



22 May 2010

— Question 51:

#### QUESTION

The members unanimously decided last year (Cartagena Member Meeting and Annual Meeting) to have a new mainsail design (square top main) and area (93.5m<sup>2</sup>) from 2010. The wording in the 2010 Class Rule aims to reflect this decision and was accepted by all members at the 2009 Annual Meeting.

A mainsail has been produced (Matador light main) that is not in line with these design and area criteria, but that is argued to comply with the wording of the 2010 Class Rule.

How to read the 2009/2010 and 2010/2011 TP52 Rule on mainsail area (5.55 and J.5) and how does this relate to the clear unanimous member intention and decision on 2010 mainsail design and area?

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#### CONSIDERATIONS

The Members that ask for the Interpretation make it clear that they ask the intent and spirit of the TP52 Rule, and the intent and spirit of the decisions made during 2009 at various Member Meetings that laid the basis for the totally rewritten 2011 TP52 Rule as well as the transition rules of 2010, to be the guiding principle where the rule is flawed or has more than one way of being read. They specifically point out that this is not just a request, but a principle well documented in our rules, like in Rule 1.2.

Further they point out that our class rule overrides all other rules in case of conflict and that the class is the sole authority for the TP52 Rule. See Rules 1.4, 1.7, 1.13.

Of all mainsails presented for measurement in Cascais the Matador light main that is being questioned is most clearly not in line with what was agreed last year at the Cartagena Meeting. Agreed was a square top main of 93.5m<sup>2</sup> with a head of 1.250m and a "fair shaped leech". This was represented by the drawing that ETNZ put on the table in Cartagena.

Many of the mainsails presented for measurement in Cascais had leeches that also trespass on the "fair shaped leech" shape as represented by that particular drawing. But only the Matador light main "tricks" the area formula by creating a head that is not a square head.

Unfortunately the rule I wrote, which was unanimously accepted at the 2009 Annual Meeting, only functions properly if the "fair shaped leech" can be used to determine the aft head position by extending the leech from any point where the shape can be seen as "trying to manipulate the position of the aft head point". This point of view is not supported by ISAF when we asked them how to read the ERS where it says "extended as necessary". Which leaves us with the need to decide how to deal with this.

To uphold a rule on the basis of intent and spirit should be avoided where possible. The same might be said for overriding other rules, like the ERS or the OSR. On the other hand this can not always be avoided. No rule is perfect and conflicts are part of the game. With intent and spirit we are on a slippery slope. On the other hand it is the intent and spirit that produced this rule and these great boats. Nothing else. So do not mess with it.



- From a pure technical point of view the question with this particular mainsail is: *where is the position of the Aft Head Point?*

The TP52 Rule (2009-2010 / 5.34) says that measurement points at the corner of a sail shall be the intersection of the adjacent sides projected.....

The ERS say in G.5.5 that the Aft Head Point is the intersection of the leech *extended as necessary* and the line through the head point at 90 degrees to the luff.

*"Extended as necessary"* is demonstrated by 1 drawing in a set of 4 drawings with G.5.5 that shows main and jib heads. The top shown is not a "square top".

In G.4.2 (a) the ERS defines how to find the (forward) Head Point. A bit "strange" is that with this definition there is a drawing that shows the position of the Aft Head Point determination for a curved leech. This drawing indicates that when the leech is not of a continuous curve, but kicks off towards the headboard, *the latter part of the leech shall be ignored for determination of the aft head point.*

ISAF can not in short time produce an official response on this matter, but staff (after consultation with the Chairman of the ERS Working Party, Jan Dejmo) indicates that **the purpose of the corner point definitions is to find the corner locally and to make sure that point is not artificially manipulated due to unfair curvature near to this point. The ERS makes no attempt to control the profile of the sail edge away from the corner other than dealing with hollows at measurement points.**

So the ERS / ISAF recognises that **corner points can be manipulated artificially** and tries to remedy this. To their opinion this is to be limited to looking at "unfair curvature near to this point". This creates two questions: What is **"unfair curvature"** and what is **"near to this point"**? As indication of what should be seen as "near to this point" it is said (not regulated in the ERS) that **"no attempt to control the shape of a sail edge"** should be read in this requirement. Unfair curvature is not further explained in the email. In a way it says the same as "artificially manipulated", so the same statement is made twice. *I can not imagine that a situation that can be described as unfair is intended to be acceptable because a leech is not (or not clearly) curved. ISAF maintains the ERS is perfectly clear and advises to address the situation by a rule change.*

All in all it is fair to say that the ERS as well as the TP52 Rule are not crystal clear on this. It even might be the case that they are in conflict on this point. Are they? And if so, do we let the class rule prevail, as it permits us to do? To get any further we must try to narrow down on the words and positions and bring some order of importance to them.

Questions that might help us with this:

- Is "artificially manipulating" the position of a sail corner permitted?

No, not by intent or spirit and not by rule.

- What does it mean: "artificially manipulated"?

Artificially manipulated reflects the intent to mislead. In this case to mislead the formula that calculates the area.



- - ISAF indicates that “extending the leech as necessary” is permitted to determine a sail corner, but limits this to the leech near the corner. How to work with this?  
The two extreme positions that ISAF indicates, without giving a clear answer where the one goes into the other, are: Measuring “artificially manipulation of the corner” and “trying to control the shape of the sail edge”. This leaves room for interpretation. And so moving up and down the leech to pick a point, not a good situation.

