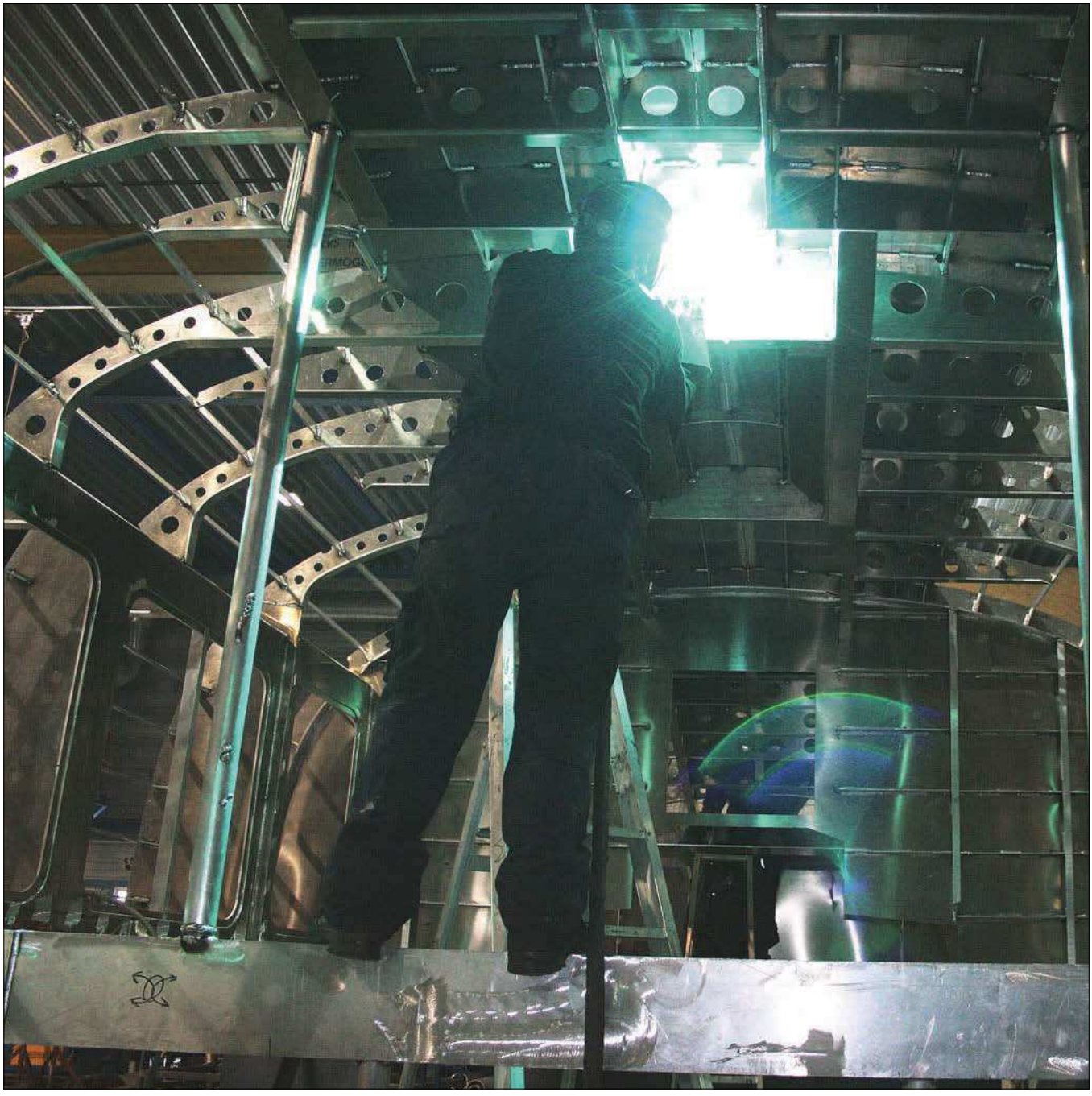
PROFESSIONAL BOATBUILDER



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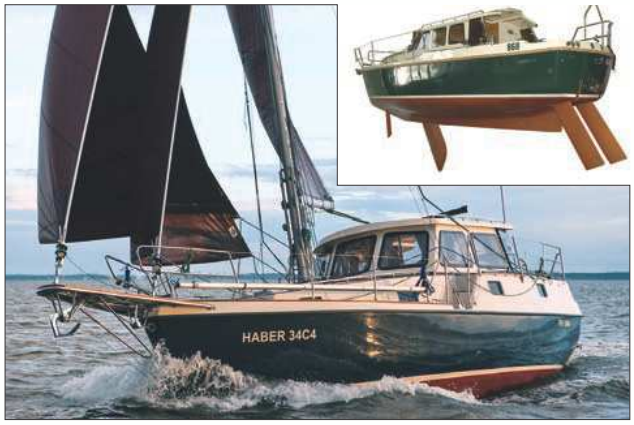
CNC-CUT METAL KITS
CUSTOMER SERVICE REPS
TWO COMPOSITES TEST LABS
ONBOARD POWER EVOLUTION

