RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

RULES

Part U Intact Stability

2009 AMENDMENT NO.1

Rule No.45 30th October 2009

Resolved by Technical Committee on 24th June 2009

Approved by Board of Directors on 28th July 2009

Rule No.45 30th October 2009
AMENDMENT TO THE RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

"Rules for the survey and construction of steel ships" has been partly amended as follows:

Part U INTACT STABILITY

Chapter 1 GENERAL

1.1 General

Paragraphs 1.1.3 and 1.1.4 have been amended as follows.

1.1.3 National Requirements

The Society may make special requirements as instructed by the flag-governments of ships or the governments of the sovereign nations in which ships navigate.

1.1.4 Definitions

For the purpose of the application of this part, the following definitions apply.

(1) The definitions of "mobile offshore drilling unit" and "work-ship" are according to **Part P**.

~~(1)~~(2) "Timber deck cargo" means a cargo of timber carried on an uncovered part of a freeboard or superstructure deck. The term does not include wood pulp or similar cargo.

Chapter 2 STABILITY REQUIREMENTS

2.1 General

Paragraphs 2.1.1 and 2.1.2 have been amended as follows.

2.1.1 General

1 Stability curves and heeling moment curves are to be prepared by the method deemed appropriate by the Society for all designed loading conditions and they are to be verified to comply with the requirements in **2.2** and **2.3**.

2 Excessive stability is to be avoided, since it may produce a greater acceleration which may have adverse effects in hull structures, cargoes, etc.

3 For the ships navigating in the areas where icing is expected to occur, it is to be considered that the projected area against wind is increased and the position of centre of gravity is heightened due to icing on the structures.

4 Work-ships are to be in accordance with requirements given in this **Part**. In addition, special consideration is to be paid to stability during designated operations.

2.1.2 Calculation on Stability

Stability is to be calculated under the following conditions.

(1) In preparing stability curves, the position centre of gravity is to be determined on the basis of the data obtained at inclining test required in **2.3.2, Part B of the Rules**.

(2) Free surface effects of liquid in tanks are to be of what the stability during navigation under the relevant design loading condition is most severely affected.

(3) In work-ships, the heeling lever resulting from designated operations is to be considered the one considered to be the most unfavorable for stability.

~~(3)~~(4) Where anti-rolling devices are installed in a ship, the requirements in **2.2** are to be satisfied whether the devices are in operation or not.

EFFECTIVE DATE AND APPLICATION

1. The effective date of the amendments is 1 April 2010.

2. Notwithstanding the amendments to the Rules, the current requirements may apply to ships for which the date of contract for construction is before the effective date.

3. Notwithstanding the provision of preceding **2.**, the amendments to the Rules may apply to ships for which the application is submitted to the Society before the effective date upon request by the owner.

GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

GUIDANCE

Part U Intact Stability

2009 AMENDMENT NO.2

Notice No.62 30th October 2009

Resolved by Technical Committee on 24th June 2009

Notice No.62 30th October 2009
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 U INTACT STABILITY

U1 GENERAL

U1.1 General

Paragraph U1.1.1 has been amended as follows.

U1.1.1 Applications
1 ~~As~~ With respect to ~~tugs~~work-ships, special considerations ~~are~~ is to be paid ~~for~~ to intact stability under operation in addition to the requirements in **Part U of the Rules**.
2 ~~As~~ With respect to sailing ships and multihull crafts, special requirements deemed necessary by the Society may apply in addition to the requirements in **Part U of the Rules**.

U2 STABILITY REQUIREMENTS

U2.2 General Stability Requirements

U2.2.1 Stability Curves

Sub-paragraphs -4 and -5 have been added as follows.

1 For ships loading with timber deck cargoes, stability is to be calculated under following conditions, provided that the requirements in Regulation 44, *ILLC* are complied with and timber cargoes are stowed in full breadth of ships. However, when the ship has a rounded gunnel, allowance not exceeding 4 per cent of the breadth of ships for loading may be given.

(1) 75% of the volume occupied by timber may be added to buoyancy.

(2) In arrival condition, timber weight is to be considered a 10% increase over departure condition due to absorption of water. However, attention is to be paid to the rate of increase determined by the flag state which ships are flying.

(Sub-paragraphs -4 to -5 are omitted.)

4 Fire fighting vessels are to comply with following requirements in addition to the requirements given in **2.2.1**, **Part U of the Rules**.

(1) Stability curves are to comply with the following **(a)** and **(b)**:

(a) The residual area between a righting lever curve and a heeling lever curve of monitors for fire fighting and propulsion machinery such as thrusters for ship positioning is not to be less than 0.09 *m-rad*. The area is to be determined between the first intercept of the two curves and the angle up to an angle of heel of 40 *degrees* beyond the angle of the first intercept or the downflooding angle, whichever is less.

