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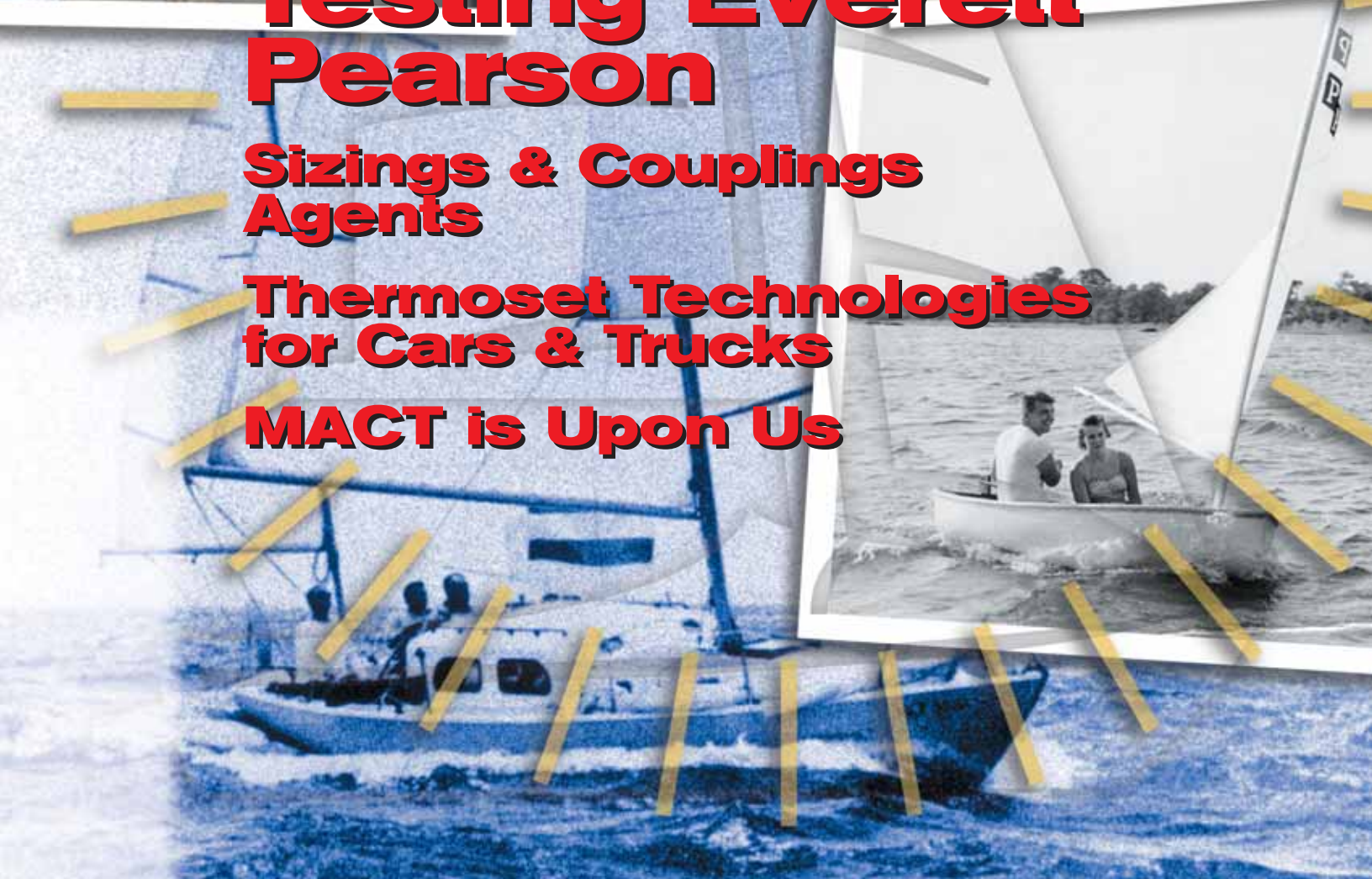


Testing Everett Pearson

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TOUGH AS GLASS: TESTING EVERETT PEARSON



Tough as Glass

Testing Everett Pearson

By Andrew Rusnak, *Editor for Composites Fabricators Association*

“...so it will have the right physical properties,” says Everett Pearson, laying down his tuna pita sandwich to explain with several chops of his hands how a combination of ply orientation and resin infusion strengthen fiberglass parts in high stress areas.

