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BSi-001

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UK PRINCIPAL EXPERT IN SMALL CRAFT STRUCTURES REPORT ON THE DISCUSSIONS INHERENT TO THE ISO 12215 IN DUSSELDORF, 2017

Meeting of Committee:	ISO/TC188/WG18
Date(s) of Meeting:	24/01/2017
Place of Meeting:	Dusseldorf, Germany
Author of report:	Jean-Baptiste R. G. Soupez
Other UK attendees:	Ross Wombwell (British Marine); Benoit Mancini (X-Yachts).
Countries & number in delegations	<ul style="list-style-type: none">• Morning Session: France [6], UK [3], Sweden [1], Finland [1]• Afternoon Session: France [4], UK [2], Finland [1]
Additional major papers circulated at meeting	n/a
Items added to Agenda at meeting	n/a
List of discussed items	<ul style="list-style-type: none">• ISO 12215-7• ISO 12215-10• ISO 12215-5
Other comments/items	n/a
Date of Next Meeting:	June 2017
Proposed venue for next meeting:	Berlin, Germany

REPORT FROM DELEGATE

ISO 12215-7

- The working group decided to keep loads and safety factors in the core of the standard, thus keeping it shorter and easier to use, beneficial for small UK boatbuilders. The detailed calculation processes have therefore been moved into the Annexes This will keep the standard more concise, as the detailed calculations are not always required, depending on the method chosen.
- Debate on should the mast break before the multihull capsize, or vice versa. Mast falling can kill some crew (recent examples in France), but multihull capsizing could end up will all crew lost. Hence mast designed for percentage of max Righting Moment, though no formal decision was taken regarding the breaking issue.

ISO 12215-10

- No significant change after METS meeting (November 2016). Mast manufacturers present highlighted higher shroud loads should be implemented if no backstay is used.
- Factor of safety debate, the aim is to break at rigging screw rather than chain plate, who normally has a higher factor of safety (typically 20% greater than the rig). For stainless steel, an extra 20% FoS doubles the fatigue cycle for the chain plain: but is this enough? X-yachts uses breaking load of the shroud rather than the working load to create additional FoS.
- 1x19 lifetime of rig is about 10 years, but using 304 will corrode before that, so manufacturers did not recommend exploring the properties of this outdate material.
- For multihull, better to break mainsheet before mast, hence the mainsheet is the “fuse”.
- Author of this report was tasked to provide the Working Group with a rig calculation spreadsheet based on the Nordic Boat Standard, sent to the convenor on 28/01/2017.

ISO 12215-5

- Discussion on using flexural stress below 12mm and tensile/compressive above in single skin. Simplified method should be more conservative, which it is not the case now, so simplified method gives easier results. Final decisions: use flexural strength for all single skin laminates. For all laminates and method, consider that, for ease of measuring and consistency, sigma compression shall be derived from a flexural test provided the rupture occurs in the compressed face.
- French sub-group will investigate the Ksls value for IMOCA.
- Might have to delete some aspect regarding double curvature and natural stiffeners as not validated yet and the deadline is approaching fast. Last attempt at FEA validation will be made in the next 6 weeks; after which non-validated parts of the standard will be postponed.

Future Meeting:

- Next meeting scheduled in Berlin in June 2017.
- French-sub group will meet in France prior to that to discuss specific issues (such as Ksls)

Annex: Agenda of the ISO/TC188/WG18 Meeting

WG 18-N 469

2016-12-16

**WG 18 - SCANTLINGS
PRESENTATION AND AGENDA OF BOOT MEETING 2017-01-24**

Dear WG 18 member

Our next meeting of WG 18 will be held in BOOT 2017.

Tuesday 2017-01-24 - Time 10:00- 17:00 Room 211
Dusseldorf BOOT (North entrance top level of escalator)

PRELIMINARY

The NWIP DIS 12215-7- Multihulls, has been sent to TC secretary for circulation as a DIS. (See N 467 & N 468)

This subject will therefore will therefore be less urgent... at least for the first quarter of 2017

The preparation of the DIS 12215-10 continues and we will discuss the documents I send now.

The preparation of the revision DIS 12215-5 Monohulls pressure and scantling will be the main subject of the first half of 2017

We still have the following time schedule.

TIME SCHEDULE FOR PARTS 7,10 AND 5 OF ISO 12215				
Standard	CD circulation ends	DIS ready	DIS circulation starts	DIS circulation ends (3 months)
ISO 12215-5 revision	2016-07-10	2017-03-15	2017-06-15	2017-09-15
ISO 12215-7	No CD	2016-12-15	2017-02-01	2017-05-01
ISO 12215-10	2016-08-04	2017-05-15	2017-07-15	2017-10-15

PRELIMINARY AGENDA

1- Quick presentation of DIS 12215-7 Multihulls and its spreadsheet

See N 465 Mets Minutes, N 467 DIS Corr draft, N 468 DIS clean draft .

2- Discussion on the draft for DIS 12215-10 –Rig loads and rig attachments

See N 465 Mets Minutes, N 466 Part 10 draft and excel spreadsheet

3- Discussion items to be discussed on Part 5 revision.

See N 465 Mets Minutes, last doc is N 463, unchanged since METS . I will probably send an improved draft mid-january

Main core:

- Non stiffened sections: method to determine panels
- Panels across several areas, and with variable pressure, passage from sandwich to single skins
- Double curvature
- Other subjects

Annexes:

- Annex A : application declaration
- Annex B: Specific requirements for racing craft
- Annex C: Specific requirements for work boats
- Annex D: FRP laminate properties – **A full review is needed**
- Annex A : application declaration

3 - Discussion on the following and improving of the Webscant program

- Annex A : application declaration

4 - Material test campaign**5 -Date of next meeting**

This Agenda will be updated, if needed, mid-January.

Gregoire Dolto

Attached docs (zipped) they can be downloaded from WG 18 ISo Website

- WG_18_N_465 METS 2016 Minutes .docx
- WG_18_N_466 Corr Draft DIS 12215-10 (E) 2016-11-24.docx
- WG_18_N_467 Corr DIS 12215-7-2016-12-04.docx
- WG_18_N_468 Clean DIS 12215-7-2016-12-14.docx
- CALCULS PART 10-2016-11-28.xlsm Preliminary Excel file