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Dream Executed!

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he Fastwater 52

On June 25, 2011 I was invited to an Open House in Sarasota Florida for the unveiling of the custom-designed Fastwater 52 sailing catamaran *Ice Wars II*. It sounded quite interesting as I had heard of the project, but did not have the opportunity to see the vessel up to that time. The invitation was from project manager Pat Reischmann of Hy-Tech marine Inc. and vessel owner Dr. Gary Onik. The weather was perfect and Marina Jack in downtown Sarasota was a great location for a debut.

The Dream

Dr. Gary Onik, an accomplished Radiologist in the medical profession, is the inventor and pioneer of ultrasound guided cryosurgery for both the prostate and the liver. He loves freezing cancer cells so much that he's naming his new boat *Ice Wars II*. As an avid sailor, Gary retains credentials like RYA Yachtmaster Ocean as well ABYC Certified Master Marine Technician and is a graduate of the Landing School. In talking with him, Gary explained that after a catamaran cruise in a remote part of the Caribbean, he knew he wanted to do a circumnavigation, but could not find a production catamaran that would meet the needs of such an endeavor – at least not what he planned. Gary wanted a vessel that could carry himself, his son Alan as first mate, occasional family and guests on a world cruise in a style that he was most comfortable with. He wanted solid construction, ease of operation, amenity, and the ability to maintain the systems himself. The original *Ice Wars* was a Manta 40 that Dr. Onik sailed and enjoyed for many years, and he basically wanted a bigger version for global sailing, so he asked Pat if would oversee the construction of a custom design.


Owner Dr. Gary Onik and First Mate Alan

The Execution

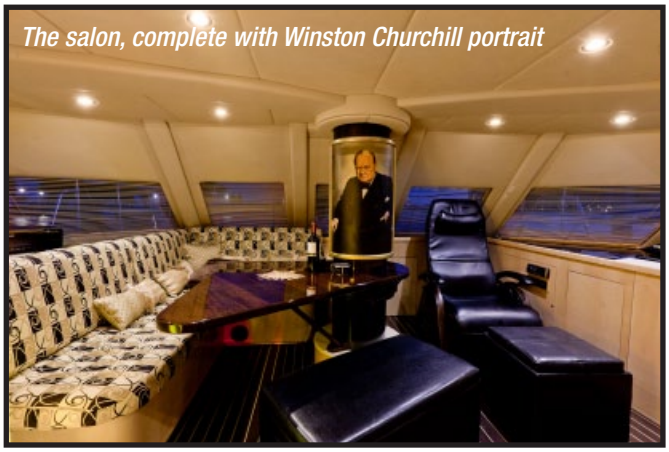
Pat Reischmann, well known for the development of the Manta Catamaran, was game for Gary's project. Pat approached Naval Architect Cortland Steck, who he had previously collaborated with on other designs such as the Manta 44 powercat, to develop a design that would offer the same features as the Manta but take it to the next level. Aluminum was chosen for its durability and strength, and a freestanding carbon fiber mast to offer reliability and ease of handling. Walking through and around the decks of this vessel showed the absolute attention to detail, creativity and simplicity for the intended world cruising given Gary's dream.

Pat was very impressed with the strength of the aluminum hull and deck compared to conventional composite fiberglass construction; nothing changed or moved after assembly or during launch. Furthermore, *Ice Wars* was made of a new alloy called Alustar™, which is 28% stronger than normally used alloys. Water leaks were non-existent since all cleats, hardtop, stanchions, hull to deck joint etc. are all welded. Like the Manta, the forward crossbeam is structural and does not require a gull striker to support it offering a clean walkway across the bow. Acoustical and thermal insulation was provided with a unique combination of Ceram-kote™ epoxy barrier, Silent Running™, sprayable viscoelastic insulation, and 3M Thinsulate™. Pat says the boat is extremely quiet and he has not seen any signs of condensation anywhere. The exterior was faired and painted with Awlgrip products and bottom paint is E-paint. The cabin top has a lot of special structure for the freestanding spar, and the cabin windows are made of extremely durable tempered and laminated glass.


The Navtec hydraulic boom vang

Other rigging features include a Navtec™ series 4 boom vang, Dutchman boom brake, Harken battcar switch system, furling system, deck hardware, and running backstays, single line reefing, and 2:1 mainsheet for easy mainsail trimming. Like the Manta, all sail handling lines lead to an electric winch at the helm. The Doyle UPS offwind furling sail is set on an adjustable bridle between two telescoping struts, enabling one to pull the tack to windward to sail deep apparent angles. The mainsail and Camber Spar jib are fully battened and made of Spectra for performance and durability; the mainsail is protected with a Doyle stack pac.


