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# **GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS**

**Part V**

**Load Lines**

**GUIDANCE**

**2007      AMENDMENT NO.1**

Notice No.51      27th September 2007

Resolved by Technical Committee on 2nd July 2007

AMENDMENT TO THE GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

“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**

**V2.1 General**

Paragraph V2.1.1 has been amended as follows.

**V2.1.1 General**

- 1** The Society accepts the freeboards assigned by the flag ~~government~~ Administration of ships or its recognizing organization subject to the hull structure of ships being confirmed to have a sufficient strength for the draught corresponding to them.
- 2** When a freeboard is assigned to a ship under the instruction by the flag Administration according to the *International Convention of Load Lines, 1966* (before the modification by the *1988 Protocol*), the following IACS Unified Interpretations are to apply.  
LL2, LL15, LL16, LL17, LL18, LL24, LL25, LL26, LL27, LL28, LL29, LL30, LL31, LL33, LL34, LL35, LL37, LL38, LL39, LL41, LL42, LL43, LL48, LL54, LL56, LL57, LL59, LL63, LL65, LL69, LL72

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

Paragraph V2.2.1 has been amended as follows.

**V2.2.1 Assignment of Freeboard**

Sub-paragraphs -3 to -9 have been added as follows.

- 1** In case of freeboard assignment specified in **2.2.1, Part V** of the Rules, the standard height of superstructure and the standard quarterdeck height for freeboard assignment calculation ~~except for sunken poop~~ is/are given in **Table V2.2.1-1**. For intermediate value of  $L_f$  is to be obtained by linear interpolation.

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

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

- 2 The ordinates of the standard sheer profile are given in **Table V2.2.1-2**. The standard mean height of sheer is the sums of the respective products, which are obtained from each four ordinate of the profile in forward and after half multiplied by the corresponding coefficients given in **Table V2.2.1-2**, divided by eight.

**Table V2.2.1-2 Standard Sheer Profile**

	Station	ordinates (mm)	coefficient
After half	After Perpendicular	$25(L_f/3+10)$	1
	$L_f/6$ from A.P.	$11.1(L_f/3+10)$	3
	$L_f/3$ from A.P.	$2.8(L_f/3+10)$	3
	Amidships	0	1
Forward half	Amidships	0	1
	$L_f/3$ from F.P.	$5.6(L_f/3+10)$	3
	$L_f/6$ from F.P.	$22.2(L_f/3+10)$	3
	Forward Perpendicular	$50(L_f/3+10)$	1

- 3 For the application of regulation 28 of the *International Convention of Load Lines, 1966 and Protocol of 1988 relating to the International Convention of Load Lines, 1966* (hereinafter, referred to as *ILLC*), the tabular freeboards for ships with lengths between 365 m and 400 m are to be determined by the following formula.

(1) Freeboards for Type A ships

$$(a) \quad \underline{221 + 16.10L_f - 0.02L_f^2} \text{ (mm)} \quad \text{for ships of } \underline{365 < L_f \leq 400} \text{ (m)}$$

$$(b) \quad \underline{3,460} \text{ (mm)} \quad \text{for ships of } \underline{400 < L_f} \text{ (m)}$$

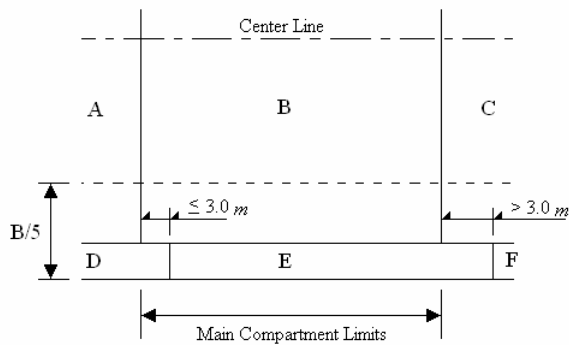
(2) Freeboards for Type B ships

$$(a) \quad \underline{-587 + 23L_f - 0.0188L_f^2} \text{ (mm)} \quad \text{for ships of } \underline{365 < L_f \leq 400} \text{ (m)}$$

$$(b) \quad \underline{5,605} \text{ (mm)} \quad \text{for ships of } \underline{400 < L_f} \text{ (m)}$$

- 4 When there are steps or recesses in a transverse bulkhead, assumed damages specified in regulation 27(12) of *ILLC* are to be determined as per **Fig. V2.2.1-1(1) to (4)**.

**Fig. V2.2.1-1.(1)**



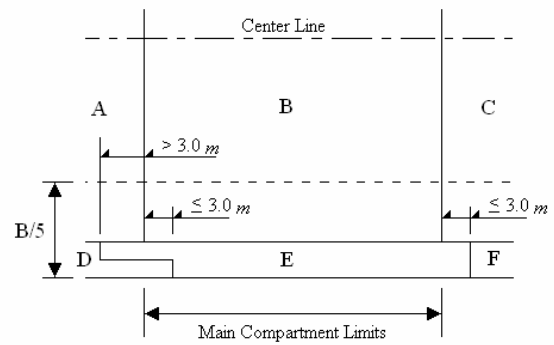
Compartments to be considered damaged simultaneously:

A + D

B + E

C + E + F

**Fig. V2.2.1-1.(2)**



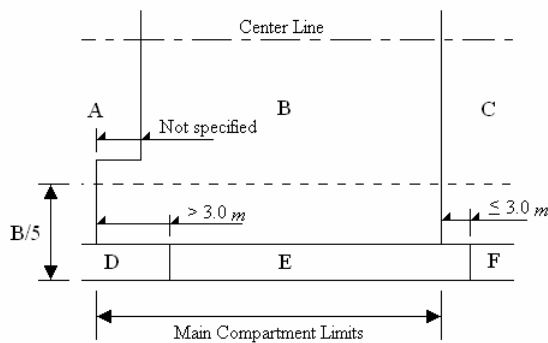
Compartments to be considered damaged simultaneously:

