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Westlawn Student Jon Ames Wins the *Professional Boatbuilder/WoodenBoat* Design Challenge

Westlawn's Students and Alumni Have Won More Design Competitions Than Those from Any Other School!

September 1, 2010. [The Westlawn Institute of Marine Technology](#) is pleased to announce that Westlawn student Jon Ames has won the [Professional Boatbuilder/WoodenBoat design competition](#), wood category. It is Jon's second success in a design competition in less than a year. (His power trimaran design was a finalist in the [Westlawn/PassageMaker Design Competition](#), in January 2010.) This continues Westlawn student and alumni successes in design competitions. In addition to Jon Ames's two wins, these success include:

- The 2008 [Cruising World design competition](#), Keimpe Reitsma, 1st runner-up
- The 2004 [Camper & Nicholson/Boat International "New Concepts" competition](#), Ben Dodaarell winner in the 45 to 60 meter category
- The 2004 [Blue Water Sailing competition](#), Doug Frolich, 1st prize, and Charles Magnan honorable mention

Over the past ten years, Westlawn students and alumni have achieved individual honors in more design competitions than the students and alumni of any other school!

Jon Ames *ProBoat/WoodenBoat* entry competed with 58 entries from professionals, students, and amateurs from all over the world. The *ProBoat/WoodenBoat* panel of judges for *Design Challenge II: More pleasure at 2 Gallons Per Hour* was aimed at inspiring less-expensive, more fuel efficient, and seaworthy designs. The entered designs were to be capable of carrying a family on overnight excursions. Entries were to meet the following criteria:

- Must be trailerable for affordable launching, over-the-road transportation, and storage.
- Max beam 8'; max length 40'
- Minimum length 24', stem to transom
- Trailerable weight (with engine) should not exceed 3,500 pounds

- Must burn less than 2 gallons per hour (7.6 l/hr), maintaining a 10-knot cruising speed in a 2' (0.6m) chop and 15-knot breeze while carrying 800 lbs/362 kg (family of four). Favorable consideration will be given for continued efficient fuel consumption and good seakeeping abilities at speeds in excess of 10 knots
- Must include at least spartan overnight accommodations (berths, head, galley) for two adults and two children
- Must be a new design
- Submissions should be the designer's original, previously unpublished work, and include lines, profiles, sections, table of offsets, accurate weight study, cost calculations, and performance predictions.



The St. Joseph Sound Launch by Jon Ames

Winners were selected in three categories based on construction material: composite, metal, and wood. Jon Ames' 30-foot *St. Joseph Sound Launch* won the wood category.

Jon Ames describes his winning entry as follows:

On the west coast of Florida there is a nice little piece of water called St Joseph Sound. It has numerous spoil islands, shallows, beaches, parks, wildlife, all within a short cruise from Clearwater or Tarpon Springs. A fuel-efficient weekend boat is just what is called for to enjoy some wonderful family time exploring the sound at a leisurely pace. This boat was inspired by the challenge and the sound.

Of primary importance in this challenge was the fuel consumption so close attention had to be paid to hull shape and weight. I chose a semi-displacement hull form optimized to operate at a speed/length ratio of 2. This in turn determined other critical aspects of the design. Quarter-beam buttock angle, prismatic coefficient, and center of buoyancy are carefully matched to the S/L ratio. The D/L is very low, a result of limited fuel stores and simple outfitting. At this S/L ratio a round bilge reduces wetted surface and gives a softer ride. Deadrise forward is high for easy entrance into waves, but flattens out aft to reduce displacement. This is not an offshore boat, but should serve comfortably in the bays and sounds of western Florida and the Keys.



The St. Joseph Sound Launch by Jon Ames

Interior accommodations are sparse but sufficient for a small family. V berth forward with porta-potti under, galley with sitting headroom and access to stove, icebox and sink. Two small berths under the bridge deck suitable for children or stores complete the layout.

The cockpit and helm are comfortably laid out for relaxed cruising. Two chairs with lounges aft. Far aft is open with room for water activities. A swim platform makes water access easy and serves as rubrail for topsides with ample tumblehome.

I really love wooden boats, so the construction incorporates elements of traditional wood construction, while allowing for the benefits of epoxy. Although exterior and interior glass sheathing are called for in

this plan, a slight change in scantlings would allow for a more traditional approach with less glass and epoxy.

In order to confirm performance numbers, Ames did a detailed weight study and then three different speed analysis: Holtrop, Propeller Handbook, and Wyman.

St. Joseph Sound Launch Specifications:

LOA:	30'
LWL:	29' 3"
Beam:	8'
Draft:	2'
Displacement:	4300 lbs
Trailer Weight:	3200-3500 lbs
DL Ratio:	79
Prismatic Coefficient:	0.70
LCB/LWL:	58%
Wetted Surface:	170 ft sq
GZ at 20 Deg:	1.03 ft
GZ at 30 Deg:	1.11 ft
Tankage	
Fuel:	50 Gallons
Water:	30 Gallons
Engine:	Volvo D2 40 with 2.14:1 Gear
Propeller:	D 17"
Cruise speed:	10 knots
Top Speed:	12 knots

Ames noted, "This challenge created an active topic on our [Westlawn] forum boards. We students enjoyed many an interesting argument discussing aspects of the challenge and its broader implications on society and the boating industry."

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Founded in 1930, the [Westlawn Institute of Marine Technology](#) is the only nationally accredited distance-learning school of small-craft design in the United States. As the not-for-profit educational affiliate of the [American Boat and Yacht Council](#), the mission of the Westlawn Institute of Marine Technology is threefold:

- To provide our students with the skills and knowledge required to build a rewarding career in the profession of yacht and small-craft naval architecture.
- To support continued growth of the recreational and small-craft marine community through the

development of well-trained, safety-oriented, boat designers developing better products for the benefit of the boating public.

- To provide continuing education to marine-industry professionals.

To learn more about Westlawn, please call (207) 853-6600 or visit the Westlawn website at:

www.westlawn.edu.