INTERNATIONAL ETCHELLS CLASS ASSOCIATION

ONE-DESIGN PROJECT

FEBRUARY 2022

ONE-DESIGN PROJECT

- Recommended action track from 2021 Class Audit
- **Goals**:
  1. Clarify what may/shall be done to Etchells by sailors and builders
  2. Make the construction of the boats as one-design as possible
  3. Deter speed-shopping
  4. Reverse or curtail the increase in costs
  5. Support re-sale values
  6. Increase compatibility with Equipment Rules of Sailing (“ERS”) and Standard Class Rules (“SCR”)
- **Mechanisms**:
  - Update the official Class **documents**
    A. Class Rules
    B. Building Specifications
    C. Plans
    D. Measurement Form
    E. Measurement Guide
    F. Building License Agreement
  - Change the way we **certify** Etchells when built, and the way we **inspect** them at events.

Guiding Principles

- Achieve the stated intent of the original rules:
  - Boats as similar as possible in construction, weight, and shape
  - Building tolerances only for unintentional variations in the build process
  - Hull Construction information only needed by Builders & Measurers
  - Sailors are permitted to customize certain items
- Changes must not allow/create Etchells that are faster or slower than those currently being produced
- No changes except to solve real problems

Summary

- Items to do with building the hull and hull appendages have been moved out of Section D & E of the Class Rules and into the Building Specifications and the Plans.
- Rules permitting what the sailor is allowed to do to the hull and appendages are now in an enlarged Section C of the Class Rules.
- No major changes to Rig & Sails, just working on some clarifications.
- New measurement points have been introduced, and the Hull Datum Point is now the old "Point C" on the transom (it doesn't get damaged as much as the bow).
- New builds will match the prototype inside tight guidelines. The builders are cooperating to harmonise construction protocols.
- At major events, boats will be inspected and compared with their own Measurement Form ("Passport") to confirm they have not been modified inappropriately.
- Existing boats (that have not been modified inappropriately under previous rules) shall not be penalized under new rules.

1. Clarifying Who May/Shall Do What

- Move most of Sections D (Hull) & E (Appendages) into Building Specs & Plans
  - Note: the Building Specs & Plans **are** part of the Class Rules.
- Move into Section C everything the sailor may do to the Hull & Appendages:
  - Floorboards
  - Console
  - Deck recesses for fittings
  - Mast hole modification/reinforcement
- Rig: no change
  - Mast & boom must be supplied by Licensed Spar Maker, Spi Pole can be supplied by anybody.
  - Sailor can modify so long as the equipment is re-measured and still complies with Section F & Plans
- Sails: no change
  - Can be supplied by anybody
  - Sailor can modify so long as the sail is re-measured and still complies with Section G
- Adding in "No-brainer" permissions for common items
  - Modern material fittings (carbo blocks etc)
  - Tape, Tools, Spares
  - Spi boxes/bags

2. Boats As One-Design As Possible

A. Tooling approvals
   1. Hull/Deck mould approval protocol
   2. M8 and M10 will be re-approved at the same time as the new M12 is approved
   3. All other moulds/patterns (e.g. rudder), to be approved by World Sailing ("WS") or the International Etchells Class Association ("IECA")

B. Building License
   1. Expanded, detailed description of Prototype Assessment
   2. Reinforcement of requirement to build all boats to match prototype, with agreed "match" guidelines

C. Harmonization of build
   1. Position of bulkheads, chainplates, knees
   2. Strakes
   3. Bilge in-fill
   4. Simpler, separate, skeg construction process

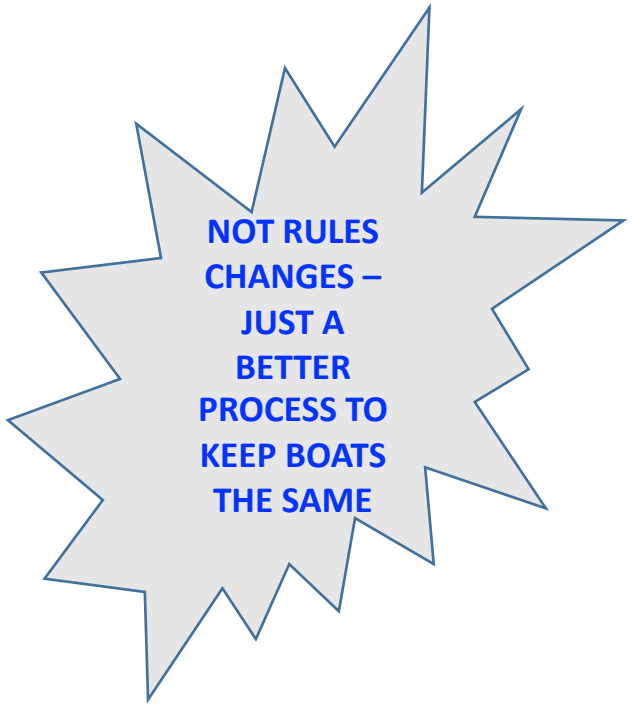
D. More stringent certification & Inspection process (***next slides***)

