

GMT Carbonics 38

Advanced composite engineering and manufacturing for marine and industrial applications • Since 1984



Hinckley SW42, Jacqueline IV

Transatlantic 2015!

Two intrepid GMT customers took the trip of a lifetime and entered the 2015 Transatlantic race. Both rigs are on older, some might say, “classic”, Hinckley boats. They started with 11 other vessels in their class off Newport RI on June 28th. One is a Southwest 42 that was refit by her owner with a GMT carbon rig and rudder over 18 years ago. He races her regularly on the East coast and has done several Newport Bermuda events over the years.

The second boat, a Southwest 51, was refit with a GMT rig just weeks before the start of the race. The long time owner is an avid short handed racer also having competed several times in the Newport-Bermuda race. He is a constant tinkerer, and always looking for ways to improve his classic vessel. The new rig has an increased height over the previous rig. The boat also has a large GMT carbon bow sprit set up to

run multiple head-sails, and the mast is fit with halyard locks. To top things off, all new carbon fiber EC6 rigging was used to replace the existing rod rigging. It could well be the most high-tech classic going.

It is great to see these well cared for, owner-operated, boats off the line in a race as significant and historic as the Transatlantic. Both owners also stayed in England to run the Fastnet. It is undoubtedly what the designers and craftsman at Hinckley had in mind when they built the boats, thinking they could safely sail across the Atlantic in them, no matter if it was now or in twenty years. GMT takes pride in delivering carbon rigs and rudders with the same thinking in mind. Whether it's a newly delivered rig, or one that is pushing two decades old, they are built to last.

Rhodes Powerfurl

The owner of the Rhodes design, Valkay, came to GMT at the end of a long refit. He already had a manually furling boom from another supplier with his GMT carbon mast from a previous refit. He was never able to manage the mainsail from the comfort of his pilot house though. Going with an electrically powered GMT PowerFurl boom would be the ultimate finishing touch to his project. Knowing the owner wanted the system to be as easy and “push button” to operate as possible, GMT proposed the idea of a captive winch for the halyard. The owner loved the idea. GMT designed and built a composite housing for the winch on the foredeck that doubles as a step to service the mast. Inside the pilot house, the owner can now raise, reef, or furl his mainsail at the touch of a button.



TECHNOLOGY: EYE IN THE SKY

These "camera tubes," built for Northrop-Grumman are battle-field-tough, sealable, carbon composite containers. GMT has built thousands of these and we continue to fill repeat orders. They are precision-built for mounting sensitive instruments inside, light enough to carry over rough terrain, strong, and moisture proof. They have "lenses," power plugs, and some optical enhancements that we can't discuss.



SOLUTIONS: Stout Stanchions

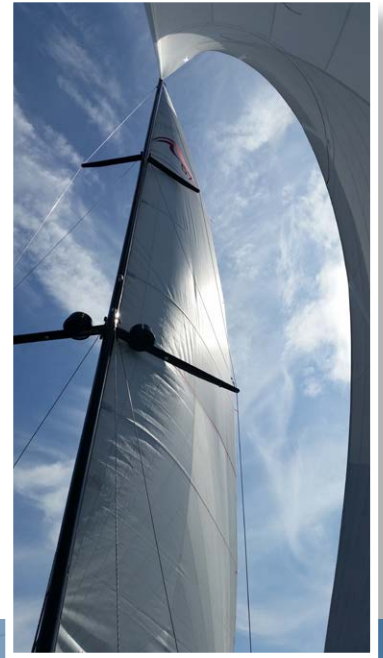


A far cry from our typical stanchions built for luxury superyacht projects, these are made for the military and built to survive. They are 2 1/2" in diameter with a sturdy 7/8" wall thickness. Composite material is the choice due to strength and corrosion resistance which reduces maintenance cycles. Each one is load tested to 900 ft-lbs in bending to ensure they will hold up in harsh working environments.

Carbon Rig & Boom:

Hanse Sets Sail

In our last issue we highlighted a project to rig the newest Hanse 575 in the US with a GMT carbon rig and PowerFurl 360 boom. We have since built, installed, and sea-trialed this rig to great success. Representatives from GMT, McMichael Yacht Brokers, and Sea-Logic Electronics were on hand with the owner for the sea trials and final rig tune. The spar was painted in black Awlgrip and the PowerFurl boom finished in a clear, carbon twill, with full LED lighting including blue up & down facing spreader lights from Rigid Industries. The end result is a modern performance cruiser that looks as good as she sails. Some of the first tacks upwind saw speeds over 9 knots. The owner had an ear-to-ear grin because of the performance and convenience of the GMT in-boom furling carbon rig.



