

AC TECHNICAL REGULATIONS

V2.07

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1 Introduction

- 1.1 This document, the **AC Technical Regulations**, defines rules that govern **yachts** sailed by **Competitors** in **AC38**. It also includes rules relating to shrouding, **Competitors'** chase boats, **surrogate yachts**, weather collection, model testing and reconnaissance.
- 1.2 The **AC Technical Regulations** shall be read and interpreted in conjunction with the **AC75 Class Rule** and **AC40 Class Rule**.
- 1.3 Rules that classify or provide interpretation within the **AC Technical Regulations**, for instance the "Language", "Reference frames and units" and "Definitions" sections, apply to all documents that comprise the **Class Rules** and **Specifications**, unless that rule specifies a different scope.
- 1.4 The **AC75 Class Rule**, the **AC40 Class Rule** and the **AC Technical Regulations** shall be in force from their first publication in non-draft form (without the word 'Draft' on the cover), and **Competitors** shall comply with them until the completion of the final race of **AC38**.
- 1.5 The **AC75 Class Rule**, the **AC40 Class Rule** and the **AC Technical Regulations** include:
 - (a) rules that govern an **AC75 Class Yacht** and an **AC40 Class Yacht**, including how they are constructed and how they are raced, which shall apply during measurement and when racing, unless stated otherwise; and
 - (b) rules that govern:
 - (i) procedures of measurement, declaration, interpretation, amendment;
 - (ii) limits on quantities, manufacture, modification and testing of components;
 - (iii) weather collection, shrouding, reconnaissance;
 - (iv) surrogate yachts, support vessels, sailing and testing limitations; and
 - (v) other matters that are not separately addressed in the **Protocol**;which shall apply at all times unless stated otherwise.

The applicable time-period over which a Rule is in force shall be indicated by the context, but if there is any doubt, shall apply at all times.

2 Language

- 2.1 The official language of the **Class Rules** is English.
- 2.2 Within the **Class Rules**, the word “Rule” is a reference to a rule of the **Class Rules**, and unless specified otherwise is a reference to a rule within the same document.
- 2.3 Within the **Class Rules**, the word “Section” refers to a top-level numbered division of a **Class Rules** document, which comprises all rules and figures whose identifiers begin with the same integer. For example, this rule is within Section 2, the “Language” section of the **AC Technical Regulations**.
- 2.4 Where words or phrases are printed in bold type their meaning is defined in Rule 21 of the **AC Technical Regulations**. Bold terms may be used in modified grammatical forms, in which case any modification to the term relates to a corresponding modification to the definition.
- 2.5 In some document viewers, the definition of terms in bold may be seen as a tooltip. Although these tooltips are intended to provide the correct and full definitions, they should not be relied upon; the text printed in Rule 21 of the **AC Technical Regulations** is the only authoritative source.
- 2.6 Where words or phrases are printed in italic type their meaning has a local definition that only applies within that section of the **Class Rules**.
- 2.7 The interpretation of words not defined in bold shall be made with reference to The Oxford English Dictionary, as it exists online at www.oed.com (or such later official website of the Oxford English Dictionary). In interpretation, the **Rules Committee** shall determine the most appropriate definition of a word within the Oxford English Dictionary, or if no appropriate definition is found, from another authoritative source.
- 2.8 The words “can” and “may” are permissive, but the permission is restricted when followed by the words “not”, “only” or similar. The words “will”, “must”, and “shall” are mandatory.
- 2.9 The word “or” is used as an “inclusive or”, meaning “one or more of the listed items”, except where it is clearly an “exclusive or” from the grammar or context, such as when:
- (a) it is preceded by the word “either”; or
 - (b) the options separated by the “or” are logically exclusive.
- 2.10 Where the word “significant” is used, it means “non-negligible”, or “sufficiently great or important to be consequential or influential”. As an exception, the phrase “significant figure” has its usual mathematical meaning.
- 2.11 The terms “fitting”, “hardware” and “component”, when not part of a defined term, are used interchangeably. Their meaning depends on context, and unless otherwise specified may refer to any physical part of the **yacht** including structural elements, fairings, mechanical systems, electrical systems, hydraulic systems, red boxes, or parts thereof, whether fixed or movable, and regardless of material or function, where:
- (a) “component” in some cases refers to a **controlled component** or **one-design** component; and
 - (b) “fitting” and “hardware” cannot refer to a **controlled component** or **one-design** component.
- 2.12 The phrase “for the avoidance of doubt” indicates that the subject that follows is already controlled by a more general Rule, but the specific Rule is included to remove any potential uncertainty in interpretation.

3 *Reference frames and units*

- 3.1 The Measurement Waterline Plane, **MWP**, is defined as the horizontal reference plane of the **yacht**.
- 3.2 The Longitudinal Centre Plane, **LCP**, is defined as a vertical reference plane, orthogonal to **MWP**.
- 3.3 The Transom Reference Plane, **TRP**, is defined as the vertical reference plane orthogonal to **MWP** and **LCP**.
- 3.4 The reference planes **MWP**, **LCP** and **TRP**:
- (a) are fixed to the **yacht**, translating and rotating as the **yacht** moves in space; and
 - (b) exist as defined in the relevant measurement conditions, but deform while the boat is sailing and should be interpreted as such.
- 3.5 The **platform** shall be measured in the **yacht**-fixed reference frame, where:
- (a) the origin is at the intersection of **TRP**, **LCP** and **MWP**;
 - (b) *x* is the **longitudinal** axis, positive forward;
 - (c) *y* is the **transverse** axis, positive to port;
 - (d) *z* is the vertical axis, positive up.
- 3.6 The **mast** and **mainsail** shall be measured in the **mast**-fixed reference frame, where:
- (a) the origin is at **MRP**;
 - (b) *u* is an axis perpendicular to the shear web of the **mast tube**, positive towards the front of the **yacht**;
 - (c) *v* is an axis perpendicular to *u* and *w*, positive towards port; and
 - (d) *w* is an axis parallel to the intersection of the shear web of the **mast tube** with the **mast centre plane**, positive up.
- 3.7 Terms such as “above”, “below”, “up”, “down”, “forward” and “aft” refer to:
- (a) where not specified otherwise, directions or relative positions aligned to the **yacht**-fixed reference frame *xyz*;
 - (b) where used in the context of measurement in the **mast**-fixed reference frame, directions or relative positions aligned to *uvw*, such that each term has the same meaning in both frames if *uvw* is aligned with *xyz*.
- 3.8 The following tolerances shall be applied to all dimensions specified in the **Class Rules**:
- (a) where a measurement is required to be a specific value:
 - (i) where decimal places for a unit are given, the measurement shall be accurate to the least significant figure indicated. For example, if a Rule states that a length must be 5.0 m, that length must be at least 4.95 m and less than 5.05 m;
 - (ii) where decimal places for a unit are not given, the measurement shall be accurate to within 1% of the figure indicated. For example, if a Rule states that a component must weigh 1000 kg, that component must weigh between 990 kg and 1010 kg inclusive; and
 - (b) where a measurement is required to be “at least”, “at most”, “no less than”, “no greater than”, “a minimum”, “a maximum”, “between”, “within a range”, or other similar wording, no tolerance beyond that limit or outside that range is permitted, but the permitted measurement is inclusive of the limit value. For example, if a Rule states that a length must be no more than 5 m, that length must be no more than 5.000000 m.
- 3.9 Pressures in the **Class Rules** refer to gauge pressures unless otherwise specified.

- 3.10 Dates and times in the **Class Rules** refer to the local time zone of Italy, being the IANA time zone 'Europe/Rome' (Central European Time (CET, UTC+1) or Central European Summer Time (CEST, UTC+2) according to the applicable calendar date).

4 Component limits

4.1 **Controlled components** are the key components of **AC75 Class Yachts**, restricted in quantity and degree of modification. Any component that serves or partly serves the purpose of a **controlled component** shall be counted, where a component **launched** on an **AC75 Class Yacht** or a **surrogate yacht** shall be treated as an **AC75 Class Yacht** component.

4.2 For an **AC75 Class Yacht**, the **controlled components** in the table below are restricted in quantity and degree of modification.

Controlled component	Legacy quantity	Legacy minimum retained portion	New quantity	New minimum retained portion	Total quantity
Hulls	1	100% area*	0	N/A	1
Foil arm stocks	4	See Rule 5.10	4	100% mass	4
Foil wings	3	See Rule 5.9	3†	80% mass	6
Foil flaps	3	See Rule 5.9	5‡	80% mass	8
Rudders	2	80% mass	1	80% mass	3
Mast tubes	2	80% mass	0	N/A	2
Mainsail skins	8	85% area	12	85% area	20
Jib skins	10	85% area	13	85% area	23

*See Rules 5.6 and 5.8. †See Rule 4.8. ‡See Rule 4.9.

4.3 The values in the column “**Legacy quantity**” of Rule 4.2 are the maximum number of **legacy controlled components** that a **Competitor** may **launch**.

4.4 The values in the column “**New quantity**” of Rule 4.2 are the maximum number of new **controlled components** that a **Competitor** may **launch**. A new component need not be newly built; it could be a modified or unmodified component that was previously declared in **AC36**, **AC37** or **AC38** if that component cannot be declared as a **legacy** component, or if a **Competitor** chooses not to declare it as a **legacy** component.

4.5 The values in the column “**Total quantity**” of Rule 4.2 are the maximum number of **controlled components**, whether new or **legacy**, that a **Competitor** may **launch**.

4.6 The quantity limits tabulated in Rule 4.2 apply per **Competitor**, not per **yacht**.

4.7 In order to allow recycling of older **hulls** that were built to a higher **platform** mass and with the requirement to support running backstays, winches, a bowsprit and a bobstay, a **legacy hull** that was first **launched** by a **Competitor** in **AC36** shall have a reduced **retained portion** of 87.5%.

4.8 All new **AC75 Class Yacht foil wings** declared by a **Competitor** shall have an identical **Version A** design. These **foil wings** shall share an identical **retained portion** geometry that complies with the minimum value defined in Rule 4.2.

4.9 All new **AC75 Class Yacht foil flaps** declared by a **Competitor** shall have a maximum of two distinct **Version A** designs. Each set of new **foil flaps** corresponding to one of those two **Version A** designs shall share an identical **retained portion** geometry, that complies with the minimum value defined in Rule 4.2.

4.10 An **AC75 Class Yacht’s foil arm stock** is supplied either with a separate leading edge, or with the leading edge already bonded to the structural spar of the **foil arm stock**. A supplied leading edge may be replaced by another supplied leading edge (either port or starboard) without affecting the percentage of retained **foil arm stock**, provided the leading edges and structural spars are weighed, ballasted, and tracked accordingly either by the manufacturer, or subsequently by the **Measurement Committee**.

- 4.11 A component shall be counted in the applicable limits regardless of whether that component satisfies the specific Rules controlling its parameters in the **Class Rules**. In the event that a test component cannot readily be identified as a specific **controlled component** type, a classification of type and quantity shall be determined by the **Rules Committee** by following the interpretation process detailed in Rule 13.1, where:
- (a) components shall be classified according to resemblance in form or function to **AC75 Class Yacht controlled components**, whatever their scale;
 - (b) test components shall be counted even if they only resemble one aspect of an **AC75 Class Yacht controlled component**, without matching the overall functionality. For example, a tow-post mounted on or close to the **MRP** used to apply simulated aerodynamic loads to the **platform** should be classified as a **mast tube** because it partially serves the function of a **mast tube**; and
 - (c) in an extreme case, a single test component may be ruled as comprising multiple declared components if it is effectively serving the purpose of multiple components, depending on its method of installation in a **yacht**. For example, a double-ended **rudder** that could be installed either way up, with only one half of the component tested at a time, could be ruled as two declared **rudders**. However, a conventional **rudder** that could be installed at different extensions, or an asymmetric **foil wing** with different design concepts on either side of its connection to a **foil arm** shall be treated as a single component.
- 4.12 The ID for a new **AC75 Class Yacht controlled component** shall be distinct from any ID of the same **AC75 Class Yacht controlled component** type **launched** by the same **Competitor** in **AC36** or **AC37**, such that any component from **AC36**, **AC37** or **AC38** can be uniquely identified by the combination of the **Competitor** that launched it and the component's ID.
- 4.13 A new **AC75 Class Yacht hull** ID or *hull number* shall be allocated by the **Measurement Committee** when it is **launched**. **Competitors** shall inform the **Measurement Committee** when this occurs, and *hull numbers* will be allocated sequentially, continuing the sequence from **hulls** that were launched in **AC36** and **AC37**, except that culturally objectionable numbers may be skipped at the discretion of the **Measurement Committee**.

5 *Legacy components*

- 5.1 Subject to the quantity limits in Rule 4.2, a **Competitor** may **launch** a **controlled component** previously declared in **AC36** or **AC37** as a **legacy controlled component**. The **Competitor launching** the **controlled component** in **AC38** need not be the same **Competitor** that previously **launched** it.
- 5.2 A **legacy controlled component** must have a **Version A** for **AC38** that exactly matches a configuration in which that component was declared to the **Measurement Committee** during **AC36** or **AC37**, where:
- (a) such configuration need not be the configuration in which that component was first **launched** during **AC36** or **AC37**, nor the final configuration of that component in **AC36** or **AC37**; and
 - (b) such configuration need not have been **launched** during **AC36** or **AC37** provided it was declared to the **Measurement Committee** according to the component declaration procedures of **AC36** or **AC37**.
- 5.3 To the extent required by Rule 7.6, the **material substance** of the **retained portion** of the **legacy** component cannot have been modified since the component was most recently declared in **AC36** or **AC37**.
- 5.4 A **Competitor launching** a **legacy** component in **AC38** must provide an affidavit to the **Measurement Committee** that the declared configuration matches a declared **AC36** or **AC37** configuration, where the affidavit must:
- (a) include the date that the specific configuration was declared during **AC36** or **AC37**, and the relevant documentation such as IGES files or drawings supplied to the **AC36** or **AC37** **Measurement Committee** at that time;
 - (b) include a statement that the **legacy** component complies with Rule 5.3; and
 - (c) if the component has transferred ownership, the affidavit must be supported by the **AC36** or **AC37** **Competitor** that originally declared the component.
- 5.5 A **legacy controlled component** that is declared in **AC38** shall have a **Version A blueprint** that:
- (a) exactly matches a **blueprint** previously declared, with respect to information required by both the original and current **blueprint** specifications; and
 - (b) is augmented with any additional information required in the **blueprint** specifications for a new **controlled component**.
- 5.6 The following modifications shall not constitute a change that contributes to the change percentage permitted for a legacy **hull**, but shall require a new **hull** version to be declared if there is any change to the **hull surface**:
- (a) modifications to the **hull surface** and **hull** that, in **planform**, would lie entirely within the “crew zone” **planforms** declared in **AC37**, if those **planforms** were extended by 200 mm on all sides. Such modifications are permitted only if, when any apertures created by:
 - (i) **cockpit apertures**, when **projected** on to fair extensions of the **hull upper surface**; and
 - (ii) drainage conduits,are closed by fair extensions of the **hull surface**, the original and modified **hull surfaces** form identical external closed volumes, excluding any internal surfaces;
 - (b) modification of up to 4 m² of **hull**, with no change to the corresponding **hull surface**; and
 - (c) modification up to 4 m² of **hull upper surface**, with a corresponding change to the **hull upper**, where the **hull upper surface** is offset, normal to its local surface, by no more than 20 mm to allow rebates for sliding covers or similar.

- 5.7 For **legacy hulls** first launched in **AC36**, eight "crew zones" may be retrospectively declared to the **Measurement Committee** and applied in Rule 5.6 (a) as though they were declared in **AC37**, provided:
- (a) no previous declaration of "crew zones" has been made for that **hull**;
 - (b) the declaration shows the retrospective "crew zones" overlaying a **hull blueprint** that was declared in **AC36** or **AC37**; and
 - (c) the retrospective "crew zones" have rectangular **planforms** of the following sizes:
 - (i) four "crew zones" of 800 mm by 600 mm; and
 - (ii) four "crew zones" of 1100 mm by 600 mm,which correspond to the cockpits in which the crew operated when the **hull** was last launched prior to **AC38**.
- 5.8 To enable compliance with the **Protocol's** constructed-in-country requirement, the bow region of a **legacy hull** may be replaced with a new region of **hull**, following the same procedure that is permitted by Rule 8.2 for repairs. The replacement bow region shall:
- (a) include all of the **hull** forward of a plane 18.0 m forward of **TRP**; and
 - (b) not extend aft of a plane 15.0m forward of **TRP**.
- 5.9 Each **legacy foil wing** and **legacy foil flap**:
- (a) must have a **retained portion** of at least 60% of the mass of its declared **AC37** configuration, and
 - (b) must have a **retained portion** which includes 99.5% of the **high strength metals** in its declared **Version A**, measured as a mass percentage.
- 5.10 The **AC38 Version A** of a **legacy foil arm stock** shall match the **AC37 foil arm stock** specification. The only modifications that may be made to a **legacy foil arm stock** are to:
- (a) update it to match the **AC38 foil arm stock** specification detailed in the "Foil arms" section of the **AC75 Class Rule**; or
 - (b) to return it to match the **AC37 foil arm stock** specification.
- 5.11 Once declared in **AC38** in accordance with Rule 7.3, a **legacy controlled component** is treated in the same way as a new **AC38** component in terms of change and repair allowances, subject to the "**Legacy minimum retained portion**" tabulated in Rule 4.2.

