

Introduction and Aims

This document sets out the procedures, scope and responsibilities of yacht owners, designers and/or builders with the World Sailing Offshore Special Regulations Structural Plan Review Scheme.

The aim of the World Sailing Offshore Special Regulations Structural Plan Review Scheme is to implement compliance with the requirements of World Sailing Offshore Special Regulations 3.03 – Hull Construction Standards (Scantlings). <https://www.sailing.org/inside-world-sailing/rules-regulations/offshore-special-regulations/>

The objective of the scheme is for World Sailing together with World Sailing recognised organisations to provide certification to designers, builders and/or owners to show compliance with specific parts of the International Standard ISO 12215: Hull Construction – Scantlings specified within the scope below.

Scope

The scope of the plan review consists of application and calculation to the following parts of ISO12215 – Small Craft – Hull construction and scantlings:

ISO 12215 Part 5: Design pressures for monohulls, design stresses, scantlings determination
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All parts and annexes where applicable to design category A (“ocean”) – Sailing Craft

ISO 12215 Part 8: Rudders

All parts and annexes where applicable to design category A (“ocean”) – Sailing Craft

ISO/DIS 12215 Part 9: Sailing Craft - Appendages

All parts and annexes where applicable to design category A (“ocean”)

Plan Review ISO Standard Criteria:

- The boat shall show complete compliance with the above ISO standard parts.
- In all applicable cases the ISO standards should be applied as the minimum.
- Any proposed interpretation of the ISO standard shall be made through a World Sailing recognised organization as confirmed by World Sailing and in consultation with all World Sailing recognised organisations. If agreed such interpretation shall then be notified to all World Sailing recognised organisations and made publicly available on the World Sailing website. Agreed interpretations shall be applied by all World Sailing recognised organisations until such a time that interpretation is withdrawn or invalid.
- The latest version of the ISO standard shall be used at all times.

Scope of Structural Review

The areas of the yacht that shall be reviewed are those detailed within the above mentioned standards and shall include the following as a minimum:

- Hull shell including bottom, side, deck, cockpit and superstructure
- Primary structural stiffening members including floors, girders etc.
- Bulkheads including watertight and integral tank boundaries
- Rudders, including stock, bearings and blade
- Appendages including attachment and blade
- Keels including all load cases, fins, backing plates and bolting arrangements and keel floors

Any areas of the boat’s fixed structure may be assessed by the World Sailing recognised organisation.

Designer/Builder Plans

The designer shall submit plans showing scantlings, arrangements, and details of the main and fixed parts of the hull structure including the areas listed above. The plans shall include principal parameters and data for the yacht to complete the calculations to ISO 12215.

For FRP construction, the plans shall include complete laminate schedule information including the following:

- ply specification, ply weight, ply orientation, fibre material
- resin information
- if sandwich construction; core information shall be supplied

Where further information is available, then the following may be recorded as part of the assessment.

- if ply test information is available; ply fibre content and thickness
- if mechanical test data information is available; minimum mechanical properties of the laminate

Calculations

The plan review shall include independent calculations by the recognised organisation of the areas listed above. These calculations may be by hand, spreadsheet or by an ISO 12215 program. The designers/builders submitted calculations shall not be taken as the only proof of compliance.

The procedure from initial enquiry through to certification for structural plan review scheme is detailed in the following flow chart.

