

# CARBONICS

Advanced Composite Engineering & Manufacturing for Marine & Industrial Applications



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GMT COMPOSITES PRODUCT BULLETIN • NUMBER TWENTY TWO • FALL 2004

## CARBON MAST REFITS: STILL A WISE INVESTMENT

The adage "It is better to give than to receive" holds true when you give the boat you love a carbon fiber mast. She'll love it and you will reap the benefits. Before utter-

*Continued on Pg 2*

## GMT CARBON GRACES MODERN MAINE CLASSICS

Six years ago, GMT built its first carbon mast for Brooklin, Maine boatbuilder, Brooklin Boat Yard. This year, we built a mast for the same owner who had commissioned Bob

*Continued on Pg 4*

*Brooklin Boat Yard built, Bob Stephens designed 48 ft. VA PENSIERO ghosts along in a light breeze off the Maine coast.*



Photo: Jack Greene

## GMT TURNS 20!

It all started twenty years ago. Goetz Marine Technology was founded to build highly loaded carbon parts for the developing marine market and beyond. Early projects included carbon fiber rudders, quadrants and structural components for America's Cup boats, carbon spinnaker poles and faring for a towed submersible for the Raytheon Corp. GMT's reputation grew as more and more businesses were beginning to imagine new applications for pre-preg carbon. As the book of business grew, so did size of the carbon parts GMT was turning out. In 1991, GMT was the first builder in the world to construct the first carbon cruising spars for a pair of Hinckley 59's and GMT's mast business was launched. By 1993 mast business increased to the extent that spars made up more than 70% of the company's sales.

In twenty years there have been significant changes in the way materials are manufactured as well as the way in which various types of carbon components can be constructed. For example, GMT's Chief Engineer David Schwartz worked with our carbon pre-preg supplier to specially formulate a resin ideally suited to vacuum bag curing of laminates. One of the most notable changes from 1984 to 2004 is that of the public's acceptance of carbon fiber as a material.

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## GMT POCKET BOOM: UPDATE

In our last issue of CARBONICS, we featured our new Park Avenue Pocket Boom. Two other booms have since seen their first months of service. "First Light" (see photo), a Baltic 55 raced to Bermuda and cruised back to New England for coastal cruising between Maine and Rhode Island. Her owner reports the boom performs admirably. Interest in the Pocket boom has been strong, as the boom fills a gap in what is currently available in the market. We have additional orders for Pocket Booms for 40 to 67 ft. boats.



Photo: Ben Sprague

GMT built Park Avenue Pocket Boom on FIRST LIGHT, a Baltic 55 based in Newport, RI recently returned from the Newport-Bermuda Race and cruising in Maine.

## CARBON REFIT *cont.*

ing the usual, "Well, I don't race her very much.", it's important to know that most of the masts GMT builds are for performance cruising boats. Now that we have been building carbon fiber masts for over 14 years, we know that the weight reduction in a spar is key. What most folks still don't know is that the most noticeable effect of this weight savings on an older boat is the reduction in the boat's pitching moment. This translates into increased boatspeed and a more enjoyable sail. Other benefits include increased safety, sail carrying capacity and reduced heel angle for a given wind range. Reduced maintenance costs over the long run are likely as the adhesion properties of the Awlgrip top coat to the carbon fiber is superior to that of aluminum or wood.

Carbon mast refits at GMT Composites continue to comprise a large chunk of the masts we build. Clearly there are an ever increasing

number of people for whom adding a carbon mast is a smart investment in their boat. The investment isn't necessarily just a monetary one, but more to do with prolonged enjoyment of your boat. Is a carbon spar right for you? To find the answer take this 10 second survey:

- *Do you plan to keep your boat for at least another 5 years?*
- *Do you use your boat a lot?*

By a lot, we mean at least weekly with some extended cruising throughout your season.

If you answered "yes" to both questions then a carbon spar will clearly enhance the enjoyment of your boat. As to the cost, to quote one of GMT's first mast customers, "It's an expensive new mast, but a cheap new boat." So, if you've tested the waters of the new and used boat markets and decided to keep the "old girl", a carbon refit is the single most dramatic improvement you can make to the boat.

