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Stylish Sailing

Christensen Shipyards is putting increased capacity to effective use, as Robert Pols heard from president and COO Joe Foggia.

The identity of the first European to sail to North America is open to discussion. Friar Nicholas of Lynn, who may have preceded Columbus by 130 years, is almost modern compared to Leif Eriksson, who was perhaps only replicating an earlier voyage by Bjarni Herjolfsson. One thing, though, is certain: each of them could have traveled in much greater comfort and safety had he a Christensen ocean-going vessel at his disposal.

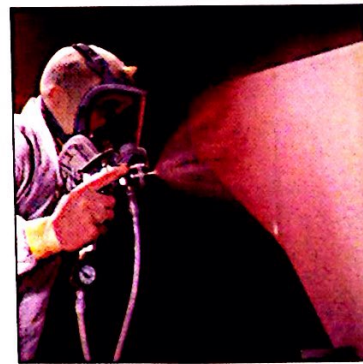
Christensen Shipyards is a leading builder of luxury composite fiberglass yachts that can be powered for any combination of speed and range desired. Its yard in Vancouver, Washington has the resources necessary to build the entire yacht on-site. Large, climate-controlled assembly bays, one of which houses an expandable hull mold, are supplemented by a metal shop; electrical, plumbing and pipe fitting departments; cabinet and upholstery shops; and everything else that's needed to ensure all aspects of quality are subject to inhouse control.

It's a site that's ideal for its purpose, and one that has recently been extended, as Joe Foggia, president and COO, explained. "We've just finished a new marina, about 100 meters south of the main site, to provide private, sheltered space for seven yachts of up to 170 feet in length; and there's a dry dock there as well. As for the manufacturing facility, that's not an old shipyard that's been taken over. We designed it from scratch specifically for the building of our yachts."

There is also, he continued, a new building for pre-fabricating and pre-finishing interiors. "Because we're now totally engineering the whole boat in Auto-CAD and 3D, we're able to transfer all that activity to our new 20,000 square-foot facility where we can achieve a better quality of finish. Then the interior features are moved across to the vessel at just the appropriate time, rather than being installed too early when there's a risk of damage from other work. As a result of that change, we've already seen the saving of thousands of man-hours—something in the region of 6,000 per boat."

It is planned that the facility should be able to handle several more yachts, increasing delivery capacity from two to three, or even four vessels a year. So the final phase of development over the next 18 months will use the space between the present buildings to increase the output of other activities. Chief among these is fiberglass infusion, a technique of which Christensen has developed its own variation.

"We consulted with individuals doing infusion in different parts of Europe, experimented with how it could be best applied here, and devised our own form of vacuum infusion process," Foggia explained. "We don't use the more traditional method of hand-laying fiberglass, which has to be set, cured, and sanded between layers. Instead, we've come up with the right materials and procedures to allow us to put all the layers down, ▶



Christensen Shipyards

vacuum-bag them, inject resin on one side, and suck it through to the other. For that, we need only around 20% of the man-hours, and, because there isn't the large number of mechanical bonds between layers, the part is much stronger and lighter, and we save about 40% on materials. It's also environmentally better because it's vacuumed; there is none of the resin fumes that arise from the open-air spraying involved in conventional laying-up by hand."

The savings of manpower and materials sit well with Christensen's concern for manufacturing efficiency, which, he argued, is boosted by having an experienced workforce. "Because we have a low turnover, we've always tried to use the same core of people who have been with us for some years, and we try to find processes within the construction of a vessel whereby they can build it faster. We aim to work smart as well as hard, and, when relatively few people are working on a process, a lot less error is made."

The elimination of error is vital to an operation where quality and safety are top priorities, and all work is subject to intense and repeated scrutiny. "We have a quality control officer out there, checking and verifying all the time. The foremen of each craft, who all have experience of the full range of processes, are making quality checks too," said Foggia. "Then the American Bureau of Shipping (ABS) surveys us on a random basis (averagely once a week) for the certification of engineering, hull, superstructure, and machinery.

"We're also certified by the Maritime & Coastguard Administration, which, in addition to having the same concerns as the ABS, is interested in the fire integrity of the vessels," continued Foggia. "In fact, we have an open yard for any surveyor or, indeed, anyone else who wants to come in. Basically, we spare no effort or expense as far as quality and safety are concerned," Foggia concluded. "We make sure that they are never jeopardized." ●

Village Marine Tec

Village Marine Tec continues to be the industry standard for military, industrial and offshore, commercial, and pleasure boat seawater reverse osmosis desalinators, water purification equipment, and US Coast Guard-approved oily water separators. We are the core part of a family of companies, including Aqua Pro membranes, Excel Products, and Pacific Molded Technologies dedicated to manufacturing water purification equipment with an emphasis on materials and quality. Our service is unsurpassed with five conveniently located service centers in Florida, California, and Washington.