

Subject :

The exemption from damage stability requirements for the existing bulk carriers

NKTECHNICAL INFORMATION

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The upgraded requirements for existing bulk carriers in IACS UR and SOLAS have been already implemented according to the implementation schedule for each vessel since 1998. As informed by our Technical Information No.296 (25 December 1998), the exemption from structural requirements for the vessels, which do not have sufficient number of bulkheads, is provided in the SOLAS Chapter XII Reg. 9.

As a requirement for the above exemption, IACS has developed a unified interpretation for "detailed information on specific cargo hold flooding scenarios" stipulated in SOLAS Chapter XII Reg. 9.3 as attached SC154.

For your information, our attending surveyor confirms that the above "detailed information" has been placed onboard referring to this SC154. However, its content need not be approved. Furthermore, the above "detailed information", which has already been confirmed by the surveyor, need not be reconfirmed.

If you have any inquiries, please contact the Survey Department (Tel. 81-3-5226-2027, Fax. 81-3-5226-2029).

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SC154 Provision of Detailed Information on Specific Cargo Hold Flooding Scenarios (SOLAS XII/9.3)

(Mar. 2000)

This Unified Interpretation is applicable only to bulk carriers which are constructed before 1 July 1999 but not capable of complying with SOLAS XII/4.2.

Where bulk carriers are shown to be not capable of complying with SOLAS XII/4.2 due to the design configuration of their cargo holds, SOLAS XII/9 permits relaxation from the application of regulations 4.2 and 6 on the basis of compliance with certain other requirements, including provision of detailed information on specific cargo hold flooding scenarios.

1. General - The information should comprise at least the following:

- 1.1 Specific cargo hold flooding scenarios.
- 1.2 Instructions for evacuation preparedness.
- 1.3 Details of the ship's means for leakage detection

2. Specific cargo hold flooding scenarios

2.1 Flooding assumptions:

- 2.1.1 The flooding of the foremost cargo hold is to be used as the starting point for any respective flooding scenario. Subsequent flooding of other spaces can only occur due to progressive flooding.
- 2.1.2 The permeability of a loaded hold shall be assumed as 0.9 and the permeability of an empty hold shall be assumed as 0.95, unless a permeability relevant to a particular cargo is assumed for the volume of a flooded hold occupied by cargo and a permeability of 0.95 is assumed for the remaining empty volume of the hold. The permeability of a hold loaded with packaged cargo shall be assumed as 0.7.

2.2 Loading conditions to be considered:

- 2.2.1 Flooding scenarios should be developed for loading conditions loaded down to the summer load line even if not in compliance with the requirements of Regulation 4.2. The scope to be covered should include at least the following:
 - A homogenous and, if applicable, an alternate hold loading condition are to be considered.
 - In case one or more loading conditions meet the requirements of regulation 4.2, this should be noted.
 - A packaged cargo condition, if applicable.
- 2.2.2 In case the vessel is able to withstand flooding of the foremost hold at a lower draught, guidance in the form of limiting KG/GM curves, based on the flooding assumptions in 2.1, should be provided. Curves should indicate the assumed trim and whether the foremost hold is homogeneously loaded, loaded with high density cargo (alternate hold loading), loaded with packaged cargo or empty.

2.3 Presentation of results



SC154

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The results should clearly indicate the reasons for non-compliance with the survival criteria given in Reg. XII/4.3 and explain the implications regarding the need to abandon ship. e.g. immersion of a weathertight closing appliance if the stability characteristics are otherwise satisfactory may indicate that there is no immediate danger of foundering, provided the bulkhead strength is adequate, particularly if the weather conditions are favourable and bilge pumping can cope with any progressive flooding.

3. Guidance for evacuation

The following guidance in this IACS Interpretation with regard to preparation for evacuation is in the most general terms. Responsibility for the preparation of detailed information rests with the operator of the ship.

- 3.1 In any case of detection of severe flooding (made in accordance with UR S 24), preparations for abandoning the vessel shall be envisaged in accordance with the applicable rules and procedures, such as SOLAS III, STCW and the ISM Code.
- 3.2 In the context of severe weather conditions the weather itself may have substantial influence on the development of the flooding and consequently the time remaining to execute the abandoning of the ship could be much shorter than estimated in any pre-assessed flooding scenario.

Note: This UI SC 154 is to be uniformly implemented by IACS Members and Associates from 1 January 2001.

