

# **Treatment of Ventilators in Stability Calculations**

## **Amended Guidance**

Guidance for the Survey and Construction of Steel Ships Part V

## **Reason for Amendment**

IACS has adopted unified interpretations (UI) for the International Convention on Load Lines (LL Convention) over the years when it has been deemed necessary to do so, and these UIs have already been incorporated into the ClassNK Rules.

IACS recently decided to review the aforementioned UIs to assess whether they were still consistent with relevant IMO Circulars. During its review, IACS decided to amend UI LL80, which stipulates the treatment of ventilators in stability calculations, to ensure that it is consistent with MSC.1/Circ.1535 (Rev.2). The amended version of UI LL80 was adopted as UI LL80 (Rev.1).

Accordingly, relevant requirements are amended based on IACS UI LL80(Rev.1). In addition, the format for the table related to the standard heights of superstructures and raised quarter decks used for freeboard assignment calculations is also amended to be the same as the format used for corresponding tables in the LL Convention.

## **Outline of Amendment**

- (1) Amends wording related to the treatment of ventilators in stability calculations to be consistent with IACS UI LL80(Rev.1).
- (2) Amends the format of the table related to the standard heights of superstructures and raised quarter decks used for freeboard assignment calculations so that it is the same as the format used for corresponding tables in the LL Convention.

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

## Part V LOAD LINES

### V2 ASSIGNMENT OF FREEBOARD AND MARKING OF LOAD LINES

#### V2.2 Assignment of Freeboard and Marking of Load Lines

##### V2.2.1 Assignment of Freeboard

Sub-paragraph -1 has been amended as follows.

1 In the case of the freeboard assignment specified in 2.2.1, Part V of the Rules, the standard heights of superstructures and the standard raised quarterdecks height used for freeboard assignment calculations are given in Table V2.2.1-1. For intermediate values not specified in the table, of  $L_f$  is to be obtained by linear interpolation.

Table V2.2.1-1. has been amended as follows.

~~Table V2.2.1-1 Standard Height of Superstructure ( $h_s$ )~~

Length of ship for freeboard ( $L_f$ )	Standard Height of Superstructure (m)	Standard Quarterdeck Height (m)
<del>30 m or less</del>	<del>1.80</del>	<del>0.90</del>
<del>75 m</del>	<del>1.80</del>	<del>1.20</del>
<del>125 m or more</del>	<del>2.30</del>	<del>1.80</del>

Table V2.2.1-1 Standard Heights of Superstructures

Freeboard length $L_f$ (m)	Standard height $h_s$ (m)	
	Raised quarter decks	All other superstructures
30 m or less	0.90	1.80
75 m	1.20	1.80
125 m or more	1.80	2.30

Sub-paragraph -13 has been amended as follows.

13 In the application of the #Regulation 27(13)(e) of the *ILLC*, “unprotected openings” include ventilators that are for operational reasons have to remain open to supply air to engine rooms, emergency generator rooms or closed ro-ro and vehicle spaces (if the same is either considered buoyant in stability calculations or is considered to be a protected opening leading below) for the effective operation of the ship and that are provided with weathertight closing appliances in accordance with the requirements of 23.6.5-2, Part C of the Rules or 21.6.5-2, Part CS of the Rules, that for operational reasons have to remain open to supply air to the engine room, emergency generator room or closed ro-ro and vehicle spaces (if the same is considered buoyant in the stability calculation or protecting openings leading below) for the effective operation of the ship are to be considered as unprotected openings with regard to the residual range of stability. Where it is not

technically feasible to treat some closed ro-ro and vehicle space ventilators as unprotected openings, an alternative arrangement that provides an equivalent level of safety may be used provided that it is deemed appropriate by the Administration.