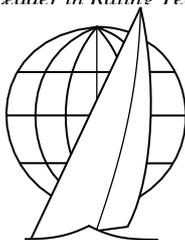


OFFSHORE RACING CONGRESS

World Leader in Rating Technology

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ITC – INTERNATIONAL TECHNICAL COMMITTEE

Minutes of a meeting of the **International Technical Committee** of the Offshore Racing Congress held on 18th to 20th October 2014 in ISAF Offices – Southampton (UK)

Present: Alessandro Nazareth (Chairman)
Andy Cloughton (UK)
Jason Ker (UK)
Nicola Sironi (ORC Chief Measurer)
Zoran Grubisa (CRO-ORC Staff)
Panayotis Papapostolou (GRE-ORC Programmer)
Davide Battistin (ORC Programmer)
Jim Schmicker (USA)
David Lyons (AUS)
Fabio Fossati (Research Associate - ITA)

Observers: Simon Forbes (ISAF – UK)
Tobias Kohl (J & V - GER)
Matteo Ledri (ITA)
Konstantina Sfakianaki (NTVA – Greece)
Martyn Prince (GBR-WU-J-Class)
Rob Taylor (ISAF – UK)

Apologies for absence were received from committee members Kay Enno Brink (Germany) and Research Associate Lex Keuning.

1. **WELCOME, MEETING LOGISTICS**

The Committee thanks ISAF for hosting the committee for the first time in many years in the Ariadne House in Southampton and particularly Simon Forbes for his kind assistance during the entire meeting's time. ITC welcomed also Tobias Kohl who finally accepted to become a member and whose membership will be finally ratified by Congress in the next AGM in Palma.

2. **REVIEW OF MARCH MEETING MINUTES**

The minutes of the last meeting in Delft were approved.

3. **REPORT ON 2014 SEASON – CURRENT VPP FEEDBACK**

Nicola Sironi reported about season races and results. The World Championship in Kiel was a success in terms of participation, with the best boats all in the top ranks while the scoring was very tight in corrected time differences. The same was observed in other major regattas. Another sign of VPP accuracy is that there were no major concerns or complaints raised from the sailing constituency.

The first four race days of the Worlds were raced in light air and flat water, with medium/heavy displacement boats leading in corrected time. This helped create a general impression that these boats may have a slight advantage. There were also some complaints raised about the treatment of headsails set flying that is considered too punitive versus normal configurations to the point that many boats discarded the new sail because of its impact on the VPP performances (see submissions NED 1 and GER 5 below).

4. SUBMISSIONS

4.1 ARG 1 - ANOTHER OPTION IN STABILITY MEASUREMENT

ITC discussed the issue of using the boom as an outrigger for the inclining test instead of poles. The majority of racing boats nowadays have asymmetric spinnakers tacked on CL, hence there is diminishing availability of poles for the inclining test.

The procedure using the boom was explained in previous Measurement Committee meetings, and practiced in a small number of big boats, but never consolidated in the Rule. This new method is now supported by the ITC and deferred to the Measurement Committee for defining the exact procedure and wording..

It is noted that using this procedure, the boom shall be pushed out until its end, where the weights are suspended, until it reaches the longitudinal position of LCF. The resulting heel shall first be recorded with the boom in that position, and no weights, then the weight is suspended, possibly with a load cell, and the angle with weights is recorded as the second set of data. WD shall be then measured athwartships from the point where the weights are suspended to the boat centreline. The measurement should be repeated on both sides of the boat, averaging the results. The sum of the two angles obtained suspending the weights should reach the minimum established in IMS E2.7.

4.2 ESP 1- POSITIVE LEECH ON MAINSAIL

The Submission refers to a possible loophole, resulting in a non-measured part of the sail area, when battens on the leech are placed between two measurements points on the leech. The solution is to halve the maximum excess measured on the leech to the adjacent measured width (girths). The decision was supported by Rob Taylor as being aligned with the ERS, and will be deferred to the Measurement Committee for final wording of the rule.

4.3 ESP 3- FOLDING THREE BLADE PROPELLER

The submission is supported. A new drag coefficient for folding three-blade propellers was developed with the same concept now used for feathering propellers of three-bladed versus 2 bladed. A test run was prepared and the results were in the expected direction. This modification is to be included in 2015 VPP.