2.D: Certification & Inspection Process

1. **Fundamental measurement** process by an **official measurer**:
   a) During the build process:
      1) Strake dimensions and laminate layers
      2) Glass Hull weight, Keel weight, Bare Hull weight
   b) Upon completion of build:
      1) Compliance with **class rules**, including Building Specifications and Plans
      2) Enter figures on the Measurement Form
2. Declarations on Measurement Form by Builder, Outfitter, and Measurer
   1. ALL weights & measurements to be witnessed & declared by an **official measurer**.

2.D: Certification & Inspection Process

1. Prototype
   a) The Building License requires the builder to make a prototype to verify construction & tooling.
   b) September 2022: a new boat (the "prototype") will be **inspected** from each builder/mould
   c) The Prototype's Measurement Form is filed at the IECA.
2. New Build
   a) **Fundamental measurement** is undertaken.
   b) For a new boat to pass **certification control**, **t**he recorded data for the new boat must:
      1) Be built in accordance with the **class rules** (incl. Building Specs, Plans, etc)
      2) Fit within the Class Rule tolerances, **and**
      3) Match the Prototype's Measurement Form, within guidelines agreed by the IECA and the Builders
3. At Events where Equipment Inspection takes place
   a) Valid Measurement Form is a requirement of entry.
   b) A subset of measurements are taken on each boat
   c) For a boat to pass **equipment inspection**, **t**hose measurements must:
      1) Fit within the Class Rule tolerances, **and**
      2) Match the recorded Actuals on the boat's own valid Measurement Form, within guidelines set by the IECA.
   d) For a future deadline (Miami 2023?) all boats attending Sanctioned Events must have the new Measurement Form as their "passport". The extra point measurements are required.
   e) All boats attending major events are encouraged to get their boats re-measured well in advance.