*As the class rule clearly puts the responsibility for complying with the rule with the owner, crew, designers and builders the prudent approach in case of doubt is to ask a formal interpretation from the class manager before making a sail.*

***The first conclusion is that the sail corner position of the specific sail (the Matador light main) is to be seen as artificially manipulated.***

- Is it possible to fight “artificial manipulation of the corner” without getting into some control of the adjacent sail edges shapes?  
This reflects the dilemma the class faces. The answer is: NO. So, some balance of interests needs to be found.

The essence of the specific case of the Matador light main is not whether this specific corner has been manipulated, but whether it is possible and how to determine the true position of the corner once manipulation is established. The more so as the ERS remedy to measure such manipulation is to “extend the leech as necessary”, but ISAF at the same time in her email explains the use of this remedy is to be restricted and shall not be an attempt to control the shape of the leech. But, extending the leech is easier said than done.

***The second conclusion is that the class rule as written does not specifically require a “fair leech shape” as was shown on the ETNZ drawing that was the basis for the decisions at the Cartagena Member Meeting.***

***Consequently, adding the two conclusions and the ISAF position on control of the leech together, the use of battens to “poke the leech out” locally is not forbidden by the class rule, as long as it can not be seen as intended to artificially manipulate the Aft Head Position.***

- Can we define “artificially manipulating a corner position” in such a way that there is no room for individual interpretations?  
This can of course be attempted, but I am afraid that in this case any such attempt will be seen as changing the class rule. Does this mean a class rule has no control over this?  
Sure not, the control in the future shall be found in introducing further restrictions on the upper girth or batten number and/or length. Till we change the rule, by a member vote at an Annual Meeting, we will remain in a limbo over this and depend on the (Chief) Measurers judgement of each sail presented for certification.

As this is not a very desirable situation the alternative is to find a solution in correcting the formula that calculates the mainsail area in such a way that it typeforms the shape better than the current formula. As you may agree this is a rule change, so can only be done by mutual consent.



— INTERPRETATION

*The unanimous member decision to include in the 2010 Class Rule a square top main of 93.5m<sup>2</sup> with a head of 1.250m and a “fair shaped leech” as represented by the drawing that ETNZ put on the table in Cartagena during the Member Meeting (which was substantiated at the 2009 Annual Meeting) shall be seen as part of the intent of the 2010 TP52 Class Rules and as been taken in the spirit of the 2010 TP52 Class Rules.*

*The TP52 Rule is very clear where it comes to conflict between rules, the TP52 Rule prevails. As such the decision where to position the balance between protecting the class from abuse of the rule by artificial manipulation of sail corner positions and the importance of not regulating the sail edge shapes by means of the corner position lies with the TP52 Class.*

*As Chief Measurer I feel we should nevertheless respect the position of ISAF in this matter and also recognise that our current rule does not expressly forbid other (batten assisted) shapes of the leech than the “fair leech shape” for mainsails.*

*Thus we shall allow other shapes of the mainsail leech. But only if this does not lead to artificial manipulation of the Aft Head Position. In case of any doubt, not certifying shapes that lead to artificial manipulation of the Aft Head Position shall prevail.*

*In general:*

- 1) Artificial manipulation of a corner point is forbidden.*
- 2) Controls of a sail edge shape that are not specifically mentioned in the class rule can not be introduced in the disguise of “extending a sail edge as necessary to establish a fair corner point”.*
- 3) Point 2) shall never lead to the conclusion that artificial manipulation of a corner point is permitted. Point 1) is the leading principle.*
- 4) How to “extend a sail edge as necessary” to establish a fair corner point is not really clear. Whether a leech is curved, or not curved, or any combination of these. There are several drawings in the ERS demonstrating how to do this, but the truth is if you do it twice you never come to the same point. The (Chief) Measurer is the one to decide.*

***So, in the case of mainsails, the shape of the leech shall be considered free as long as it does not lead to artificial manipulation of the aft head point and stays within all other limits as given by the TP52 Rule.***



— PLEASE CONSIDER:

I realise this Interpretation leaves rather open what a permitted mainsail shape is till at least the 2010 Annual Meeting. Artificial manipulation that gives a benefit in area can not just be achieved at the head but also by “playing” with E, so create a windsurf type sail. Of course I will fight that as well.

This is not satisfactory. Not for you and not for me.

To avoid this and to give a clear picture to the members, designers, etc. I propose to make a minor alteration to the mainsail area formula, which I accept is in fact a rule change:

$MSA = P/4 * (E + MGL)/2 + (P/4 * (MGL + MGM)/2) + (P/4 * (MGM + MGU)/2) + (P/8 * (MGU + MGT)/2) + (P/8 * (MGT + 1.250)/2)$  in which E is not to be taken less than 7.0m.

To my opinion this will encourage all sails to have a maximum width top and not give much difference in area between the various possible designs.

Also it will not obsolete current designs. Small gains in area are possible, but have to be offset against the efficiency of such sails.

**To accept this please email me your consent from now till the 2010 Annual Meeting. No response within 7 days of sending this by email will be seen as consent.**