4.4 ESP 4- FREEBOARD MARKS IN OFFSET FILE

IMS B2.2 seems to be sufficiently clear about where freeboards points could be located. Only a slight rewording could be introduced in the sheerline definition. The Committee feels the wording of the Rule, and the graphics dealing more with tonnage rules than handicapping, could be streamlined and modernized, but this is deferred to the Measurement Committee and Rating Officers Committee.

4.5 GER 1 - AGE AND SERIES DATE

ITC confirms the meaning and effect of SERIES and AGE date. A Series Date is included in most OFF files, but its value can be overwritten by the content of the DXT file. It is known that some certificate dates were wrongly showing in the certificate copies in the Sailor Services, which is the primary reason for the Submission, but that problem has been solved.

4.6 GER 3 - ORC RATING RULE 304

ITC confirmed that the current ORC Rule 304 is clear enough to identify what requires re-measurement in case of modifications to the boat.

4.7 GER 5 - ORC RATING RULE 111.4

The Committee reiterated the concept that sails must be measured as they are used, and clarified that flying headsails should not be reefed, as this would allow to tension a loose luffed headsails, turning them into tight-luffed ones.

To reinforce this a new wording for headsails set flying will be introduced in 2015, requiring the luff to be tensioned on a flying headsail only by means of a halyard or a tensioning device (e.g. purchase, hydraulic cylinder, etc) attached to the tack point, with no tensioning device attached to any intermediate luff points (e.g. Cunningham holes).

The Committee revised the current treatment of tight-luffed headsails set flying and has studied a new set of coefficients, closer to those of loose-luffed flying headsails. A test run was prepared and the results were as expected.

This modification will be included in 2015 VPP.

4.8 GER 8 - ACCOMMODATION REGULATIONS CLARIFICATION

ITC believes that current IMS Appendix 1 Rule 205 is adequately clear on defining an approved table, while Rule 102.4 is reinforcing the concept of “permanently installed”. The submission is therefore not supported by ITC.

4.9 GER 11 - MAST HEIGHT

The calculation of gyradius adjustment for the mast is based on the mast length, and is defined as being a maximum of (P+BAS, ISP, IM) so any increase of ISP in excess of P+BAS changes the mast length and therefore the gyradius adjustment, whose effect is felt only upwind.

To solve this issue (whose effect is however minimal) a test was performed taking only P+BAS as default mast length, and the resulting differences were negligible (below the first decimal in GPH).

This modification will be included in the 2015 VPP.

4.10 GER 12 - ORC RATING RULE 206.1(C)

This submission gave the opportunity to revise the entire wording of the rule regarding the use of headsails and spinnakers and their combinations. However, it was noted that IMS rules should define only how sails are measured while ORC rules are describing how sails are used.

A draft was prepared and deferred for final confirmation to the Measurement Committee. The rewording will clarify the use of inner staysails, the use of multiple headsails in various combinations, and the prohibition of using bloopers set outside another spinnaker or headsail.

4.11 GER 13 - ORC RATING RULE 208.6

See GER 12 above for rewording about spinnakers, but the Committee agrees on the concept of prohibiting spinnakers to be attached to a stay and this is also included in new text drafted for Rules 207 and 208.

4.12 NED 1 - FLYING HEADSAIL MINIMUM AREA

The current minimum area of headsails was derived last year from Code0 minimum area, when Code 0 was considered as a special type of asymmetric spinnaker.

With last year's change of considering Code 0 as a headsail set flying, it was agreed that the same formula for minimum headsail sail area can be used with J and IM for headsails set on the luff and TPS and ISP for headsails set flying. Therefore, it was agreed to change the headsails set flying minimum area for 2015 as follows:

$$0.405 \cdot TPS \cdot \sqrt{ISP^2 + TPS^2}$$

4.13 NED 2 - DEFAULT MAST WEIGHT AND CENTER OF GRAVITY

The revision of default mast weight needs a thorough investigation to be addressed properly. The Committee recognized that the formulation introduced almost 20 years ago (1995) may need some update. The database of new aggressive mast weight and CG is rather large, and will be used to revise this formulation.

The issue is deferred to next year and included in ITC 2015 agenda.