ROVINGS

Compiled by Dan Spurr

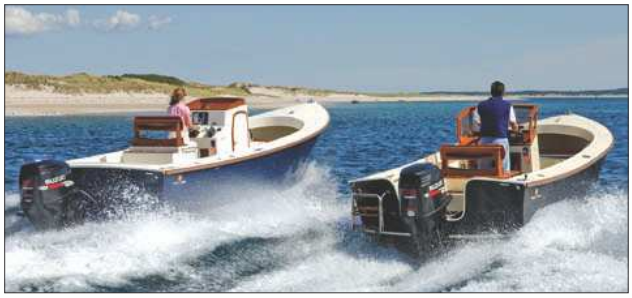
A Million Ideas

One look at the portfolio of Janusz Konkol, a boat designer and builder in Poland, confirms that his mind runs in many directions at once: wooden boats, composite sailboats and motoryachts, center-console outboard boats, mahogany plywood classic runabouts à la Chris-Craft, GarWood, and Riva, traditional wood blocks for Tall Ships, composite and metal parts for automotive and other industries.... For 14 years Konkol's Haber Yachts has supplied motorboats for Rothbilt Boats in Yarmouth Port, Massachusetts. Haber Yachts employs about 50 people.



HABER YACHTS (DOTID)

Above—*Designed and built by Janusz Konkol, owner of Haber Yachts, in Poland, the Haber 34C4 (34'1"/10.4m) has sold well; attractive features include the pilothouse, shoal draft, and quality appointments.* ***Inset***—*Several models have the optional patented four-centerboard configuration that allows the boats to sail a straight line without a hand on the helm or an autopilot.*



ROTHBILTBOATS (DOTID)

Above—*Haber Yachts has built powerboats for RothBilt Boats of Yarmouth Port, Massachusetts, for more than 14 years, under the direction of plant manager Piotr Wilk.* ***Left***—*Prepping the mold for the RB24 (26.5'/8m) center-console powerboat.*

Of the company's five sail models, the largest, the Absolwent 900 (29'6"/9m) is a wooden sloop. The largest of the fiberglass models is the 34C4 (10.4m), available as a sloop or cutter. All have shoal draft and low-aspect Huari or gunter rigs with the masts stepped on tabernacles. Konkol's aim is to offer boats suited for a myriad of service, from open ocean to lakes and canals, and for easy over-the-road transport. For the latter they generally have shallow draft, light displacement, and relatively narrow beam. The 800C4 described below meets Category C requirements as a sloop, and Category B with the extra ballast that comes with the cutter rig.

Of particular interest to sailors are three so-called self-steering models: the 660C4 (21'7"), 800C4 (26'/7.93m), and 34C4 (34'1"/10.4m). The C4 stands for the four centerboards in each model. Konkol writes that he was motivated to develop this concept—a standard centerline midships centerboard, another at the bow, and two more in the quarters—after a tense experience sailing with someone who knew next to nothing about handling a sailboat. The wind came up and Konkol's friend was unable to hold a course while he, Konkol, attempted to go forward and drop the jib. Eventually they figured it out, but Konkol was determined to find a way to make a boat hold a course without relying on an autopilot, untrusting as he is of electronics.

The British magazine *Practical Boat Owner* (PBO), which has a reputation for fairly and rigorously testing sailboats on the water, spent a good deal of time on the 800C4 and published a detailed analysis of the boat's handling with the four centerboards in its May 2009 issue. The writer came away impressed. First he addressed the offshore capability of the boat, stating that in severe conditions the "flush bottom" allows it to "slip sideways," whereas a heavier-ballasted and deeper-draft yacht could trip and capsize. And speaking of capsize, the pilothouse prevents the boat from becoming stable upside down—in other words, there is no angle of vanishing stability (AVS).

The boat, which is also fitted with a conventional tiller and rudder, can be steered and even tacked by raising and lowering the correct centerboard. PBO's reviewer wrote: "If you're sailing upwind in gentle conditions under full sail with the bow board, main board and leeward stern board, you can tack simply by lifting the stern board: that moves the CLR [center of lateral resistance] forward so the boat rounds up and through the wind. Drop the new leeward board once you've completed the tack, and away you go—with no need to touch the tiller."

