

Technical & Measurement Committee Report by Tracy Usher

The ILCA Technical and Measurement Committee (TMC) met with builder's representatives on October 17, 2008 in London, immediately preceding the mid-year World Council meeting (see Heini Wellmann's article in this issue). A large number of topics were addressed in the TMC meeting, with proposals then carried forward for approval by the World Council. This article attempts to highlight the main results of these meetings.

A number of proposed Class Rules changes were considered with the following six to be submitted to the membership for approval:

1. A common sailor complaint centers on the maintenance of the o-rings responsible for the proper operation of the self-bailer. In particular, they seem to need frequent adjustment and/or replacement and often sailors can't easily find builder supplied replacements. To help alleviate this situation, it is proposed to modify rule 13 to deregulate the o-rings and allow alternative replacements, provided the inherent function of the bailer remains unchanged.
2. Several years ago, rule 14(d) was introduced which aimed to help reduce the wear on the gelcoat at the top front edge of the centerboard case by allowing the use of a small piece of plastic tape. However, sailors have complained that most commonly available plastic tapes are rubbed off almost immediately by the friction of the centerboard as it slides up and down. The aim of this rule change is to de-specify the tape, allowing the use of any general material, of the same dimensions, to protect the gelcoat.
3. It is a good bet that every Laser sailor has, at some point, used either tape or a marking pen to place reference points on the boat (for example on the boom to measure outhaul settings). Technically, this is not strictly allowed and it is proposed to introduce a new rule to explicitly allow this common practice.
4. Another common practice which is not strictly legal is the use of lubricants (e.g. silicon sprays) above the decks (for example on the end of the boom to insure the clew strap slides easily). This is another rule change aimed at explicitly allowing another common practice.
5. Sailors have requested that the outhaul blocks specified in rule 3(f)(v) be allowed to be bolted to the gooseneck.
6. Finally, sailors have also requested that rule 3(f)(v) also be amended to allow a double block instead of two single blocks.

Text of the proposed rule changes, along with detailed explanations, will be posted on the ILCA website and published in the March 09 edition of LaserWorld. Voting for the changes will be by paper ballot (in LaserWorld) and on the website and will run from March to September. The World Council will ratify the results and submit the proposed rule changes to ISAF for final approval. Approved rule changes will come into effect in 2010.

Changes to Builder Supplied equipment, unlike Class Rule changes, are approved by both the builders and the World Council and are not subject to a vote of the Class Membership. Typically these are items with long development cycles involving sailor testing and represent a real improvement in the boat and/or its equipment. After long periods of testing, two changes received final approval:

1. The centerboard brake has been redesigned and the new version both grips the centerboard much better and has a much longer lifetime. This item should be available mid/late 2009 and is expected to retail around \$10 US.
2. Harken has developed a new set of ball bearing blocks to replace the venerable Holt mast and traveller blocks. These blocks not only run much easier, but their design also addresses wear issues that the Holt blocks suffered from. These should be available mid/late 2009 and a complete set is expected to retail for around \$90 US.

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In addition to the above, the status of the GRP foils was reviewed. Both Performance Sailcraft Australia and Laser Performance are producing GRP foils which have been shown to match the characteristics (shape, weight, flex, etc.) of the Crompton foils. Laser Performance GRP foils will be available to Europe, North and South America in early 2009.

The TMC also reviewed progress on several Measurer and Measurement issues:

1. Jean-Luc Michon has completed a final draft of the Measurer's Manual and it is undergoing final review. When done this will be placed on a Measurer's section of the website and then a program of training and certifying District Measurers will commence with the goal of being able to have a certified ILCA Measurer in all major sailing areas.
2. In addition to training Measurers, a Measurement section of the ILCA website is under development. It will include a frequently asked question section, a section with photographs of both legal and illegal rigging options and other things which the sailor can access and use to help them understand some of the details of the Laser Class Rules.
3. The TMC aims to develop a standardized procedure, and web based form, for sailors to submit proposals for changes to, or interpretations of, the Class Rules. A second web based form will also be developed which enables a sailor to request the class's assistance in dealing with a quality problem with their boat.

Finally, the TMC discussed at length several longer term projects whose primary aim is to either improve the boat or address perceived problems. Two key topics deserve mention here:

1. There was general agreement to put the composite upper mast project on hold. The masts that were prototyped were intended to reduce the average weight for Radial sailors but field testing indicated a reduction in performance in lighter winds. A composite mast with the same bend characteristics as the aluminium seems promising as a way to solve permanent bend and breakage issues but there is some concern over long term durability. In the meantime, the builders have made significant progress with the aluminium top mast and, in addition, Clive Humphris (ILCA Technical Officer) has developed a "split collet" to replace the currently riveted mast collar (the primary failure point for the aluminium spars). The "split collet" is essentially a two piece (split longitudinally) plastic cup which inserts into the top of the lower spar and "holds" the upper mast. This removes the mast collar and the need for the rivet allowing one to rotate the mast at will. This design has been prototyped and looks to be very promising. Stay tuned for more information!
2. The TMC reviewed the status of two proposals to modify the Standard sail. One design, from Hyde, is a bi-radial cut using a yarn tempered cloth which aims to improve quality and durability while retailing at around the same price. The second, from North, modifies the standard cross cut shape slightly to address some shape issues, adds improved reinforcements at key wear points and aims to improve durability while decreasing cost. Both proposals were well received and, after a lengthy discussion, the TMC and builders agreed on a common set of objectives to improve quality and durability while maintaining the current performance. The next round of prototyping will begin soon with the goal of making a decision on the time scale of the next World Council meeting.

The TMC will meet again next summer before the World Council meeting in Halifax. Sailors who have questions, comments, suggestions, etc., can contact the Technical Officer at technical@laserinternational.org.