Are there equivalent alternatives to fibreglass?

Instead of recycling, are there equivalent alternatives to fibreglass as ship building material?

To explore that well, it certainly helps to have a clear understanding about the reasons why fibreglass composites are used with sailing and motor yachts in the first place. Denmark-based Fiberline offers a very useful bigger picture:

“Plastics reinforced with various forms of fibre make up a significant portion of the composites that are used by modern society. Fibre-reinforced plastics can be divided roughly into two groups: synthetic materials reinforced with short fibres, and synthetic materials reinforced with long (continual) fibres. Composites that are reinforced with short fibres are used primarily for injection moulding or extruded plastic products. Composites reinforced with long or continual fibres are often used in large structures such as ships, pressure tanks, aircrafts, and wind turbine wings. In fibre-reinforced plastic materials, the properties of the fibres are used to resist tensile and compressive loads, while the plastic – the matrix material – transfers shear.

When using composite materials instead of traditional materials such as steel or aluminium for example, there are normally significant reductions in weight due, in part, to the specific properties of the individual components and low dead weight, and partly because it is possible to produce composites for specific purposes. Because it is a combination of materials, a composite product can be combined and designed with a view to specific load-bearing capacities, while providing a number of advantages in relation to traditional materials, such as resistance to chemicals, as well as electrical and thermal insulating properties.”

So any alternative should – ideal case – offer all of the above technical characteristics, plus be recyclable….and as said at the section Who recycles fibreglass today, Italy based LinseT is one stakeholder in the field working on such a fine alternative. More to come soon!

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