 1 July 2006 shall comply in all areas with double-side skin construction with the following requirements:

- .2 Subject to the provisions below, the distance between the outer shell and the inner shell at any transverse section shall not be less than 1,000 mm measured perpendicular to the side shell...."

Discussion

4 Despite the guidance provided in resolution MSC.277(85), the minimum width requirement for the double-side skin construction of general dry cargo ships which occasionally carry dry cargoes in bulk remains unclear. Specifically, should the width of the double-side skin construction of a general dry cargo ship of between 100 m and 150 m in length, which intends to occasionally carry dry cargoes in bulk, be not less than 1,000 mm?

5 Based on the understanding of the abovementioned provisions of SOLAS chapter XII and the guidance provided in resolution MSC.277(85), there could be two distinct viewpoints, as set out below.

6 If the ship is of a type other than those described in paragraphs 1.3 and 1.5 of resolution MSC.277(85), then SOLAS chapter XII does not specify a requirement regarding the minimum width of the double-side skin construction of a general dry cargo ship of less than 150 m in length based on the following:

- .1 resolution MSC.277(85) allows ships to occasionally carry dry cargoes in bulk, provided they are of double-side skin construction (where "double-side skin construction" is as defined in SOLAS chapter XII in relation to bulk carriers); and
- .2 while SOLAS chapter XII specifies the minimum dimensions for double-side skin construction of bulk carriers not less than 150 m in length only, no minimum width of the double side-skin construction is specified for bulk carriers of less than 150 m in length.

7 The minimum width of the double-side skin construction of a general dry cargo ship of between 100 m and 150 m in length is to be not less than 1,000 mm based on the following:

- .1 paragraph 1.6.1 of resolution MSC.277(85) refers to double-side skin construction as defined in paragraphs 2 and 3 of SOLAS regulation XII/1 for bulk carriers. It should be noted that these definitions of single/double-side skin construction do not contain the criterion of the ship's length;
- .2 SOLAS regulation XII/6.2 contains the criterion of the ship's length and specifies requirements for double-side skin construction of bulk carriers of the length of 150 m and upwards. These requirements are applicable to the specified ships and do not affect the definition of single/double-side skin;
- .3 this document addresses the definition of double-side skin construction in paragraph 1.6.1 of the resolution MSC.277(85) and thereby focuses on the phrase "as defined in SOLAS chapter XII in relation to bulk carriers". Hence, discussion on the application of SOLAS regulation XII/6.2 in relation to ships' length is not relevant to the definition of double-side skin construction and is, therefore, out of scope;
- .4 if paragraph 1.6.1 of resolution MSC.277(85), in specifying that "they are of double-side skin construction (where "double-side skin construction" is as defined in SOLAS chapter XII in relation to bulk carriers)", is only referring to paragraph 4 of SOLAS regulation XII/1 (definition of the term "double-side skin"), then there is no requirement on a ship of less than 150 m in length for the double-side skin space to be at least 1,000 mm in width. However, if this reference is to instances where the term "double-side skin" appears in other parts of SOLAS regulation XII/1, in particular paragraph 2.2; then it may be considered that there is a minimum width requirement of 1,000 mm; and

- .5 the minimum dimension of 1,000 mm was chosen as the practical minimum width, considering the requirement to have sufficient access space taking into account the width of longitudinal stiffeners fitted on the side shell and inner hull.

Proposal

8 Based on the above considerations, IACS is of the opinion that a clarification is needed regarding the correct response to the question raised in paragraph 4, as discussed in paragraphs 6 and 7.

9 If paragraph 6 provides the correct understanding, then the reference to SOLAS regulation XII/6.2 in paragraph 1.6.3 of resolution MSC.277(85) is proposed to be amended as shown below, with a view to removing the ambiguity in its application (additions/ deletions):

"Regulations XII/6.2, 6.3 and 6.4 (Structural and other requirements for bulk carriers), for ships of 150 m in length and upwards"

10 If the correct understanding is provided in paragraph 7, then the reference to regulation XII/6.2 in paragraph 1.6.3 of resolution MSC.277(85) is proposed to be amended as shown below, again with a view to removing the ambiguity in its application (additions and deletions):

"Regulations XII/6.2, 6.3 and 6.4 (Structural and other requirements for bulk carriers), for ships of 100 m in length and upwards"

Action requested of the Sub-Committee

11 The Sub-Committee is invited to:

- .1 consider the foregoing, in particular the different understandings as explained in paragraphs 6 and 7 above;
- .2 render its view on either of the two proposed understandings offered in paragraphs 6 or 7 above;
- .3 consider the most effective and efficient means of clarifying this issue in resolution MSC.277(85) and
- .4 take action, as appropriate.