4.14 NOR 1 - ASYMMETRIC SPINNAKER SHEETED TO WINDWARD

Sheeting an asymmetric spinnaker on CL on the windward side is clearly breaking ORC Rule 208.3. Furthermore, this configuration is possible only if a crew member acts as an outrigger, requiring having his body outside the lifelines, in violation of RRS 49.2 and 50.3. Therefore, the submission is not supported.

4.15 RUS 1 - DEFAULT EQUIPMENT WEIGHT

The Committee agreed that the 1% default DSPM deduction to obtain the empty trim for boats floated before 31/12/2012 without any inventory list is not adequate for small boats. Therefore it is agreed to change this deduction scheme, adding a fixed amount of 50 kg to the 1% of displacement, as follows:

$$50 \text{ kgs} + 1\% \text{ DSPM}$$

This will be included in the 2015 VPP.

It was noted that as time passes this date of 31/12/2012, the boats with old measurements will diminish, so this problem will gradually disappear.

4.16 RUS 2 - UPWIND SPEED OF SMALL YACHTS

This submission is a general recap of the following three (RUS 3 – USE OF IMPLIED WIND, RUS 4 – PENALTY FOR LOW INITIAL STABILITY – RUS 5 RESISTANCE IN WAVES), so the ITC answered to each one separately (see below).

4.17 RUS 3 - USE OF IMPLIED WIND

It is well known that Implied Wind resulting for boats in the middle of the fleet is often well below the wind observed on the race course. Only the first boat can sometimes exceed the observed wind. This is in the nature of the Implied Wind approach, which is the result of a calculation where course construction, elapsed time and certificate data are used to construct the course as the only variables.

Hence the ITC, after a long discussion, agreed to make a proposal for a better use of the Implied Wind concept. IW will always be used to determine the winner but then the scoring program will re-run the corrected times calculation using the winner's Implied Wind as a fixed wind speed for the rest of the fleet. This was experimented in Spain for a few years at the beginning of the century, then abandoned.

This option would give a better result to light boats with good performances in lighter winds. Therefore, ITC supports this Implied Wind hybrid method. The most important races of the 2014 season (World's and European Championships) and other races of previous years will be re-scored with this system to assess any resulting differences.

4.18 RUS 4 - PENALTY FOR LOW INITIAL STABILITY

The Committee had a long discussion again on this submission regarding how the stability of boats is treated by the VPP, since this has been on the ITC agenda for several years.

The introduction of an average RM (measured and default) and of the PHIUP (heel angle corrector) avoids type-forming towards low stability boats. It must be noted that this "protection" comes more from PHIUP correctors than from the RM averaging.

So ITC agreed to consider a detuning the RMdef in the average RM used by VPP.

A test run was performed using the following new formulation:

$$RM_{rated} = (0.666666 * RM_{meas} + 0.333333 * RM_{def})$$

The test results had the expected impact on the fleet. The main concern about the possibility of reviving a trend towards optimizing tender boats was not considered to be an issue.

The new formulation for RMrated will be included in the 2015 VPP.

4.19 RUS 5 - RESISTANCE IN WAVES

Again a long time was spent in discussing this topic. The VPP has a routine for the calculation of added resistance in waves (see ORC VPP Documentation chapt. 6.5, page 68). The wave energy spectrum has been modified in the past to reflect the fact that the majority of races are held in flat water, reducing the energy at low wind speed. Obviously there are racing venues where the wave energy is under estimated, but there are many others where it is still overestimated as the races are done in flat waters also with strong winds.

ITC suggestions have always tried to avoid the introduction of another dimension in scoring software options regarding the sea state, as this would cause more problems than it would possibly solve.

As already written last year the Committee has tried to verify if the speed of small boats are really overestimated. It was also noted that the modification of the drag coefficients for upwind sails introduced last year has helped address this perceived problem.

The formulation described in the ORC VPP Documentation seems to work correctly and no concern was raised about boats treated incorrectly due to being out of the parameter's range of application. L^3/VOL is no longer in the formulation but and its range has mistakenly been left in the documentation, while the correct ratio to be taken into account is B/Tc rather than Bwl/Tc , where there is no range of application.

The submission is thus not supported but the Committee will keep this item on the 2015 agenda.