One of his favorite phrases, *the right physical properties* is the goal of lunchtime discussions as well as every J Boat, shuttle bus, car body, and SwimEx™ at Tillotson-Pearson, Inc. (TPI), his Warren,

Rhode Island shop. Perhaps more than any major FRP figure in the last 40 years, Pearson has researched and tested how various laminate constructions of fiberglass, resin, and core materials act under stress loads.

Ironically, however, after maneuvering toward a brilliant career in a precarious business, an “unplanned” obsolescence has emerged from Pearson’s early devotion to manufacturing quality products, especially sail boats.

“Fiberglass lasts forever,” says longtime friend and Pearson business associate Gary Hoyt. “Durability is a problem in the boat industry, and bankruptcy is common. Everett is an anomaly, but some of the boats he built 35 years ago are still viable market items today.”

Boat builders Catch-22...

With a concerned frown, Hoyt sets soup spoon to saucer with a clink as Pearson quietly sips tomato juice. Lingering, late fall sunlight already waits for spring in the atrium dining room of the Cross Road Pub and Restaurant off Market Street in Warren—decorated for a New England Christmas. Scattered across the table, on the backs of napkins and manila folders, are eager sketches of

hydrodynamic boat hulls and keel designs.

The two men allow the uneasy thought to tranquil down, but it never reaches bottom; their energy, like a sudden rip current, stirs it up. They know each other’s cues, think alike, spent many hours teaming a way out of the dilemma of staying in business while building lasting products for a limited market. Measured over the years, it has perhaps been Everett Pearson’s biggest test.

Lost and Found

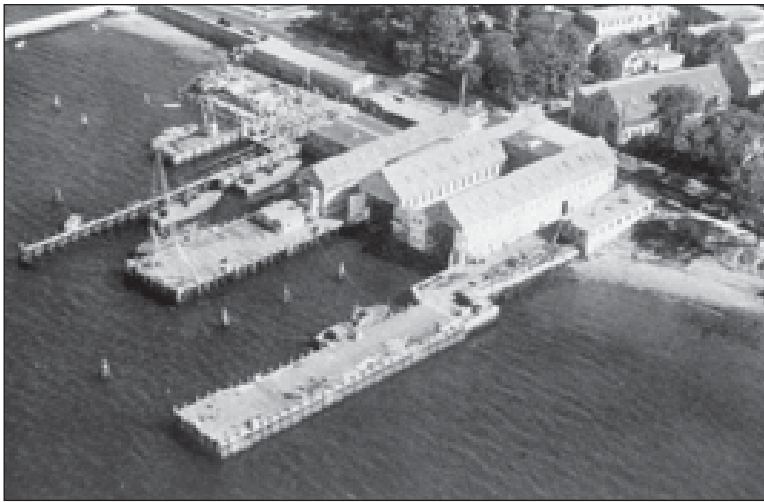
You don’t get to be the world’s premiere boat builder in the age of high craftsmanship without closely guarded secrets. Captain Nat Herreshoff, the “Wizard of Bristol,”



dazzled the marine imagination in the early 20th century with unique yacht designs that portended modern boat building. And after one of his ships had been built, part drawings were stored away, sometimes in the attic crawlspace above the hallway near his office, left for someone else to find and ponder...

Two artificial palm trees mock the first blast of cold December air sweeping south down route 136 in front of TPI. Watchful gulls hover over the plant as heavy trucks snort in and out of the parking lot—UPS, Yellow, Overnite, Ashland Chemical.