The furler system



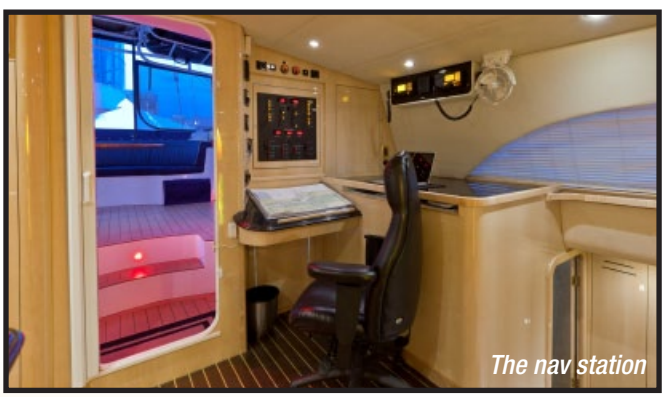
The salon, complete with Winston Churchill portrait

The Wurlitzer jukebox was re-purposed to incorporate a bar

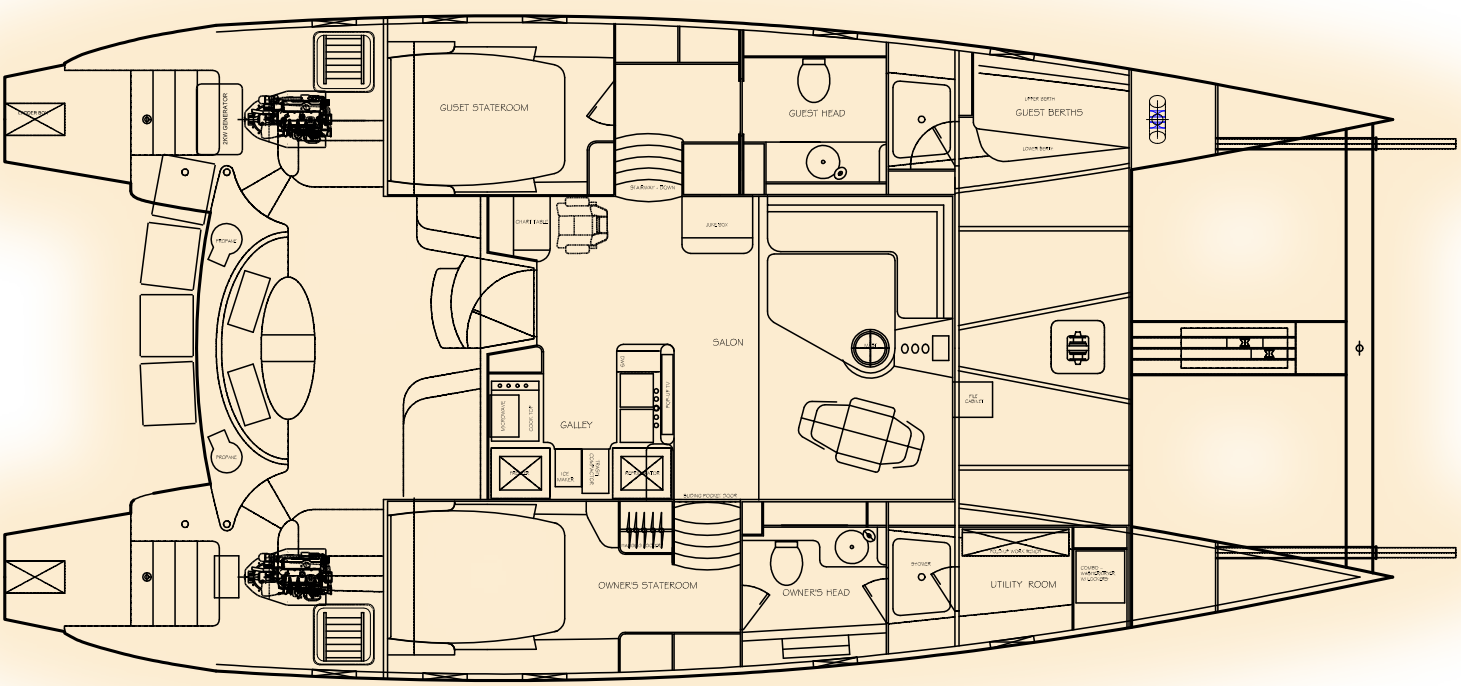
Dr. Onik wanted a very upscale finish for the interior and it certainly ended up that way, with honeycomb core granite countertops, fiddle back sycamore laminates and hard wood, colored acrylics, very attractive wenge wood and brass sole laminate, plush vinyl head and hull liners, and an adjustable custom wenge salon table with the *Ice Wars II* inlaid logo. The interior is truly stunning.