6 Legacy replicas

6.1 Subject to conditions detailed herein, **Competitors** are permitted to declare a **legacy replica** as a **legacy controlled component**, provided it matches a **legacy controlled component** (the *originalLCC*) as follows:

- (a) a **legacy replica** must have a **Version A blueprint** that
 - (i) exactly matches a **blueprint** corresponding to the *originalLCC*, with respect to information required by both the original and current **blueprint** specifications; and
 - (ii) is augmented with any additional information required in the **blueprint** specifications for a new **controlled component**;
- (b) to the extent required by Rule 7.6, the **legacy replica** must be built to the same design as the *originalLCC*, including construction geometry, laminate and material specifications; and
- (c) the **Competitor** declaring a **legacy replica** need not be the same **Competitor** that declared the *originalLCC*; for example, the design of the **legacy replica** could be purchased from another **Competitor**, subject to any other rules and regulations relating to the sale of such a design.

6.2 **Veteran Competitors** may only declare a **legacy replica** component if they are unable to use a corresponding **legacy controlled component** because:

- (a) it is no longer owned by the **Competitor**, and any such sale or disposal was not made with the primary purpose of satisfying this clause; or
- (b) it has been sold to another **Competitor** of **AC38**;
- (c) it has been accidentally damaged beyond reasonable repair; or
- (d) the **veteran Competitor** declared fewer than the **AC38** maximum permitted quantity of corresponding **legacy controlled components** in **AC36** and **AC37**, in which case, the **legacy replica** must be built to the design of a **controlled component** that they have previously declared.

Prior to construction of a **legacy replica** component, a **Competitor** must satisfy the **Measurement Committee** that the relevant condition has been met.

6.3 For a given **Competitor**, **legacy replica foil wings**, **foil flaps**, **rudders** and **mast tubes** shall share a common **Version A** across each component type.

6.4 For **new Competitors**, the maximum quantity of **legacy replica sail skins** shall be:

- (a) 4 **mainsail skins**; and
- (b) 5 **jib skins**.

6.5 Notwithstanding Rule 6.2, **veteran Competitors** are not permitted to build **legacy replica sail skins**.

6.6 A **legacy replica sail skin** shall have an identical blank design to its corresponding **legacy sail skin** version.

6.7 A **new Competitor** launching a **legacy replica sail skin** must:

- (a) own the *paired hull* for those **sail skins**; and
- (b) only ever hoist that **sail skins** on that *paired hull*,

where the *paired hull* is the **hull** on which the corresponding **legacy sail skin** version was first hoisted, or a **legacy replica** of that **hull**.

7 *Component versions*

7.1 **Competitors** must track **controlled components** and versions of those components in a spreadsheet with the following columns:

- (a) ID: a number indicating the identity of a physical component;
- (b) Version: a letter (or letters) indicating the version letter of the component;
- (c) SHA: the **SHA** of the component's **blueprint**;
- (d) Mass: the mass of the component, for components whose change percentage is controlled by mass;
- (e) Area: the controlled surface area of the component, for components whose change percentage is controlled by area;
- (f) Comment: text briefly describing the component or type of modification.

Each row shall represent a version of a specific component. The rows shall be grouped by the component ID, where the first row for each component must be the declared **Version A** of that component.

7.2 **Version A** of a **controlled component** may be the configuration in which the component was **launched**, or some other hypothetical configuration, but must comply with the relevant rules for that component type.

7.3 Except when restoring a **controlled component** to a previously declared version, a new version of a component must be declared:

- (a) for components whose change percentage is controlled by mass, whenever any change other than surface finishing is made to that component, even if there are no changes to its **blueprint**; and
- (b) for components whose change percentage is controlled by area, whenever that component changes with respect to its **blueprint**.

7.4 **Competitors** may declare **controlled components** and their versions by emailing an updated copy of the Rule 7.1 spreadsheet to the **Measurement Committee**. If a component or version of a component has not previously been declared, it must be declared within 48 hours of the component being **launched**.

7.5 For **controlled components** whose change percentage is controlled by mass, the declared mass may be based on:

- (a) the weight of sub-components and records of modifications made over time; or
- (b) in the case of a hypothetical configuration, a mass calculated from CAD models.

However, the **Measurement Committee** may require a component to be weighed at any time.

7.6 The **material substance** of the portion of the **controlled component** indicated in Rule 4.2 must exist in every declared version of the component, whereby:

- (a) at least the indicated percentage of the mass or surface area of every version of the component shall be a **retained portion**; and
- (b) if **Version A** does not represent a physical version of a component, the **retained portion** of the component must be referenced to material that would be present if the component was modified to **Version A**.

- 7.7 As exceptions to Rule 7.6:
- (a) **material substance** may be replaced where permitted by Rule 8; and
 - (b) material within a **hull** qualifies as unmodified **material substance** within a **retained portion**, if:
 - (i) it has been modified locally to open, close or change penetrations permitted by the “Hull geometry” section of the **AC75 Class Rule**; or
 - (ii) only the surface finish has been modified, and any such changes fall within the permitted build tolerance of the **hull** with respect to the **hull surface**.
- 7.8 Legacy **mast tubes** shall be modified from their **AC38 Version A** of the component in accordance with the legacy **mast** modification drawings provided in the **mast** specification referenced in the **AC75 Class Rule**. Such modifications shall not constitute a change that contributes to the change percentage permitted for that legacy **mast tube**. However, any modifications not detailed in the **mast** specification shall contribute to the change percentage.
- 7.9 For **hulls, foil wings, foil flaps, rudders** and **mast tubes**:
- (a) the **retained portion** of the component may comprise several disjoint regions divided by modified material, but those separate regions must remain in an identical position and orientation with respect to each other through the life of the component;
 - (b) the **blueprint** of all versions of the component except **Version A** must include a surface entity or entities that enclose (for mass) or overlay (for surface area) regions that satisfy Rule 7.6 (a); and
 - (c) all **blueprints** for a component must be aligned with respect to these surface entities such that they overlay exactly across all versions.
- 7.10 For **sail skins**:
- (a) the **retained portion** of the component may comprise several disjoint regions divided by modified material, and these regions are not required to be in the same position or orientation with respect to each other through the life of the component; and
 - (b) addition or removal of branding or stickers shall not count as modified area provided the structure of the **sail skin** is not significantly altered.

8 *Controlled component repairs and replacements*

- 8.1 Rules in this section give permission for repairs that qualify as unmodified **material substance** within a **retained portion**, and do not need to be declared as new **controlled component** versions.
- 8.2 It is permitted to repair or replace a **hull, foil arm stock, foil wing, foil flap, rudder** or **mast tube** to restore it to an **AC38** declared configuration, where:
- (a) except where modification is permitted, the external surface geometry shall be within the permitted tolerances of the declared component;
 - (b) the **material substance** need not be the same material as in the declared component, but any material substitution:
 - (i) shall not result in any significant change to the component's stiffness or behaviour under load; and
 - (ii) shall not result in a reduction in mass, but may result in an increase in mass;
 - (c) examples of permitted material substitutions are:
 - (i) dry **fibre** may be substituted for an equivalent pre-preg **fibre**;
 - (ii) the resin system may be changed;
 - (iii) two plies of 150 g/m² may be substituted for one ply of 300 g/m²; or
 - (iv) heavier **fibre** weights may be used where the original **fibre** weight is not practically available;
 - (v) pre-cured flat monolithic plate may be used in place of in-situ laminated fibre;
 - (d) in the case of a repair requiring replacement of more than 1 kg of material, a **Competitor** must inform the **Measurement Committee** when commencing the repair or replacement, and must provide the **Measurement Committee** with documentation they require; and
 - (e) a **Competitor** alone shall decide whether to repair or replace a component, and no evidence of damage is required.
- 8.3 It is permitted to repair a **sail skin** to restore it to an **AC38** declared configuration, by:
- (a) the addition of material over damaged regions or to add local reinforcement, provided the original **sail skin** remains; and
 - (b) the replacement of components such as edge tapes, chafe patches, batten pockets, batten end patches, webbings and associated block patching for maintenance,
- provided the modifications are no larger than required to address the areas that require repair, reinforcement or maintenance, and do not modify the global behaviour of the **sail skin**.

8.4 Repair or replacement of material within a **controlled component's retained portion** shall only be built or prepared once that component has been taken out of service. This does not apply to the construction of:

- (a) flat monolithic plate which has a uniform construction across the plate;
- (b) flat sandwich panel which has a uniform construction across the panel;
- (c) round tubes of uniform construction and cross-sectional shape;
- (d) fabrics and generic sail laminate products;
- (e) existing **sail skin** material that was not constructed for the purpose of repair or replacement;
- (f) **commercial products**; or
- (g) commercially available products such as screws or bolts, if approved by the **Measurement Committee**,

but does apply to any incorporation of those components within a repair. Once a component has been taken out of service for such a repair, it shall not be re-installed on a **yacht** afloat until that repair is complete.

9 AC40 permitted modifications

- 9.1 The following modifications to an **AC40 Class Yacht** are permitted for testing and development purposes, where:
- (a) the modifications detailed in this section are prohibited when racing; and
 - (b) any changes to an **AC40 Class Yacht** or any of her components not expressly permitted in this section, or in the **AC40 Class Rule**, shall result in the **yacht** becoming a **surrogate yacht**.
- 9.2 The **hull upper** of an **AC40 Class Yacht** may be modified:
- (a) within the shaded areas indicated in Figure 9.1; and
 - (b) locally, to attach fittings and sensors,
- provided that the tracks, cars and hydraulic cylinders of the **yacht's** sheeting systems are not altered.
- 9.3 The **mast** of an **AC40 Class Yacht** may be modified locally, to attach fittings and sensors, provided that the systems for controlling the sails are not altered.
- 9.4 It is permitted to add to, remove or modify:
- (a) fittings within the shaded areas indicated in Figure 9.1, such as seats, windscreens, headrests and mounts for displays;
 - (b) hydraulic components except hydraulic cylinders;
 - (c) the electrical systems, including instrumentation, PLC control, sensors and mounts;
 - (d) crew input devices; and
 - (e) the steering system
- of an **AC40 Class Yacht**.

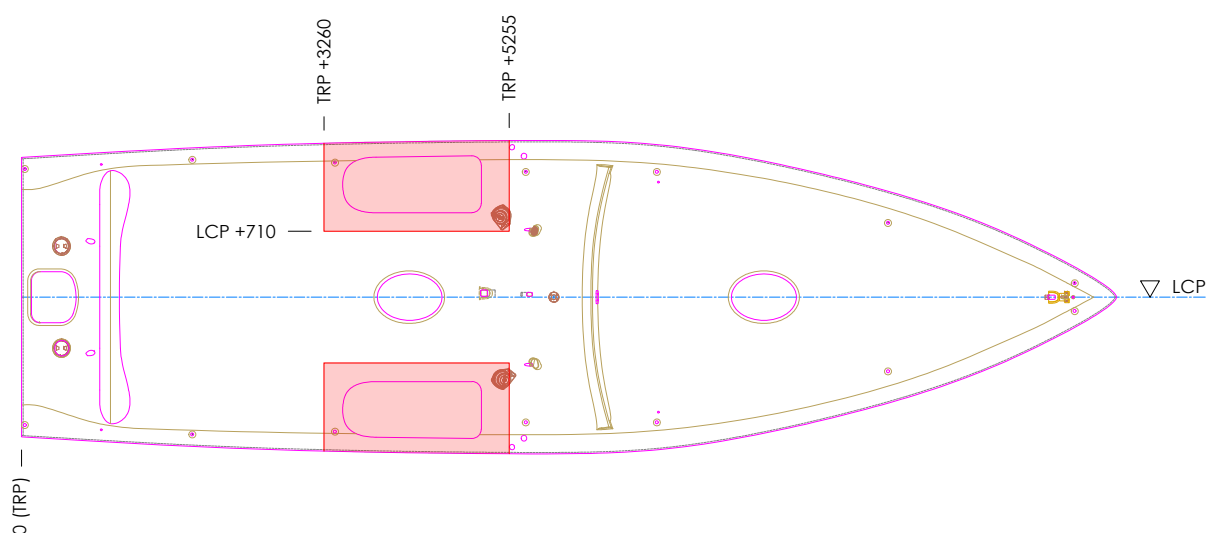


Figure 9.1: Cockpit modification areas

10 Temporary repairs

- 10.1 If a **yacht** is unintentionally damaged, and a repair or replacement that would restore the **yacht** to a compliant condition in time for her next race is not possible, the **yacht** may be temporarily repaired and granted an exemption to the specific **Class Rules** or parts of her measurement certificate that she cannot comply with, provided:
- (a) any repair or replacement is no more extensive than required;
 - (b) any damage or subsequent temporary repair could not positively impact the performance of the **yacht**;
 - (c) the **yacht** is restored to a compliant condition as soon as possible.
- 10.2 If a **controlled component** other than a **sail skin**:
- (a) is unintentionally damaged;
 - (b) cannot be repaired in accordance with Rules 8.2 and 8.4 in time for the **yacht's** next race; and
 - (c) a repair under Rule 10.1 is possible;
 - (d) but, a substitution component is available on the **Competitor's** substitution schedule;
- the **Competitor** shall be obliged to repair the **controlled component** under Rule 10.1, rather than use a substituted component, provided that any performance degradation that would result from the repair is minimal. Only if such a repair is not possible, or if the repaired component would be significantly compromised, will a substitution be permitted.
- 10.3 Verification that the relevant conditions of Rules 10.1 and 10.2 have been met, and the grant of exemption, shall be made by:
- (a) the **Measurement Committee** in consultation with the **Regatta Director**, for any races that are scheduled on the same sailing day in which the damage occurred; and
 - (b) the **Jury**, in consultation with the **Measurement Committee**, for any races on subsequent sailing days. In this case:
 - (i) prior to making their decision, the **Jury** may decide to provide details of the damage, repair and substitution options to other **Competitors** affected by their decision so that those **Competitors** have an opportunity to provide relevant technical feedback; and
 - (ii) the **Jury** may impose a date by which the **yacht** must be restored to a Rule-compliant condition.

11 Measurement

- 11.1 A **yacht** must have a valid measurement certificate issued by the **Measurement Committee** in order to race in any **AC38 event**, unless granted an exemption under Rule 10.3.
- 11.2 The **Measurement Committee** may place measurement marks or seals on **yacht** components during construction or upon their completion. These marks or seals may include, but are not limited to, reference screws, punch marks, measurers' signatures, cable ties and stickers, on components or component tooling. **Competitors** shall permit inspections, allow such marks to be placed, and shall not move, remove or alter any such marks or seals without the express consent of the **Measurement Committee**.
- 11.3 **Competitors** shall permit the **Measurement Committee** to:
- (a) interview team members; and
 - (b) require team members to complete affidavits,
- relating to questions from the **Measurement Committee** on design, construction or use of components on the **yacht**.
- 11.4 All declarations made by a **Competitor** to any **Regatta Official** must be truthful and accurate. The **Jury** may impose penalties upon any **Competitor** that makes a false declaration, which shall be more severe if the false declaration is believed to be intentional.
- 11.5 Except where specified, it is not the responsibility of a **Competitor** to provide categorical proof of compliance with the **Class Rules**. Where proof by inspection or measurement is impractical, the **Measurement Committee** shall rely on interviews, affidavits and reference documentation. However, it always remains the responsibility of a **Competitor** to ensure that their **yacht** complies with the **Class Rules**, including in areas that cannot be easily measured.
- 11.6 Leading up to **events**, the **Measurement Committee** will publish dates of measurement periods, during which **Competitors** may present their **yachts** for measurement. The **Measurement Committee** will inspect the **yachts** for compliance with the **Class Rules**, and **Competitors** shall provide whatever assistance is reasonably requested by the **Measurement Committee** to facilitate this process.
- 11.7 The **Measurement Committee** shall use its own equipment for measuring a **Competitor's yacht**, except that a **Competitor's** equipment may be used at the discretion of the **Measurement Committee** if it is calibrated against the **Measurement Committee's** equipment and sealed to their satisfaction.
- 11.8 When weighing components of a **yacht**, **Competitors** shall be permitted to dry any water on the surface of those components and replace wet **rigging** with equivalent dry **rigging**. The **Measurement Committee** shall make reasonable allowances for wet sail weights.
- 11.9 Where specific tolerances for component measurement are not given in the **Class Rules**, the **Measurement Committee** may make an allowance for unintended distortion of a component during manufacture when checking the shape of such a component against its **blueprint**.
- 11.10 The **Measurement Committee** shall, at times they choose during **AC38**, make spot checks of compliance with component declarations by requiring a **Competitor** to declare to them what component versions they sailed with on any sailing day. The **Measurement Committee** may also request, and **Competitors** shall supply, **blueprints** corresponding to those component versions and declared **SHAs**.
- 11.11 Except as otherwise specified, **Competitors** are not required to routinely supply construction drawings of declared components. However, if the **Measurement Committee** have any doubt as to the compliance of a component they may request such drawings, which shall then be supplied by the **Competitor**.
- 11.12 **Competitors** shall inform the **Measurement Committee** immediately if they make any changes or repairs to the **yacht** that could affect her measurement certificate or her compliance with the **Class Rules**.
- 11.13 The **Measurement Committee** reserve the right to re-measure or inspect any aspect of a **yacht** at any time, before or after sailing, and may publish procedures for regular measurement inspections.