4.20 RUS 6 - INFLUENCE OF KEEL WIDTH

It was noted that a lot of boats scoring well in ORC have a large keel fin area mainly in the upper part of fin with a lot of surface area (due to a very long chord length), reducing leeway and so also induced resistance. This is mainly observed in medium to high-displacement ratio designs. A test run was prepared trying to address this issue to reduce the frictional resistance of the keel when low leeway angles are computed.

The test was encouraging but some concerns are that this new treatment of keels is also affecting older boats with large keels (or even with long keels extending below the canoe hull).

It was thus decided not to implement this new Rf calculation, and keep this item on the 2015 ITC agenda.

4.21 RUS 10 - EXPLANATION OF HULL APPENDAGES MEASUREMENT

This submission is related to the GP Rule, and is deferred to the Measurement Committee.

4.22 RUS 12 - HEADSAIL COEFFICIENTS

In 2014 the possibility to measure any kind of headsail (headsails are all fore sails with mid girth < 75% LPG) required the introduction of a new set of coefficients for each kind of headsail.

The headsail coefficients used previously that were retained for the VPP are:

1. Headsails with $LPG < 110\%$ J (jib with and without battens)
2. Headsails with $LPG \geq 110\%$ J (genoa without battens)

The treatment didn't change compared to previous year (2013) for the above listed headsails. In addition, roach was allowed in genoas (they were not allowed in 2013 and before) without any different treatment. However, when a genoa has battens, these are supposed to support the roach, so a new set of coefficients was introduced to take into account the better efficiency.

The problem is that this different treatment for battened genoas is applied fully as soon as the LPG is over 110%, causing a sudden jump in performance for just a centimeter more of LPG.

The Committee has thus agreed to smoothen the transition between the original jib coefficients to the genoa-battened ones in the range of 110% to 130% LPG to fair in this jump.

A test run was prepared and no issues were detected.

This modification is thus to be included in the 2015 VPP.

5. **HYDRODYNAMICS**

5.1 In the evaluation of possible fine-tuning of RR multipliers, no major issues were experienced to require modifications during the season, but the Committee will keep this item on its agenda for 2015.

5.2 On the topic of dynamic wetted area being possible implemented into the VPP, Jason Ker worked with the ORC programmer on the coding of DYN WS evaluation, which was nearly finished last year. This would be a further improvement in the viscous resistance formulation.

Some correlation work on dynamic wetted area versus static wetted area at different BTR and LVR was already completed, and so this routine is ready to be implemented into the VPP. LPP appendage clipping of old boats with wine glass sections or keels blended into the canoe body seem to be the only issues left to address.

The ORC programmer is completing the re-writing of the LPP, which will likely address the above issues on clipping and so allow the inclusion of this routine into the VPP, but not until 2016.

5.3 Possible revision of added resistance in waves: See 4.19 Submission RUS 5.

6. **AERODYNAMICS**

6.1 Downwind wind tunnel results analysis: ORC Programmer Davide Battistin prepared a spreadsheet with all the results of the wind tunnel tests on downwind sails made in 2013 and 2014.

Now with the help of Fabio Fossati he will rebuild the IMS total forces for all the configurations tested in both test sessions (where in the wind tunnel the overall forces were obviously measured), and prepare tables, plots and comparison tools to help ITC to better decide how to use this data in revising the current downwind aero model.

The tests made in 2013 and 2014 were done combining two mainsails (one with square top roach and one with an typical IMS max roach curve) with:

- 4 asymmetrics tacked on a bowsprit (2 larger at the maximum size allowed by foretriangle with the shape of an A1 and A2 and two smaller, always with the shape of an A1 and A2)
- 2 asymmetrics tacked on pole (one larger at the maximum size allowed by foretriangle and one smaller with an all-purpose shape)
- 2 symmetric tacked on pole (one larger at the maximum size allowed by foretriangle and one smaller with an all-purpose shape)

The post-processing will take into account the VPP internal area and a blockage coefficient of approximately 3%.

6.2 Revision of SHAPE & POWER functions: No major issues were experienced on this formulation during the season, although the Committee will keep this item on its agenda for 2015.