Custom Carbon: Navigator's Aid

Custom race boat owners watch every ounce of weight that goes into a new build. It is not just in the structural components, but also the fit out of the interior that are closely examined. That was true of a new Dunning 40 build when it came time to fit a navigation station below decks. The project was already behind on the build schedule, and the owner wanted a lot of attention to be paid to this small but important component. It needed to fit into a narrow slot anchored to the compound curves of the hull. The final design for the table had not yet been confirmed, and

he also wanted it to look as refined and high tech as the rest of the boat. Having worked with GMT before on large projects, he knew we were capable of designing, fabricating, and delivering on time. Faced with an almost impossible timeline of two weeks, GMT delivered. The nav station sports an inset 7" GPS screen & speaker, a curved ergonomic design, and a multi-folding table to lay a chart out when needed, or hide away when not. The finish was of course done in a high gloss carbon fiber twill.



Scientific:

Plankzooka!

They may look like rocket boosters, but they have a very different purpose. These carbon tubes were made by GMT Composites for the Woods Hole Oceanographic Institute as part of their Sentry project. The goal is to collect one type of plankton at a very specific location in the deep ocean. Traditionally, this type of sampling is done using a specialized net towed by a ship, but this was not a viable solution in this case. Instead, the autonomous submersible called Sentry will be used. Code nicknamed plankzooka, these carbon tubes were designed to very strict weight, strength, and size criteria. They will move thousands of cubic meters of water per hour thru a very fine mesh.

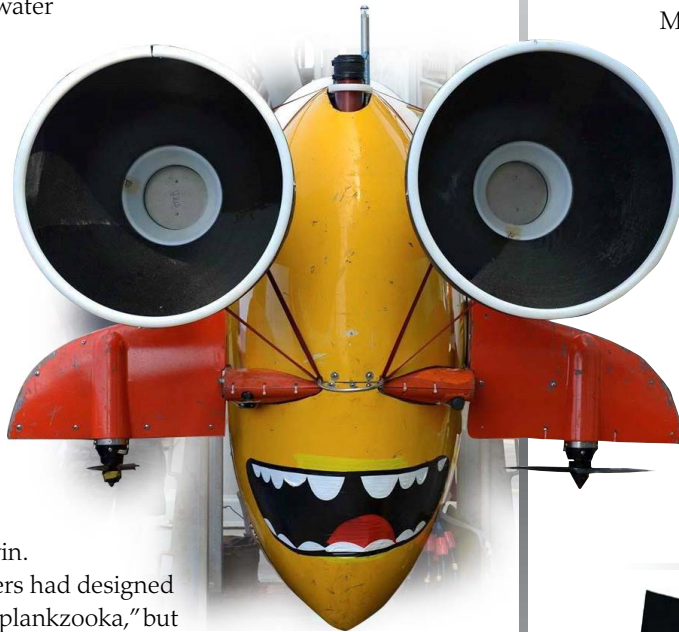
GMT has worked on other projects for WHOI in the past, including parts for the 4,500 meter upgrade to their famous manned submersible, Alvin.

WHOI's engineers had designed the concept for "plankzooka," but were up against some build challenges and a very tight timeline in making it a reality. They turned to GMT as a trusted partner not only in developing an appropriate laminate schedule and build process, but also in



delivering the type of quality that survives in the deep ocean. Added to the challenge was it had to be completed on a very short lead time, or the ship, literally, would have sailed without the parts on-board.

The parts were completed on time, and picked up immediately to begin trials before going into full duty cycle. WHOI is hopeful the concept delivers newfound capabilities in deep ocean sample collection, and can be deployed in other parts of the world.



About Town

On a recent delivery of a passerelle to the 130' M/V "Magic" docked at the Newport Ship Yard, it was good to see all the activity at the bustling yard. The 156'

M/V Seven J's was also docked there sporting her GMT passerelle. Interestingly, both these vessels were built in the Pacific Northwest.