11.14 When a measurement period is open:

- (a) if the **Measurement Committee** believes there is ambiguity as to whether an element of a **Competitor's yacht** satisfies the **Class Rules**, they shall seek the advice of the **Rules Committee**. If the ambiguity remains, the **Rules Committee** shall rule confidentially on the compliance or otherwise of the **yacht**, based on the information presented to them by the **Measurement Committee**, after which a measurement certificate may be issued or withheld;
- (b) if the **Rules Committee** becomes aware of an element of a **Competitor's yacht** that may not satisfy the **Class Rules**, they shall ask the **Measurement Committee** to inspect the element and report to them. The **Rules Committee** shall then rule confidentially on the compliance or otherwise of the **yacht**, after which a measurement certificate may be withdrawn or withheld;
- (c) decisions on the compliance of a **yacht** made by the **Measurement Committee** and/or the **Rules Committee** may subsequently be changed by the **Measurement Committee** or the **Rules Committee** if new information comes to light, or if they believe the original decision was made in error. Only an interpretation or an amendment to the Rule providing clarification shall provide a **Competitor** with a guarantee of continuing compliance of an ambiguous design element; and
- (d) if a measurement certificate is withheld from a **Competitor**, the **Measurement Committee** shall explain in full the reasons why the **yacht** does not comply with the **Class Rules**, including the detail of decisions made or advice given by the **Rules Committee**.

11.15 During training or racing, **Competitors** shall permit the **Measurement Committee** to install small video cameras onboard their **yachts** to assist the **Measurement Committee** in determining compliance, where:

- (a) the mass of these cameras shall not be included in the measurement mass of the **yacht**;
- (b) the **Measurement Committee** shall where possible locate the cameras in locations that minimise any increase in aerodynamic drag, provided they are still able to capture the details required; and
- (c) **Competitors** shall not adjust nor deliberately obstruct the view from these cameras.

11.16 Until the **Measurement Committee** has been appointed, any notification required to be given to them shall be emailed to measurers@americascup.com. Email sent to this address shall be held in confidence and made available to the **Measurement Committee** once they have been appointed.

12 *Class Rule infringements during an event*

- 12.1 If a **yacht** was unintentionally damaged whilst racing to the extent that she was no longer compliant with the **Class Rules**, or no longer matched the configuration specified in her measurement certificate, the **Measurement Committee** shall notify the **Regatta Director** with details of:

- (a) the non-compliance;
- (b) any races the **yacht** raced in whilst non-compliant; and
- (c) the potential performance implications of the non-compliance.

If the **Regatta Director** in consultation with the **Measurement Committee** determine that the non-compliance was unlikely to have increased the performance of the **yacht**, no penalty shall be applied relating to races already sailed; otherwise, the **Regatta Director** shall inform the **Jury** who in consultation with the **Regatta Director** may impose a penalty at their discretion.

- 12.2 After a measurement certificate has been issued for an **event** or **AC75 event stage**, if the **Measurement Committee**:

- (a) determines that it has issued a measurement certificate in error, and that a **yacht** is non-compliant with the **Class Rules**;
- (b) determines that a new interpretation issued by the **Rules Committee** renders a **yacht** non-compliant with the **Class Rules**;
- (c) determines that a **yacht** is non-compliant with the **Class Rules** as a result of a query of compliance by a **Competitor** detailed by Rule 12.9; or
- (d) is informed by the **Rules Committee** that a **yacht** is non-compliant with the **Class Rules** following the process described by Rule 11.14 (b);

they shall notify the **Regatta Director**, notify all **Competitors** and follow the process detailed in Rule 12.3. No penalty shall be applied relating to races sailed when non-compliant unless a condition within Rule 12.4 is also found to apply.

- 12.3 If a **Competitor's yacht** is found to be non-compliant with the **Class Rules** according to Rule 12.2, a determination of the **Competitor's** ability to rectify the non-compliance in time for the next race shall be made by the **Regatta Director** in consultation with the **Measurement Committee**, and:

- (a) if they find that the **Competitor** is able to rectify the non-compliance, and the **yacht** can be re-inspected before the next race, the **Measurement Committee** shall withdraw the **yacht's** measurement certificate immediately;
- (b) otherwise, the **Regatta Director** may grant a grace period which shall end no later than:
 - (i) the end of the following day, if the **yacht** has a race on the following day that is scheduled to start within 24 hours of the current time; otherwise
 - (ii) the end of the current day;

the current time being the time at which the **Measurement Committee** notifies the **Regatta Director** and all **Competitors** of the non-compliance. The **Measurement Committee** shall withdraw the **yacht's** measurement certificate at the expiry of any grace period.

- 12.4 After a measurement certificate has been issued for an **event** or **AC75 event stage**, if the **Measurement Committee** determines that:
- (a) a **yacht** has been modified without the approval of the **Measurement Committee** and:
 - (i) may no longer be compliant with the **Class Rules**; or
 - (ii) no longer matches the configuration specified in her measurement certificate; or
 - (b) a **Competitor** has made a false declaration;
- they shall withdraw the **yacht's** measurement certificate and follow the process detailed in Rule 12.6.
- 12.5 If the **Measurement Committee** determines that a **yacht** has raced in a manner that is non-compliant with the **Class Rules** they shall follow the process detailed in Rule 12.6.
- 12.6 If a **yacht** has raced in a non-compliant configuration or manner described by Rules 12.4 and Rule 12.5, the **Measurement Committee** shall notify the **Jury**, the **Regatta Director** and all **Competitors** with details of:
- (a) the non-compliance;
 - (b) any races the **yacht** may have raced in whilst non-compliant; and
 - (c) the **Measurement Committee's** assessment of any potential performance implications of the non-compliance.
- 12.7 On receiving notification from the **Measurement Committee** according to Rule 12.6, the **Regatta Director** shall review the non-compliance, requesting further investigation if necessary. As a result, if the **Regatta Director** determines that the non-compliance is:
- (a) unintentional, and unlikely to have impacted the outcome of a race, the **Jury**, in consultation with the **Regatta Director** may impose a fine on the **Competitor**;
 - (b) intentional, or could have impacted the outcome of a race, the **Jury**, in consultation with the **Regatta Director** may disqualify the **yacht** from:
 - (i) the last race in which the **yacht** competed if the **yacht** competed in only one race while non-compliant; or
 - (ii) the last two races in which the **yacht** competed whilst non-compliant.
- 12.8 A **Competitor** whose measurement certificate has been withdrawn must rectify the non-compliance, present their **yacht** for re-measurement and receive a new measurement certificate prior to being eligible for any further racing in the current **event** or **AC75 event stage**.
- 12.9 During an **event**, a **Competitor** may query the compliance of another **Competitor's yacht** by sending an email either directly to the **Measurement Committee**, or by copying the **Measurement Committee** into an email addressed to that **Competitor**. The query must include details of the potential areas of non-compliance. The **Measurement Committee** shall investigate and:
- (a) if the **Measurement Committee** finds that the **yacht** complies with the **Class Rules**, they shall notify the **Regatta Director** and all **Competitors** with details of the investigation and an explanation as to why they are satisfied that the **yacht** continues to comply; or
 - (b) if the **Measurement Committee** finds that the **yacht** does not comply with the **Class Rules**, they shall proceed according to the appropriate process under Rule 12.2, 12.4 or 12.5.

12.10 The total number of measurement compliance queries, detailed in Rule 12.9, that may be made by each **Competitor** shall be limited as follows:

- (a) two queries in each Preliminary Regatta;
- (b) three queries in the America's Cup Challenger Selection Series; and
- (c) two queries in the America's Cup Match.

Any measurement compliance queries that result in the **Measurement Committee** determining that the **yacht** in question is non-compliant with the **Class Rules** shall be excluded from these limits.

13 Rule enquiries

13.1 **Rule Enquiries** are the primary means by which the **Class Rules** shall be interpreted or amended. They shall be submitted by a **Competitor** or the **Rules Committee** to the *website* detailed in Rule 13.2 in the form of:

- (a) an interpretation request;
- (b) an amendment proposal, with or without additional commentary;
- (c) two or more alternative proposals for an amendment;
- (d) a software approval request relating to the “Display systems” section of the **AC75 Class Rule**; or
- (e) a combination of the above.

For simple amendments, the **Rule Enquiry** process may be bypassed and a pull request submitted directly to the main branch of the **Official Repo**. However, preceding a pull request with a **Rule Enquiry** may provide the opportunity for more discussion. The **Technical Director** may also submit a **Rule Enquiry**, but solely in the form of an amendment proposal.

13.2 The **Rules Committee** shall maintain a *website* for the management of **Rule Enquiries**, which:

- (a) shall:
 - (i) receive **Rule Enquiries** and their associated *responses* and *comments* from **Competitors** and the **Rules Committee**;
 - (ii) publish and maintain a record of all **Rule Enquiries**, including their associated *responses* and *comments*; and
 - (iii) maintain the anonymity of **Competitor** submissions, unless they choose to identify themselves;
- (b) may:
 - (i) provide notifications to **Competitors** and the **Rules Committee** when new content is published;
 - (ii) provide notifications to **Competitors** and the **Rules Committee** when a deadline is approaching; and
 - (iii) maintain the **Rule Enquiry** timeline set out in Rule 13.4 by restricting submission permissions.

13.3 At any time where the *website* is not functioning as described by Rule 13, the **Rules Committee** shall notify **Competitors** and provide an equivalent process which maintains the same principles.

13.4 The **Rule Enquiry** timeline shall proceed as follows, with further details provided in Rule 13.5:

Stage	Submission	Working day	Time (Europe/Rome)	Actor
1	Initial enquiry	1	00:00 or 12:00	Competitor or Rules Committee
2	<i>Responses</i> submitted	1 – 4	Any time	Competitors
3	<i>Responses</i> close & published	4	20:00	<i>website</i>
4	<i>Comments</i> submitted	4 – 8	Any time	Competitors
5	<i>Comments</i> published	5 – 8	00:00 and 12:00	<i>website</i>
6	<i>Comments</i> close	8	12:00	<i>website</i>
7	Publication	9	00:00	Rules Committee

If the **Rule Enquiry** is not closed by Stage 7 (as detailed in Rule 13.5 (d)), the timeline is reset to Stage 2, where **working day** 9 of the current round becomes **working day** 1 of the next round. The process repeats until the **Rule Enquiry** is closed by the **Rules Committee**.

13.5 The following restrictions shall apply to the submissions within the **Rule Enquiry** process:

- (a) Initial enquiry (Stage 1):
 - (i) may be submitted by either a **Competitor** or the **Rules Committee**; and
 - (ii) upon receipt by the *website*, the enquiry shall be scheduled for publication at the next occurrence of the times indicated in Rule 13.4.
 - (iii) the **working day** of publication shall be used as the reference for all subsequent stages;
- (b) Responses (Stages 2–3):
 - (i) each **Competitor** may submit one *response*;
 - (ii) a *response* may address a **Rule Enquiry** or a **Rules Committee** draft, and may include consent to an amendment, an alternative amendment proposal, or general commentary;
 - (iii) all *responses* shall be published simultaneously at the time indicated in Rule 13.4;
- (c) Comments (Stages 4–6):
 - (i) each **Competitor** may submit multiple *comments*;
 - (ii) a *comment* may address a **Competitor's** response, and may include consent to an amendment, an alternative amendment proposal, or general commentary;
 - (iii) upon receipt by the *website*, each *comment* shall be scheduled for publication at the next occurrence of the times indicated in Rule 13.4;
- (d) Publication (Stage 7):
 - (i) where there appears to be sufficient consent, the **Rules Committee** shall initiate an amendment in accordance with Rule 14.6. If the amendment is adopted, the **Rule Enquiry** shall be marked as closed;
 - (ii) where the **Rules Committee** considers that an amendment may resolve the issue but that sufficient consent has not yet been demonstrated, it shall propose or revise a draft amendment, this option being preferred to issuing an interpretation;
 - (iii) where the **Rule Enquiry** does not involve an interpretation question, and no amendment is agreed, the **Rules Committee** may mark the **Rule Enquiry** as closed;
 - (iv) where at least one draft interpretation has previously been circulated, and the **Rules Committee**, having reviewed all feedback, is satisfied that the draft cannot be further improved, it shall publish that draft as a final interpretation and mark the **Rule Enquiry** as closed; and
 - (v) in all other cases, the **Rules Committee** shall propose or revise a draft interpretation response, subject to Rule 13.6.

13.6 At the step described by Rule 13.5 (d) (v), if the **Rules Committee**, after considering the feedback from **Competitors**, determine an interpretation request included in the **Rule Enquiry** to be unreasonably long, or to cover an unreasonably large number or matrix of possible scenarios, they may withdraw the request and request the original **Competitor** to re-submit the **Rule Enquiry** with an interpretation request that limits the scope of the question to those elements which better clarify ambiguity in the **Class Rules**.

13.7 **Rule Enquiries**, *responses* and *comments* may include references to relevant paragraph numbers within the **Class Rules**, indicated as “75-X.X”, “40-X.X” or “TR-X.X”.

13.8 **Rule Enquiries** initiated by the **Rules Committee** shall not reveal a design characteristic that might not have been considered by all **Competitors**.

- 13.9 The **Rules Committee** may alter the timelines in Rule 13.4 for a given **Rule Enquiry** under the following conditions:
- (a) during Stage 2, if all **Competitor responses** have been received, the **Rules Committee** may skip to Stage 3 and publish those *responses*;
 - (b) at any time after Stage 3, the **Rules Committee** may close the *comments* stages and publish their own response (Stage 7), which:
 - (i) allows **Rule Enquiries** to be closed once **Competitor** consensus is reached; and
 - (ii) encourages **Competitors** to submit their *comments* earlier;
 - (c) at their discretion, the **Rules Committee** may shorten the timelines in Rule 13.4, but shall notify all **Competitors** of any such changes; and
 - (d) with agreement from the submitter of the **Rule Enquiry**, the **Rules Committee** may lengthen any of the timelines in Rule 13.4.
- 13.10 Interpretations shall be based on the following principles:
- (a) interpretations shall consider only the words in the **Class Rules**, not their possible intent;
 - (b) where wording is ambiguous, the most reasonable and natural interpretation of the written words within the context of any other relevant **Class Rules** shall be taken;
 - (c) if a part of the **Class Rules**, or the understanding of it created by the application of clause 13.10 (b), is found to directly contradict another part, a part that refers to more detail shall take precedence over a part that is more general; and
 - (d) finally, if there remains ambiguity or contradiction as to whether a particular feature is permitted, and that ambiguity or contradiction cannot be resolved by application of the above clauses, an interpretation shall be permissive.
- 13.11 Draft responses from the **Rules Committee** shall not constitute a ruling of any form. Whilst **Competitors** may comment on these drafts, they are inadmissible as evidence of any interpretation of the **Class Rules** unless published as final.
- 13.12 The **Rules Committee** may seek the advice of independent experts, including members of the **Measurement Committee**, when considering an interpretation.
- 13.13 **Competitors** shall not conduct any private correspondence with the **Rules Committee** regarding any Rule, interpretation or amendment. Correspondence shall only be in the form described by Rule 13.1, or within a group forum which all **Competitors** are invited to attend.
- 13.14 Advice or opinions on the meaning of a Rule, from a member of the **Measurement Committee** or **Rules Committee**, are not binding except through an interpretation.
- 13.15 Once an interpretation has been issued as final, it cannot be modified without the explicit agreement of all **Competitors**.
- 13.16 Interpretations that relate specifically to wording within the **Class Rules** that has since been amended no longer apply.
- 13.17 Separately to the **Rule Enquiry** process described in the above rules, **Competitors** may request clarification of the construction or operational requirements of **one-design** components. Requests for clarification should be made to the **Rules Committee** who, after consultation with the suppliers of those parts, will issue a clarification notice to all **Competitors**. The clarification notices shall be published on the **Official Noticeboard**, and any website created in accordance with Rule 13.2.

14 *Amendment*

14.1 The current, authoritative version of:

- (a) the **AC75 Class Rule**;
 - (b) the **AC40 Class Rule**;
 - (c) the **AC Technical Regulations**;
 - (d) the **AC75 Specification**; and
 - (e) those parts of the **AC40 Specification** which exist in a documented form,
- shall be contained solely within the main branch of **Official Repo**.

14.2 The **AC75 Class Rule**, **AC40 Class Rule** and the **AC Technical Regulations** will be maintained in LaTeX format. **Specifications** may be maintained in LaTeX, Microsoft Word, AutoCAD or other format.

14.3 The **Class Rules** and **Specifications**, once published, may be amended at any time by the unanimous consent of **Competitors**, either:

- (a) via the mechanism described in Rules 14.6; or
- (b) by another process.

14.4 The **Class Rules** and **Specifications** may also be amended, following consultation with all **Competitors** by:

- (a) the **Technical Director** for:
 - (i) minor changes to the specification of **one-design** components or software, provided those changes are necessary to address a fundamental safety or reliability issue; and
 - (ii) changes relating to the use of Samsung Knox management software specified in the “Display systems” section of the **AC75 Class Rule**;
- (b) the **Technical Director** or the **Regatta Director** for changes related to safety;
- (c) **AC Media** for changes related to **media equipment**; and
- (d) the **Commercial Manager** for changes related to **event** branding.