Inside, amid the pervasive, syrupy smell of resin, Everett Pearson pulls a book from the shelf in his office.



An aerial view of the old Herreshoff yard, circa early 1960's.

"Here's a picture of a J Boat, which they first raced in the America's Cup," he says pointing to the black and white photo.

It is immediately obvious that Pearson fastened the denominators of strength, durability and perseverance to the center of his soul long ago. It is not hard to picture him, even at 65, in his Brown University football uniform, the captain, Hall of Fame fullback of the '54 Bears, before taking a degree in economics the following spring. The Bears had a winning season that year, losing to Yale by only two points.

"Very few could ever argue against saying they were America's greatest yacht

and boat builders," he says, settling in his chair, studiously turning pages in the weighty coffee table text with the title-name Herreshoff scripted on the cover. "I don't think there's anything that's been designed to date, on my wall there, they didn't do back in the 1800s. They had flat bottoms, fin keels, bulb keels, they were very, very creative."

Along the front wall of Pearson's office are rows of half models—Freedom 40, Alden 44, Pearson 43, J/24—legacies of his own creative enterprise. Nathaniel Green Herreshoff and his brother John Brown started building ships and yachts in 1856. They built every America's cup defender from the 1893 *Vigilant* to the 1934 *Rainbow*.

Late one Saturday morning in the spring of 1962, Everett Pearson readied to leave work and go home. He made a habit of coming in on Saturdays to tie up the week's loose ends—check the company's books, tweak production schedules. Three years ago, he and his cousin Clint purchased the old Herreshoff place in Bristol, Rhode Island, because they needed a waterfront facility to launch the Triton and other sailboats they were making.

As he leaned back in his chair to organize his thoughts, he noticed a ceiling hatch in the hallway, just outside the office.

"I went and got a flash light, crawled up there and found all these old wooden work drawings" he said, pointing to the few he's kept and hung on his office wall.



Pearson's Freedom 40.

"I sat and admired them. I mean can you imagine if we had to have people do this kind of work today? The talent they had."

Pearson quickly jockeys from thought to thought as he struggles to keep up with vivid reminiscences that flood his mind. He remembers names, dates, lengths of boats. The time in-between thoughts, however, is spent in measured speech. He is moved as he tells the Herreshoff tale, although there's no noticeable excitement in his face, pasted over with that stoical, impenetrable determination one gives to those of Swedish descent. His is a quiet, driven compulsion that comes out on the rough side of old fashioned grunt work.

"When you went to work for Herreshoff, you worked as an apprentice for a year for nothing, that's after you bought your own tools," he continues. "We inherited Herreshoff's head rigger, 85 year old Charlie Peterson, when we bought the yard. That old man could do rope-to-wire splices that were magnificent. He'd spliced a piece of stainless steel around a silver dollar he kept in his pocket. It was so tight you couldn't get it off. Well, Charlie's son, Elef told us he went to work as an apprentice rigger for his father for a whole year with no wages. At the end of the year, Charlie told him he wasn't good enough, and he'd have to work another year for nothing."

Admiration for how the Herreshoffs crowned the epoch of wooden boats



A young Everett Pearson sailing on the Kickemuit.

The cousins took their fiberglass dinghies to the first National Boat Show in New York City, 1957, and quickly took orders at \$300 apiece.

forces Pearson to stop and reflect. Sprawled over his desk is an assortment of technical gadgetry—the latest three-pound lap top computer, chargers for cell phones, wires for hook-ups. He keeps a palm PC in his shirt pocket. There's a small sign on one of his shelves: *If God wanted us to have fiberglass boats, he would've made fiberglass trees.*

"It's a shame Herreshoffs went by the boards," he laments. "That would've been my first love, to continue building wooden boats instead of going to fiberglass. They were all cut and design, one of a kind. But labor was too expensive, and you couldn't save anything during production."

