

# Amendments to the "Rules for the Classification of Ships with Reinforced Plastic, Aluminium Alloy or Wooden Hulls"

RFS/006/AMN/03

Effective from 1/7/2021

Reasons of the amendments:

Part/Chapter/Section/Paragraph amended	Reason
Pt B, Ch 1, Sec 1, [1.1.1]	to accept structural scantling according to ISO 12215-5 with safety factor increased of 25% (based on Tasneef experience) for craft with $V \ge 10 \ L^{0.5}$ to which the requirements of these Rules - taken from those developed for HSC - are not applicable
Pt B, Ch 3, Sec 1, [1.1.1]	to correct a clerical error

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### **SECTION 1**

## **DESIGN PRINCIPLES AND STABILITY**

### **1** Design principles

#### 1.1 Applications

#### 1.1.1 (1/7/2021)

The requirements of Part B, Chapter 2 of the Rules apply, together with the requirements of:

- Part E, Chapter 11, Section 2, for passenger ships
- Part E, Chapter 20, Section 2, for fishing vessels.

Craft with V  $\geq$  10 L<sup>0.5</sup> will be individually considered by Tasneef that, in general, may accept scantling according to ISO 12215-5 with safety factor increased of 25%.

#### 1.1.2 Direct calculations

Tasneef may require direct calculations to be carried out, if deemed necessary according to the provisions of Sec 3,[5].

Such calculations are to be carried out based on structural modelling, loading and checking criteria described in Sec 3, [5]. Calculations based on other criteria may be accepted if deemed equivalent to those laid down by Tasneef.

#### 1.1.3 Units

Unless otherwise specified, the following units are used in the Rules:

- thickness of plating, in mm,
- section modulus of stiffeners, in cm<sup>3</sup>,
- shear area of stiffeners, in cm<sup>2</sup>,
- span and spacing of stiffeners, in m,
- stresses, in N/mm<sup>2</sup>,
- concentrated loads, in kN,
- distributed loads, in kN/m or kN/m<sup>2</sup>.

#### 1.1.4 Definitions and symbols

The definitions of the following terms and symbols are applicable throughout this Chapter and its Appendices and are not, as a rule, repeated in the different paragraphs. Definitions applicable only to certain paragraphs are specified therein.

**"Moulded base line"**: The line parallel to the summer load waterline, crossing the upper side of keel plate or the top of skeg at the middle of length **L**.

**"Hull"**: The hull is the outer boundary of the enclosed spaces of the craft, except for the deckhouses, as defined below.

**"Chine"**: For hulls that do not have a clearly identified chine, the chine is the hull point at which the tangent to the hull is inclined 50° to the horizontal.

**"Bottom"**: The bottom is the part of the hull between the keel and the chines.

**"Main deck"**: The main deck is the uppermost complete deck of the hull. It may be stepped.

**"Side"**: The side is the part of the hull between the chine and the main deck.

**"Castle"**: A castle is a superstructure extending from side to side of the ship or with the side plating not being inboard of the shell plating more than 4% of the local breadth. In general, such a superstructure fitted on the weather deck of the ship is considered as "constituting a step of the strength deck" when it extends within 0,4 L amidships for at least 0,15 L. Other castles are considered as "not constituting a step of the strength deck".

**"Deckhouse"**: The deckhouse is a decked structure located above the main deck, with lateral walls inboard of the side of more than 4 per cent of the local breadth. Structure located on the main deck and whose walls are not in the same longitudinal plane as the under side shell may be regarded as a deckhouse.

**"Cross-deck"**: For twin-hull craft, the cross-deck is the structure connecting the two hulls.

**"Fore end"**: Hull region forward of 0,9 L from the aft perpendicular.

**"Deadrise angle**  $\alpha_{d}$ ": For hulls that do not have a clearly identified deadrise angle,  $\alpha_{d}$  is the angle between the horizontal and a straight line joining the keel and the chine. For catamarans with non-symmetrical hulls (where inner and outer deadrise angles are different),  $\alpha_{d}$  is the lesser angle.

"Aft end": Hull region abaft of 0,1 L from the aft perpendicular.

**"Midship area"**: Hull region between 0,3 L and 0,7 L from the aft perpendicular.

- $\label{eq:L} \textbf{L} \qquad : \quad \text{Rule length, in m, equal to } \textbf{L}_{\text{WL}} \text{ where } \textbf{L}_{\text{WL}} \text{ is the } \\ \text{waterline measured with the craft at rest in calm } \\ \text{water and, for SESs, in the off-cushion condition} \end{cases}$
- FP : forward perpendicular, i.e. the perpendicular at the intersection of the waterline at draught T and the foreside of the stem
- AP : aft perpendicular, i.e. the perpendicular located at a distance L abaft of the forward perpendicular
- **B** : the greatest moulded breadth, in m, of the craft
- $B_w$  : the greatest moulded breadth, in m, measured on the waterline at draught T; for catamarans,  $B_{\rm w}$  is the breadth of each hull
- **D** : depth, in m, measured vertically in the transverse section at the middle of length L from the moulded base line of the hull(s) to the top of the deck beam at one side of the main deck (if the main deck is stepped, **D** will be defined in each separate case at the discretion of Tasneef)

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#### 1.1 Application

#### **1.1.1** *(1/7/2021)*

The requirements of Part B, Chapter 2 of the Rules apply, together with the requirements of: The requirements in Ch 1, Sec 1 apply.

- Part E, Ch 11, Sec 2, for passenger ships;
- Part E, Ch 20, Sec 2, for fishing vessels.

### 2 Stability

#### 2.1 Application

2.1.1

The requirements of Ch 1, Sec 1 apply.