All such changes may only be made with the approval of the **Rules Committee**, who shall consider the impact of their proposed changes on all **Competitors**, taking account of the state of their design and construction programmes, so that any burden imposed is commensurate with the need for amendment. Furthermore, the **Rules Committee** shall only approve changes that do not disproportionately affect some **Competitors** more than others.

14.5 In the event that the **Rules Committee** approves changes according to Rule 14.4, they shall concomitantly adjust rules relating to mass and centres of mass controlled by the **Class Rules** such that the impact on **Competitors** is minimised.

14.6 Amendments by the unanimous consent of **Competitors** shall be made as follows:

- (a) A **Competitor** proposing an amendment, or the **Rules Committee**, or the **Technical Director**, shall fork the the main branch of the **Official Repo**, prepare the amendment in a branch, and submit a pull request to the **Official Repo** against the main branch. They may include a rationale in the pull request description.
- (b) Each **Competitor** shall nominate one Git identity (*Approver*) to approve amendments. The **Rules Committee** shall maintain the list of *Approvers* on the hosting platform.
- (c) Upon creation of a pull request targeting the main branch, the hosting platform shall automatically notify all *Approvers*.
- (d) Each **Competitor's Approver** shall record an approval or rejection using the platform's review mechanism. An amendment is approved only when all **Competitor's Approvers** have recorded approval.
- (e) Any subsequent commit to the pull request shall reset approvals.
- (f) The main branch shall be protected with required reviewers set to all *Approvers*. Once all required approvals are recorded, the pull request shall merge automatically into main branch.
- (g) If a pull request remains unapproved after 14 days from submission, it shall lapse and may be re-submitted. The **Rules Committee** may shorten or extend this period by notice to all **Competitors**.
- (h) The merged commit, along with the pull request discussion and timestamps, constitute the formal record of publication in the **Official Repo**.
- (i) The **Rules Committee** may roll back the the main branch of the **Official Repo** if they believe that an operational error has occurred.

15 *Environmental data*

- 15.1 From the date of the first publication of the **AC Technical Regulations** in non-draft form for **AC38, Competitors** shall only obtain or collect weather, wind, sea state or sea current instrument data relevant to the **Match venue**:
- (a) from their own vessels, as explicitly permitted by Rule 15.2;
 - (b) during an unrelated regatta, as explicitly permitted by Rule 15.4;
 - (c) from personal observation from land or on the water, where personal observation excludes the use of any measurement equipment such as handheld anemometers, GPS or floating markers, and excludes timing or measuring drift;
 - (d) from a common weather programme implemented by **ACP**, provided the same access to information is granted to all **Competitors**;
 - (e) from meteorological data collected by **AC Media**, provided the same access to information is granted to all **Competitors**;
 - (f) from **publicly available sources** with subscription costs of no more than 50 EUR per month; and
 - (g) from wind-measuring equipment on a crane situated at or adjacent to a **Competitor's** shore base, provided that the equipment is only capable of measuring data within 100 mm of its sensors.
- 15.2 At the **Match venue**, **Competitors** may collect environmental data from their own **yachts** and **supporting chase boats**, provided that:
- (a) any meteorological data is measured within 100 mm of a sensor mounted on the vessel;
 - (b) any oceanographic data is measured within 2000 mm of a sensor mounted on the vessel, except that ocean current velocity may be measured at any depth from a sensor close to the surface;
 - (c) after the last race of the final **AC40 event**, the only **yachts** permitted to collect data are those **AC75 Class Yachts** scheduled to race in **AC38**;
 - (d) data may be collected from a maximum of two **supporting chase boats**, provided they are supporting a **yacht** that is permitted to collect data by this Rule; and
 - (e) a **Competitor's support vessels** shall otherwise have any wind measuring devices covered, rendering them incapable of collecting wind data.
- 15.3 **Competitors** may only obtain derived data, forecasts, models and/or model generated environmental data relevant to the **Match venue** provided that all source or training data:
- (a) was collected in a manner compliant with Rule 15.1; or
 - (b) was collected at least six months prior to the first scheduled race of the Match and is commercially available to the public.

- 15.4 Team members of a **Competitor** may obtain or collect weather data whilst sailing or coaching at a regatta that does not form an **Event** of **AC38**, provided:
- (a) any such regatta is an event which is:
 - (i) organised by a recognised yacht club;
 - (ii) run under World Sailing rules; and
 - (iii) sailed in yachts of classes existing as at 19 October 2024, or in yachts which held valid IRC or ORC certificates on 19 October 2024, or in other rating yachts from time to time approved by **COR/D-ACP**; and
 - (b) any such data is only:
 - (i) collected using the competing yacht's instrumentation system, or made available to all **Competitors** by the event organisers;
 - (ii) used for the purpose of that specific event, and not distributed to any devices or other team members that are part of the **Competitor's AC38** campaign; and
 - (iii) collected from five days prior to the morning of the first race, until the protest time limit on the last day of racing of that event.

16 *Shrouding*

- 16.1 No component or part of the **yacht** shall be covered for the purpose of hiding it from reconnaissance once it has been **launched**, or when it is about to be **launched** (i.e. prepared for being lifted into the water), unless:
- (a) it is not being used for sailing operations on that day; or
 - (b) the item providing cover (the 'cover') is a part of the **yacht** that satisfies the **AC75 Class Rules**, and remains in the same position whilst sailing.
- 16.2 Any temporary cover used for physical or sun protection during sailing operations shall be immediately removed at the request of reconnaissance teams. The **Measurement Committee** may remove the right of a **Competitor** to use any such covers if they believe the covers are being used to hinder the role of reconnaissance units.

17 Reconnaissance

17.1 Applicability

- (a) This section sets out the regulations governing a Joint **Competitor** Reconnaissance Programme and other **Competitor** reconnaissance activity.
- (b) The Joint Reconnaissance Programme shall be in place from the first official publication of these **AC Technical Regulations** until the end of **AC38**.
- (c) Within Section 17, when italicised:
 - (i) *operate* or *operation* means to launch, sail, tow, move, test, measure, assemble, modify, disassemble or similar;
 - (ii) *component* means a **controlled component** or significant part thereof; and
 - (iii) *Initial Preliminary Regatta*, *Final Preliminary Regatta*, *Official Training* and *Official Practice* are defined by the **Protocol**.
- (d) The transfer of **design information** between **Competitors** is not reconnaissance, and shall be specified by Rule 20.

17.2 RMP

- (a) Within two weeks of their entry into **AC38** being accepted, or within one week of the first official publication of these **AC Technical Regulations**, whichever is later, each **Competitor** shall appoint a team member as their recon representative and notify the **Recon Administrator** of this person. This person shall be a member of the **RMP**.
- (b) Any change in a **Competitor's RMP** representative shall be notified to the **Recon Administrator**.
- (c) Decisions within the **RMP** shall be made by a majority vote. In the event of a tie, a casting vote shall be given to the **Recon Administrator**.
- (d) The **Recon Administrator** may convene and manage meetings of the **RMP**, but shall not be entitled to vote other than to break a tie, as described in Rule 17.2 (c).
- (e) Any **Competitor** currently in default of its obligation under Article 20 of the Protocol shall be ineligible to participate in the **RMP**.

17.3 Recon Administrator

- (a) The **Recon Administrator** shall be appointed by **COR/D-ACP**.
- (b) The **Recon Administrator** shall not be a team member of any **Competitor** and together with the **RMP** will manage the Joint Reconnaissance Programme.
- (c) Until the **Recon Administrator** is appointed, any notification required to be given to them shall be emailed to recon@americascup.com. In the absence of a **Recon Administrator**, this mailbox will automatically forward to all members of the **RMP**.
- (d) After being notified in accordance with Rule 17.9, the **Recon Administrator** shall determine whether a **Competitor's** planned *operation* or *component* placement requires deployment of a **Recon Unit** and therefore creates an **Observed Day**. The **Recon Administrator** shall notify the **RMP** and relevant **Recon Unit** of their decision.
- (e) It is anticipated that **Observed Days** shall not in general be required for **AC40 Class Yachts**, but the **Recon Administrator** may declare them as such if they believe that they may be of specific interest.

17.4 **Recon Unit** appointment

- (a) One **Recon Unit** shall be appointed to follow each **Competitor**, that appointment to occur during the two months before a **Competitor's** first **Observed Day**.
- (b) Each **Recon Unit** will comprise two people, of which at least one shall hold any licence required to operate the recon vessel in the operating country.
- (c) It is envisaged that **Recon Unit** personnel shall have expertise in sailing and the America's Cup environment. However, the decision on personnel will be solely the responsibility of the **RMP**.
- (d) The **RMP** may ask an **Observed Competitor** for a recommendation of suitable local personnel but shall not be obliged to follow that recommendation.
- (e) Compensation for each **Recon Unit** will be the same for all contracted **Recon Units**, as outlined in Rule 17.16; other contractual terms will also be identical except as otherwise required by applicable laws. Initial discussions with prospective **Recon Unit** personnel shall be between those prospective personnel and the **RMP**. When an agreement is reached, the **RMP** shall inform the **Recon Administrator** of their chosen personnel, who will then confirm the appointment with the recon personnel and make arrangements for payment of their compensation. The **Recon Administrator** shall not refuse any appointment unless a person is not legally permitted to work in the given role, or is determined by the Arbitration Panel to be unsuitable for the role following an application by the **Observed Competitor** or the **Recon Administrator**.
- (f) A **Recon Unit** shall be engaged from one week before their **Competitor's** first **Observed Day** until the end of **AC38**.
- (g) A **Recon Unit** shall travel with their **Observed Competitor** to any location where they are sailing, including the **Match venue**, except that they shall only travel to the venue of an *Initial Preliminary Regatta* if the **Observed Competitor** is sailing an **AC75 Class Yacht** at that venue. Travel and accommodation costs for each **Recon Unit** shall be dealt with in accordance with Rule 17.16.
- (h) Alternatively, the **RMP** may elect to switch their **Recon Unit** personnel to local personnel at each venue at which an **Observed Competitor** is sailing.
- (i) At the **Recon Administrator's** discretion and outside of the **CRRP**, **Recon Units** may be rotated between **Competitors**.

17.5 **Recon Unit** replacement

- (a) The **RMP** may elect to replace a **Recon Unit** at any time, subject to any notice period or other restriction contained in their contract or applicable law. Such notice period is anticipated to be one month but may vary according to applicable law.
- (b) In the event that a **Recon Unit** is to be replaced, the **RMP** shall inform the **Recon Administrator**, who shall make the necessary contractual arrangements.
- (c) The **RMP** shall be required to replace a **Recon Unit** if that **Recon Unit** is no longer able to work in the country that their **Observed Competitor** is sailing.

17.6 **Recon Content Team** appointment and replacement

- (a) **COR/D-ACP** may, at their discretion and in consultation with the **Recon Administrator**, appoint a **Recon Content Team** to support the **Recon Units**. The following rules apply only if the **Recon Content Team** is appointed.
- (b) The **Recon Content Team** will comprise at least one person, with expertise in video editing and media content generation. It is envisaged that **Recon Content Team** personnel shall also have expertise in sailing and the America's Cup environment. However, the decision on personnel will be solely the responsibility of **COR/D-ACP**.

17.7 Recon vessels

- (a) During any **Observed Day**, an **Observed Competitor** must make a recon vessel available to their **Recon Unit**, which shall:
 - (i) be at least 9 m long, of a form equivalent to a Protector rib;
 - (ii) have a top speed in flat water of at least 45kts;
 - (iii) provide a windscreen and covered area for at least two people;
 - (iv) be in good working order;
 - (v) be otherwise suitable as a working recon vessel;
 - (vi) be moored at or within five minutes' walk of that **Observed Competitor's** base, and accessible to the **Recon Unit**;
 - (vii) be available for use by the **Recon Unit** at least one day before any **Observed Day**, and always remain available for that **Observed Day**.
- (b) With the agreement of the **Recon Administrator** in consultation with the respective **Recon Unit**, an **Observed Competitor** may provide a recon vessel whose specifications fall slightly below those required by Rule 17.7 (a). However, if this recon vessel proves unfit for purpose as determined by the **Recon Administrator** and the **Recon Unit**, the **Observed Competitor** shall be required to replace the recon vessel with a vessel that meets the requirements of Rule 17.7 (a) within a time frame determined by the **Recon Administrator**.
- (c) An **Observed Competitor** shall make best endeavours to ensure the provided recon vessel is always in service. If the provided vessel is at any time inoperable or out of service, and a suitable replacement boat is not available, the **Recon Unit** shall be entitled to observe from the **Observed Competitor's** primary chase boat.
- (d) An **Observed Competitor** shall either ensure the recon vessel boat is fuelled for a day, or provide the **Recon Unit** with a fuel card or other payment method for purchasing fuel.
- (e) An **Observed Competitor** may not place team members, VIPs or media on the recon vessel, unless required by an emergency.
- (f) Unless agreed otherwise between the **Recon Unit** and the **Observed Competitor**, a **Recon Unit** shall only use the recon vessel for reconnaissance of an **Observed Competitor** whilst sailing, before sailing, or after sailing, or to re-fuel the vessel, etc.
- (g) Each recon vessel shall fly an identifying recon flag, designed and provided by **AC Media**.

17.8 Recon driver

- (a) An **Observed Competitor** may contest a **Recon Unit** driver's suitability to operate a recon vessel, if they have a genuine concern on the basis of licence validity, legality or capability.
- (b) Contestations detailed in Rule 17.8 (a) shall be referred to the **Recon Administrator** in the first instance, and may be escalated to the **RMP** by the **Observed Competitor**.
- (c) Until the contestation detailed in the Rule 17.8 (a) is settled, the **Observed Competitor** shall provide a suitably qualified driver to drive the recon vessel, who shall operate under the direct instruction of the appointed **Recon Unit**.
- (d) It is prohibited to contest the driver's suitability for the purpose of disrupting the **Recon Unit**. If a **Recon Unit** or the **Recon Administrator** suspect an **Observed Competitor** of infringing this Rule, they may refer the matter to the **RMP** for review and possible remedy in accordance with Rule 17.20.

17.9 Notification

- (a) An **Observed Competitor** shall notify the **RMP** and the **Recon Administrator** a minimum of two months prior to the first **AC38** roll out of any **yacht** into *public view* at any *sailing venue*, in preparation for their first **AC38** sailing day, where:
 - (i) *public view* means a location from where there is a line of sight to any part of the **yacht** from a viewing point that is readily and easily accessible to the general public, accessible by foot or by boat (using a sightline 2 m above mean sea level for any boat), and within 200 m of the location of the mast base of the **yacht**; and
 - (ii) a *sailing venue* is a location where a **Competitor** will launch a **yacht** and the zone within a radius of 10 km around that location.
- (b) An **Observed Competitor** shall notify the **RMP** and the **Recon Administrator** a minimum of two months before sailing at a new location (i.e. a location at which the **Observed Competitor** has previously never sailed any **yacht** during **AC38**).
- (c) It is strictly prohibited for a **Competitor** to sail or tow a **yacht** at any location without having notified the **RMP** and the **Recon Administrator** as required above.
- (d) Once a **Recon Unit** is appointed, the **Recon Administrator** shall put them in contact with their **Observed Competitor**, who shall arrange access and notification.
- (e) An **Observed Competitor** must provide 24 hours' notice to their **Recon Unit**, the **RMP** and the **Recon Administrator** of their intent to *operate* on a **yacht** or any of its *components* in *public view* at a *sailing venue* for any reason.
- (f) The **Competitor** should notify the **Recon Unit** again, as soon as possible, if that **yacht** or *component's operation* notified according to Rule 17.9 (e) is cancelled. They shall keep the **Recon Unit** informed of planned *operation* times.
- (g) If the **Competitor** intends to leave a **yacht** or a **yacht component** in *public view* for an extended period without conducting an *operation*, they must notify their **Recon Unit** and the **Recon Administrator**.
- (h) A **Competitor** must notify a **Recon Unit** of planned sailing days, days off and extended non-sailing periods as soon as they are known and notify them again as soon as possible if those plans change.
- (i) Each time a **Competitor** sends an updated component schedule to the **Measurement Committee**, a copy shall also be sent to the **RMP**, **Recon Unit** and **AC Media**. This copy shall indicate component IDs and versions but need not include any descriptions.
- (j) Notification shall be by text, WhatsApp or email.
- (k) If any of the notification deadlines detailed elsewhere in Rule 17.9 precede the official publication of these **AC Technical Regulations**, they may be satisfied by an equivalent notification within 7 days of the official publication of these **AC Technical Regulations**.

