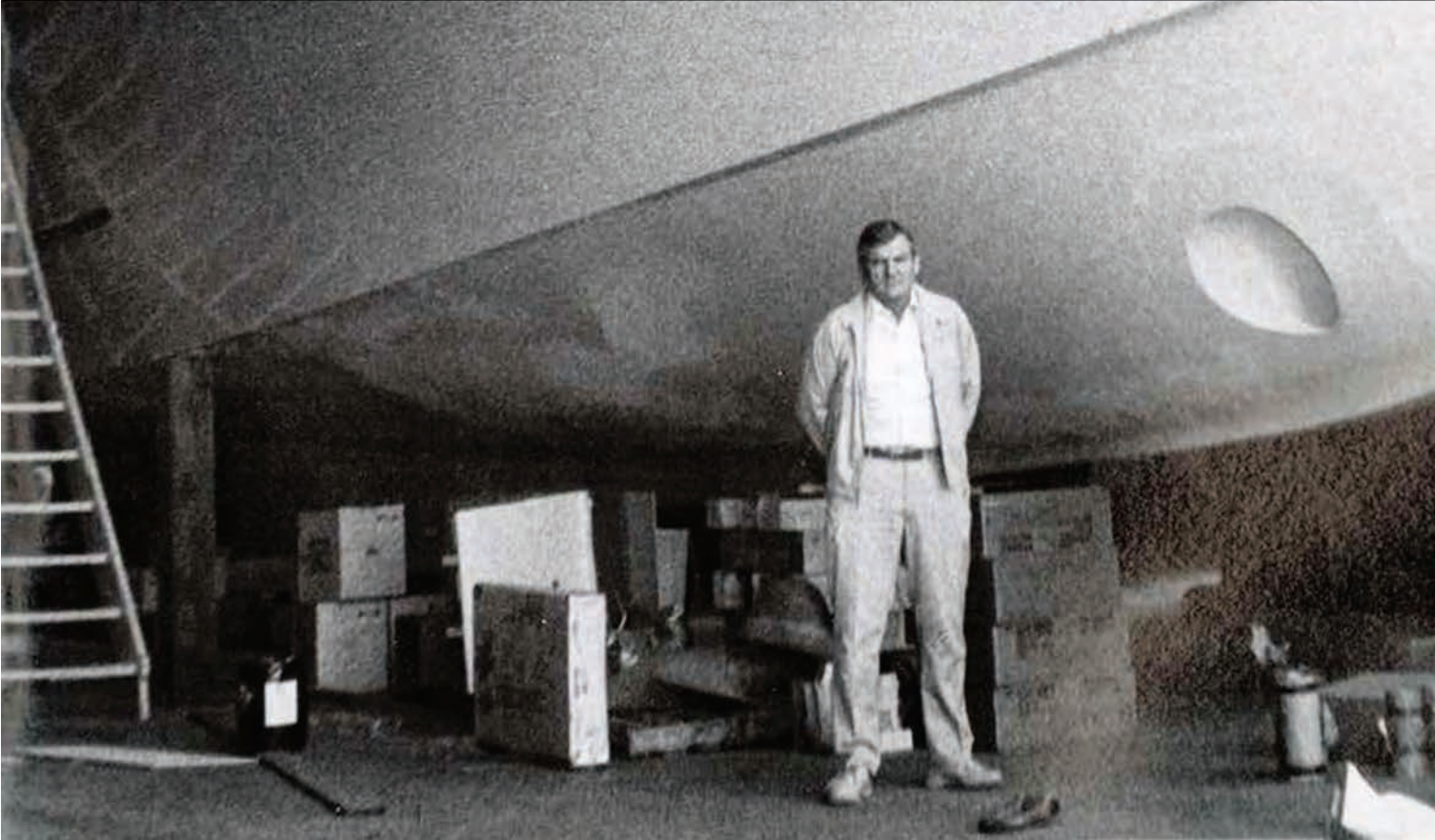




WASTE NOT, WANT NOT
Christensen Shipyards

Along with a number of recent launches and sales announcements, Christensen Shipyards is in the midst of an ongoing reinvention. In becoming more efficient and instilling more motivation from the shop floor to the boardroom, the future of one of the USA's leading superyacht builders appears assured.

