

F18 class rules change

A submission from: Italian, Hungarian and French classes

Purpose or Objective

To update the list of products entering in F18 hull construction to improve boat construction quality and reliability.

Proposal

To remove the wood restriction regarding use of Epoxy resin in hull lamination by amending F18 class rule.

By removing this restriction, Epoxy resin can be used with any other core material in the same way it is allowed for polyester resin.

Current rule:**D.3.1 MATERIALS**

(a) The **hull** shells shall be built from polyester or vinylester resin, glass fibers, polyester gel coat, the combination of wood-epoxy or injected plastic with a core of PVC or balsa or felt. The **hull** shells shall not be altered, other than locally for fittings and passage of equipment and normal reinforcement. Epoxy glue is permitted for joining components. Every material that is not expressly permitted is prohibited.

Proposed wording change:**D.3.1 MATERIALS**

The hull shells shall be built from Polyester resin, Vinylester resin, Epoxy resin, white glass fibres, covered by gel coat or paint.

PVC, wood, balsa, or felt shall be used for the core of the shell.

Plastic is allowed to build plastic injected hull.

Reasons

Actually epoxy can be used only to join decks, sub decks, half hull and as primer for painted hull.

In hull lamination epoxy is allowed only if you are using wood. This restriction was pertinent more than 20 years ago at the beginning of the class to meet builder production tools and process who were using polyester resin for their major production.

Nowadays the situation has completely changed, most of the modern beach cats in the same price range than F18 such Viper, Nacra 17 and recent Phantom essential are all made using epoxy resin for one main reason:

To give value for money to the customer.

Epoxy will keep hull stiffness for years

This change will also improve fleet consistency by supplying platform who will last longer.

A list of some of the last design using epoxy resin is in attached link:

<http://www.sail-world.com/Europe/2016-Mixed-Multihull---Panel-report-and-recommendations/96329?source=google.fr>

Extract :

NACRA 17: 4.5 Hull Construction

Glass fibre, epoxy resin, PVC foam core, carbon fibre reinforcement, vacuum bagged.

VIPER:

5.5 Hull Construction

Glass fibre, epoxy resin, PVC foam core, carbon fibre reinforcement, vacuum bagged.

NACRA 16:

6.5 Hull Construction

Glass fibre, epoxy resin, PVC foam core, carbon fibre reinforcement, vacuum bagged.

Epoxy has become so familiar that it is now used everywhere. It can be used easily by any of us. Some marine composite companies are offering kits for Corinthian sailors with dedicated youtub tutorials to explain how easy it can be applied and repair.

Polyester/Epoxy cost difference:

Testimony from one of the 2 last French boat builder:

Material for info:

- Price per kg of a quality vinylester resin: 5.55 € ex VAT

- Price per kg mix (resin + hardener) of a quality epoxy resin: 7,80 € ex VAT

Quantity used per hull lamination: around 25 kg.

Looking at legal side the epoxy restriction is quiet impossible to control as it requests to analyses shell samples who may already contain legal epoxy glue or primer, which confirm the rule of thumb :

- if it is not possible to enforce a rule there is no reason to keep it in force!

By offering to all builders the possibility to use Polyester or epoxy in hull lamination as they wishes we are opening a fair competition allowing all of them to built the best reliable boat at the best value for money.

This proposal will help in building better platforms who will last longer, will preserve owner investment and may prepare in a better way the class to long term perspective plan.