## NEW PROJECTS

Work is nearing completion on a power boat mast for CH Marine in Shelter Island for a 57 ft. commuter style yacht. The mast is fitted with a tabernacle arrangement for low bridge clearance and finished with polished stainless fittings and Faux Bois wood effect paint treatment. Work has begun on the spars for "Goshawk", the BBY 76 ft. sloop (see sailplan, page three). Work will commence shortly on spars for a new Bruce Kirby ketch and a McCurdy & Rhodes 56 ft. sloop undergoing a refit in Maine. Other spar projects include Faux Bois spars for an Alden designed 50 ft. ketch and spars for a 67 ft. yawl. Orders for three Pocket Booms have been received and more are likely on the way. In the non-marine arena, GMT has received an order for carbon table tops and credenza from Ralph Lauren Polo. We are also in production of some custom jewelry being designed and marketed by a well known jewelry retailer.



## GMT NEWS

On the summer race course, GMT spars performed well. In this year's edition of the Newport Bermuda Race, racing in the experimental division, Morning Glory got there first with her twin rudders recently stiffened by GMT. Also in that event, Jacqueline IV, Hinckley 42, finished second in her class, Owner, Bob Forman said that this is their fifth Bermuda race and they've been in the top three 4 of 5 times. Flyway II, newly sparred Tripp 55 (also built by BBY) won the Stratford Shoals Race race in mid July. Meanwhile out on Block Island, "Wahoo", Corby 41.5 right out of the box dazzled the competition at Block Island Race Week, winning her class in a very competitive grouping.

## 20 Years

Where once it was commonplace to hear "what is carbon fiber?", it is far more likely to hear "What will a carbon mast do for my boat?". Due to this acceptance, fertile ground was available for new development in spars designed for specific types of sailing. Examples of this include enhanced mast durability that allows single handed sailors' to thrash around the world, advancements in mainsail handling (in-mast, in-boom and now GMT's Pocket boom) and less runner dependent rigs.

GMT Composites has always led the way in the design and construction of carbon parts. A list of GMT's firsts shows an impressive resume of our expertise and dedication to perfection in composite construction:

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## RIGGERS IN THE SPOTLIGHT

### MALONEY MARINE RIGGING, INC.

Maloney Marine Rigging is a full service rigging shop located on the grounds of the Boothbay Region Boatyard, Southport Island, Maine. J. Maloney started the rigging shop in 1990 and is ably assisted by Office Manager Leslyn Olson and rigger, Charles Lopez. MMR is the Navtec Service Center for Maine and New Hampshire. In addition to rod rigging and hydraulics, they provide a full spectrum of rigging services: custom rope and wire splicing, roller furler installation and repair, swaging, deck hardware installation and mast tuning.

This Winter J. will be advising the owners of Morgan's Cloud, a 56 ft. McCurdy & Rhodes design, on their conversion to a GMT carbon mast. The boat and her owners, Phyllis Nickel and John Harries, are committed to high latitude short handed sailing and her new carbon mast will be designed to take anything Mother Nature sends her way. They cruise the high northern latitudes while running their business, Attainable Adventure Cruising, which provides cruise planning assistance as well as consulting on the fitting out and building of boats bound for the high latitudes. In addition they are freelance writers and photographers with numerous credits in premier magazines. They can be contacted through their web site, [www.morganscloud.com](http://www.morganscloud.com), which provides a wealth of information to help sailors plan and execute an Attainable Adventure Cruise.



**MORGANS CLOUD, McCurdy & Rhodes 56 ft. along the coast of Greenland in 2003, will upgrade her spar to GMT carbon.**

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**MODERN MAINE CLASSICS**  
*cont.*

Stephens and Steve White to design and build him a slightly larger version of his previous boat. GMT supplied the rig package, this time including a boom furling system for easier mainsail handling. The owner liked both his "Va Pensiero"s so much he's decided to keep them both.

In the years between building these two masts, GMT has sparred a number of other Brooklin Boat Yard beauties. The Dieter Empacher, 70 ft. "Sonny", launched in 2000 has had a strong record in the several distance races she's sailed. The 35 ft. "Tendress" is a day sailor/racer's dream, simple to sail and fast at almost all points of sail and conditions. In 2003, "Hoi An" was launched equipped with a full GMT package. New for next year will be the rig package for "Goshawk", a 76 ft. Bob Stephens design for another repeat customer of Brooklin Boat Yard (see sailplan). A late Spring, 2005 launch is anticipated for "Goshawk" followed by an inaugural passage in the Marblehead-Halifax Ocean race. Stay tuned for photos of this work of art.

