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Hope afloat: Charleston-based Greentex's recycled carbon fiber used in boat hull

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photos by [Brad Nettles/Staff](#) Mark Castlow (right) of Dragonfly Boatworks explains to onlookers at the Isle of Palms Marina how his company built a boat out of recycled carbon fiber supplied by Charleston's Greentex Solutions. [Buy this photo](#)

Jay Holmes knew Chad Ferris before last fall, but when they met at a Citadel tailgate party in November, Holmes had an agenda.

A 1989 graduate of the military college who then spent 15 years in the cotton industry, Holmes had a 21st-century textile idea: using recycled carbon fiber for marine applications.



But he needed some help finding customers, boat builders, and that's where Ferris, a local fishing captain who graduated in 1995, came in.

It turned out Ferris knew just the guy, Mark Castlow of Dragonfly Boatworks in Vero Beach, Fla., and they struck a deal.



Mark Castlow of Dragonfly Boatworks explains to onlookers at the Isle of Palms Marina how his boat made out of recycled carbon fiber can be more than 20 percent lighter than a similar boat that was sitting nearby.

On Tuesday morning, the trio gathered at the Isle of Palms Marina to unveil the product of their collaboration: a 15-foot black boat hull they touted as the first ever made of recycled carbon fiber.

"Looks like our dreams are kind of coming to fruition here," said Ferris, who, like Holmes, was wearing a blue checked shirt and sunglasses.

Holmes, 46, said the idea occurred to him after working at a mill in Gastonia, N.C., and then studying textile supply chains around the world.

Using his money and the proceeds of a second mortgage on his Mount Pleasant home, he founded Greentex Solutions, which takes scrap carbon and turns it into usable fabric, like the soft black oxidized polyacrylonitrile fiber, or OPF, that made up the middle layer of the hull on display Tuesday.

Castlow said he initially thought Holmes' idea was "pretty crazy" but came to believe in its feasibility as well as appreciate its environmental benefits.

He said the Greentex-supplied hull took less time and less work than the similar boat sitting next to it Tuesday and could be more than 20 percent lighter.

"Your mind starts to spin when you think of the applications for it," Castlow said, naming covers for marine pumps and structural support for houses as examples. Holmes also hopes to sell an OPF foamboard as a replacement for marine plywood.

Ferris, 39, is one of Greentex's two salesmen, and another Citadel classmate is Greentex's chief financial officer and general counsel.

Holmes has outsourced most of the work so far, to places like the United Kingdom and China,

and he said some of his suppliers turned out for Tuesday's unveiling. But he aims to do all the recycling work locally, possibly as soon as this year in a building on the old Navy base in North Charleston.

"My goal for the last 20 years has always been to build a textile company in Charleston, where textiles began," Holmes said. "Bring it full circle."