BY: DIANE M. BYRNE
IMAGES: COURTESY OF CHRISTENSEN SHIPYARDS



IN 2009 CHRISTENSEN IMPLEMENTED THE LEAN MANUFACTURING POLICY OF KAIZEN, PRACTICING THE ELIMINATION OF WASTE AND FOLLOWING A PATH OF CONTINUOUS IMPROVEMENT...



The Christensen Shipyards facility in Vancouver, Washington State, were purpose built by Dave Christensen and inaugurated in 1983.

Spend time speaking with the head of a major corporation, and chances are you'll hear him or her mention phrases like 'thinking outside the box', 'being engaged', and any number of other buzzwords. Unfortunately, you may come away from the conversation wondering how many of these same chiefs really are thinking outside the box or really are engaged with what's going on at their company. Spend time speaking with Joe Foggia of Christensen Shipyards, and it's a completely different experience. In fact, contrary to the stereotype of a person who has been with a company for three decades and president of it for more than a third of that time, Foggia is about as tapped into every level of the Washington State builder's business as someone can be.

So, too, is every craftsperson, from the engineering department to the plumbing department and even the marble shop. It's all thanks to the eye-opening experience of Kaizen (pronounced ky-zen), implemented at Christensen Shipyards in 2009 and continuing to this day. Kaizen's principles are akin to those of the renowned Toyota Production System and Lean manufacturing, with an emphasis on the elimination of waste and, perhaps more important, continuous improvement. Both concepts pertain to time, effort, money, and other elements that all ultimately affect the end product coming out of its nearly 200,000-square-foot building, the yachts. "Ideas pop up from every individual in our organization," Foggia says. "It's cool."



BRAND BEGINNINGS

The very idea behind Christensen Shipyards initiated with one person, 30 years ago. Dave Christensen, a real estate developer, had purchased an 80' yacht from Westport Shipyards for his family's use in 1979, going on to sell her for a tidy profit. He commissioned and sold a few more yachts from Westport over the following years and decided to hang his own shingle. His namesake facility was built from the ground up in Vancouver, Washington, in 1983. Initially, Christensen Shipyards targeted buyers of yachts in the 90' range. Then, as it is now, the shipyard was vertically integrated, with engineering, fiberglass hull layup, and brightwork all done in-house.

Christensen Shipyards' first delivery was Domino, a 92-footer, in 1984. She wasn't fully custom, but her LOA placed her, and her builder, squarely into the burgeoning megayacht market of the time. Custom construction started a few years later, with the 130' Royal Oak and the 120' Picante handed over in 1988 and 1989, respectively. By the end of 1990, three more custom yachts had emerged from the facility, ranging in size from 115' to 130', sizes that were considered huge in those days. The yard continued to sign and deliver one or two yachts each year. The early days of Christensen Shipyards were also the early days of Foggia's career. He began working as a part-time apprentice at the yard at the ripe age of 15. Now, Foggia is also Dave Christensen's stepson, but don't confuse family for favoritism. Whether it was the fiberglass department, carpentry, plumbing, or the mechanical department—all divisions that Foggia worked in through his college

Around the production halls color-coded schedules are mounted near the yachts in build: green indicates on time, yellow means deadlines are at risk and red means the department is delayed.

years—Foggia was expected to work. And he worked hard. Upon graduation, he transitioned into other in-house divisions, like production planning, getting a sense of what it takes to spec out the materials and schedule works. From there, he moved into estimating and then project management, gaining more hands-on experience with the full flow of production.

Through the early 1990s, Christensen Shipyards continued to build megayachts mostly in the 120' to 140' range. Production changed in the mid- to late 1990s, from fully custom to spec building. While other builders stuck to one-off construction, a good argument was to be had for spec construction. Since the builder itself would act as the client initially, there would be no vagaries or eccentricities in terms of outfitting. Scheduling could become more predictable too, and costs could be better controlled. To be sure, spec construction held a risk, but it worked for Christensen. It sold its first spec yacht, a 155' that became known as Liquidity, in 1997. She was a little more than halfway completed when she sold, too, allowing the buyer to put some personalization on the project without impacting what Christensen wanted to control.