17.10 Access

On **Observed Days**:

- (a) If an **Observed Competitor** intends to launch, sail or tow any of their **yachts**, they shall provide their **Recon Unit** access to the forecourt on which they roll-out, or from which they launch their **yachts** in a location that provides an unobstructed view of the **yacht** (except where obstructed by the **yacht's** cradle, etc). Such location shall be no more than 25m from the location of the mast base of the **yacht** when preparing to launch, or when in *public view* for any reason if not preparing to launch.
- (b) An **Observed Competitor** shall provide access to the edge of a wharf overlooking the **yacht** when at the dock, or to the dock itself, at a location that provides an unobstructed view of the **yacht** and is no further than 25m from the mast base of the **yacht**.
- (c) An **Observed Competitor** shall provide their **Recon Unit** with access to and from the locations detailed in Rules 17.10 (a) and 17.10 (b), as required to prepare for and carry out their duties. However, the **Recon Unit** may not use this access to conduct reconnaissance from other locations within the **Competitor's** shore base.
- (d) **Recon Units** must abide by the health and safety regulations of the **Observed Competitor**, and may be required to move from the nominated locations during crane operations, etc. However, the **Observed Competitor** shall not impose health and safety regulations on their **Recon Unit** that are above and beyond those of the **Observed Competitor's** own team members, and shall provide the **Recon Unit** with the appropriate health and safety training if necessary for them to observe a **yacht** launch.
- (e) An **Observed Competitor** shall provide their **Recon Unit** with access to:
 - (i) drinking water;
 - (ii) at least one meal;
 - (iii) bathroom facilities; and
 - (iv) parking within reasonable walking distance from the **Observed Competitor's** shore base.

Any associated costs shall be borne by the **Observed Competitor**, other than parking, which shall be equally split amongst all **Competitors**.

- (f) Following a sailing day, a **Competitor** shall provide access to one team member for an interview lasting no more than 3 minutes, within 15 minutes of docking. This team member is selected at the **Recon Unit's** discretion, but the same team member shall not be selected for interview twice within 7 days, except in exceptional circumstances and with that team member's consent.
- (g) On request, a **Competitor** shall provide access to a suitable member of their technical team to provide commentary or explanation on an aspect of another **Competitor's yacht**, a recent interpretation draft, **Class Rules** amendment, or similar.
- (h) **Competitors** shall not be obstructive in answering interview questions, and whilst they are permitted to withhold confidential information, shall provide an informative report on the sailing day.

17.11 Recon equipment

- (a) **AC Media**, in conjunction with the **Recon Administrator**, shall provide to each **Recon Unit** a standard set of recon equipment including cameras, video cameras, gimbals, a hand-held anemometer, laptops and software. The **Recon Units** shall be consulted during the selection of this equipment.
- (b) **Recon Units** shall not use any photo or video equipment for recon except that standard equipment provided, and/or their own personal mobile phones.

17.12 **Recon Unit** duties

During any **Observed Day** at a *sailing venue*, a **Recon Unit** shall:

- (a) Take photos and video of a **Competitor's yacht** on each
 - (i) roll-out into *public view*, whether launching or not;
 - (ii) launch and lift-out, whether sailing or not;
 - (iii) sailing session.
- (b) Follow a sailing day on the water, record the amount of sailing time vs. stoppage and towing time, sails used, approximate wind speeds and sea-state, approximate boat speeds and sailing angles, significant events, crew changes, etc.
- (c) Interview a team member following a day's sailing, asking about what was learnt, how the day went, and for feedback on any new *components*, design features or events observed whilst sailing.
- (d) Within six hours of the end of a sailing day, upload all recorded photos and videos to the **Recon File Store**. In exceptional circumstances, a **Competitor** may request to the **Regatta Director** that the publication of footage to the **Recon File Store** is delayed. Such a request shall only be granted by the **Regatta Director** if:
 - (i) a **Competitor's yacht** reveals new branding that is commercially sensitive, in which case the footage shall be made available in the usual time-frame to **Competitors** only, but its wider publication shall be delayed. Such an embargo shall be granted to each **Competitor** no more than twice during any rolling twelve-month period; or
 - (ii) one of more of a **Competitor's** crew members have been seriously injured.

The length of any publication delay granted to a **Competitor** shall be decided by the **Regatta Director**, who shall balance the **Competitor's** request with the requirements of **AC Media**.

- (e) As soon as possible, compile and collate images, videos and daily summaries for distribution to **Competitors** and **AC Media**. These summaries shall include observations and comments on photos and videos, in addition to some statistics, and shall be uploaded to the **Recon File Store**. The format of the reports may be specified by **AC Media**.
- (f) **RMP** members may propose specific areas of interest to focus on, but any information captured by the **Recon Unit** shall be shared equally with all **Competitors** via the **Recon File Store**. A **Recon Unit** shall not provide any photos, video or other data to any **Competitor** except via the **Recon File Store**, but this does not prohibit verbal discussions between a **Competitor** and a **Recon Unit**.
- (g) On request from **AC Media**, a **Recon Unit** shall interview a member of their **Observed Competitor's** technical team on specific technical questions, and upload that interview to the **Recon File Store**.
- (h) Take photos and video of a **Competitor's yacht** when in *public view* or when it is not in an enclosed structure, such as during roll-out, lifting or afloat, whether or not it is a sailing day.
- (i) Not be required to carry out any duties on behalf of the **Competitor**, unless required by an emergency.

17.13 **Recon Content Team** duties

- (a) Support the **Recon Units** as specified by the **Recon Administrator**, for example, by editing, summarising or annotating content captured during reconnaissance.
- (b) Generate other promotional content as required by **AC Media**.

17.14 On-water management

- (a) When a **Competitor's yacht** is away from the dock and either stationary or on a side-tow, a recon vessel shall remain at least 75 m from the **yacht**.
- (b) When a **Competitor's yacht** is on a bow tow, a recon vessel shall remain at least 100 m from the **yacht** and aft of her beam.
- (c) When a **Competitor's yacht** is sailing, a recon vessel shall make best endeavours to remain at least 100 m from the **yacht** and aft of a crosswind line passing through the bow of the yacht, except as permitted by Rule 17.14 (d).
- (d) As an alternative requirement to Rule 17.14 (c), when a **Competitor's yacht** is sailing around a race-course with racing buoys or marks placed by a **Competitor** or the **Regatta Director**, a recon vessel may be positioned:
 - (i) outside a circle of radius 100 m centred on each racecourse buoy or mark; and
 - (ii) 100 m beyond laylines to any racing buoy or mark, thereby being off the racecourse, with laylines estimated by assuming a tacking or gybing angle of 120 degrees, using the current wind direction.
- (e) As an exception to the rules above within Rule 17.14, a recon vessel may infringe these minimum distances if the following conditions are met:
 - (i) both the recon vessel and the **Competitor's yacht** are in the vicinity of a dock;
 - (ii) the recon vessel must be moved in order to prepare for or conduct the duties of the **Recon Unit**; and
 - (iii) the **Recon Unit** aboard the recon vessel does not conduct any reconnaissance whilst infringing the minimum distance range.

17.15 AC Media

- (a) **AC Media** shall employ a dedicated technical writer with sailing and America's Cup expertise to edit and supplement recon data with technical commentary sourced from:
 - (i) Analysis of information provided by **Recon Units**;
 - (ii) New *component* declarations; and
 - (iii) Interpretation and amendment analysis.
- (b) **AC Media** shall publish edited information supplied by **Recon Units** and the **Recon Content Team** on a technical area of the Official America's Cup Website and the Official America's Cup Social Media Channels. This will include feature stories, interviews, photos, videos and sailing statistics.
- (c) Stories and interviews provided by **Recon Units** and the **Recon Content Team** shall be credited on the website with the names of the relevant personnel, which is intended to encourage good quality commentary and content from those teams.
- (d) **AC Media** may specify the format of sailing day reports produced by:
 - (i) **Recon Units**; and
 - (ii) **Competitors** on sailing days which are not **Observed Days**.

17.16 Costs

- (a) The compensation for each member of a **Recon Unit** shall be a:
 - (i) monthly salary to be agreed by **COR/D-ACP**;
 - (ii) an additional contracted rate to be agreed by **COR/D-ACP** for each **Observed Day**.
- (b) It is expected that **Recon Unit** personnel will, in general, already be based in the location where the **Observed Competitor** will be sailing. As such, when operating at the home base of the **Observed Competitor**, no additional expenses shall be payable to a **Recon Unit**. However, the **RMP** may choose to make their own arrangements to provide accommodation and travel expenses for a **Recon Unit** if necessary.
- (c) An **Observed Competitor** shall arrange travel and accommodation for their **Recon Unit**, for any venue at which they sail away from their home base except the **Match venue**. Such travel and accommodation shall be of a standard equivalent to that provided to that **Competitor's** own team members.
- (d) The **Recon Administrator** shall arrange travel and accommodation for **Recon Units** at the **Match venue**.
- (e) The **Recon Administrator** shall arrange travel and accommodation for the **Recon Content Team** as required.
- (f) All costs detailed above within Rule 17.16 and parking costs detailed in Rule 17.10 (e) (iv) shall be shared equally between all **Competitors**. **Competitors** shall provide the **Recon Administrator** with documentation of all costs, which the **Recon Administrator** shall aggregate and use to invoice each **Competitor** on a monthly basis.
- (g) Any costs submitted by a **Competitor** in accordance with Rule 17.16 (f) that are deemed to be excessive or unnecessary by the **Recon Administrator** may be referred to the **RMP** for review. The **RMP** may require the **Competitor** to bear the full cost of any such expense.

17.17 CRRP

- (a) The **CRRP (Competitor Reconnaissance Restriction Period)** shall:
 - (i) be in place from the first official publication of these **AC Technical Regulations**;
 - (ii) no longer be in place from the first day of the *Final Preliminary Regatta*; and
 - (iii) exclude any days on which *Official Practice* or *Official Training* occurs.
- (b) Within the **CRRP**, reconnaissance conducted by **Competitors** will be heavily restricted as detailed in Rule 17.18, but outside of this period will be relaxed as detailed in Rule 17.19.

17.18 Restrictions during the **CRRP**

- (a) A given **Competitor** shall not go on the water at any venue at which another **Competitor's yacht** is sailing unless it is also a **shared venue** for that given **Competitor**.
- (b) **Competitors** are prohibited from carrying out their own reconnaissance on other **Competitors**, and shall not go on the water at any time for the purpose of observing another **Competitor's yacht**.
- (c) Taking photos or videos of another **Competitor's yacht** is prohibited, except that at a **shared venue** for a given **Competitor**:
 - (i) another **Competitor's yacht** is permitted to appear occasionally in the background of videos taken from onboard the given **Competitor's yacht**; and
 - (ii) casual photos (but not videos) taken by a **Competitor's** team members on a mobile phone from shore are permitted.
- (d) It is prohibited to make any electronic position, speed or course measurements of the performance of another **Competitor's yacht**.
- (e) **Competitors** shall not obstruct **Recon Units** from performing their roles efficiently, and shall be always courteous and considerate to each **Recon Unit**.

17.19 Restrictions outside of the **CRRP**

- (a) Outside of the **CRRP**, other **Competitors** may observe each other onshore and on the water subject only to:
 - (i) the restrictions of the **Protocol**, other than paragraph 41.2 (a); and
 - (ii) the remaining clauses within Rule 17.19.
- (b) Except where safety protocols issued by the **Regatta Director** (in accordance with **Protocol** Article 41.3 (b)) governing the operation of support boats within a *racing area* (as defined by the **Protocol**) are in force, any vessel being operated by a **Competitor** in proximity of another **Competitor's yacht** shall comply with the restrictions for a recon vessel in Rule 17.14, in addition to complying with **Protocol** Article 41.3 (a).
- (c) It is prohibited for a **Competitor** to detect the position, speed, course or other position-related information of another **Competitor's yacht** using radar, laser range-finding, optical tracking or other method that can report equivalent performance data.
- (d) When an observed **Competitor's yacht** is *under way*, it is prohibited for an observing **Competitor** to take photos or video of that **yacht** unless:
 - (i) they are captured by a mobile phone, held by hand, onboard a chase boat or media boat that is also *under way*, and which has an LOA of less than 16m;
 - (ii) they are captured by cameras, held by hand, from ashore; or
 - (iii) the observed **Competitor's yacht** inadvertently and occasionally appears in the background of photos or video taken from cameras installed on a **yacht** or chase boat.
- (e) Within this Rule, a vessel that is *under way* is one which is afloat and not:
 - (i) anchored;
 - (ii) tied to a dock or other vessel;
 - (iii) held on station by an automated system; or
 - (iv) otherwise held in position except by manual control of the driver.
- (f) **Competitors** shall not obstruct **Recon Units** from performing their roles efficiently, and shall be always courteous and considerate to each **Recon Unit**.

17.20 Remedies

(a) A **Competitor** that fails to:

- (i) notify a **Recon Unit** of an intended outing;
- (ii) provide a suitable recon vessel or access to their primary chase boat;
- (iii) provide a driver that operates according to Rule 17.8 (c); or
- (iv) provide other access as required herein;

shall be referred to the **Regatta Director** and is subject to a fine of NZ\$10,000 for the first offence, NZ\$20,000 for the second offence, and doubling for each subsequent offence.

- (b) If the breach in Rule 17.20 (a) is considered to be deliberate by the **RMP**, in consultation with their **Recon Unit**, the matter shall be referred initially to **Regatta Director** and ultimately to the Arbitration Panel who shall determine additional remedies (including points penalties).
- (c) If a **Competitor** fails to give the required notification for a **Recon Unit** to witness the launch of a new *component* or *component* version, as declared to the **Measurement Committee**, in addition to the fine listed above, that **Competitor** shall be obliged to immediately make that *component* available for viewing to the **Recon Unit**, whether on the **yacht** or otherwise.
- (d) Any perceived breaches of Rule 17 raised by either a **Competitor** or a **Recon Unit** shall be referred to the **Recon Administrator**. At their discretion, the issue may be escalated and referred to the **Regatta Director** in the first instance, and ultimately to the Arbitration Panel for remedy.

18 *Model testing*

18.1 Within this Rule:

- (a) a *controlled environment* means an engineering test facility such as a wind tunnel, cavitation tunnel, towing tank or manoeuvring basin in which fluid motion, or body motion, is controlled or measured;
- (b) *model testing* means the fluid dynamic testing of designs, at any scale, in a *controlled environment*; and
- (c) *model testing data* means any information, whether qualitative, quantitative, photographic or otherwise, relating to *model testing*.

18.2 A **Competitor** shall not conduct, or induce a third party to conduct any *model testing*. This does not prohibit:

- (a) fluid dynamic testing of designs in the open air and on open water, subject to the restrictions of the **Class Rules**; or
- (b) the calibration of sensors in a *controlled environment*.

18.3 A **Competitor** shall not obtain any *model testing data* except from **publicly available sources**.

18.4 Within 30 days of the **AC Technical Regulations** being published for **AC38**, any **Competitor** that has since 16/11/2021:

- (a) conducted, or induced a third party to conduct any *model testing*; or
- (b) obtained any *model testing data* that is not from **publicly available sources**

shall notify all other **Competitors**, and provide all *model testing data* and relevant details of the testing such as test conditions, geometry, and other pertinent information required to make good use of such data.

18.5 If, during **AC38**, any team member of a **Competitor** engages in *model testing*, or inspects or reviews *model testing data*, regardless of its perceived relevance to **AC38**:

- (a) that **Competitor** shall inform the **Rules Committee** of the details of such *model testing*;
- (b) the **Rules Committee** must be satisfied that the testing would not significantly benefit the **Competitor**; or, the relevant *model testing data* must be shared with all **Competitors**; and
- (c) the **Rules Committee** shall notify all **Competitors** of its findings.

19 *Support vessels*

19.1 **Support vessels** of a **Competitor** must:

- (a) at all times be designated a *classification*, which denotes their physical construction; and
- (b) at specific times, also be designated a *role*, which denotes their current purpose.

19.2 Each **Support vessel** of a **Competitor** must be classified as:

- (a) an **eChase**;
- (b) a **foil-restricted** vessel; or
- (c) an **exempt foiling vessel**.

A **Competitor** may not operate any **support vessel** that does not meet the requirements of one of these *classifications*.

19.3 An **eChase**:

- (a) shall have the following technical specifications:
 - (i) a minimum LOA of 10 m;
 - (ii) the capability of fully-foiling at a boat speed of 24 knots and above;
 - (iii) a minimum top speed of 35 knots;
 - (iv) a minimum range of 75 nm at an average speed of 25 knots;
 - (v) a minimum duty cycle corresponding to two consecutive **AC75** match race distances at typical **AC75 Class Yacht** VMG speeds, up and down the course; and
 - (vi) a capacity of six people including the driver, plus an additional payload of 250 kg;where the requirements of (ii) - (iv) shall apply in the loaded condition specified by (vi);
- (b) shall be powered exclusively by sustainable energy sources, being one or more of:
 - (i) batteries, which must be charged using a sustainable energy source;
 - (ii) hydrogen, which must be manufactured sustainably;
 - (iii) biofuels, subject to the approval of **COR/D-ACP**; or
 - (iv) other fuels subject to the approval of **COR/D-ACP**;and
- (c) shall be designated as either:
 - (i) an **AC37 eChase**, if first launched on or before 19th October 2024; or
 - (ii) an **AC38 eChase** otherwise.