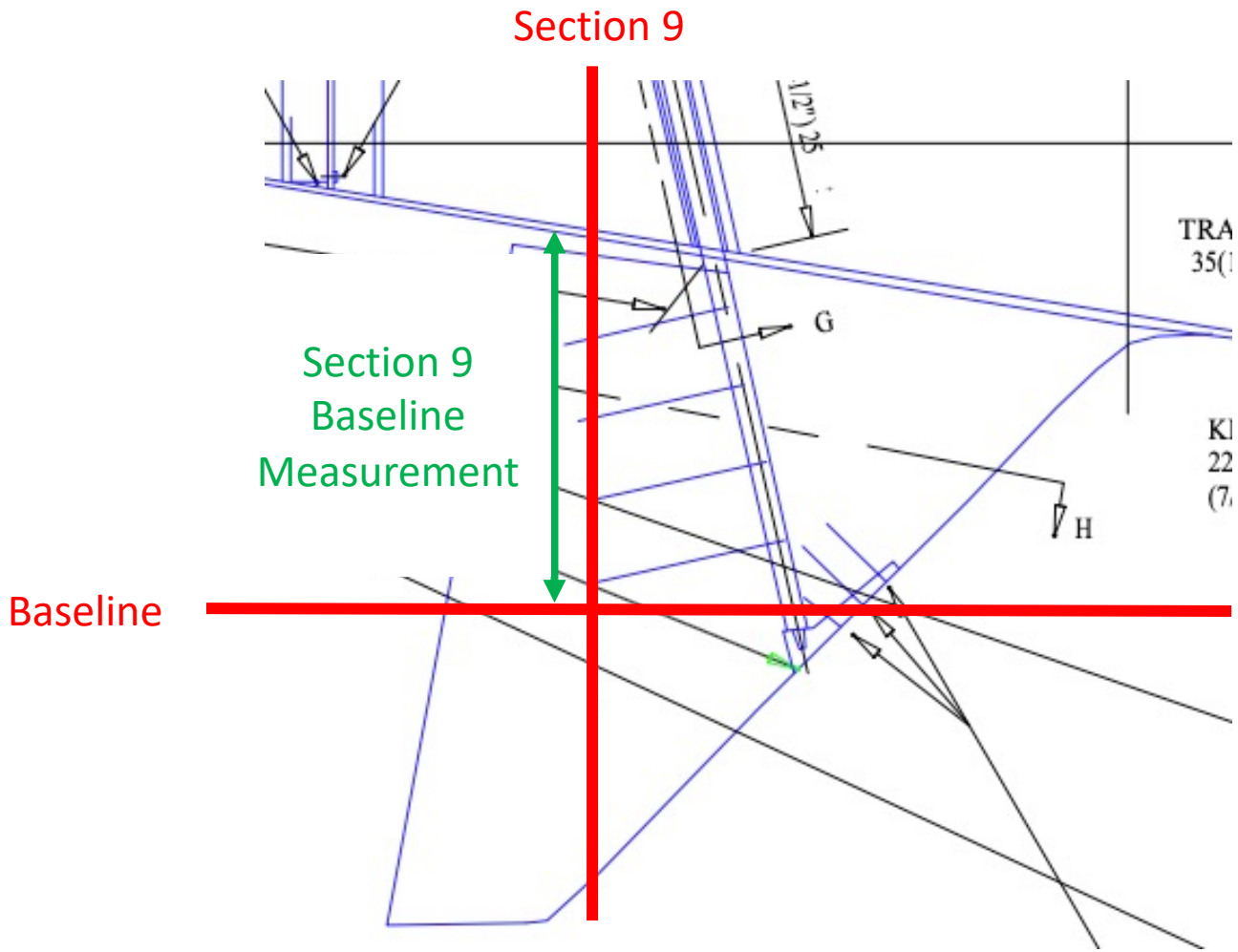


3. Deter Speed-Shopping

A. Modifications
    1. Reinforcing that no modifications are permitted to Hull or Hull Appendages, except to convert pre-1998 keels to modern rules
B. Clarification of Maintenance & Repair – ERS definitions
C. Section 9 baseline
D. Point measurements:
    1. Hull section templates
    2. Keel template
    3. Rudder
    4. Skeg

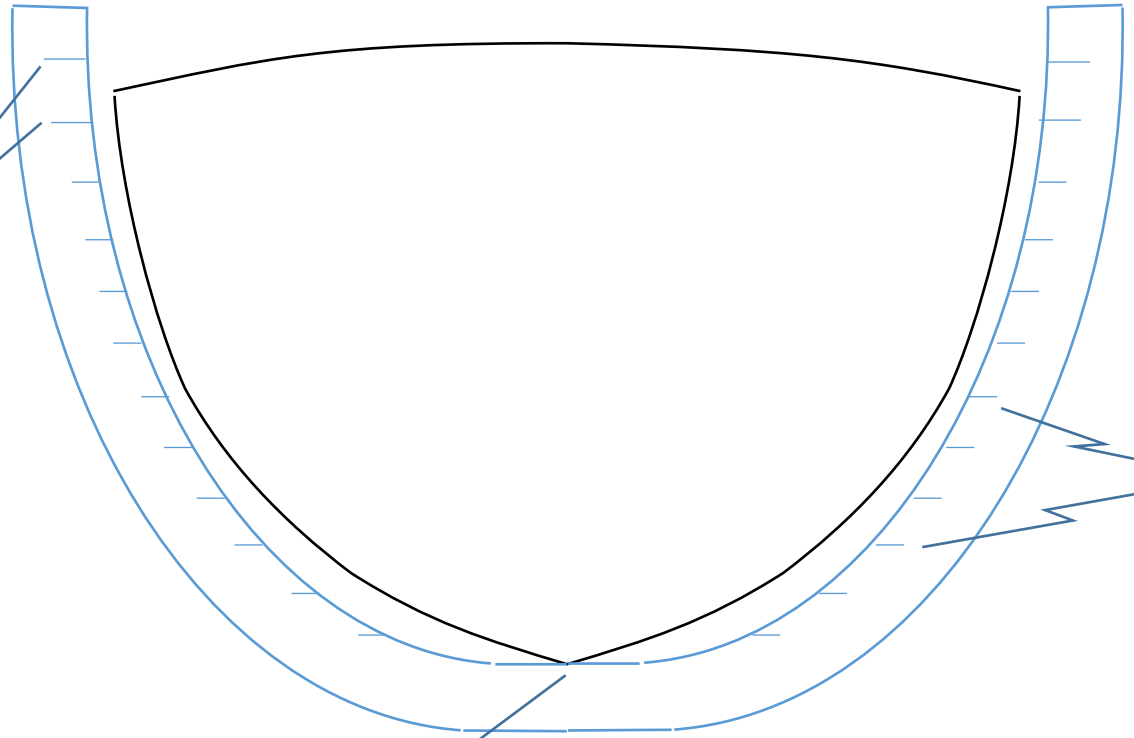
3.C – Section 9

Baseline measurement introduced to deter modification of hull to minimize rudder/hull gap