In early spring of 1955, Ted Harrison, a Pearson family friend and mentor to Everett and Clint, read an article in *Popular Mechanics* on polyester resin and fiberglass. It gave him an idea. Harrison owned a Pawtucket moving company and was well-regarded for his skill with all things mechanical. He knew the Pearson boys loved sailing, and that the two were hungry, like many of their generation, to call on the spirit of entrepreneurship. He'd watched the two grow up, how they hustled through their humble beginnings delivering groceries, selling Christmas Trees, landscaping lawns, banging nails, laying concrete.

Harrison took it upon himself to give a copy of the article to Everett and Clint. Then he placed an order with the Celanese Corporation of America in New York: one 500 lb. drum of MR 28 C resin; one eight pound can of MC 1 paste; one gallon of accelerator E; and two gallons of ML 4 blue separating film. Total investment: \$221.90.

The supplies were delivered to a barn in back of one of the tenement houses owned by the Pearsons in Seekonk, Rhode Island. Two months later, sticky, itchy fingers and an eight-foot dinghy emerged.

"We used the process described in the article, the 'Marco' method," Pearson remembers, after pointing to the invoice from the Celanese Corp. he keeps in a frame on his office wall, a gift from Harrison before he died. "We covered the male tool with fiberglass, put the female mold over it and pulled vacuum. The molds were polyester, they were flexible. The resin around the trough would be sucked between the two molds, and every now and then it flowed up to the vacuum port and leave blanks in the bottom of the hull. Finally, we decided it was easier to put the glass into the resin by hand, and so worked our way into hand layups."

Everett and Clint carried the dinghies out onto the lawn and painted up a *For Sale* sign. But summer 'sweat-resin' projects in the barn were short-lived. Even though the boating industry was on the cusp of a major wood-to-fiberglass transition with myriad 'new market' possibilities, and even though the Pearsons, somewhat unbeknownst to them, were laying the historical groundwork for breakthroughs in technology, military duty called. The two Brown grads had to serve.

Commissioned as an ensign after NROTC in college, Everett was stationed on a destroyer in Newport. By the time he and Clint got out, they knew they wanted to build boats for a living, so they closed the barn and moved to a plant in Bristol, right on Constitution Street. It was so small they couldn't stand up straight to work because of low hanging sprinkler pipes.

The cousins took their fiberglass dinghies to the first National Boat Show in New York City, 1957, and quickly took orders at \$300 apiece. They were so successful, the cousins followed up with 12- and 15-foot runabouts.

And then came Triton.

Marion Givens, a high school English teacher from Pawtucket, Rhode Island, prepared to send her two oldest boys to war. It was 1941. Her youngest son was still in high school, and for some time now, he'd given up sailing the square-ended, ten-foot punt they kept on the

banks of the Kickemuit River in back of their home. The old punt just laid there, its wooden hull floating in the grass.

"I used to hang around and watch her sons sail it," Pearson recalls fondly of his childhood neighbors. "Mrs. Givens saw I had an interest and asked me if I wanted it. I said, 'I'd love to have it.' I was eight."

Pearson recruited his father's handyman expertise to fix and paint the punt, and his mother stitched the sails. It didn't take him long to figure out what made it go. Soon, he zipped along the Kickemuit, honoring the mooring buoy boundaries his mother'd set so she could keep an eye out. A year and a half passed before she was convinced to let him stray a little further.

"So I started to sail," Pearson says. "But as soon as you learn to sail a boat, you want something a little bigger and a little faster."

By the time he was ten, Pearson cashed in \$850 of war bonds and bought an old, beat up, Beetle Cat Boat he found on Bristol Island. Another family project, until two years later, he sold the Cat Boat and bought an Old Town White Cap and, along with cousin Clint, raced it against other White Cap sailors across the river.

Faster and further, year by year, always testing himself until in 1964 he won the Newport-Bermuda race in the 38-foot Burgoo yawl, designed by Bill Tripp, the first fiberglass hull to take the prize.