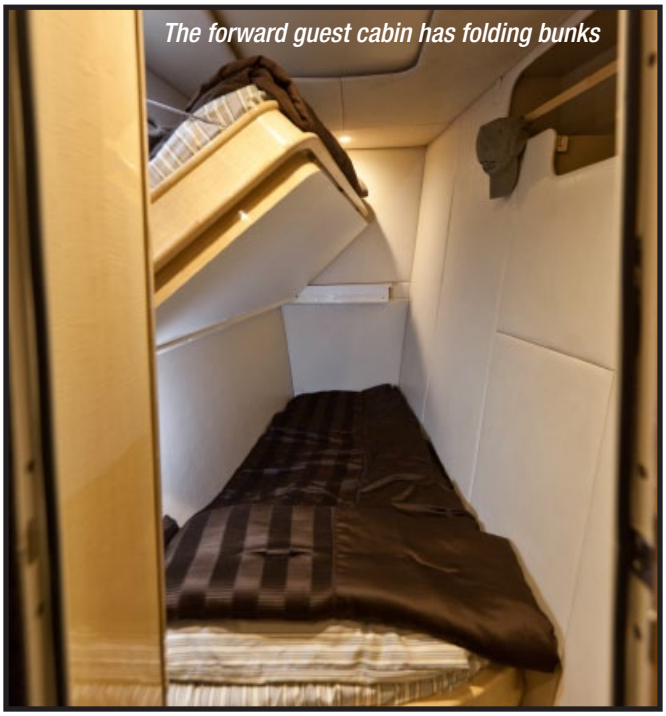
Pat says that Gary insisted on two personal features above all else – he wanted him to mount a painting of Winston Churchill, his idol, on the curved mast, and he wanted to install a Wurlitzer juke box from his home in the salon, removing the internal parts, while keeping the lights and bubbles. The lights and bubbles set up a very soothing lighting ambiance in the salon, and the storage inside is well utilized for liquor, books and the inverter/charger.

The interior layout is designed for a live aboard couple with total accommodations for as many as six. All bulkheads, doors, stringers and sub soles are made with Coosa™ board, a high density foam board that is much lighter than plywood and impervious to moisture.



The nav station




The forward guest cabin has folding bunks


The master head. Notice the through-door into the utility room

The starboard hull is dedicated to the owner's stateroom with queen size berth and vanity table, storage, large hanging locker, locker with shelves, head with separate shower stall, and laundry/work room with work bench, washer/dryer and bulkhead mounted watermaker. The port hull offers guest staterooms forward, with bunk berths and hanging locker and aft queen size berth with storage, hanging locker, several pantry and storage lockers and a shared head with separate shower stall.


The starboard master stateroom

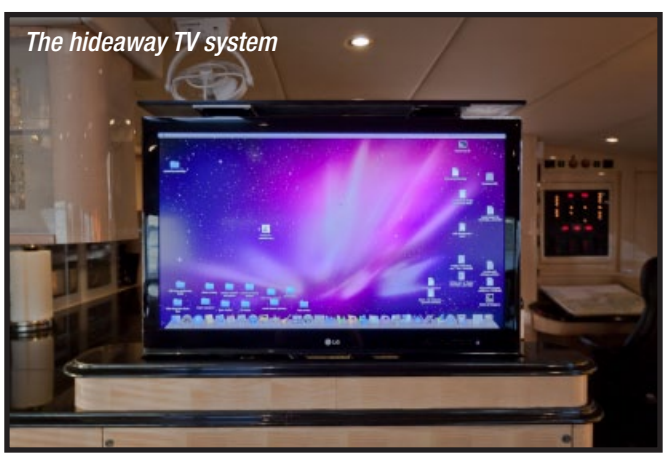
The galley with etched glass cabinet doors

The main salon, galley and navigation station are on the bridge deck. Salon amenities include an L shaped settee, recliner chair, hideaway TV system, file cabinet and storage. Ventilation is provided through recessed, stainless steel opening ports with built in sliding blinds and fixed screens and hatches with built in sliding screens and blinds. All hatches incorporate day/night solar vents and mountable rainproof wind scoops.