6.3 Reinforcement of rule for blooper prohibited: see 4.10 Submission GER 12.

6.4 Multiple headsails set all together: see 4.10 Submission GER 12.

7. DEFAULT VCG DETERMINATION IN WAY OF DEFAULT RM – COMPONENT WEIGHTS FORMULATION

The Chairman has worked on the review of the formulations drafted last year for evaluating default VCG using the component weights method. There will be a part of weights and corresponding CG's that will be taken from VPP inputs or LPP, such as:

- a) EMPTY DSPL
- b) Mast WEIGHT (MW)
- c) Internal ballast weight

Other weights (listed below) will be computed from overall DSPL, construction materials, fin and bulb volumes using parametric formulations:

- a) HULL WEIGHT
- b) DECK WEIGHT
- c) FIN WEIGHT
- d) BULB WEIGHT
- e) INTERNALS WEIGHT

The corresponding VCG's will be deducted from hull and keel geometry always using parameterized dimensions. The suggested approach from ITC will be to deduct the default VCG basing the parameters on race boats standards to fix it as a benchmark. This new method will surely increase the accuracy in assessing the estimated stability of the whole fleet, with particular regard to small boats. So this item will remain in the 2015 ITC agenda.

8. CLASS LIMITS PROPOSAL FOR 2015

ITC devoted a large amount of time in preparing a new proposal for the class divisions and splits that could be accepted worldwide as ORC International Class divisions to be adopted not only for the next International events (like ORC World and European championships) but generally around the world. The current class divisions are based purely on GPH, and varies in different countries according to the fleet's composition.

ITC noted two fundamental issues related to class divisions based on GPH:

- 1) the low possibility to design fast yachts in lower divisions (for example, Classes B and C in the last World Championship) without being compelled to make them too small to fit in the GPH limits. The consequence is that the winners of the lower divisions are always medium/heavy displacement boats, usually the largest in their class.
- 2) the first windward leg of the inshore races is a fundamental part of the race and it should be better to have as many boats as possible with similar windward speed in the same class.

In the past, to solve the first issue the smallest boats of the larger class were moved according to a fixed length limit, or conversely pushed up into the larger class with boats exceeding a certain length, but this caused complaints.

To answer the second issue, ITC decided to select the Windward12 (UP 12) handicap instead of using GPH to group boats with similar upwind speeds into the class. To also maintain similar dimensions it was decided to couple the windward speed at TWS=12 kts with the sailing length (IMS L) of each boat.

To couple the two factors (UP12 and IMS L) it was decided to transform the WW12 allowance (that is a speed) in a length and average the obtained length with IMS L. The final factor was named CDL (Class Division Length)

The transformation in length of the UPWIND12 allowance is obtained with the following formulation:

$$VMG_{UP12} = \frac{3600}{UP12} \cdot 0.5144 \quad \text{where } VMG_{UP12} \text{ is boat upwind speed in m/s at 12 kts wind}$$

$$RL = \frac{VMG_{UP12}^2}{F_n^2 \cdot 9.81} \quad \text{where } RL \text{ is rated length and } F_n \text{ is Froude number set at } 0.28$$

The RATED LENGTH is the length that you should have at $F_n=0.28$ with the VMG_{UP12} speed, so it is transforming a speed into a length. Froude number of $F_n=0.28$ for upwind VMG was fixed using $F_n=0.4$ (that is the Froude number at around which maximum displacement speed is obtained) multiplied by $\cos(45^\circ)$, 45° being the average true wind angle upwind.

The Class Division Length is then calculated as follows:

$$CDL = \frac{IMSL + RL}{2}$$

The CDL, coupling a speed (or a handicap in sec/mi) and a length, is addressing the problem of mixing handicap and dimensions of boats returning more homogenous classes in terms of dimensions and speed.

The lower limit of CLASS C is thus retained at 660 (or 670 if necessary) GPH.

A spreadsheet with the ORCi world fleet with the new class divisions is attached.

In the spreadsheet are highlighted the boats who entered the 2014 World and European Championships and their Classes using the new CDL approach.

The proposed class division is also prompted by a meeting in Barcelona with 2015 World's Championship organizer, and is as follows:

$$\begin{aligned} 430 &< \text{CLASS A} < 540 \\ 540 &< \text{CLASS B} < 605 \\ 605 &< \text{CLASS C} < 660 \text{ (or } 670) \end{aligned}$$

The class limits will need to be adjusted according to next year's VPP to keep as much as possible the boats in the same class so that they fall within the above limits for this year.