Construction is polyester resin and hand-laid reinforcements—principally mat and woven roving—in a computerized humidity-and-temperature-controlled environment. Foam core is installed in some areas, but the hulls are largely solid. Hulls remain in the mold for a minimum of four days at a minimum temperature of 64°F (18°C), and at that temperature

for four weeks before leaving the heated shop. Solid glass stringers are tabbed to the hulls of powerboats. Boats are tested in a water tank for watertightness and systems functions.

Consumer interest in the sailboats is focused mainly on the space and shelter of the pilothouse, shallow draft, construction quality, and, according to PBO, attention to detail. It's unclear how many customers are lured by the intriguing capability of the four centerboards.

Principal dimensions of the 800C4: LOD 26′ (7.93m), LWL 24′8″ (7.53m), beam 8′2″ (2.5m), draft 1′10″–5′1″ (0.58m–1.8m), displacement 5,428 lbs (2,650 kg), ballast 1,323 lbs (600 kg), sail area 377 sq ft (35m^2), D/L 164, SA/D 19.6.

Haber Yachts, 13-300 Nowe Miasto Lubawskie, ul. K. Makuszyńskiego 1, Poland, tel./fax +48 (0) 56 472 54 24, tel. +48 (0) 56 472 54 04, webiste www.haber-yachts.com.

Composites at North Idaho College

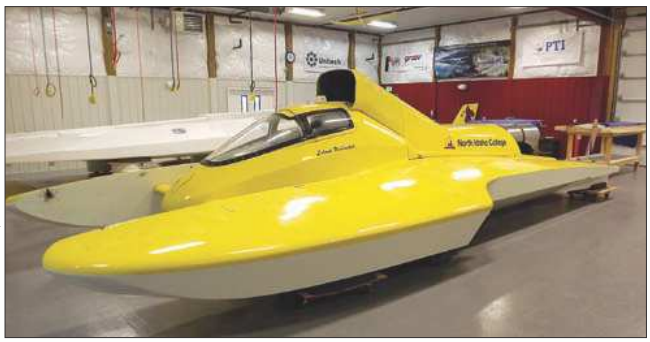
You may recall reading in this column about Murdo Cameron, the ex-airplane pilot who decided he liked making flight simulators more than flying and teaching, and actually, liked messing around with advanced composites more than making flight simulators ("Composites Nut," *Professional BoatBuilder* No. 128, page 14; "Infused With Enthusiasm," PBB No. 144, page 12).

Murdo called recently to tell of North Idaho College's (NIC) new Aerospace Composite Technology program in Hayden, in which he's involved. Lest you wonder, there is a marine connection. Our earlier reports on Murdo were about infusing C-class hydroplane hulls and decks; he's lent NIC boat molds to enable the students to get their hands on large parts. For more information on the program, Murdo referred us to composites instructor Trevor Budge.

The program, funded entirely by a $3 million grant from the Trade Adjustment Assistance Community College and Career Training Grants, implemented by the U.S. Department of Labor's Employment and Training Administration, is intended to provide skilled technicians to the local aerospace industry, which includes Empire Airlines, several smaller aviation companies, and a number of composites firms that support them. Military veterans returning from overseas are a particular target group. The school estimates that the composites industry will need to fill more than 600 new jobs in the next two to three years. Graduates, of course, will be qualified to fabricate and repair composites in other fields, including marine.

Thirty-seven students enrolled in the first semester. Budge says about one-third are right out of high school, a third are hobbyists who want to learn more about working with composites, and another third are employed middle-aged individuals looking for better jobs.

Budge, who has an extensive background working for various composites companies in the United States and Australia—mainly building aircraft such as the all-carbon



TREVOR BUDGE/NORTH IDAHO COLLEGE

EVAN MOORE

TREVOR BUDGE/NORTH IDAHO COLLEGE

Above left—*The Leland Unlimited Hydroplane Race Team has loaned a hydroplane to North Idaho College for composites technology students to splash and modify to instructor Trevor Budge's specifications.* ***Above***—*In the layup, or clean, room, students learn infusion. The gray tanks are resin traps that prevent resin from entering the vacuum system. Each table has drops for air, electrical, and vacuum.* ***Left***—*The first class in the Aerospace Composites Technology program gathers outside the hangar facility at the Coeur d'Alene Airport, in Hayden, Idaho.*