Salon windows have adjustable mini blinds. The main companionway door is watertight and has an integral sliding screen door.

The galley includes super insulated, top loading, 12v refrigeration and freezer compartments, four-burner propane stove cook top, microwave/convection oven with exhaust blower, dual sink, icemaker and trash compactor. There is abundant storage with slide out racks in all cabinets. The clear Plexiglas upper cabinet doors with Ice Wars logo are particularly attractive and functional, allowing light transmission and the ability to see what is inside.

The exterior deck layout has wide side decks for easy movement fore and aft, the cabin top incorporates generous overhang forward for shading of the forward salon windows. All hatches and ports are Hood/Bomar stainless steel. The foredeck storage lockers accommodate space for extra anchors and rode, sea anchor, large inflatable and conventional fenders and all dock lines.



The hideaway TV system

The hard top space is utilized with solar panels


Built-in steps

There are built-in steps in the cabin top and hull sides forward for easy access. The integral hardtop and radar arch is constructed of welded anodized aluminum tube and composite fiberglass. It is multifunctional, providing easy access to the mainsail, with excellent space for solar panels, dinghy lift tackle, mainsheet attachment, integrated rain collection system and electronics antennas.


Forward anchor locker and windlass

(The anchoring system is quite unique as the windlass and anchors are all mounted below deck. The windlass is an all stainless steel Lighthouse 1501 with two 200-foot chain rodes. Two aluminum spade anchors are launched from under the main strut and feature automatic chain washers, and pre-rigged bridles. There is a deployable anchor roller in the windlass locker that leads to a very unique chafe proof anchor roller welded on the fwd cross beam for rope rodes.

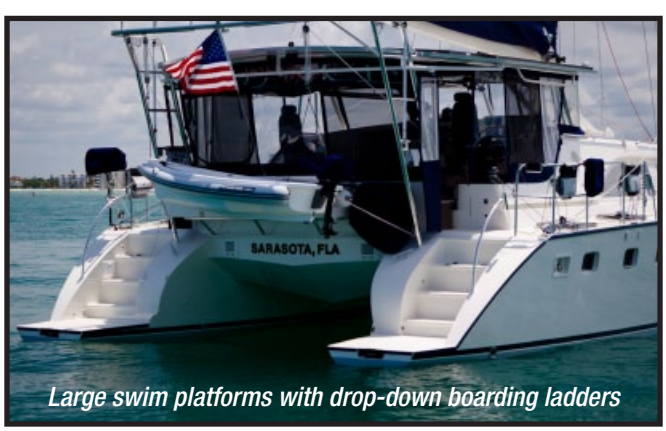
The air-conditioned cockpit is very large and roomy with two Stidd adjustable helm chairs and curved seating around a gorgeous custom cockpit table. The sole is finished with Marinedeck 2000™ cork decking. It is completely enclosed with vinyl and acrylic. The helm station has a large visibility window in the hardtop to see sail trim, and the forward acrylic windshield includes a unique glass insert with windshield wiper/washer. The underside of the hardtop has very clever opening storage racks for bicycles, workbench, diving gear, boarding ramp and ladder, fishing rods, etc. Everything truly has a place and there is a place for everything.

Behind the cockpit are four custom fiberglass storage boxes that provide storage for a 25-gallon gasoline storage tank, gasoline powered high-volume portable damage control pump, complete Hooka equipment, and a 2kw Honda generator.

The aft swim platforms are huge and offer easy dinghy and dock access. The Armstrong™ swim ladders telescope and slide into the platform. There is an 8 ft. boarding ramp that can be deployed on any side of the vessel, and unique combination radar arch access ramp and boarding ladder.

Gary opted for a Walker Bay dinghy for its sailing and rowing versatility, which hangs neatly and securely from the radar arch behind the cockpit. One person can easily deploy it.