FROM BOOM TO GLOOM

The late 1990s was a time of tremendous growth in the megayacht sector. More buyers emerged, both new and established owners alike wanted bigger yachts than ever before, and they wanted them delivered within the most favorable time frame. Christensen was now addressing the 150'-plus market, so between that and its spec program, it certainly had advantages.

But Foggia, who had become president and a managing partner in 2001, and the management team knew it wouldn't be enough simply

to build larger. They decided to bring more specialties in house. “A lot of other builders use subcontractors, and they switch out subcontractors, so quality changes from boat to boat,” Foggia avers. Christensen added an on-site, 10,000sqft marble shop in 2007, bringing its total facilities to more than 180,000sqft. The marble shop was created in conjunction with Homchick Stoneworks, a Washington State firm renowned for its expertise in working with marble, granite, onyx, and other exotic stones. Sinks, soles, countertops, edge treatments; you name it, it’s fashioned in the on-site shop.

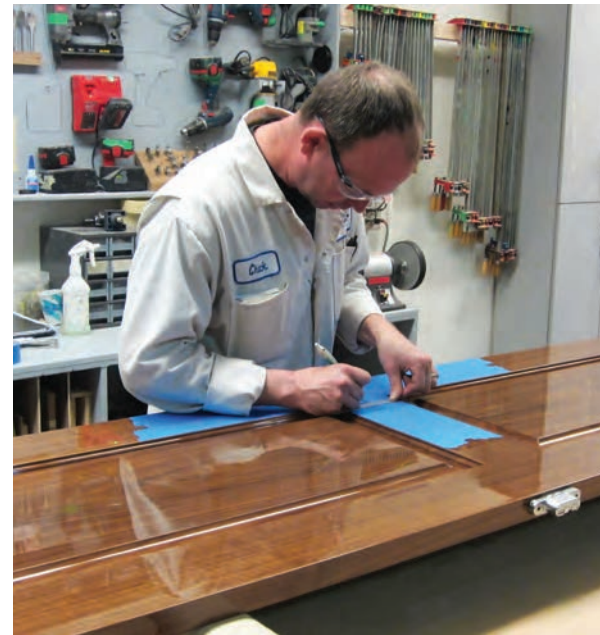
Another expansion for Christensen was set to occur thousands of miles away, in the state of Tennessee: the creation of Christensen Shipyards East. Given the boom going on in the megayacht business, the 200’-plus market held great potential. However, Christensen’s existing facilities couldn’t accommodate yachts of that magnitude. While a defunct aluminum plant was available not far from its Washington State headquarters, that building ultimately wasn’t the right fit. As unlikely a choice as Tennessee seemed—it’s landlocked, for one—Christensen selected it for a few reasons, including its low business costs and the region’s marine ties. On the shores of Tellico Lake, a short drive from Knoxville, the new facility would be across the water from well-known companies like Yamaha and Sea Ray. In addition, Brunswick Boat Group, parent company of Sea Ray, had recently moved its headquarters from Chicago to Knoxville, plus several ski-boat, houseboat, and sport-boat manufacturers were nearby.

Another influence came in the form of a Christensen shareholder, Henry Luken, who became part of the company a few years after purchasing the above-mentioned Liquidity. Luken’s telecommunications and media businesses were headquartered in the region. The plans for expansion were revealed publicly in 2006, calling for 450,000sqft of climate-controlled production space. The groundbreaking began, followed by construction on the new building.

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Every month each member of the 300 strong team gets to present a 'Kaizen', suggesting an improvement in efficiency, quality and reducing wasted time or money.



Then came the Monaco Yacht Show in September 2008. In stark contrast to previous years, one of the world's most significant superyacht shows was subdued. "The boat show was dead," Foggia remembers. "There were four Russians posing as buyers walking around, and everybody was trying to get them on their boat." The proverbial writing was on the wall, and Christensen would not be able to keep all of its employees, who numbered about 500 at the time. Worse still, from September 2008 straight through 2009, "We didn't have one sales call," Foggia recalls. "The world was in a tailspin. Nobody was thinking about buying boats." As a result, progress on the Tennessee facility was halted in 2009 too.