19.4 An **eChase's** appendages are restricted as follows:

- (a) A **Competitor** shall declare the unloaded appendage hydrodynamic surface geometry of an **eChase** to the **Measurement Committee** within 48 hours of a vessel's first launch, or within 14 days of the appointment of at least one member of the **Measurement Committee**, whichever is later. The declaration shall include the position and orientation of each appendage with respect to the vessel and its design waterline plane.
- (b) For a given **Competitor**:
 - (i) all **AC37 eChases** shall share a common appendage hydrodynamic surface geometry; and
 - (ii) all **AC38 eChases** shall share a common appendage hydrodynamic surface geometry, which may differ from their **AC37 eChase's** appendage hydrodynamic surface geometry.
- (c) Following its declaration, the appendage hydrodynamic surface geometry an **eChase** shall not be modified, except for:
 - (i) the rotation of parts such as flaps or rudders, where the axis of rotation is approximately in the span-wise direction of that appendage; and
 - (ii) one modification of the hydrodynamic surface geometry which is required for safe operation of the vessel, only if approved by the **Measurement Committee**. The **Competitor** requesting the change shall document the details and reasons for the proposed change to the **Measurement Committee** who shall publish these documents to all **Competitors**. The **Measurement Committee** shall consider responses from **Competitors** when reviewing the requested modification.

19.5 An **exempt foiling vessel**

- (a) is a **support vessel** that does not meet the requirements of an **eChase** or a **foil-restricted** vessel, and has been granted the status of an **exempt foiling vessel** by the **Rules Committee**;
- (b) shall be approved by the **Rules Committee** provided they are satisfied that its use and purpose has not provided, and could not provide any design or performance data relevant to the development of a **Competitor's AC75 Class Yacht**. For example:
 - (i) the vessel may be the private vessel of a team owner, provided its foils were not build or modified during **AC38**, the foils are not instrumented to provide design information, and the **Competitor's** sailing team do not sail on the vessel;
 - (ii) the vessel may be a foiling spectator boat chartered and operated by a **Competitor**, provided it is operated independently of the **Competitor's** design and sailing teams.

19.6 At a **shared venue**, a **support vessel** may only be on the water if fulfilling the *role* of a:

- (a) **supporting chase boat**;
- (b) **VIP boat**; or
- (c) **delivery boat**.

19.7 A **support vessel** may switch between the *roles* listed in Rule 19.6 at any time whilst at a dock, provided that she always meets the requirements of her current *role*. In the event that a **support vessel** is designated as a **supporting chase boat** for only part of a sailing day, the requirements of Rule 19.8 (a) shall apply only for that proportion of the day.

- 19.8 To qualify as a **supporting chase boat**, a **support vessel** must meet the following requirements:
- (a) On any sailing day, during the time that a **Competitor's yacht** is away from the dock, a **supporting chase boat** must spend at least 80% of that time:
 - (i) following, towing or alongside their **yacht**;
 - (ii) setting marks for their **yacht**;
 - (iii) waiting or manoeuvring on a course on which their **yacht** is sailing;
 - (iv) travelling directly between the **Competitor's** shore base and their **yacht**; or
 - (v) at a **Competitor's** shore base.
 - (b) When a **Competitor's yacht** is not sailing, a **supporting chase boat** shall only:
 - (i) travel directly to and from the **Competitor's** shore base for the purpose of refuelling or maintenance; or
 - (ii) remain at a **Competitor's** shore base.
- 19.9 A **VIP boat** must meet the following requirements:
- (a) the only purpose of the **VIP boat** shall be for a **Competitor** to host VIPs such as sponsors, officials, or dignitaries at the venue at which that **Competitor** is sailing;
 - (b) no team members of a **Competitor** shall be onboard except those essential to the hosting of the VIPs. In general, this means that no sailing team, design team, shore crew, meteorologists or coaches shall be onboard, except in the case where such a person holds a dual role in a team, for example, a member of senior management that is also in the sailing team;
 - (c) a **Competitor** shall notify the **Recon Administrator** of the vessel's identity, its purpose in relation to the **Competitor**, and the names and roles of any of that **Competitor's** team members who may be onboard with specific duties to host VIPs; and
 - (d) the **Recon Administrator** shall approve a vessel as a **VIP boat** and the list of team members that may be onboard when they are satisfied it meets the requirements in this Rule. They shall then notify all **Competitors** with the details required by Rule 19.9 (c).
- 19.10 A **delivery boat** is any vessel operated by a **Competitor** that is, at a particular time, neither a **supporting chase boat** nor a **VIP boat**. For example, she may be a chase boat being used to visually check weather conditions when not sailing, or a chase boat on a delivery trip.

- 19.11 At any **shared venue**, the following rules shall apply to all of a **Competitor's support vessels**, and those onboard them. A tick indicates that a permission or requirement applies, a cross indicates that it does not apply, and symbols in parentheses refer to details in the text.

		Supporting chase boat	VIP boat	Delivery boat
(a)	A flag of the indicated colour, at least 300 mm square, must be flown from a high point on the vessel that is clearly visible to other vessels. (✓) Not required if the vessel is always a VIP boat .	✓	(✓)	✓
(b)	Authorisation is required from the Recon Administrator to hold this support vessel classification .	✗	✓	✗
(c)	Wind gear is permitted subject to Rule 15. (✗) Any wind gear must be covered. (✓) Only if the vessel is a sailing vessel and the Competitor signs a declaration to the Recon Administrator's satisfaction that the wind data is not available to the Competitor ; otherwise it must be covered.	✓	(✓)	(✗)
(d)	A Competitor's support vessel may follow another Competitor's yacht . (✓) Only if the vessel is also following their own yacht .	(✓)	(✓)	✗
(e)	A Competitor's support vessel may hold position on a course area, or traverse a course area, where another Competitor is training. (✓) Only if that Competitor's yacht is also on that course area.	(✓)	✓	✗
(f)	A Competitor's support vessel is permitted within 250 m of another Competitor's yacht whilst: • assisting in an emergency; • at her own dock; or • transiting through a narrow channel without stopping to make observations, provided the purpose of the trip is not reconnaissance.	✓	✓	✓
(g)	A Competitor's support vessel is otherwise permitted within 250 m of another Competitor's yacht . (✓) Only if operating according to Rule 19.11 (d) or 19.11 (e).	(✓)	(✓)	✗
(h)	A Competitor's team members are permitted onboard. (✗) Only if authorised by the Recon Administrator for hosting VIPs.	✓	(✗)	✓
(i)	Competitors are permitted to capture photos and videos of other Competitors .	✗	✗	✗
(j)	Guests are permitted to capture photos and videos of other Competitors on handheld mobile phones only, with no external stabilisation, provided that footage is not taken for the benefit of the Competitor .	✗	✓	✗

20 *Performance data and design information*

- 20.1 It is prohibited for a **Competitor** to acquire any **performance data** regarding another **Competitor**, unless:
- (a) the **Competitor**:
 - (i) would be permitted by the **Protocol** and **Class Rules** to obtain that data directly through reconnaissance; and
 - (ii) did not purchase the data from another **Competitor**, whether directly or through a third party;
 - or
 - (b) the data is provided by **AC Media**.
- 20.2 **Competitors** may sell or transfer the following to another **Competitor**:
- (a) physical **yacht** components; and
 - (b) **design information** relating to **yacht** components.
- 20.3 The **Measurement Committee** must be notified of any sales or transfers described by Rule 20.2.
- 20.4 **Competitors** shall permit the **Measurement Committee** to:
- (a) inspect any **yacht** component or **design information** which has been sold or transferred between **Competitors**;
 - (b) interview team members; and
 - (c) require team members to complete affidavits,
- in order to verify that no **performance data** has been shared.
- 20.5 It is recommended that **Competitors** only share component **design information** prior to either **Competitor** launching that component, to prevent any cases where **performance data** may be inadvertently shared. Any transfer of **design information** after this point shall be subject to greater scrutiny by the **Measurement Committee**.
- 20.6 As an exception to the recommendation in Rule 20.5, if a **Competitor** discovers a fault within a launched component which they have sold a duplicate of, or **design information** pertaining to it, they are permitted to explain the issue and provide an updated specification. However, this permission must not be used to share **performance data** pertaining to their use of that component.
- 20.7 Any transfer of **design information** must not be used to allow a **Competitor** to glean information that they would otherwise be unable to attain without exceeding the component limits in Rule 4.

21 Definitions

21.1 AC Media

As defined in the **Protocol**.

21.2 AC Technical Regulations

The technical regulations governing the yachts, including **AC75 Class Yachts** and **AC40 Class Yachts**, used by any **Competitor** in addition to any rules specific to the class of yacht. This included all amendments to, interpretations of and rulings regarding such technical regulations.

21.3 AC36

The 36th America's Cup, and the time period spanning from the completion of the final race of the 35th America's Cup to the completion of the final race of the 36th America's Cup.

21.4 AC37

The 37th America's Cup, and the time period spanning from the completion of the final race of the 36th America's Cup to the completion of the final race of the 37th America's Cup.

21.5 AC38

The 38th America's Cup, and the time period spanning from the completion of the final race of the 37th America's Cup to the completion of the final race of the 38th America's Cup.

21.6 AC40 Class Rule

The rule governing the **AC40 Class Yachts** used in the regattas specified in the **Protocol** and in any other regattas sailed in **AC40 Class Yachts**, including all amendments to, interpretations of and rulings regarding such class rule.

21.7 AC40 Class Rules

The combination of the **AC40 Class Rule** and the **AC Technical Regulations**.

21.8 AC40 Class Yacht, also AC40

A yacht that complies with or could comply with the **AC40 Class Rule**.

21.9 AC40 Specification

The collection of published information that defines the components that comprise an **AC40 Class Yacht** and their arrangement with respect to each other, including information embodied in the design of supplied components. The **AC40 Specification** in its entirety does not exist in a fully documented form, but combines information from the user manuals, the supplied components themselves, the software supplied and installed, and general sailing knowledge. For example, the **AC40 Specification** shall include:

- (a) the arrangement of cockpit controls installed in the **yacht** as supplied, whether or not these details exist in a published drawing; and
- (b) the fact a halyard is led up the mast and over the mainsail halyard sheave, whether or not that information is stated explicitly in any published document.

21.10 **AC75 Class Rule**

The rule which, together with the **AC Technical Regulations** governs the yachts to be used in some Preliminary Regattas, the America's Cup Challenger Selection Series and the Match, including all amendments to, interpretations of and rulings regarding such class rule.

21.11 **AC75 Class Rules**

The combination of:

- (a) the **AC75 Class Rule**; and
- (b) the **AC Technical Regulations**.

21.12 **AC75 Class Yacht, also AC75**

A yacht that complies with or could comply with the **AC75 Class Rules**.

21.13 **AC75 event stage**

One of:

- (a) an entire Preliminary Regatta, if raced in **AC75 Class Yachts**;
- (b) the Group stage of the Challenger Selection Series;
- (c) the Semi-Finals stage of the Challenger Selection Series;
- (d) the Finals stage of the Challenger Selection Series; or
- (e) the entire Match,

where those regattas or parts of regattas listed above are detailed in the **Protocol**.

21.14 **AC75 Specification**

The complete set of specifications and software published by **COR/D** or **ACP** that are referenced in the "Documents" section of the **AC75 Class Rule**.

21.15 **ACP**

America's Cup Partnership, as defined in the **Protocol**.

21.16 **ActuatorAxis**

A **Competitor**-defined axis in a frame of reference fixed to a major structural part of a **control surface actuator** through which the actuator force or torque is transmitted.

21.17 **Aft Media Post**

A post attached near the transom of the **hull** which forms part of the **media equipment**.

21.18 **Appendage**

A **foil** or a **rudder**.

21.19 **AppendageCS**

Appendage control system: the **control system** used to control all **AppendageDOFs**.

21.20 **AppendageDOF**

One of, or if plural, the combination of:

- (a) the **FlightDOFs**; and
- (b) the **SteeringDOF**.

21.21 **AppendageECC**

The **ECC** within the **AppendageCS** that controls the **AppendageHCC**.

21.22 **AppendageEPS**

Appendage electrical power supply: the system within the **AppendageECC** that drives the hydraulic pumps in the **AppendageHPS**, including motors and their controllers.

21.23 **AppendageHCC**

The **HCC** within the **AppendageCS** that actuates the **AppendageDOFs**.

21.24 **AppendageHPS**

Appendage hydraulic power supply, that when driven by the **AppendageEPS**, supplies hydraulic power to move the **AppendageDOFs**.

21.25 **Audio hub**

A **one-design** communications system that connects local audio devices and converts audio to an IP-based protocol for transmission.

21.26 **Batten**

A beam used to locally stiffen a sail.

21.27 **Bearing centre**

The centre of rotation of a bearing.

21.28 **Blueprint**

An IGES file, drawing or other document or collection thereof that provides information about the design and/or construction of a version of a component. Specific requirements for **blueprints** for each component type are provided in the relevant sections of the **AC75 Class Rule**, these specific requirements taking precedence over this general definition.

21.29 **CAN Bridge**

A **one-design** device that provides a controlled data link between the **Crew Command System**, the **AppendageECC**, and the **RigECC**.

21.30 **Cant**

Rotation of a **foil** about the longitudinal **foil arm** cant axis specified in the "Foil" section of the **AC75 Class Rule**.

21.31 **Carried equipment**

Clothing, shoes, safety equipment, other equipment, food and drink that is worn or carried aboard by the crew or **guest racer**, including **crew media equipment**.

21.32 **CCS, Crew command system**

An electronic circuit for transmitting **passive input device** signals to the **FoilCantECC**, **RigECC** and **AppendageECC**.

21.33 **CCTV System**

Closed-circuit television system: a **hardwired** camera and display system.

21.34 **Challenger of Record**

As defined in the **Protocol**.

21.35 **CIS**

Crew information system: an electronic system connected to the **Media System** to display the raw or processed **Competitor** data output from the **Media System** to the crew, and to provide voice communication between the crew.

21.36 **Class Rules**

The combination of:

- (a) the **AC Technical Regulations**;
- (b) the **AC75 Class Rule**; and
- (c) the **AC40 Class Rule**.

Where the term is used in relation to an **AC75 Class Yacht** or an **AC40 Class Yacht**, it refers to the **AC Technical Regulations** in combination with either the **AC75 Class Rule** or the **AC40 Class Rule** respectively.

21.37 **Clew point**

The intersection or virtual intersection of the **leech** and **foot** of a **sail skin** for a **jib** and the intersection of a 26.750 m radius circle centred at the **head point** and the **leech** of a **sail skin** of a **mainsail**. The **leech** or **foot** will be extended tangentially from the point where the **leech** or **foot** curvature reduces below a radius of 1.0 m when approaching the intersection.

21.38 **Closed definition**

A definition in the **AC Technical Regulations** that defines a term appearing exclusively in the rule or set of rules being referred to. For example, the **closed definitions** of the **AC40 Class Rule** will define terms that appear only in the **AC40 Class Rule** and will appear nowhere in the **AC75 Class Rule**.

21.39 **Cockpit**

A volume designed for a crew member or **guest racer** to operate within.

21.40 **Cockpit aperture**

A line bounding an opening into a **cockpit**.

21.41 **Commercial core**

The **core** category of a **commercial product**.

21.42 **Commercial hardware**

The hardware category of a **commercial product**.

21.43 **Commercial Manager**

The Commercial Manager of **ACP** or person who performs the duties of the Commercial Manager if that role has not been appointed.

21.44 **Commercial paint**

The paint category of a **commercial product**.

21.45 **Commercial pre-consolidated FRP**

The pre-consolidated **FRP** category of a **commercial product**.

21.46 **Commercial product**

A classification of products controlled by the “Commercial products” section of the **AC75 Class Rule**.

21.47 **Competitor**

As defined in the **Protocol**. Where the term **Competitor** is used in the context of interpretations or amendments, it refers only to those **Competitors** that are still competing and who are not in default of their payment obligations required by the **Protocol**, the **Class Rules** and **ACP**.

21.48 **Constituent**

Any substance, particle, or fibre that contributes to a material’s composition, whether in pure form or as part of a mixture. Combinations formed at the atomic scale, such as alloys, shall be considered substances, not mixtures.

21.49 **Control surface**

One of the following:

- (a) a **foil flap**;
- (b) a **rudder**; or
- (c) a **rig**.

Where position, orientation, movement or control of a **control surface** is mentioned herein, that position, orientation, movement or control is implied to be relative to the **yacht**, except that for a **foil flap**, it is relative to the **foil wing** to which it is attached.

21.50 **Control surface actuator**

One or more **hydraulic actuators** connected **mechanically** to a single **control surface**, together with the following optional components as declared by the **Competitor**:

- (a) rods, struts, cables, sheets, turning blocks etc. forming the **mechanical** connection;
- (b) any number of **valves** used to adjust the **control surface**; and
- (c) sensors used to measure the **control surface actuator’s internal state**.

21.51 **Control system**

A system used for the adjustment of **control surfaces**, including all mechanical, hydraulic and electrical components involved in supplying or transmitting power or information used for such adjustment.

21.52 **Controlled component**

A component of the **AC75 Class Yacht** that is restricted in quantity and/or degree of modification, being a:

- (a) **hull**;
- (b) **foil arm stock**;
- (c) **foil wing**;
- (d) **foil flap**;
- (e) **rudder**;
- (f) **mast tube**;
- (g) **mainsail skin**; or
- (h) **jib**.

21.53 **Cooling device**

An **electric actuator** used exclusively for cooling parts of electrical circuits, **HCCs** and **LCSS**. A cooling device used for any other purpose, such as propulsion or transmission of information, is not a **cooling device**.