3.D – Point Measurements

Hull Section Templates



Sheerline limit marks

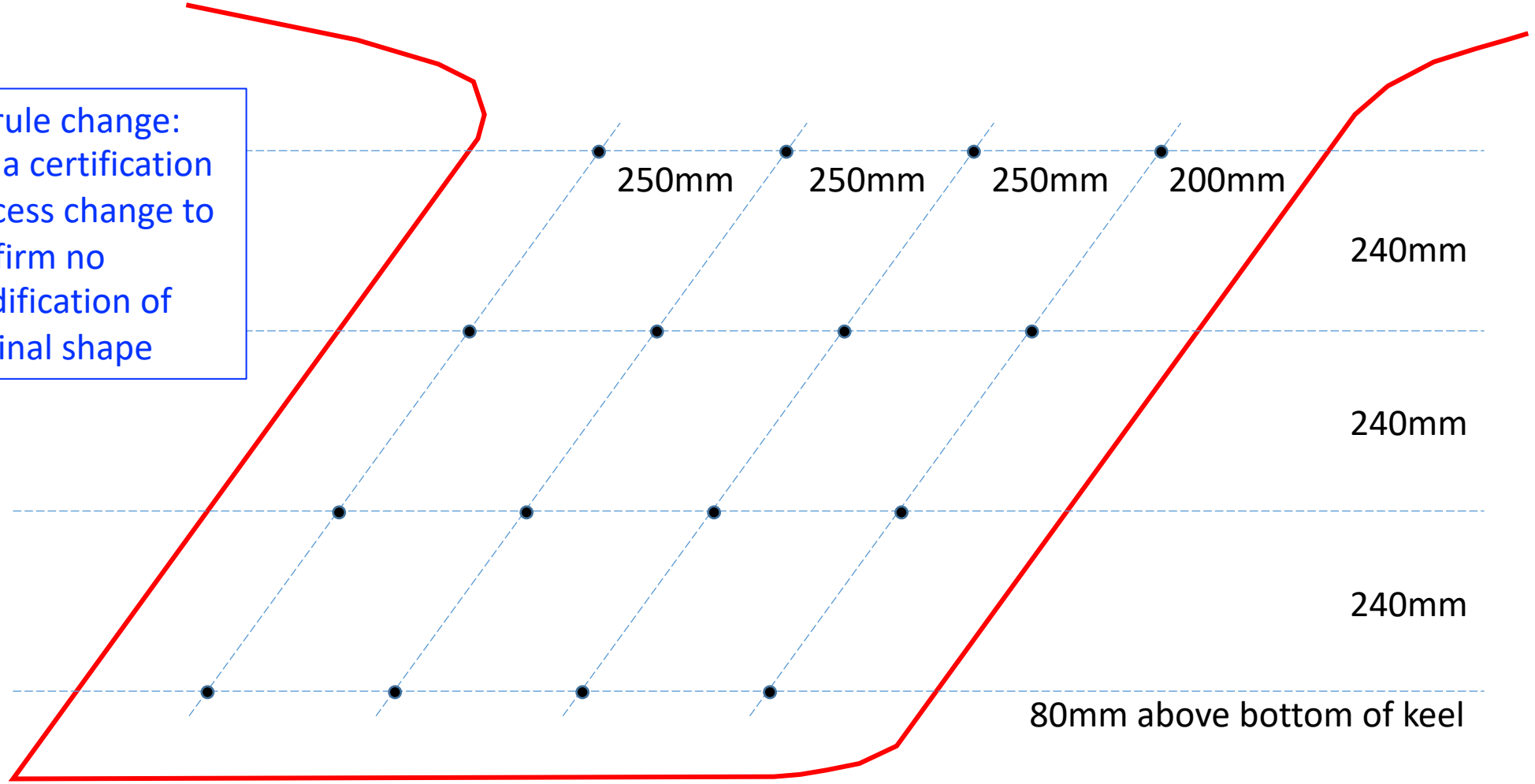
No rule change: just a certification process change to confirm no modification of original shape

Hull templates touch hull at its lowest point

Marks at 100mm increments from the centreline (except for Station 6, measured from the 75mm marks) to specify the points for measurement of gap between hull and template.