9. STATION DENSITY ANALYSIS IN OFFSET FILES

The new RR introduced in 2013 had the effect of being less sensitive to trim variations, and with the introduction of the dynamic wetted area evaluation it will decrease even further. In any case the ITC believes that a sensitivity study on offset station density and/or position (mainly at the extremities) in offset files should be important to assess this reduced effect of trim that was once heavily exploited.

Jim Schmicker will continue with a study that he began during the year, but has not yet finished.

10. SYRF RESEARCH PROJECTS PROPOSAL

Following Myles Cornwell's (SYRF) presentation made at the last meeting in Delft, Fabio Fossati described the guidelines of a research project based not only with the completion of the research on downwind aero model but also including:

1. Use of a full-scale dynamometer of the Sailing Yacht Lab (an instrumented sloop of 35') for a full scale test
2. Pressure measurement (both full scale and in the wind tunnel) for returning a very wide benchmark for numerical codes
3. Flying shape determination
4. CFD and wind tunnel validation tests

It is well known to all the Committee that full scale tests are a hard issue in returning reliable results, but this is one of the aims of this research project. In the following weeks Fabio will complete the research project including:

- Guidelines and detailed description of the project
- Working group composition
- Possible research facilities to be involved
- Budget
- Delivery times

to allow a quick presentation to SYRF and to hopefully obtain an approval and funding.

Other possible research projects were discussed briefly (including also a recollection of all hydro and aero tests made by ITC/ORC in the last 20 or more years) and hopefully a proposal will be prepared soon after the above project.

11. LPP UPDATE – RHINO PLUG-IN FOR DERIVING OFFSET FILES

Davide Battistin has nearly completed a re-writing of the entire LPP code. It is a complete revision and partial rewriting of the LPP code, in order to make it more controllable, robust, and easily manageable.

Presently the new code consists already of more than 15000 lines. All the most important procedures - dat/dxt input, off input, clipping, sectional and longitudinal integration - have been completely revised and tested, producing a new interface (that is the set of IN/OUT parameters), where it is clear (at least for the programmer!) what is input, what is output, what is internal to the procedure.

All the math is 'protected' and 'hidden' into more complex objects, thanks to the modern object oriented programming techniques and instruments. The new code makes heavy use of the new features of the last versions of Fortran language, Fortran90-Fortran2003.

Some validation tests are still needed and hopefully it could be included into newer versions of the VPP also during the year being the intention to completely reproduce the VPP results compared as they come out from the present LPP.

12. UNIVERSAL MEASUREMENT SYSTEM UPDATE

ORC Chief Measurer reported on the UMS status. He was invited at a measurers meeting in Newport in September with major US officers/measurers/technics.

The current ORC Manager is ready and fully available for dealing with other handicap platforms like ORR or PHRF but US officers seem to be following a different path to administer their database.

As far as IRC is concerned, the latest ORC Manager contains a routine that produces IRC data from hull+rig+sails measurements, but in a form that does not allow the same format to be used, nor conversely create a “bridge” to allow the ORC manager to acquire IRC data. This is work in progress, and it is hoped to make further steps at the meetings in Palma.

The important thing is that the IMS rule has all the features to become the UMS platform, with some work to be done in unifying a few measurements and their nomenclature and acronyms in sails and rig, as already stated last year.

Regarding hull geometry, the STL files format has been indicated as the best and most robust universal standard to provide hull geometry information data, from a design file or direct measurement, but anyway the OFF file creation is a step required before running the LPP.

At present the software already in use can create OFF files from cleaned and properly oriented point clouds, without any post-processing requiring the creation of a surface, in any available format, like DXF, STL, IGS. With the 3d scanners now becoming increasingly available, the objective is to set up a standard procedure to get good and error-free OFF files.

Some standard procedures are being put together in order to make use of these new tools minimizing the expensive post-processing time and procedures.

13. VPP DOCUMENTATION RELEASE

A new version of Documentation (fully compatible with 2014 VPP) has been prepared by Zoran Grubisa and needs only a double check from ITC. The Committee re-assessed the necessity to transfer the current source file of Documentation into a more powerful LATEX platform to deal with a very complicated and convoluted technical text. This will be done during 2015 by the ORC programmer taking into account that the 2015 VPP Documentation will not change a lot from the one ready to be published.

