

In pursuit of unanimity

The ongoing mission of the ORC's International Technical Committee (ITC) is daunting: to develop and refine a VPP to work for all boats in all conditions, and then use this as the basis of a rating system that is applied in 35 countries by some 8,000 users... not an easy task.

And this VPP has to be robust, meaning it can't have any glitches or bugs whenever new refinements are made. This puts the ITC and ORC programmers under pressure at the beginning of every year to deliver their product, while the rating officers also put pressure on them to have it ready so they can run their national fleet certificates and see if any rating changes affect new class splits for the year.

And with the transparency of public online access through Sailor Services, owners, sailmakers and boat managers also become anxious to have access to the VPP so that they can get speed guides and run test certificates to make decisions on sail

generated by the boat sailing in displacement mode. This was almost completed last year and, while it worked well for modern hull forms with modern appendages, the approach did have inconsistencies with older hulls fitted with fuller, more traditional keel shapes.

3. Conduct a study on offset station density effects and develop a new protocol for ORC to accept 3D design files (such as in IGES or RHINO formats) from designers, rather than requiring them to convert these files to the OFF format. Some designers are more adept at working with OFF files, but others are not, and therefore it's hoped that a new protocol with more flexibility will help reduce the hassle that faces some designers in this process. It's also important to note that guarding the safety and security of designer files is sacred to ORC, where only the technical staff and a few trusted national rating officers can have access... in fact, even members of ITC are not allowed access to these design files in the database, since many are themselves active designers.

4. Post-processing of the wind tunnel data gathered earlier this year at Milan Polytechnic. The results will be used in refinement of the downwind aero model in the VPP, and the decision on whether more testing is needed will be made once results are evaluated. A possibility is that the results of this study may lead to another in CFD for the downwind aero model.

5. A study to examine how to determine a default VCG figure based on component method measurement instead of determining this from a regression of the default Righting Moment value. HPR already offers the option of using an inclination or component method to determine VCG, so ORC would like to offer this same option to give greater flexibility for use in ORCi certificates.

In other non-technical developments the determination of class splits for the 2014 ORCi World Championship in Kiel was made, with the A/B split being at 550 sec/mi GPH and the B/C split at 615 sec/mi GPH. This makes Class A look like fast boats ranging from Farr 40s to TP52s, Class B fast cruiser-racers in the 40ft-ish range, and Class C smaller sportboats along with cruiser-racers in the 30-40ft range.

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Typically crowded starts in ORCi Class C make class splits an increasingly important issue at ORC championships. The Cossutti-designed NM38 Sugar, to leeward, is one of the most successful modern ORCi designs and is the current European title holder

designs, appendage changes or other optimisations, even though in theory the VPP should be able to accurately handle any boat in any configuration...

Among the wish list of research agenda items given in this column in the February issue, ITC chairman Alessandro Nazareth has decided to pare this down slightly to a shorter, more achievable list, which was reviewed recently at the ITC's first meeting of the year, in Delft. Here it was agreed that the 2014 VPP, while a little late in delivery due to the new, more global treatment of headsails, looks pretty good and not in need of many big refinements so far.

It's worth noting that this meeting was one of the most crowded of the past 10-15 years: there were designers like Manolo Ruiz de Elvira (back in Spain after his tenure with Oracle), Tobias Kohl from Judel-Vrolijk, numerous rating officers, technicians and others as observers, along with the full committee – 22 people in all!

So, with this strong interest, the main items to be studied this year include:

- 1.** Further development of the aerodynamic CFD study to examine the effects of depowering upwind using mainsail twist as well as reefing. This is in recognition that most boats depower this way, and therefore the method needs to be examined carefully.
- 2.** Dynamic wetted surface that takes into account any wave patterns

These class breaks were determined after an analysis of both the 160+ regatta entries in the worlds and the composition of the ORC fleet in Germany, where offshore sailors each year pre-determine their class splits for consistency throughout all regattas of the season.

This kind of consistency is used in some other countries as well, where the offshore sailors have a central organisation to handle such matters. But in other areas it is left up to the regatta organisers to decide class splits, which may be hard for teams who travel and participate in different events, where they may find themselves in different classes.

To reduce the perennial fights over this topic, ORC is considering an offer of prescribed class splits that could be applied universally by national authorities and championship organisers. This would not only achieve consistency across regions, but it would also give designers and builders clearer targets for offering new boats to the market.

The problem with this universal approach is, of course, that popular boat styles vary from region to region: the Baltic region, for example, has a higher proportion of cruiser-racers, whereas the Mediterranean fleets see more participation from pure race boats. This may no doubt continue to be an evolving topic...

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