A + D + E

B + E

C + F

**Fig. V2.2.1-1.(3)**



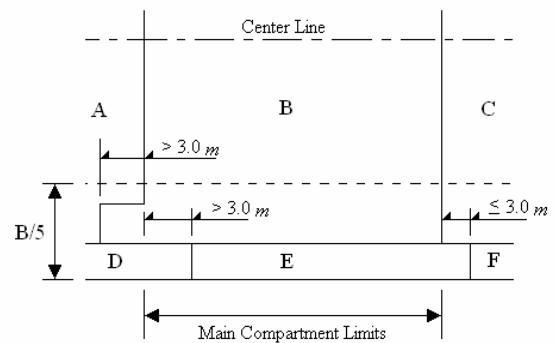
Compartments to be considered damaged simultaneously:

A + D

B + D + E

C + F

**Fig. V2.2.1-1.(4)**



Compartments to be considered damaged simultaneously:

A + B + D

B + D + E

C + F

- 5 Where gutter bars are installed on the weather decks of tankers in way of cargo manifolds and are extended aft as far as the after house front, the free surface effects of boarding seas is to be taken into account with respect to the ship's residual stability specified in regulation 27(13) of ILLC.
- 6 Small access openings stipulated in regulation 27(14)(c) of ILLC generally refer to access openings that have an area not greater than  $1.5 \text{ m}^2$ . Access openings with plates which are secured by closely spaced bolts and in their joining parts are properly gasketed, need not be considered as openings.
- 7 For bulk carriers assigned *B-60* or *B-100* freeboards according to regulation 27 of ILLC and intended to carry deck cargoes, the *KG* used for demonstrating compliance with the deterministic damage stability requirements of that regulation is to be the same as that used for

the probabilistic damage stability calculations specified in **Chapter 4, Part C of the Rules**, at the deepest subdivision load line. For ships assigned timber freeboards according to the provisions of Part V of the Rules, the above mentioned deepest subdivision load line is to be read as the deepest timber subdivision load lines.

- 8** Where a recess in the freeboard deck extends to both sides of the ship but is not in excess of 1 m in length, it is to be treated as a recess that does not extend to the sides of the ship for the application of regulation 32-1 of *ILLC*.
- 9** In the application of regulation 34(1) of *ILLC*, where a cargo hatchway complying with the following conditions, extends above the level of the superstructure deck and covers the whole area of the recess, the hatchway may be deemed as forming a part of the superstructure, allowing the effective length of the superstructure not to be reduced by the area of the recess.
- (1) The hatchway is complying with the requirements of regulation 16 of *ILLC*.
- (2) The coaming height extending above the level of the superstructure deck is not less than the following values.
- (a) Position 1: 600 mm
- (b) Position 2: 450 mm

Paragraph V2.2.2 has been added as follows.

#### **V2.2.2 Marking of Load Lines**

With respect to the provisions of **2.2.2, Part V of the Rules**, the load line marks and relevant markings are to be permanently marked such as by welding. When plating of metallic material is welded to the hull, precautions need to be taken regarding factors such as the materials used and the electrolytic compatibility of the material with the ship's hull.

## EFFECTIVE DATE AND APPLICATION

1. The effective date of the amendments is 1 October 2007.
2. Notwithstanding the amendments to the Guidance, the current requirements may apply to ships for which the date of contract for construction\* is before the effective date.  
\*“contract for construction” is defined in IACS Procedural Requirement (PR) No.29 (Rev.4).

### IACS PR No.29 (Rev.4)

1. The date of “contract for construction” of a vessel is the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. This date and the construction numbers (i.e. hull numbers) of all the vessels included in the contract are to be declared to the classification society by the party applying for the assignment of class to a newbuilding.
2. The date of “contract for construction” of a series of vessels, including specified optional vessels for which the option is ultimately exercised, is the date on which the contract to build the series is signed between the prospective owner and the shipbuilder.  
For the purpose of this Procedural Requirement, vessels built under a single contract for construction are considered a “series of vessels” if they are built to the same approved plans for classification purposes. However, vessels within a series may have design alterations from the original design provided:
  - (1) such alterations do not affect matters related to classification, or
  - (2) If the alterations are subject to classification requirements, these alterations are to comply with the classification requirements in effect on the date on which the alterations are contracted between the prospective owner and the shipbuilder or, in the absence of the alteration contract, comply with the classification requirements in effect on the date on which the alterations are submitted to the Society for approval.The optional vessels will be considered part of the same series of vessels if the option is exercised not later than 1 year after the contract to build the series was signed.
3. If a contract for construction is later amended to include additional vessels or additional options, the date of “contract for construction” for such vessels is the date on which the amendment to the contract, is signed between the prospective owner and the shipbuilder. The amendment to the contract is to be considered as a “new contract” to which **1.** and **2.** above apply.
4. If a contract for construction is amended to change the ship type, the date of “contract for construction” of this modified vessel, or vessels, is the date on which revised contract or new contract is signed between the Owner, or Owners, and the shipbuilder.

#### Notes:

1. This Procedural Requirement applies to all IACS Members and Associates.
2. This Procedural Requirement is effective for ships “contracted for construction” on or after 1 January 2005.
3. Revision 2 of this Procedural Requirement is effective for ships “contracted for construction” on or after 1 April 2006.
4. Revision 3 of this Procedural Requirement was approved on 5 January 2007 with immediate effect.
5. Revision 4 of this Procedural Requirement was adopted on 21 June 2007 with immediate effect.