Gary made the comment that if he was to be in charge of maintaining the machinery, the engine rooms needed to be

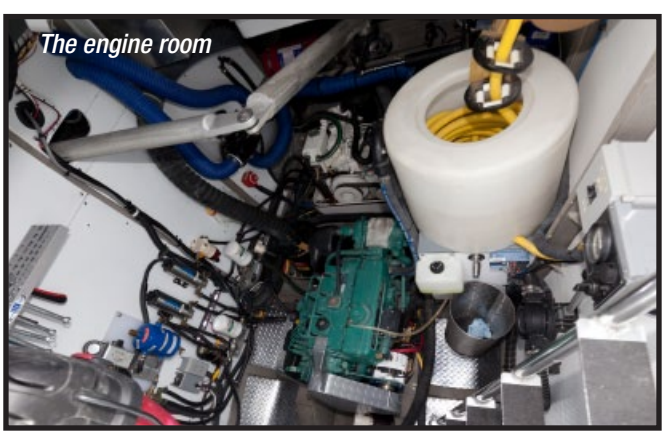


Large swim platforms with drop-down boarding ladders

The inclosed cockpit with inlaid settee table and overhead storage

functional and easy to work in. They are separate and sealed from the interior and accessed through a watertight hatch in the deck of each hull. They offer full standing headroom and easy access to the engines, generator, steering, etc. There is a fold down workbench and integral storage for new and used oil, tools and spare parts. Air-conditioning is ducted to the engine rooms through a shut off vent.

Twin D2-75hp Volvos with sail drives and three-bladed Gori folding propellers provide auxiliary power. Shift and throttle controls are by Glendinning electronic, and there is a wireless handheld remote control. Engine panels have full gauges, upgraded with Floscan meters. There is a 12v bow thruster in the port hull, spade rudders and shafts are made of aluminum running on Tides Marine composite bearings, joined with an aluminum cross bar, and driven by an Edson pull/pull cable and radial drive system.



The engine room

Climate is controlled with three independent 16000 btu air conditioners, built in dehumidification system, and ducted forced air diesel heating system. The heads are freshwater Techma and the owner's head even has a hot and cold bidet! There is self-contained composting back up head in the work/laundry room.

The utility room – complete with washer and composting head

A close up look at the helm. Notice the windshield wiper.

The sophisticated 120v/12v electrical system panel incorporates digital meters for amps, volts and hertz. There are 50 amp shore power cords controlled with Glendinning automatic stowage system port and starboard, as well as a third auxiliary 30-amp service in the anchor locker. An isolation transformer provides corrosion protection and increased safety as well as accommodating different voltage for foreign ports. A 8kw Next Generation diesel generator provides auxiliary AC power. An additional 2 kw Honda gasoline generator can be utilized as a backup system. A 3kw inverter provides AC power from the batteries. The large battery bank has a 1200 amp capacity and is charged by a 120v 150-amp charger, twin 130 amp engine alternators and an 800 watt solar array. I don't think they will have to worry about battery power! All interior, exterior, and running lights are LED. The hull and deck are protected from corrosion with the Electrogard cathode protection system

Standard electronics installed at the helm include: Furuno electronic charting with large LED screen, two linear drive auto pilots, large compass, infrared camera, radar, sonar, knot, depth, apparent wind and VHF remote. Electronics installed in the interior and nav station include: SSB, VHF, security system, 37" Led TV and stereo system with speakers in the main salon, cockpit and foredeck.

The Team

Gary and Pat obviously had a great working relationship given the finished product, and Pat brought together some of the best resources in the industry to bring it to fruition.

I had the opportunity to talk with just a few of the suppliers who assisted in putting this all together.

First, I guess the place would be to start at the beginning, was to contact Cortland Steck of Cortland Steck Yacht Designs based out of St. Petersburg Florida. Cortland had worked with Pat on other Manta projects and noted his pleasure as to have had the opportunity to work with both Pat and Gary on *Ice Wars II*. Cortland's first comments were that Gary wanted in every aspect to design a catamaran that was solid, sturdy, rugged and most importantly safe. Cortland noted that he felt that the project was a bit unusual from the standpoint that Gary was so willing to let he and Pat have such a "freehand" in the design and allowed both he and Pat the opportunity to apply rather progressive ideas as to design and materials. Aluminum was selected as construction material of choice. The freestanding mast was a particular challenge from Cortland's standpoint, as the engineering was somewhat complicated. All said and done, his final words were "Great Team!" and further noted that he was very happy with the final results.

Next, was to contact Ted Van Dusen Ph.D of Composite Engineering in Concord, MA. Ted was contacted as a custom builder of tri-axial carbon spars. Ted is recognized as one of the best in this specialty product and Pat knew that Composite Engineering could accomplish the goal of a freestanding carbon fiber mast and boom. Ted explained that lightweight carbon spars lower the center of gravity and reduce the pitching moment, so carbon

spars substantially improve vessel stability, ease of handling, and safety, further the stiffness to weight ratio of carbon spars is more than twice that of comparable aluminum spars. The weight of carbon spars is about one-half the weight of aluminum spars, and carbon spars are considerably stronger. Ted noted that the freestanding aspects of this particular mast and boom added further benefits of simplicity of operation and (what I thought was interesting) due to minimal rigging reduced the noise level of the wind through the rigging. I have to note that this particular aspect of *Ice Wars II* in most of my conversations with the team often becomes a focal point in what Gary and Pat accomplished.

