

CHALLENGER OF RECORD & DEFENDER

AMERICA'S CUP 36

Draft AC75 Interpretation 003 of AC75 Class Rule Version 1.2 issued 10 December 2018

Rule References:

- 9.1 Except as permitted in Rules 9.5 and 9.6, the outermost layer of the **hull, foils** and **rudder** must be a **commercial product** approved by the **Rules Committee** according to Rule 8, who shall only approve paints that are comparable to those on the list provided in Rule 8.6.
- 11.19 The minimum areal density of any part of the **hull shell** shall be 2 kg/m². (Note that this Rule does not imply any stiffness, strength or robustness targets; it exists only to ensure that a **hull shell** is a solid structure and not, for example, a film-covered space frame structure.)
- 35.52 **Hull shell**
- The monolithic or sandwich panel construction that forms the structure of the **hull surface**, excluding internal structure and local reinforcements such as bulkheads, ring frames, longitudinal beams, stringers or taping details.
- 35.53 **Hull surface**
- The external surface of a **hull**, where:
- (a) fittings such as pedestals, helm wheels and deck gear shall be excluded; and
 - (b) local details may be excluded, provided they have no significant aerodynamic, hydrodynamic or hydrostatic effect. Examples of such details that may be excluded are:
 - (i) local reinforcements for deck hardware;
 - (ii) recesses for winches; and
 - (iii) local foot rests.
- The **hull surface** is divided into the **deck** and **hull lower surface** by the **perimeter line**.

Background:

The hull surface is typically built out of composites to which a surface finish (primer, paint) is applied.

For the purpose of this interpretation we assume that all materials of the hull surface, including the surface finish (paint) comply with all related rules in the AC75 Class Rules.

Questions:

1. Does the minimum areal density in Rule 11.19 include surface finish like paint?
2. Can the Rules Committee provide guidance as to how a team has to prove compliance of the hull surface of their yacht with Rule 11.19?

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Interpretation

The surface finish is part of the **hull**. As described in Rule 9.1, it must be the outermost layer of the **hull surface**.

The **hull shell** is defined as forming the structure of the **hull surface**. Therefore, the surface finish shall not be included unless it significantly contributes to the **hull surface** structure.

Answers

1. No, unless such surface finish contributes significantly to the structure of the **hull surface**.
2. Hull laminate drawings must be sent to the **Measurement Committee** stating the layers and materials of the **hull shell** (including core if applicable) as well as a targeted percentage of resin content. The **Measurement Committee** will select laminate zones and calculate the expected areal density which shall fall at or above minimum required. The **Measurement Committee** may take samples from a test panel which has been declared to have the base hull shell laminate, as confirmed through a **Competitor** Declaration. As a last resource, the **Measurement Committee** may take samples of the **hull shell** in those zones where the target calculated areal density is at the minimum value.