3.D – Point Measurements

No rule change: just a certification process change to confirm no modification of original shape



3.D – Point Measurements

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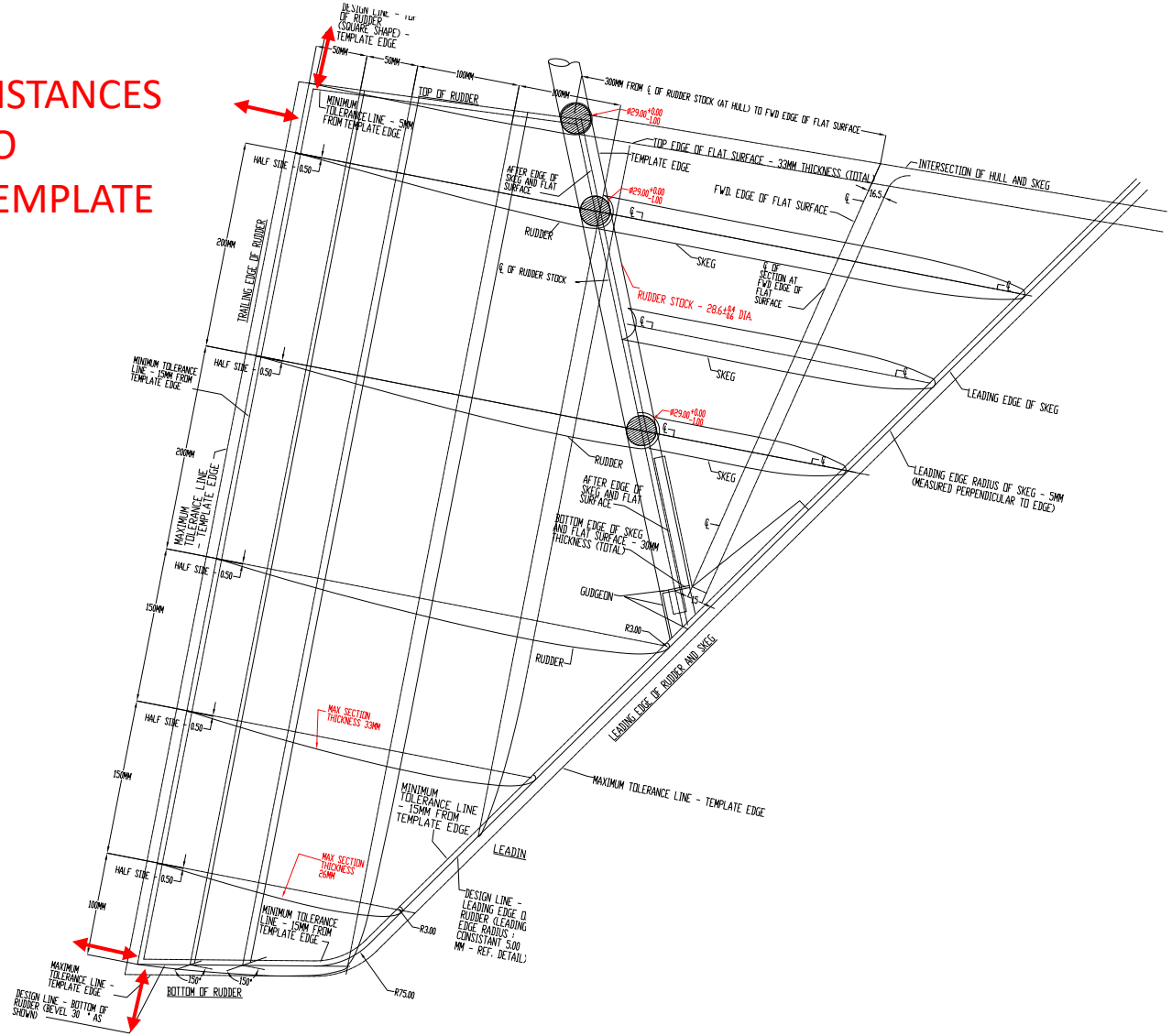
- No rule change: just a certification process change
- Rudder: Introduced to deter modification of moulded shape to either:
  - minimize rudder/hull gap, or
  - change the section thickness or airfoil section
- Skeg: Introduced to deter modification of moulded skeg shape (thickness, airfoil section)