(b) The residual area between a righting lever curve and a heeling lever curve of monitors for fire fighting and propulsion machinery such as thrusters for ship positioning is not to be less than 0.09 *m-rad*. The area is to be determined between the first intercept of the two curves and the downflooding angle or the immersing angle of the deck edge, whichever is less. In such cases, the immersing angle of the deck edge is to be according to **U2.3.1-1(2)**.

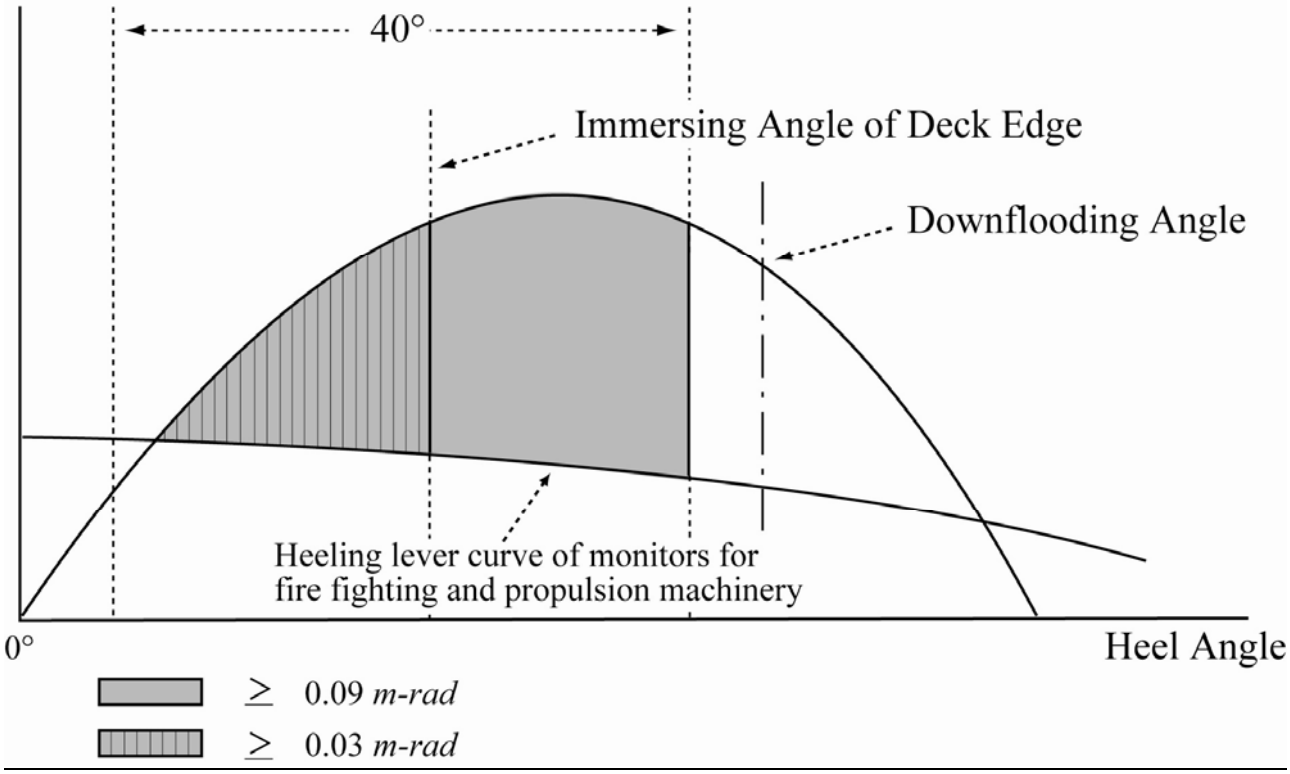
5 Work-ships, except for those work-ships listed in **-3** and **-4** above, are to at least comply with the following requirements corresponding to their designated operations in addition to the requirements given in **2.2.1**, **Part U of the Rules**. However, in cases where other stability requirements deemed appropriate by the Society are in effect, this requirement may be dispensed with.

Stability curves are to comply with the following:

The residual area between a righting lever curve and a heeling lever curve due to designated operations is not to be less than 0.09 *m-rad*. The area is to be determined between the first intercept of the two curves and the second intercept or the angle of down flooding, whichever is less.

Fig.U2.2.1-5 has been added as follows.

Fig. U2.2.1-5 Heeling lever curve of monitors for fire fighting and propulsion machinery



EFFECTIVE DATE AND APPLICATION

1. The effective date of the amendments is 1 April 2010.

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.

3. Notwithstanding the provision of preceding **2.**, the amendments to the Guidance may apply to ships for which the application is submitted to the Society before the effective date upon request by the owner.