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**20 Years**  
*cont.*

**1 9 9 1**

First carbon Stoway spars on cruising boats.

**1 9 8 6 - 9 2**

First spar and rudder manufacturer to win every major sailing event in the world.

**1 9 9 4**

First carbon spar to cruise Antarctica.

**1 9 9 5**

First carbon radio-telescope structure

**1 9 9 8**

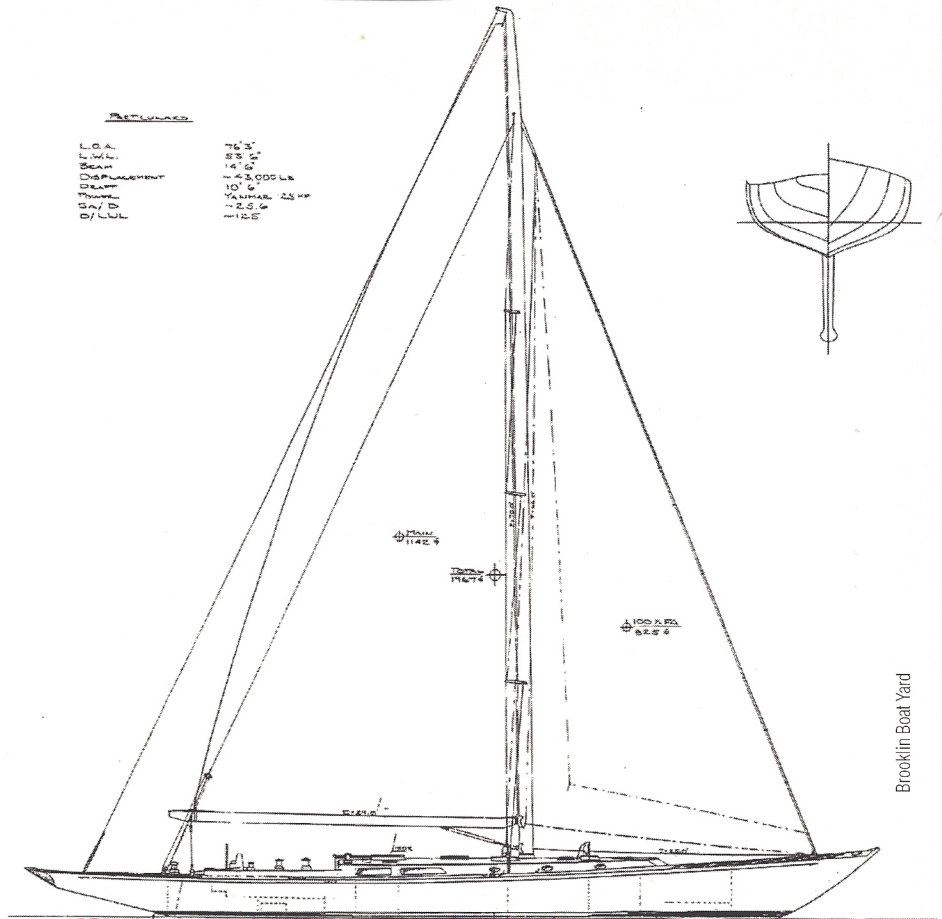
First free standing wing spar on an imrs 50.

**2 0 0 3**

First Park Avenue Pocket boom

**2 0 0 4**

First carbon high end production jewelry



*Designer Bob Stephens' sail plan for the 76 ft. GOSHAWK, Brooklin Boat Yard's current masterpiece under construction. GMT Composites won the contract to supply the all carbon rig package.*



Photo: Jack Greene

*GMT supplied the rig package to Brooklin Boat Yard for Joe Weber's earlier VA PENSIERO in 1998.*

**CORRECTION:**  
GMT Composites was an advertiser in the Notice of Race booklet for the 2004 Newport-Bermuda Race, not a sponsor.

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