21.54 **COR/D**

The **Challenger of Record** and the **Defender** jointly.

21.55 **COR/D-ACP**

Until the formation of the **ACP**, **COR/D** in consultation with the **ACP**. Once it is formed, the **ACP**.

21.56 **Core**

Material that is bonded between two structural **FRP** skins in a sandwich construction, primarily to transfer shear. **Core** includes any material that is bonded to both skins, such as a corrugated laminate between two skins, but excludes:

- (a) solid laminate or metal used within edge, taper or local reinforcement details; and
- (b) adhesives and resins used to bond skins and core, or to fill honeycomb cells.

21.57 **Crew indication device**

Any device that:

- (a) contains an electronic system, or is connected directly or indirectly to an electronic system;
- (b) displays or plays audibly information that it has received or generated internally;
- (c) is worn or installed on the **yacht**;
- (d) can be seen or heard by the crew, directly or indirectly; and
- (e) may process data internally,

such as a display, LED or speaker.

21.58 **Crew media equipment**

One-design equipment supplied by **AC Media**, the **Regatta Director** or any other organising authority to be worn or carried by the crew.

21.59 **CRRP, Competitor Reconnaissance Restriction Period**

A period where **Competitor** activities which could be considered reconnaissance of another **Competitor** are heavily restricted.

21.60 **Defender**

As defined in the **Protocol**.

21.61 **Delivery boat**

A **support vessel** which is neither a **supporting chase boat** nor a **VIP boat**.

21.62 **Design information**

Any geometry, material specification, control-system architecture, structural analysis, manufacturing drawing, software, or similar data that describes the intended configuration of a **yacht** or its components and does not contain, embed, or reveal **performance data**.

21.63 **Dock tune**

The state of the rig as it is positioned on the **hull** before and after sailing with no sails hoisted.

21.64 **ECC**

Electrical control circuit: an electrical and/or electronic circuit within a **control system** or the **FCS**. When used in plural, refers collectively to the **AppendageECC**, **RigECC** and **FoilCantECC**.

21.65 **eChase**

A foiling green-energy powered **support vessel**.

21.66 **Electric actuator**

An electric linear or rotary motor, or functionally equivalent device, that converts electric power into force and translation, and/or torque and rotation.

21.67 **Electrical component**

An electrical or electronic component, including:

- (a) housings and integrated mechanical parts used to operate them, that are:
 - (i) supplied commercially as part of an electrical or electronic component (not manufactured by or for a **Competitor**); and
 - (ii) fundamental to the operation, protection or mounting of the component; and
- (b) magnetic shielding materials of Hall-effect sensors.

21.68 **Event**

Any regatta that forms part of the 38th America's Cup.

21.69 **Exempt foiling vessel**

A foiling **support vessel** such as a team owner's private yacht, or a foiling spectator boat, that has no significant interaction with a **Competitor's** technical teams.

21.70 **External forces**

Forces applied from outside the **yacht** to the **yacht**, such as fluid pressure, fluid dynamic friction and gravity.

21.71 **FCS**

Foil cant system: a **one-design** system for controlling the rotation of the **foils** about the **foil arm cant** axes.

21.72 **FCS transverse reference plane**

Transverse plane parallel to **TRP**, midway between the forward and aft cant bearing centres.

21.73 **Fibre**

One or more slender filaments with an aspect ratio greater than 10.

21.74 **FlapDOF**

The degree-of-freedom representing the rotation of a **foil flap** about its hinge axis, which may include some twist or other deformation as further defined in the **AC75 Class Rule**.

21.75 **FlightCS**

Flight control system: the **control system** used to control all **FlightDOFs**.

21.76 **FlightDOF**

One of, or if plural, the combination of:

- (a) the port and starboard **FlapDOFs**; and
- (b) the **RakeDOF**.

21.77 **FlightHCC**

The part of the **AppendageHCC** that actuates the **FlightDOFs**.

21.78 **Foil**

An appendage that can provide hydrodynamic side force and/or vertical lift, that is not a **rudder**.

21.79 **Foil arm**

A component of a **foil** that connects the **FCS** to the **foil wing**.

21.80 **Foil arm drum**

A fairing to close a penetration in the **hull** that allows **cant** rotation of a **foil arm**.

21.81 **Foil arm fairing**

Those parts of a **foil arm** that are not part of the **foil arm stock**. Although a **foil arm fairing** may be referred to in the singular, it can comprise several unconnected parts, each attached to a different region of the **foil arm**.

21.82 **Foil arm stock**

A component forming the structural spar of a **foil arm** combined with a leading edge. For an **AC75 Class Yacht** and an **AC40 Class Yacht**, the **foil arm stock** shall be a **one-design** component with included items defined in the relevant **Foil arm stock** specifications.

21.83 **Foil cant reference point**

The point at the intersection of the **foil cant** axis and the **FCS transverse reference plane**.

21.84 **Foil flap**

A component of a **foil** that can be adjusted relative to a **foil wing** by a **foil** system.

21.85 **Foil flexure**

A region of a **foil wing** and/or **foil flap** that is declared by the **Competitor** as flexible.

21.86 **Foil wing**

A component of a **foil** that, together with a **foil flap**, typically generates most of the hydrodynamic vertical lift of the **foil**.

21.87 **Foil wing assembly**

The **foil wing**, **foil flap**, and those parts of the **foil** system that are contained entirely within the **foil wing box** when **projected** to **TRP**.

21.88 **Foil wing box**

A 2D region with extents defined in the “Foil” section of the **AC75 Class Rule**.

21.89 **Foil-restricted**

Having a total *hydrofoil area*, when **projected** to a plane parallel to a vessel’s flotation waterplane, of no more than 0.3 m². Within this definition, the *hydrofoil area* shall be the combined area of all regions of appendages that:

- (a) are, or can be, below the flotation waterplane;
- (b) have an aerofoil-like cross-section (excluding attachments such as sensors or supports);
- (c) have a span direction (normal to the aerofoil-like cross-section) within $\pm 75^\circ$ of horizontal; and
- (d) are not part of a propeller, a cavitation plate for a propeller, or a propeller duct.

21.90 **FoilCantECC**

The **ECC** that forms part of the **FCS**, and controls the **HCC** of the **FCS**.

21.91 **Foot**

The bottom edge of a **sail skin**.

21.92 **Foot girth**

The distance from the **tack point** to the **clew point** of a **sail skin**.

21.93 **Foot line**

A line running along the **foot** of a **sail skin** which may be tensioned.

21.94 **FRP**

Fibre-reinforced polymer matrix composite.

21.95 **Guest racer**

A human being on a **yacht** who:

- (a) may observe racing but may not contribute to racing; and
- (b) is not required to be a member of the team racing that **yacht**.

21.96 **Hardwired**

Physically connected by electrical wires, including localised electromagnetic or optical coupling between system components (e.g. galvanic isolation of a protocol bus, or optical isolation of an I/O device). For a circuit to be **hardwired**, all information exchange must be confined to that circuit, and there shall be no wireless connections.

21.97 **HCC**

Hydraulic control circuit.

21.98 **Head**

The top edge of a **sail skin**.

21.99 **Head girth**

The distance from the **head** point to the **peak point** of a **sail skin**.

21.100 **Head pennant**

A nominally round piece of **rigging** used as an extension of a halyard to accommodate a sail with reduced **luff** length.

21.101 **Head point**

The intersection or virtual intersection of the **luff** and **head** of a **sail skin**. The **luff** or **head** will be extended tangentially from the point where the **luff** or **head** curvature reduces below a radius of 1.0 m when approaching the intersection.

21.102 **High strength metal**

A metal **constituent** of **appendages** subject to specific constraints.

21.103 **Hull**

The physical outer shell structure that forms the main body of the **yacht**, including its surface finishes. Hardware attached to the main body of the **yacht** may be designated as part of the **hull** at the **Competitor's** discretion.

21.104 **Hull internals**

All structure inside the **hull surface**, other than the **hull**, that contributes to the strength or stiffness of the **yacht**, including bulkheads, frames, floors and stringers.

21.105 **Hull lower**

The part of the **hull** whose external geometry corresponds to the **hull lower surface**.

21.106 **Hull lower surface**

The lower part of a **hull surface** that is divided by the **perimeter line**, extending downwards from the **perimeter line**.

21.107 **Hull surface**

The continuous, closed surface which represents the geometry that the external surface of a **hull** was designed to.

21.108 **Hull upper**

The part of the **hull** whose external geometry corresponds to the **hull upper surface**, and is not the **hull lower**.

21.109 **Hull upper surface**

The part of the **hull surface** that is not the **hull lower surface**.

21.110 **Hydraulic accumulator**

A pressure storage reservoir in which hydraulic oil can be held under pressure applied by a spring, a raised weight, the hydrostatic head of the fluid itself, or compressed gas.

21.111 **Hydraulic actuator**

A passive hydraulic device (i.e. one that does not meter, regulate, or provide feedback control) such as a ram or motor whose sole function is to convert:

- (a) hydraulic pressure into force or torque, and flow into translation or rotation; or
- (b) force or torque into hydraulic pressure, and translation or rotation into flow.

A **valve** shall not be considered to be or contain a **hydraulic actuator**.

21.112 **Hydraulic fitting**

A connector used to join different parts of a hydraulic system such as tubes, manifolds and cylinders.

21.113 **Hydraulic intensifier**

A pressure or flow intensifier, being a device whose sole function is to modify the pressure and flow rate of hydraulic fluid within an **HCC** by converting:

- (a) high flow and low pressure into lower flow and higher pressure; or
- (b) low flow and high pressure into higher flow and lower pressure.

21.114 **Hydrodynamic surface**

The external surface of a **foil wing, foil flap, foil flap** segment or **rudder** as declared by a **Competitor**, where:

- (a) the surface shall form one or more closed volumes;
- (b) **foil** systems shall be excluded;
- (c) surfaces bounding internal equipment spaces may be excluded; and
- (d) local details and openings may be excluded, provided each local detail has a volume less than 500 mm³ or opening surface area less than 220 mm².

21.115 **IG**

The intersection of the centre line of the forestay with the leading edge of the **mast**, as shown in the "Mast" section of the **AC75 Class Rule**.

21.116 **ILS**

Instrumentation and logging system: an electronic instrumentation circuit including devices such as sensors, processing units and logging systems.

21.117 **Internal state**

The specific condition of a device, comprising:

- (a) for a **control surface actuator**:
 - (i) the extension and velocity parallel to, or rotation and angular velocity about its **ActuatorAxis**;
 - (ii) the force or torque acting parallel to or about its **ActuatorAxis**;
 - (iii) the hydraulic pressure within any part of the device, including the inlet and outlet;
 - (iv) the temperature within any part of the device;
 - (v) the electrical voltage across or current through any part of the device; and
 - (vi) the **internal state** of **valves** within the **control surface actuator**;
 - (b) for an **LCS, AppendageHPS, RigHPS** or **valve**:
 - (i) the extension, rotation, velocity or angular velocity of one part of the device with respect to another part of the device;
 - (ii) the force or torque between two parts of the device that extend or rotate with respect to each other;
 - (iii) the hydraulic pressure within any part of the device, including the inlet and outlet;
 - (iv) the temperature within any part of the device;
 - (v) the electrical voltage across or current through any part of the device; and
 - (vi) except for a **valve**, the **internal state** of any **valves** within the device;
 - (c) for an electrical circuit or **primary power supply**:
 - (i) the voltage, current or temperature within that system; and
 - (ii) the voltage, current, temperature, state-of-charge or similar information from electrical power supplies that power that system or electrical devices controlled by that system;
 - (d) for the **AppendageEPS** or **RigEPS**:
 - (i) those properties included for an electric circuit by Rule 21.117 (c); and
 - (ii) the motor speed and motor torque of any motor within that **AppendageEPS** or **RigEPS**;
- provided that if any of this data could be used as a proxy for **yacht state** information not specifically itemised above, that data shall be excluded from the **internal state**.

21.118 **Isolated**

Electrically insulated so as to prevent the passage of electricity, and physically separated so that isolation is apparent by inspection. **Isolated** cabling may be bundled together, so long as individual cables within a bundle can be followed, but cables from two **isolated** systems must not share common connectors.

21.119 **JG**

The distance between **MRP** and the intersection of the centreline of the forestay and a plane 1.500 m above **MWP** with the rig at dock tune as shown in the “Mast” section of the **AC75 Class Rule**.

21.120 **Jib**

A sail set forward of the **mast** hoisted on the forestay.

21.121 **Jury**

As defined in the **Protocol**.

21.122 **Launched**

- (a) First installed on an **AC75 Class Yacht** with that yacht afloat where the term appears in relation to an **AC75 Class Yacht**.
- (b) First installed on an **AC40 Class Yacht** with that yacht afloat where the term appears in relation to an **AC40 Class Yacht**.

21.123 **LCP**

Longitudinal centre plane.

21.124 **LCS**

Liquid Cooling System is a hydraulic system with the sole purpose to cool components, systems or fluid within the **yacht** by the movement of a fluid, and has no effect on the **yacht state** other than that resulting from the transfer of heat, does not provide feedback to other systems on the yacht and can do no work.

21.125 **Leech**

The aft edge of a **sail skin**.

21.126 **Leech line**

A line running within 50 mm of the **leech** of a **sail skin** which may be tensioned.

21.127 **Leech points**

For any **sail skin** a **leech point** is the intersection of the **leech** and a line perpendicular to the line from the **clew point** to the **head point** taken at the corresponding percentage of **LL** from the **clew point**. **Leech points** are illustrated in the “Jib” and “Mainsail” sections of the **AC75 Class Rule**.

21.128 **Legacy**

Relating to a **controlled component** that was first **launched** in **AC36** or **AC37**.

21.129 **Legacy replica**

A reproduction of a **legacy controlled component**.

21.130 **Linear component**

A component of the **yacht**:

- (a) that has no moving parts or mechanisms;
- (b) for which any two points on or within it must either always be in contact, or never be in contact;
- (c) whose overall deformation at any point, in response to normal sailing loads, is approximately linear; and
- (d) that always returns to the same state in the absence of applied load.

A **linear component** may be constructed from multiple parts and fastened together **mechanically** or with an interference fit, or contain voids in materials such as wood or foam which may open or close under normal sailing loads. Such connections and materials are exempt from Rule 21.130 (b) provided that the components, connections or materials are not engineered to provide deliberately non-linear characteristics through internal contact mechanisms.

21.131 **LL**

The distance from the **head point** to the **clew point** of a **sail skin**.

21.132 Longitudinal

Orthogonal to **TRP**.

21.133 Low-pressure circuit

Hydraulic circuits within an **HCC** that:

- (a) supply oil from reservoirs and return oil to reservoirs;
- (b) operate at no more than 6 bar when the oil is in any static equilibrium condition; and
- (c) are incapable of delivering oil to a **hydraulic actuator**, **hydraulic accumulator** or **hydraulic intensifier** at more than 6 bar.

21.134 LP

The distance, measured perpendicular to the **luff**, from the **luff** to the **clew point** of a **sail skin**.

21.135 Luff

The forward edge of a **sail skin**.

21.136 Mainsail

The combination of **sail skins** and associated components that are hoisted on the **mast**.

21.137 Mainsail lower zone

The zone of a **mainsail** beneath the line, or extension of the line, that passes through the following two points:

- (a) the intersection or virtual intersection of the **luff** and a circle of radius 25 m centred at the **head point**; and
- (b) the intersection or virtual intersection of the **leech** and a circle of radius 25.25 m centred at the **head point**.

The **luff** or **leech** will be extended tangentially from the point where the **luff** or **leech** curvature reduces below a radius of 1.0 m when approaching the intersection.

21.138 Mast

An assembly comprising the **mast tube** with any attached components and **rigging** that is not hoisted with the **mainsail** or **jib**. This includes:

- (a) **mainsail** support structures and **control systems** that are not part of the **mainsail**, such as booms;
- (b) sheets that cannot be easily disconnected from **mast** structures and **control systems**; and
- (c) other hardware which remains part of the rig whilst sailing, such as:
 - (i) **one-design rigging**;
 - (ii) running **rigging** such as halyards;
 - (iii) **mast fittings**;
 - (iv) cables;
 - (v) **media equipment**;
 - (vi) flotation systems; and
 - (vii) hydraulic rams.

21.139 **Mast centre plane**

The plane perpendicular to the aft face of the **mast surface specification** and coincident to the lengthwise centre line of the aft face of the **mast surface specification**.

21.140 **Mast fitting**

A physical component, small compared to the **mast** and sails, attached to the **mast tube** or **rigging**, such as spreaders, luff tracks, fairings and instrument sensors.

21.141 **Mast lower zone**

The zone beneath a plane normal to the w_{MAST} axis, 1500 mm above the ball as shown in the “Mast” section of the **AC75 Class Rule**.

21.142 **Mast surface specification**

The external surface of the **mast tube** as given in the **mast** specification.

21.143 **Mast tube**

The principal spar of the **yacht**. For the **AC75 Class Yacht** this includes the one design laminate provided in the **mast** specification as well as any team designed reinforcements permitted by the **AC75 Class Rule**. The **mast tube** excludes any attached components such as luff tracks, **mainsail** support structures and **control systems** as well as taping or local reinforcements for the connection of such components.

