

Omission of Double Bottoms

Amended Guidance

Guidance for the Survey and Construction of Passenger Ships

Reason for Amendment

Amendment made by the IMO to regulations in Chapter II-1 of SOLAS were incorporated into the NK Rules by an amendment dated February 14, 2008. These changes were made to ensure that the SOLAS regulations related to the damage stability of passenger ships were in line with the corresponding SOLAS regulations for cargo ships. More specifically, the compartmental coefficients specified up until that time in the NK Rules were amended, and evaluation criteria for the partial compartment index of each draught were specified.

As part of an ongoing comprehensive review of the NK Rules, the correspondence between the relevant NK requirements and SOLAS regulations was examined, and it was found that some of the NK requirements related to the omission of double bottoms for passenger ships were unclear with respect to SOLAS.

Therefore, relevant requirements were amended for clarification purposes.

Outline of Amendment

Clarified requirements related to the omission of double bottoms for passenger ships

“Guidance for the survey and construction of passenger ships” has been partly amended as follows:

Part 3 HULL CONSTRUCTION AND EQUIPMENT

Chapter 4 DOUBLE BOTTOM CONSTRUCTION

4.2 Arrangement

4.2.1 Arrangement

Sub-paragraph -1 has been amended as follows.

1 In the case of ships to which the provisions of **2.1.36, Part 1** of the Rules apply and which are engaged on regular service within the limits of a short international voyage as defined in **1.2.14, Part 1** of the Rules, the Society may permit a double bottom to be dispensed with ~~in any part of the ship which is subdivided by a factor not exceeding 0.5~~, if satisfied that the fitting of a double bottom in that part would not be compatible with the design and proper working of the ship, and that the requirements in the following -3 are satisfied.

2 “provided the safety of the ship is not impaired” specified in **4.2.1-2, Part 3** of the Rules means to satisfy the requirement of damaged stability specified in **Part 4** of the Rules.

3 Application for the omission of double bottom or unusual bottom arrangements given by requirements of **4.2.1-2, Part 3** of the Rules is to be in accordance with following **(1)** and **(2)**. For example, arrangements in which parts of the double bottom do not extend for the full width of the ship or in which the inner bottom is located higher than the partial subdivision draught (d_p) defined in **2.1.12, Part 1** of the Rules are to be considered to be unusual bottom arrangements.

- (1)** When it is assumed that such spaces are subject to a bottom damage, compartments are to be arranged to demonstrate that the factor s_i , when calculated in accordance with **2.3.6, Part 4** of the Rules, is not less than 1 for those service conditions which are the three loading conditions used to calculate the Attained Subdivision Index (A) specified in **2.3.4-2, Part 4** of the Rules. Assumed extent of damage is to be in accordance with following **Table 3.4.2.1**. If any damage of a lesser extent than the maximum damage specified in **Table 3.4.2.1** would result in a more severe condition, such damage is to be considered.
- (2)** Flooding of such spaces is not to render emergency power and lighting, internal communication, signals or other emergency devices inoperable in other parts of the ship.

Table 3.4.2.1 Assumed Extent of Damage

	For $0.3L$ from the forward perpendicular of the ship	Any other part of the ship
Longitudinal extent	$\frac{1}{8}L_f$ or $14.5m$, whichever is less	$\frac{1}{8}L_f$ or $14.5m$, whichever is less
Transverse extent	$B'/6$ or $10m$, whichever is less	$B'/6$ or $5m$, whichever is less
Vertical extent, measured from the keel line	$B'/20$, to be taken not less than $0.76m$ and not more than $2m$	$B'/20$, to be taken not less than $0.76m$ and not more than $2m$

Notes:

1. Keel line is to be in accordance with **2.1.22, Part 1** of the Rules.
2. Ship breadth (B') is to be in accordance with **2.1.5-1, Part 1** of the Rules.

(-4 to -6 are omitted.)