

**WORKING PARTIES**

**Keel Improvements**

From: Thomas Marhevko Chair, ISO TC 188

Sent: 29 September 2020

To: Simon Forbes, World Sailing

Subject: ISO 12215-9 - Sailing Yacht Keel Fatigue - Request for Review

Hello Mr. Forbes,

This is in response to your 3 August 2020 letter to ISO TC 188/WG18 (Attached).

In your letter, you discuss the World Sailing process of having racing yachts certified by EU Notified Bodies using ISO 12215-9 and other standards. You also discuss your Working Party's review of ISO 12215-9 and offer a number of observations and recommendations.

You request that ISO 12215-9 be opened for revision to specifically look at keel fatigue requirements and other topical areas of concern.

A. The Recreational craft Directive 2013/53/EU states in Article 2:

*2. This Directive shall not apply to the following products:*

*(a) with regard to the design and construction requirements set out in Part A of Annex I:*

*(i) watercraft intended solely for racing, including rowing racing boats and training rowing boats, labelled as such by the manufacturer;*

Application of an ISO standard to racing craft is clearly beyond the direction and scope of the RCD. Application of any standard to a product beyond the scope of the standard should be done with extreme caution and an awareness of the potential consequences and liabilities.

B. ISO 12215-9, Small craft – Hull construction and scantlings – Part 9: Sailing craft appendages is under the guidance of ISO Technical 188, Small craft, and is intended for small craft as defined in ISO 8666, Principal dimensions. Annex F of Part 9 gives a “simplified fatigue strength assessment” and is listed as an Informative Annex. Use of Annex F is not mandatory, and the text points out limitations to the use of the simplified fatigue strength assessment. The Introduction of the standard also addresses the application of its requirements to racing yachts:

From the Introduction of 12215-9:

During the latter stages of the development of the ISO 12215 series, and after publication of key parts, a number of authorities adopted this International Standard for the assessment of high-performance racing yachts. While, in theory, a category A blue-water cruising yacht could experience the same loads as a competitive racing yacht, the latter has not been the principal focus of ISO 12215. Consequently, designers are strongly cautioned against attempting to design high-performance racing craft such that nearly all structural components only just comply.

- C. Except for the last two bulleted items in the attachment, all the observations/issues point to poor design/welds of metal keels by inexperienced technicians, or a lack of education and awareness of proper design and welding of metal keels. The report states that “High profile projects with correct design are often not subject to failure”.

Given the items addressed above, and since TC188 and WG 18 has an extremely full calendar 2021 year of projects that apply to recreational craft being placed on the market, this work is not currently on our business plan. Since neither TC 188 and the RCD includes racing yachts in the scope of its work, we do not support this WS request.

Your recommendations of awareness and education of the proper design and welding would still need to be completed even with a revised standard.

A possible solution for you to consider is to create your own annex of racing yacht structural requirements that could be used in conjunction with your other current requirements.

Please note that the ISO standard review process is always open for submittal of comments that would be addressed at the standard’s next systematic review. In the meantime, your proposal can be sent to the ISO Improvement List and will be considered by the WG at the next SR of this standard. Your sponsorship of the secretariat for an amendment to 12215-9 could then be considered.

Best regards,

Thomas Marhevko

Chair, ISO TC 188