Those idyllic early years on the river shaped Everett Pearson—watching his father, a groundskeeper and chauffeur, make furniture with hand tools, living in the crowded upstairs apartment of a tenement house with two sisters, tenaciously pursuing odd jobs—the seeds of a new life planted by a grandfather who escaped famine in Northern Scandinavia in 1903. And when he was 14, during the summer of '48, sitting on a porch at a yacht club meeting, he glanced inside and spotted "a little blond gal in a rocking chair." He whispered to his cousin Clint, in the frivolous but bold way adolescent boys do, that one day he was going to marry her. Virginia and Everett took to necking on her uncle's stone pier on the Kickemuit River and dreamed about building a house on the water. When they married in 1955, Uncle Wilder Bourne gave them the land and they built that house. The couple raised three children there, kept the boats tied up out front.

“I always think of our sailing days, when we were with the children,” says Virginia. “If there was a boat within a short distance, we’d have to trim our sails to see if we could go a little faster.”

Pearson doesn’t sail much these days, Virginia, a trophy-winning sailor herself, having successfully lobbied for golf. But it’s the kind of game that still allows his favorite form of competition, the challenge against the self.

Any entrepreneur like Everett Pearson will tell you success means risk, and risk often means counting on chance or Lady Luck to be on your side. When it is, successful people keep on the same path, thankful the God of fortuity has favored them. When it’s not, they’ll find another objective and deal the cards again. Can anyone in the boating world today imagine the history of floating fiberglass crafts without Everett Pearson?

Across Narragansett Bay from Bristol in East Greenwich, RI, Tom Potter, sales manager for the American Boat Building Works spent the early part of 1958 looking for someone to build a 28- to 30-foot cruiser. American Boat already built the 40-foot Vitesse (later to become the Block Island 40), a 26-foot Bill Tripp-designed sloop called the knickerbocker, and the 23-foot Sea Sprite designed by Carl Alberg. Potter, playing a hunch based on sales experience, a feel for the growing fiberglass boat market, and the few inches that can separate one class of boat from another, saw strong potential for a smaller, cruising yacht.

After being turned away by local boat builders, Potter ventured unannounced into fledgling Pearson Yachts in Bristol one day. Out of the Navy about a year, Everett and Clint were

busy, pumping out small, outboard runabouts, a 22-foot outboard cruiser, and a 14-foot catamaran, the Tiger Cat, and selling them through roadside deals and at the New York Boat Show.

Potter spread the plans of the Alberg-designed Triton on the table.

“We made the deal with him,” Everett remembers, upon purchasing the design. “By summer we’re building the plugs.”

Eager to jump on the opportunity, the Triton sloop proved the budding boat builder’s biggest challenge—technically, economically, and in terms of timing and scheduling. To recoup mounting losses, they chased a fall deadline, got the boat to the New York Show by January of 1959, and hoped it would sell.

“When we started the Triton we had no cash,” Pearson recalls. “We were worried about not making the payroll or the deposit for the boat show.”

Worry soon turned into intuitive risk for the Pearson cousins. And, like many energetic young men plagued with entrepreneurial fever in the late ‘50s, risk was safeguarded by images of a landscaping or construction business, something they’d done before, if boat building turned out to be a wash. A fall-back plan already spun through their imaginations. Triton proved to be the Pearson’s Rubicon.

They got a loan for \$25,000 each. “I guess we looked honest,” Pearson smiles. “We got the money on our signatures only.”

But it wasn’t enough. They were still short and time was running out. Last minute appeals and desperation.

Finally, a friend of the family, a funeral director who’d gone to school with Everett’s mother, Roy Pearson, escorted Everett down to the bank, put his account book on the counter, and told the clerk to “give the boy what he wants.”

“Don’t you want me to sign for it?” Everett asked.

“No,” Roy said. “As long as you’re your mother’s son, that’s good enough for me.”