Standing out amongst all the superyachts and high tech racers was the 60' Hood Design classic beauty Windwalker built by Lyman-Morse and powered with a GMT carbon spar and Pocket boom.



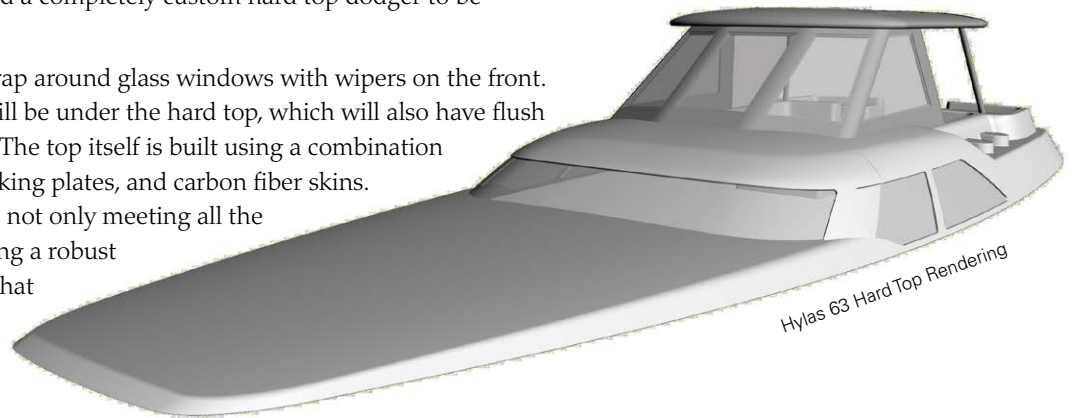
Carbon blades

Standard rudders for a forty footer typically weigh in excess of 250 lbs. It is a job for even two people to move them around. This is a 63 lb version for a Hanse 430. The carbon post is the major weight reduction, and also eliminates any chance of corrosion. Owners are usually shocked at how light they are compared to their old rudders.

Custom Carbon Hardtop

A husband and wife team recently said good-bye to their well travelled Hallberg-Rassy 62. Having cruised extensively on her, it was time for a bigger design with more interior volume. The newly developed Frers Design Hylas 63 fit all their requirements, except for one. It didn't have a hard dodger which was a favorite aspects of their HR-62. The couple felt the dodger was indispensable in warm and cold weather cruising. After preliminary spring meetings, GMT contracted to design and build a completely custom hard top dodger to be delivered late this fall.

Incorporated in the design are 5 wrap around glass windows with wipers on the front. Integrated LED colored lighting will be under the hard top, which will also have flush mounted hatches for light and air. The top itself is built using a combination of high density foam core, G10 backing plates, and carbon fiber skins. The challenges of a job like this are not only meeting all the customer's requirements, but making a robust and aesthetic composite structure that matches the curves and camber of the existing hull.



Island Packet 27

Small boat, Big upgrade

You don't often see carbon rigs on older 27 foot sailboats like the Island Packet. On the other hand, you don't often meet a sailor like this owner who has sailed as far as Antarctica. Having owned a variety of commercial and personal vessels, he knew exactly what he wanted in this boat. He had Fairhaven Shipyard refit the hull, and topped it with a GMT carbon mast, sprit, and furling boom. He plans to cruise extensively in Florida, then on to the Bahamas and beyond.

Show Time & Go Time:

In addition to our two customers doing the Transatlantic and Fastnet races this year, others have been turning in some great results. The GMT powered Hinckley Bermuda 40 Actaea won her class in the Marblehead-Halifax race. A matching pair of Tartan 34's, which are both over 40 years old, turned some impressive results. Odyssey S won the 44 mile Annual Solomon's race in



MD, & Odyssey N not only won her Division in the Chicago Mackinac race, but also the over-all win for the Mackinac Cup! GMT's own Seguin 40, Mischief, won her class at the Buzzards Bay Regatta & also just took home the John C Quinn Trophy for fastest corrected time out of 96 boats in the 88th annual Conanicut Yacht Club Around the Island Race.



September always kicks off the boat show season. GMT will attend the Newport, Annapolis, and Ft Lauderdale shows. Please contact us if you would like to schedule a meeting at any of these shows to discuss potential projects.



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