DISTANCES TO TEMPLATE



4. Reverse or Curtail Rising Costs

- Reducing man hours in build process
  - Builds to match prototype
    - No custom build to zero tolerance
    - Tooling and build features become identical
  - Build skeg in mould on bench, then bond to hull
  - Bilge in-fill to be done in mould
    - Prevents hull distortion from curing, that requires fairing later
  - Prevent interruption of build process by developing a process for In-build inspections by video call

5. Protect Re-sale Values

- A key objective is to maintain the value of older boats and their competitiveness
- A new boat should only differ from an old boat because of age effects on stiffness and weight
- Tighter controls enhances the one design e.g.:
  - Shape of boats (Point measurements, event inspection against Passport)
  - Methods of construction (Building Specifications)
  - Weight distribution (strakes, bilge in-fill, in-build inspection)
- Event verification of measurement form data – Passport value
- Clarification of permissions concerning maintenance, refurbishment and replacement
  - Waterlogged decks
  - Floorboards
  - Deck fitting recesses
- Reinforced commitment to One-Design attracts new entrants to the class

6. Align IECA Rules with WS ERS & SCR

- Adoption of WS ERS & SCR definitions
  - Modification, Maintenance, Repair
  - Installation, Fastening, Bonding, Fairing, Sanding
  - Official measurer
  - Certification authority
- Adoption of SCR standard recommendations
  - Structure of rules, plans, building specs
  - Mobile telephone
  - Spare parts, rope, tools, tape

6. Align IECA Rules with WS ERS & SCR

- MODIFICATION
  - Work resulting in a change to the original condition.
- MAINTENANCE
  - Work required to retain the original condition, compensating for normal wear and tear in order to achieve its maximum useful life. This includes preventive maintenance and may include coating, sanding, lubricating and cleaning, but shall exclude fairing and bonding.
- REPAIR
  - Corrective action, following unintended damage, required to restore the original condition. This may include coating, sanding, fairing and bonding.
- SANDING
  - Removal of the outermost surface through use of an abrasive material with or without a lubricating agent, which does not alter the shape but may remove localised irregularities or textures in the surface. It may include polishing through the use of a cutting compound.
- FAIRING
  - The addition and/or removal of material to alter the shape.

Process For Enactment

- Divide into a list of Rule Change Proposals (in discussion with WS)
    1. Re-organization of documents, without any changes in effect on stakeholders (e.g. moving Section D dimensions to Plans & Building Specs)
    2. Administration items (e.g. requiring a Measurement Form)
    3. Typos & errors(e.g. clause duplication, mismatched Metric & Imperial figures)
    4. Changes due to alignment with ERS
        1. Wording – e.g. Modification
        2. Skeg moves from Hull into Hull Appendages
    5. "No-Brainers"
        1. Spares, tools, tape
        2. Mobile phone, safety equipment, non-slip tape
        3. Materials (e.g. carbon blocks & cleats, epoxy in repairs, titanium halyard lock, foam in floorboards)
    6. New/updated definitions to enhance One-Design & reduce costs
        1. Glass Hull weight
        2. Strake dimensions
        3. Corrector weights
    7. New/updated permissions/restrictions
        1. Spar Hole
        2. Spreaders & Brackets

TIMELINE

- 2 Nov 2021 — IGC Mandates 1DP as action track from Class Audit
- End Nov 2021 — Alistair Deaves & Guy Whitehouse hired as professional consultants to the project
- 11 Jan 2022 — Deliver first report to IGC – Underlying Principles, General Structure
- 1 Feb 2022 — Deliver working draft to IGC for review & decisions
- 7 Feb 2022 — Working draft of docs go on IECA website for consultation with global membership
- 16-18 Feb 2022 — Discussion Zooms
- 1 Mar 2022 — Deliver final copy to IGC for approval
- 24 Mar 2022 — Proposed Rule Changes posted on IECA Website. Eight weeks' notice of ballot.
- 19 May 2022 — IECA Member Ballot voting window opens
- 8 June 2022 — IECA Member Ballot voting window closes
- 15 June 2022 — Deadline to deliver class-approved changes to WS Equipment Rules Sub-Committee
- 31 Aug 2022 — New IECA Rules become effective
- 15 Sep 2022 — Etchells Worlds Registration opens, Cowes

- Consultation with WS Tech Dept (Jaime Navarro) & WS Equipment Rules Sub-Committee (Bill Abbott, Vice-Chair) throughout the process.