14. 2015 VPP PREPARATION OF AN “ALL EFFECTS” TEST RUN AND A BETA VPP FOR IMMEDIATE RELEASE

Individual Test runs of all VPP modifications have been prepared and approved. A corresponding final “All Effects” test run will be prepared with the world fleet.

At the same time a Beta VPP 2015 will be assembled and an executable file will be distributed to RO and DVP Users as soon as possible after the Congress will approve the modifications for 2015 VPP.

This is a list of modifications that will be included into “All Effects” test run and Beta VPP 2015:

- Three bladed folding propeller new treatment
- Default Mast Weight based on P+BAS
- New formulation for Flying Headsails minimum area
- Blending of genoa coefficients with battens with jib ones in the range 110°-130°
- New set of tight luff flying headsails coefficients
- New average $RM=(0.666*RM_{meas}+0.333*RM_{def})$
- New Default Equipment weight for measurements before 01jan2013 = 50kgs + 0.01 DSPM
- Revised $JH_{def}=0.02 *LPG$

15. COMPLETION OF ITC RECOMMENDATIONS TO THE CONGRESS

- 1) Class divisions proposal based on CDL factor
- 2) Three bladed folding propeller new treatment
- 3) Default Mast Weight based on P+BAS
- 4) New formulation for Flying Headsails minimum area
- 5) Blending of genoa coefficients with battens with jib ones in the range 110°-130°
- 6) New set of tight luff flying headsails coefficients
- 7) New average $RM=(0.666*RM_{meas}+0.333*RM_{def})$
- 8) New Default Equipment weight = 50kgs + 0.01 DSPM
- 9) Revised $JH_{def}=0.02 *LPG$
- 10) Girth correction for positive leech on mainsail
- 11) Possibility to incline the boat with boom
- 12) Clarification about multiple headsails and bloopers prohibition
- 13) No possibility to reef headsails set flying
- 14) No luffed spinnakers allowed
- 15) New Implied Wind calculation

16. ORC RESEARCH FUND BUDGET PLANNING

See Item 10 for SYRF Research Projects and funding. ManCom has informed the Chairman about more funding available for ITC projects so it will be possible for the main items in the ITC agenda to fund some small working groups (see below Item 17).

17. STRATEGIC PLANNING FOR WORK AFTER THIS MEETING, MAIN PROJECTS FOR 2015

1. VCG default evaluation with component method
2. Dynamic wetted area
3. New LPP
4. Fine tuning of frictional resistance of long chord keels at low leeway angles
5. Station density analysis
6. Documentation transfer to Latex platform
7. Added resistance in waves
8. Revision of current upwind model – Different depowering (no mainsail reef)
9. New Default Mast Weight
10. STL to OFF hull conversion software

18. SYRA VPP UPDATE

The day after the ITC meeting was adjourned the SYRA VPP working group (Andy Claughton, Martyn Prince from WU, Alessandro Nazareth, Paolo Massarini, Nicola Sironi and Davide Battistin) met to continue the preparation of a customized VPP (based on ORC VPP) for Super and Mega Yachts that will be used in next season as requested by SYRA. The VPP will be tested and released before the first race of next season. Special attention is given to the windage producing elements of Super Yachts.

19. NEXT MEETINGS SCHEDULING

The next meeting (first for 2015) has been preliminary fixed in a week end of the second half of March and the possible locations could be Athens, Hamburg, or Delft (final decision will come according to the availability of our hosting clubs).

20. ANY OTHER BUSINESS

A strange result during the medium offshore race (37nm) of 2014 Hellenic Championship was discussed.

The winner of the series (ATALANTI XVI) that won all the races or was maximum second, in that race finished 5th overall and the most important thing to remark was that the decrease in elapsed time to win the race would have been around 30 minutes that would mean about 33 sec /nm of allowance difference.

This difference being too wide and having seen the average speed and its implied wind, the Committee thinks that there is some major issue hidden, so it has asked Kostandina Sfakianaki (who was RO) to better inspect the race data and times.

Another issue brought to the attention of the Committee was the default JH (used mainly in ORC CLUB or on old sails where JH was not measured). The current fix at 5% of LPG is considered too high, and having a look at the world fleet the average of 2% was seen as more consistent and will be implemented into the 2015 VPP.

25th October 2014