Neil Harvey of Harken SouthEast, located in St. Petersburg Florida was my next call. Neil has worked with Pat for many years and Harken was chosen to supply most all the marine hardware that is fitted on *Ice Wars II*. Neil worked with Pat in providing much of the items necessary to meet the objective of easy to operate, solid, sturdy and yet safe. Neil noted that they constructed everything from customized blocks to stanchions, along with a custom headboard for the main. *Ice Wars II* incorporated so many unique features that Pat had Neil involved with in the fitting out. Neil did note that the Harken Switch T-Track Battcar System was a particularly interesting in application for main sail handling. I can understand as I have found that headboards on large cats can be a bit difficult to reach due to the size of the mains. Neil explained that the Harken Switch Battcar systems cut stack height in half by dropping mainsail cars alternately onto port and starboard storage tracks. In a refinement to this award-winning design, a spherical bearing allows headboard cars to articulate and pass through the switch. This reduces stack height even further and simplifies sail handling. Neil was very complementary of what Pat has done with *Ice Wars II* and looks forward to the next project.

In talking with Mark Ploch, President of Doyle Ploch in St. Petersburg, FL, he expressed his excitement in seeing the project come to fruition. As he explained the opportunity to build the sails for *Ice Wars II* was a bit complex working with the logistics of the freestanding rig. I did find his comment, that with the benefit of the free standing rig it allows for better off wind sail handling given the fact that you do not have the interference of the swept back spreaders and standing rigging, very interesting. In closing Mark made the comment that it is surprising that other catamaran builders have not taken on the concept in that the power in a standard catamaran rig is built around the main and off wind sailing.

Finally, I talked with Bill Wright Vice President of JSI in St. Petersburg, FL who supplied most all the soft goods and miscellaneous stock and custom parts that made up the completed product. Bill was very pleased with the execution of project. I do have to say that the attention to detail could easily be seen in the canvas, cushions both interior and exterior and custom deck hardware. I enjoyed Bill's comment that, "well you have to know Pat, when he does have an idea you do have to work with him to get it just right." I do know Pat and after seeing *Ice Wars II*, he did get it just right!

In Summary

All in all, it was a great afternoon in Sarasota. Good visiting with Pat Reischmann and very good meeting Dr. Gary Onik, the now proud owner of *Ice Wars II*. I am sure that we all offer "fair winds" to Gary and Alan as they set out on a world journey, a dream in execution. *Ice Wars II* plans? As I understand some shake down cruising along the East Coast, summer and fall 2011 and then the Caribbean 1500 planned for this November, and then join an around the world rally. After that, I am sure that you will hear or see of the adventures of this fine catamaran in the years to come. I also want to congratulate Pat for having executed such a well-done project.

Pat says the performance is quite respectable, despite the displacement being greater than an equivalent size composite boat. He attributes this to the easily driven, fair and fine hull shapes developed by Steck, and the efficient sail plan. At 2300 rpm speeds in the high 8-knot range are common, and sailing speeds above 10 knots with the UPS has been seen in moderate winds.

Pat believes the concept of the Fastwater 52 has a lot of potential and offers a combination of accommodation, strength, and ease of handling, not offered in a 52 ft. cruising catamaran previously. He and Dr. Onik are looking into the possibility of a builder to offer the design on a semi-production basis.

For the complete specifications and digital slide show refer to www.hytechmarine.com. In my opinion, the slide show does not completely identify the attention to detail that both Gary and Pat incorporated into the final product of *Ice Wars II*.

Ice Wars II Fast Water 52 Specs

LOA	52'
LWL	50' 6"
Beam	25' 0"
Draft	4' 6"
Bridge Deck Clearance	3' 0"
Disp. Full Load	45,000 lbs.
Sail Area (Main and Jib)	1,459 sq. ft.
Sail Area (UPS)	1,269 sq. ft.
Mast Height above Waterline	72' 0"
Fuel Capacity	(2) 114 gals.
Water Capacity	200 gals.
Waste Capacity	(2) 64 gals.