RETHINKING AND RE-EDUCATING

Because buyers were scarce, some yacht builders sought ways to reinvent themselves. Those with roots in military and commercial vessels turned their attention to these sectors, but Christensen did not have that luxury. What Christensen did have, however, was expertise in composites. Happily, these skills were in demand in the burgeoning renewable-energy field for things like wind turbines, wave turbines, and buoys, because the components require strength and are continuously exposed to fluctuations in environmental conditions, therefore they cannot risk corrosion. Foggia got the idea to diversify in this respect upon seeing several wind turbines along a roadway near the eastern portions of Washington State and Oregon. In 2009, Renewable Energy Composite Solutions (RECS) was created as a sister company to Christensen Shipyards, with Foggia serving as a managing partner. It wasn't a simple matter of marketing and starting up manufacturing straight away, of course. RECS received a \$1-million federal stimulus grant to retool its manufacturing capabilities and retrain the craftspeople. The management team also tapped the expertise of an organ-

ization in Southwest Washington, as well as consultants with corporations like Boeing, to learn more about opportunities. In the course of the conversations, the team learned that the manufacturing philosophy of Kaizen held great sway. For a yacht company, typically centered around artistry more than efficiency, Kaizen required a complete rethinking. "It's a whole cultural change, from me down," Foggia explains. The company gradually improved efficiencies, with RECS landing two contracts in 2010 and further receiving Seattle Business Magazine's 2010 Manufacturing Innovation of the Year Award for Midsize Companies. RECS remains operational today.

Adopting Kaizen affected everything that Christensen Shipyards does, too. One big area of change was implementing what's termed 'Just-in-Time'; building only what you need when it's needed. "It was easy for us to figure it out, once we identified it," Foggia says. "Keep in mind, we had 25 years of bad habits. All companies develop bad habits along the way." That's especially true of overproduction. Foggia provides an apt analogy. "The natural tendency is to say, 'Well, let's build three pilothouses because it's going to be cheaper that way.' But what ends up happening is you have three different parts sitting out in the yard, and people trying to walk around them and move them around. Then the next customer says they're not going to use that style."

Customers, their captains, and any other visitor to Christensen can see another result of Kaizen within the two construction and assembly bays today, which are thankfully back to healthy production levels. Schedules detailing the duties of each department are mounted on the wall near the yachts in build, color-coded to specify the status. As you might guess, green means everything is on time, yellow means deadlines are at risk, and red means the department is delayed. The goal is to keep information flowing freely, and it encourages everyone to pitch in to keep the proper pace. "Any owner can walk in here, any



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surveyor can walk in here, and understand it," Foggia adds. "There's nothing to hide." By contrast, he says, secrets—intentional or not—result in workers waiting for information from other departments or having to request additional details, which are other forms of waste. "We figured that if you spend, say, an extra 1,000 or 2,000 hours on engineering, it saves things out on the floor," Foggia says. Add to this the fact that once per month employees, who now total about 300, get to present a Kaizen, or improvement, and more savings and boosts in productivity are occurring on a regular basis.

RENEWAL AND RESURGENCE

If you do visit Christensen's facility, you'll certainly notice something else. Among the handful of megayacht projects it's building for its own clients is a project for another yacht builder: Ocean Alexander. Specifically, it's the Ocean Alexander 120 (see INVICTUS #2). In 2009, Christensen signed an agreement with the Taiwan-based builder to help it launch its Megayacht Series. Even though Ocean Alexander builds its other offerings at its own facilities, the 120 represented a significant step up in size, so it wanted to align itself with an experienced partner. It also wanted one based in the United States. Christensen clearly had those advantages, plus represented a good match for Ocean Alexander's own purchasing power in terms of equipment.