21.144 **Mast upper plane**

The plane oriented at 95° to the aft face of the **mast surface specification** at $w=26.5$ m in **mast**-fixed reference frame, as shown in the “Mast” section of the **AC75 Class Rule**.

21.145 **Match venue**

As defined in the **Protocol**.

21.146 **Material substance**

The actual physical material present in a component, rather than its type or classification. Identical components will have different **material substance**.

21.147 **Measurement Committee**

A committee responsible for ensuring a **yacht** satisfies the **Class Rules**.

21.148 **Measurement Procedures**

A document detailing the procedures for the measurement of a **yacht**, including measurement tolerances, written by the **Measurement Committee** and approved and published by the **Rules Committee**.

21.149 **Mechanical**

Relating to a component or system that has no hydraulic, pneumatic, magnetic or electrical parts, and operates only through the contact and kinematics of components.

21.150 **Media Bowsprit**

A bowsprit which forms part of the **media equipment**.

21.151 **Media Equipment**

The **one-design** hardware supplied by **AC Media**, including the **Media System**.

21.152 **Media System**

A **one-design** system for managing the flow of data, audio and video around the **yacht** and off the **yacht** for broadcast.

21.153 **MRP**

Mast rotation point. The point about which the mast base rotates relative to the **hull**.

21.154 **MWP**

Measurement waterline plane.

21.155 **New Competitor**

As defined in the **Protocol**.

21.156 **Observed Competitor**

The **Competitor** that a specific **Recon Unit** is engaged in providing reconnaissance on.

21.157 **Observed Day**

A day in which a **Competitor's yacht** is required to be observed by their **Recon Unit**.

21.158 **Official noticeboard**

As defined in the **Protocol**.

21.159 **Official repo**

A designated Git repository, maintained by the **Rules Committee**, that contains the current, authoritative versions of the **AC75 Class Rule**, the **AC40 Class Rule**, the **AC Technical Regulations** and all associated specifications.

21.160 One-Design

The following parts of an **AC75 Class Yacht** or **AC40 Class Yacht** that have a specified design, are procured from an external supplier, and may only be modified where specifically permitted by the **Class Rules** and the **Specifications**:

- (a) all **AC40 Class Yacht** components;
- (b) within an **AC75 Class Yacht**:
 - (i) the **Audio Hub**;
 - (ii) the battery units within the **primary battery bank**;
 - (iii) the **CAN bridge**;
 - (iv) **foil arm** pins and bearings;
 - (v) **foil arm stocks**;
 - (vi) the **FCS**;
 - (vii) the **guest racer** seating module;
 - (viii) the high-pressure **hydraulic accumulator** within the **RigHCC**;
 - (ix) the **mainsail** buoyancy system;
 - (x) **mast fittings** within the **mast** specification with a specified make and model;
 - (xi) **media equipment**, including the **Media System** and **crew media equipment**;
 - (xii) the pumps used within the **RigHCC**;
 - (xiii) the **RigEPS**;
 - (xiv) standard pressure relief valves detailed in the "Hydraulic Circuits" section of the **AC75 Class Rule**;
 - (xv) **one-design rigging**; and
 - (xvi) **TRACI**.

Any additional components or materials fitted to an **AC75 Class Yacht one-design** component are not part of that **one-design** component, such as material added to the leading edge of a **foil arm stock**.

21.161 One-design rigging

The **one-design** forestay, cap shrouds and lower shrouds, being a subset of the **yacht's rigging**.

21.162 Passive input device

A device that is moved by a crew member to produce an electrical control signal, such as a button, joystick, slider or touch screen. A **passive input device** includes only the component moved by the crew member and any directly connected parts required to produce the resulting signal.

21.163 Peak point

The intersection or virtual intersection of the **leech** and **head** of a **sail skin**. The **leech** or **head** will be extended tangentially from the point where the **leech** or **head** curvature reduces below a radius of 1.0 m when approaching the intersection.

21.164 Performance data

Any data, function or model that is derived from measurements taken during the physical operation of a **yacht** or any of its components.

21.165 **Perimeter line**

The continuous line on the **hull surface** that forms the perimeter of the **hull surface** when viewed orthogonal to **MWP**. Where there are multiple coincident points on the perimeter of the **projected hull surface**, the **perimeter line** shall:

- (a) pass through the highest point of each set of coincident points; and
- (b) where this results in a vertical discontinuity, also pass through the smallest number of additional coincident points required to make the **perimeter line** continuous.

21.166 **Planform**

A geometry when **projected** to **MWP**.

21.167 **Platform**

The **hull, foils, rudder** and other systems, hardware, **rigging** and **one-design** equipment that is weighed with those components.

21.168 **Platform measurement condition**

The measurement condition for the **platform** described in the "General Arrangement" section of the **AC75 Class Rule**.

21.169 **Platform upper surface**

The upper surface of the **platform**, being the surface of the **platform** that is visible when viewed from above and orthogonal to **MWP**.

21.170 **Primary battery bank**

A battery bank that powers the main electrical systems on the **yacht**.

21.171 **Primary electrical circuit**

Any of the following electrical circuits:

- (a) the **AppendageECC**, including the **AppendageEPS**;
- (b) the **RigECC**;
- (c) the **RigEPS**;
- (d) the **FoilCantECC**;
- (e) the **CCS**
- (f) the **CAN bridge**
- (g) the **ILS**;
- (h) the **CIS**;
- (i) the **Media System**; and
- (j) an optional **CCTV system**.

21.172 **Primary power supply**

The **primary battery bank** in combination with any back-up batteries, DC-DC converters and associated cabling.

21.173 **Projected**

The **projected** shape of a part is the shape of a shadow cast by that part (or by an opaque version of that part, if constructed from a transparent material) on the specified plane from a parallel light source acting normal to that plane.

21.174 **Protocol**

The Protocol governing the 38th America's Cup made between the Royal New Zealand Yacht Squadron and Royal Yacht Squadron Limited.

21.175 **Proxy**

A measurement used as a substitute for, or to represent, another measurement.

21.176 **Publicly available source**

A source of information that:

- (a) is available to all **Competitors** and the public, either for no charge, or at a reasonable cost; and
- (b) an expert in the field would be aware of, or could easily become aware of through a normal line of inquiry.

21.177 **Quasi-isotropic RFRP plate**

Flat, monolithic, in-plane quasi-isotropic **RFRP** plate of uniform thickness, that is of dimensions no larger than 600 mm x 1200 mm x 50 mm at the time compaction pressure greater than 1.1 bar is applied.

21.178 **RakeDOF**

A degree-of-freedom of motion, being the rotation of the **rudder** about its rake axis, excluding any incidental rake change resulting from **rudder** yaw change.

21.179 **Recon Administrator**

A Regatta Official who, with the **RMP**, manages the Joint **Competitor** Reconnaissance Programme. Until such time that the **Recon Administrator** is appointed, their role will be undertaken by a representative from **COR/D**.

21.180 **Recon Content Team**

A team engaged to create media content about all **Competitors**.

21.181 **Recon file store**

An online file storage resource, with upload access to a specific folder provided to each **Recon Unit** and download access to all folders provided to all **Competitors**.

21.182 **Recon Unit**

A team of two people engaged to provide reconnaissance and media on a specific **Competitor**.

21.183 **Recover**

To drain oil from a **hydraulic actuator** chamber to:

- (a) another **hydraulic actuator** chamber (whether or not of the same **hydraulic actuator**); or
- (b) a high-pressure **hydraulic accumulator**;

without first passing to a **low-pressure circuit**. Leakage that is nominal, unintentional and has no significant impact on the hydraulic circuit is not **recovery**.

21.184 **Regatta Director**

As defined in the **Protocol**.

21.185 **Regatta Officials**

As defined in the **Protocol**.

21.186 **Retained portion**

The portion of a declared **controlled component** version which exactly matches the component's declared **Version A** in both geometry and **material substance**. For example, for a **foil wing's** Version C to have a **retained portion** of 80%:

- (a) at least 80% of **Version A** must exist in Version B; and
- (b) at least 80% of Version B must exist in **Version A**;
- (c) at least 80% of **Version A** must exist in Version C;
- (d) at least 80% of Version C must exist in **Version A**; and
- (e) a common section of at least 80% of **Version A** must exist in both Versions B and C.

21.187 **RFRP**

Regular fibre-reinforced polymer matrix composite, being **FRP** that is neither:

- (a) thermoplastic **FRP**; nor
- (b) **commercial pre-consolidated FRP**.

21.188 **Rig**

The combination of the **mast**, **mainsail** and **jib**.

21.189 **RigCS**

Rig control system: the **control system** used to control all **RigDOFs**.

21.190 **RigDOF**

A degree-of-freedom of motion, or deformation, of:

- (a) the **rig**; or
- (b) a device, such as a **jib** car, that is **mechanically** connected to the **rig**. In this case, the **mechanical** connection may at times be slack, such as when there is a slack sheet between a **jib** car and the **jib**.

21.191 **RigECC**

The **ECC** within the **RigCS** that controls the **RigHCC**.

21.192 **RigEPS**

Rig electrical power supply: the **one-design** system that drives the hydraulic pumps in the **RigHPS**, including any motors, controllers and electronic hardware.

21.193 **Rigging**

The ropes, chains, wires, cables, rods and associated **mechanical** connectors used to support, operate or restrain the **yacht's mast**, sails and systems.

21.194 **RigHCC**

The **HCC** within the **RigCS** that actuates the **RigDOFs**.

21.195 **RigHPS**

Rig hydraulic power supply, that when driven by the **RigEPS**, supplies hydraulic power to move the **RigDOFs**.

21.196 **RMP, Recon Management Panel**

The **RMP** is a panel comprising one team member from each **Competitor**, responsible for determining the personnel in each **Recon Unit**.

21.197 **Rudder**

An appendage positioned on the centreline of the **hull** which is rotated to affect yaw and trim.

21.198 **Rule Enquiry**

The process by which a **Competitor** requests interpretation or amendment of the **Class Rules**.

21.199 **Rules Committee**

A committee responsible for administering **Class Rules** enquiries, ruling on interpretations of the **Class Rules**, publishing and amending official documents as specified in the **Class Rules** and other responsibilities as detailed in the **Class Rules**.

21.200 **Sail hardware**

Components of a sail for the purpose of attachment or applying pre-tension of sail controls and **battens**. If two or more components are rigidly connected together then they will be considered as a single piece of **sail hardware**.

21.201 **Sail skin**, also **skin**

A thin and predominantly flexible membrane of a **jib** or **mainsail**. **Sail skins** include stickers, branding, **batten** pockets, **luff** pockets, attachment devices such as bolt ropes and zips as well as any reinforcements such as edge tapes or corner patches.

21.202 **Secondary electrical circuit**

Any electrical circuit which is not a **primary electrical circuit** or the **primary power supply**, such as a self-contained circuit for a permitted bilge pump, smoke alarm, or fan.

21.203 **SHA**

An SHA-512 of a component's **blueprint**, generated according to the Secure Hash Standard (SHS) (FIPS PUB 180-4) issued by the National Institute of Standards and Technology. This shall be generated using a tool such as the Windows software "Hash Tool" by DigitalVolcano Software.

21.204 **Shared Venue**

The venue of an **event**, or any venue where more than one **Competitor** is currently operating. Where a Rule refers to a **shared venue** of a **Competitor**, it implies that the **Competitor** is one of the teams currently operating at that venue.

21.205 **Specifications**

The **AC75 Specification** and **AC40 Specification** collectively.

21.206 **Steering wheel**

A device used by the crew to steer the **yacht**.

21.207 **SteeringCS**

The **control system** used to control the **SteeringDOF**.

21.208 **SteeringDOF**

A degree-of-freedom of motion, being the rotation of the **rudder** about its yaw axis, excluding any incidental yaw change resulting from **rudder** rake change.

21.209 **SteeringHCC**

A part of the **AppendageHCC** used to assist in the control of the **SteeringDOF**.

21.210 **Strop**

A length of rope with its two ends spliced together forming a continuous ring or band.

21.211 **Support vessel**

Any boat operated by a **Competitor** other than an **AC75** or **AC40**.

21.212 **Supporting chase boat**

A **support vessel** that spends the majority of its time supporting a **Competitor's yacht**.

21.213 **Surrogate yacht**

A vessel that could potentially be used as a learning platform for an **AC75 Class Yacht**, being:

- (a) any sailing yacht other than:
 - (i) an **AC75**;
 - (ii) an **AC40**;
 - (iii) yachts belonging to a class existing as at 19 October 2024 and who complies with her current class rules;
 - (iv) yachts which held a valid IRC or ORC certificate as of 19 October 2024, or in other rating yachts from time to time if approved by **COR/D-ACP**; or
 - (v) a **foil-restricted** yacht; or
- (b) any motorised vessel or towed platform other than a **support vessel**.

21.214 **Symmetric**

A component that is required to be **symmetric** must be designed to be exactly symmetric. At any point on its surface, the built shape may only vary from the designed shape within the build tolerance specified for that component within the **Class Rules**. Such a component must also be designed to be almost exactly symmetric in its structure, where any structural asymmetry can only result from details such as:

- (a) asymmetries at the individual ply level (e.g. lap joints or staggers), provided the overall laminate has symmetric structural behaviour;
- (b) fastenings across the symmetry plane; and
- (c) right-handed screw threads;

which are not designed to induce asymmetric structural behaviour.

21.215 **Tack point**

The intersection or virtual intersection of the **luff** and **foot** of a **sail skin** for a **jib** and the intersection of a 26.750 m radius circle centred at the **head point** and the **luff** of a **sail skin** of a **mainsail**. The **luff** or **foot** will be extended tangentially from the point where the **luff** or **foot** curvature reduces below a radius of 1.0 m when approaching the intersection.

21.216 **Technical Director**

The Chief Technical Officer of **ACP** or person who performs the duties of the Chief Technical Officer if that role has not been appointed.

21.217 **TRACI**

A **one-design** Tactical Race And Course Information system, comprising software and hardware.

21.218 **Transverse**

Orthogonal to **LCP**.

21.219 **Trip line**

A system used for controlling the connection between the head of a **mainsail** skin and the **mast** so that the **mainsail** can be locked to the mast or lowered.

21.220 **TRP**

Transom reference plane.

21.221 **Valve**

Any mechanical assembly that controls the flow of oil within an **HCC**, including a part or parts that move, when electrically, mechanically or hydraulically energised, or de-energised and possibly driven by a spring return, such as a check valve, pressure relief valve, or electrically powered control valve.

21.222 **Version A**

The version of a **controlled component** from which changes to that component are compared and measured.

21.223 **Veteran Competitor**

A **Competitor** that is not a **new Competitor**.

21.224 **VIP boat**

A **support vessel** operated with the sole purpose of hosting VIPs.

21.225 **Wet box**

A volume within the **hull** that is separated from the remainder of the enclosed volume of the **hull** by a watertight boundary, and shares a penetration with the **hull** external surface.

21.226 **Wetted**

The **wetted** part of a component is that part of a component that extends or can extend outside of the **hull surface** below the **perimeter line**.

21.227 **Woolly**

A piece of wool or light fabric used only for flow visualisation.

21.228 **Working day**

A period of 24 hours excluding:

- (a) Sundays;
- (b) Saturdays prior to 3 months before the first race of the America's Cup Match;
- (c) 25/12/2025 to 3/1/2026;
- (d) 3/4/2026 to 6/4/2026;
- (e) 25/12/2026 to 3/1/2027;
- (f) 26/3/2027 to 29/3/2027.

For example a **working day** beginning on Friday 11th July 2025 at 09:00 CEST ends on Monday 14th July 2025 at 09:00 CEST.

21.229 **WSP**

Wing symmetry plane.

21.230 **Yacht**

- (a) An **AC75 Class Yacht** where the term appears in the **AC75 Class Rule**.
- (b) An **AC40 Class Yacht** where the term appears in the **AC40 Class Rule**.
- (c) An **AC75 Class Yacht** or an **AC40 Class Yacht** where the term appears in the **AC Technical Regulations**.

21.231 **Yacht assembly**

The combination of the **platform**, the **mast**, the **mainsail** and the **jib**.

21.232 **Yacht state**

The specific condition of the **yacht**, comprising any of the following:

- (a) the position and orientation of any part of the **yacht** with respect to an earth-fixed datum;
- (b) the position and orientation of any part of the **yacht** with respect to the body of water on which she is sailing;
- (c) the position and orientation of any **control surface** with respect to the **yacht**;
- (d) the position and orientation of a **foil** with respect to the **yacht**;
- (e) the shape of any **control surface** or **foil**;
- (f) the position and orientation of **steering wheels** or part thereof, with respect to the **yacht**;
- (g) the position and tension of foot or leech lines, with respect to the **yacht** or **sail skin**;
- (h) the stress, strain, tension and force in any part of the **yacht**, except in **passive input devices**;
- (i) other force-related quantities in any part of the **yacht**;
- (j) the volume, velocity, flow rate or pressure of fluid within, or acting on, any part of the **yacht**;
- (k) all absolute measures of the above and quantities measured relative to each other;
- (l) all time derivatives of the above;
- (m) all proxies of the above;
- (n) all quantities derived from any of the above; and
- (o) all quantities from which the above can be derived or approximated.

22 *Agreement*

- 22.1 As further detailed in Section 14 of the **AC Technical Regulations**, the version of this document which is in force at any time is the latest released version in the main branch of the **Official Repo**.