At the boat show, interest was immediate. Potter’s hunch, that there was a potent, underlying desire for an affordable 28-foot cruiser, was on the money. They took 18 Triton orders for \$9,700 each, celebrated, paid the expensive hotel bill, went public with the company, and then bought the old Herreshoff yard. Upon inheriting a handful of highly skilled workers, they went to work building the first, FRP, family sailboat cruiser. By July, they’d cranked out 40 Tritons. Eventually, 700 were built, “an unheard of number for a boat that size,” Pearson adds.

Press Veltman, travelling through New England, grew a little weary hunting down antiques with his wife one day in 1958. So, he sneaked across Constitution Street in Bristol, and found Everett Pearson busy in his shop. The two struck up a conversation and soon became friends. Veltman, a weekend sailor and head of research for W.R. Grace in Clarksville, MD, knew a lot about mechanical testing, and there’s nothing like a good test for Everett Pearson. The Triton project taught him to trust his intuition, and he soon learned how often he’d have to call on this skill to approach technical problems in the new field of fiberglass boat building.

By the time Triton was ready for production, Pearson put in a call to Veltman.

“I told him I wanted to build this boat, but I wanted to make sure it was strong,” Pearson recalls. “He told me to make up a



Everett and wife Virginia early on the Kickemuit.

panel and send it down for testing.”

Pearson conferred with Alberg and sent the panel. Initially, the Triton hull was all glass, and even though Veltman’s test results proved it’s durability and impact resistance, Pearson was not satisfied with the hull’s stiffness.

“When we first started with Triton, we didn’t know how to stiffen the deck.” Pearson explains. “We’d take the three-inch diameter cardboard tubes the fiberglass came in on, slice them in half, place them over the deck, and lay fiberglass over them. But it became difficult to get a nice interior finish, so we started using longitudinal strips of balsa as our core material.”

First the trial, then the error. Pearson found that if water seeped through a deck fitting, it migrated along the balsa grain and delaminated the bond. He then took several pieces of balsa, glued them together and sliced off the ends to make “end grains,” so the grain ran perpendicular to the laminate. This blocked water migration. A salesman from the balsa supplier, Baltek, spotted the paste-and-cut procedure one day while visiting Pearson’s plant. He took the idea back to Baltek, and the company started producing end grain, contoured core.

But by the time Pearson was approached to build the infamous J/24s in the mid ‘70s, and even though he’d amassed a wealth of knowledge in mechanically testing mostly industrial FRP parts, not everyone was convinced balsa was a panacea for stiffening fiberglass hulls. In fact, there was still a lot of resistance and concern for water migration and rotting. But, “for impact resistance and stiffness, balsa wood wins hands down,” Pearson proclaimed. And he set out to prove his point. He made up an end grain panel, drilled a few holes through it, anchored it to some blocks, and submerged it in the Kickemuit in front of his house. During low tide, the panel came up for air for about an hour. Three years later he pulled the panel out of the river and found virtually no water penetration.

“Rodney [Johnstone] and his brother Bob built the first J/24 with foam core,” Pearson recalls. “It sat in the cradle and you could see the hull deform. The keel wasn’t properly supported, and the weight went on to the poppet. This won’t happen with a balsa hull.”

Pearson convinced the Johnstones to use balsa, and he’s since



Pearson in his Warren, Rhode Island shop.

made more than 5,000 J/24s, at one time cranking out six sloops a day of what became the world’s largest, one-design, keelboat class. Sixteen countries around the world have class membership, sponsoring some 1,400 associations.

“I would have to say though,” Pearson says, contemplating his Catch-22 dilemma, “for the J/24, the old hulls are still competitive today. An old boat is just as fast as a new boat. The concept has proven itself over the years.”

And the Triton? “If a Triton were to heel over on a point that was one square inch on the hull, it would support the boat.” Pearson adds. “People used to say they were way over built, but they were built with established safety factors we wanted to attain.” ☆

¹ Herreshoff, Francis L.: *Capt. Nat Herreshoff: The Wizard of Bristol*

Andrew Rusnak is editor of Composites Fabrication. Part II of this story will appear in the April issue.

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