Ocean Alexander built the hull mold and shipped it to Christensen in time for the first Ocean Alexander 120 to premiere at last autumn's Fort Lauderdale International Boat Show. The model was received with great acclaim. Christensen has committed to building a few

Christensen's planned expansion with a new facility in Knoxville, Tennessee was delayed during the crisis, but the yard now has plans to open it within a year.



more 120s, expecting to deliver them every six months. Because those projects are really Ocean Alexanders, though, conceived and marketed by that company, Christensen remains as focused as ever on its growing order book of fully custom yachts. In fact, Christensen anticipates delivering one every seven and a half months. Even though spec construction still holds certain advantages, the shipyard management doesn't feel the need to follow that route. "I believe we build the best quality per square foot in the world related to our class of yacht," Foggia says. "I think because we're vertically integrated, and we do everything in house and we're quality freaks, that has a lot to do with the overall quality of the vessel." He further points to client, broker, and surveyor feedback, all of which Christensen welcomes and strives to incorporate to improve its offerings.

As for those offerings, each Christensen features everything that buyers had on their previous yachts, spelled out in the specifications and priced accordingly from day one. "We make it as easy as possible up front, and as long as everybody understands clearly prior to signing the deal, things work out really well," Foggia says. Change orders are still expected and executed, of course, but the detailed approach early

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on protects buyer and builder alike. And, while most Christensen clientele are experienced owners, "way more educated on the product that they're looking at buying" versus 10-years ago, Foggia says, some relative novices do come along. "I tell them, 'Get the best people in here. Let's do it right from the very beginning,'" with consultants like maritime attorneys and surveyors.

It's that attitude which has attracted a number of yacht clients to Christensen recently. The "smallest" Christensen under construction is a 143' code-named Project Buzz. Work started on her last summer, alongside two Custom 50M Series yachts signed in 2010, code-named Perfect Pursuit and Deputy Dog. The former should launch this spring, with Deputy Dog launching in 2014. Between the two splash dates, an unnamed 160 Custom Series, with accommodations for twelve in the owner's party, will hit the water. She should be handed over early next year. Late last year, Christensen signed two 164' orders (a.k.a. Custom 50M Series), similar to the 160 Custom Series but featuring an additional fold-out balcony off the skylounge and larger alfresco areas across all decks.

Both 164s were commissioned by repeat customers, including John Rosatti, an American entrepreneur and avid yachtsman who has previously owned two Christensen yachts, the most recent one being the 162' Remember When, delivered in 2011. At the launch, Rosatti stated that in his opinion "Christensen offers one of the best built boats in the world." Rosatti went on to discuss Christensen's policy of taking what an owner appreciates from his previous yacht, and building it into the specs for the new one. Having previously purchased a owned 157' Christensen in 2006, rechristening her Nice N Easy, he'd put the yacht to good use. At the launch of the 162' he told us; "From using



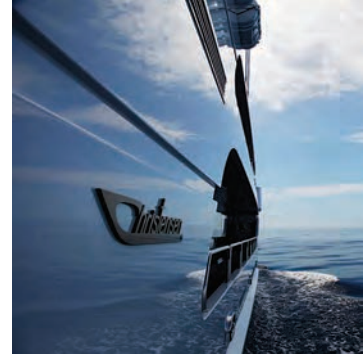
INVICTVS



Both Christensen 164s were built for repeat clients, including Remember When (below) delivered in 2011 to John Rosatti.



INVICTVS



that boat for so long, with the help of Christensen I made Remember When more comfortable.” At the time of going to press for this issue, Rosatti had just hosted Joe Foggia aboard Remember When, and were no doubt discussing the elements they would take from her and improve in Rosatti’s next Christensen, to be fittingly named Trifecta. The order book at Christensen is looking healthy, and come 2016, Christensen will deliver Project 2GES, part of the Custom 50M Series. She’ll have an upper-deck VIP stateroom and a fold-down balcony on the same level for all guests to enjoy. Even bigger yachts are on the horizon for Christensen, too. “We are working on finishing the Tennessee facility based on market demand and could have it opened within the year,” Foggia says. That seemed extra promising at press time, because Christensen was working on a multiple-boat contract, specifically for three 190-footers, with Rosatti intending to own one of them. Now that’s what we consider thinking outside the box. ■

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