Clever Craft

ALUMINUM BOATBUILDER COASTAL CRAFT COMBINES TASTE AND TECHNOLOGY—AND A LOT OF IT

STORY BY STEVE D’ANTONIO
PHOTOGRAPHY BY NEIL RABINOWITZ

It’s a secret I’ve tried to keep from my editors, albeit unsuccessfully: I revel in the opportunity to visit boatbuilders and their shops, and I especially enjoy the process when it involves those who employ unique materials, processes, or skills. Thus, when the opportunity arose to visit the folks at a small builder in British Columbia, one whose products I’d seen and, up to this point, admired primarily from afar, I leapt at the chance.

I’d spent about a half an hour aboard a Coastal Craft at the Seattle Boat Show a few years ago. Based on what I knew, or what I thought I knew, I had already formed the theme of this story even before I boarded the first flight for Vancouver: “Aluminum boatbuilding at its best, outstanding craftsmanship married to elegant design.” I wasn’t disappointed; Coastal Craft vessels are among the finest built and prettiest aluminum alloy vessels I’ve had the pleasure of spending time aboard and sea trialing. However, I was entirely unprepared for what awaited me inside the series of immaculate shop facilities, located in the quaint, waterfront town of Gibsons, British Columbia.

Technology—if ever there was a buzzword in the world of boatbuilding, surely this is it. It seemingly holds the answer to so many of our woes afloat, from navigation systems to bilge pumps, all can be technologically advanced and improved, at least when compared to paper charts and buckets, right?

Still, technology can be both friend and foe, depending upon how it’s installed by boatbuilders and yards, and used by vessel owners. Case in point, on my way to visit the folks at Coastal Craft, my over-the-road GPS took me through a residential neighborhood just south of the ferry terminal for which I was bound. It was lovely, scenic, and picturesque to be sure, and as an added bonus, I stopped to capture some images at what appeared to be a seldom-used rail crossing, as it wended its way into a mixture of vibrant fall foliage and ethereal mist.

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On the downside, I was lost. As it happened, I had forgotten that I couldn’t find the exact address of the ferry several days earlier, so I entered one that was “nearby.” Once I realized what I’d done, I doubled back. As I did I drove under a huge sign directing me to the ferry, which I’d completely ignored, all in the name of blind trust in technology. Similar stories of errors made by both mariners and aviators are legion—some have lived to recognize their faults; others have not.

That ferry left without me. However, there was another, making my technology gaffe forgivable, and the delay gave me the opportunity to sample some wonderful seafood chowder at the Olive and Anchor café in Horseshoe Bay. Technology can, when properly and wisely employed, be a force for good in the world of boatbuilding.

When I finally arrived at the offices of Coastal Craft, my first stop was what I referred to as the firm’s “war room,” the place where I surmised that ideas were hatched, discussed, and critiqued, where new designs were planned and created, and where systems were specified and detailed. Meeting with the company proprietor and founder Jeff Rhodes, and his two technology specialists, Scott Tilley and Garry Mulligan, I was given a virtual run-through of the current vessel offerings and their systems: the 400 IPS, 450 IPS, 560 IPS, and the newest model, the 65 (all are powered by Volvo pod drives), hull number one of which was still under construction.

The demonstration used everything from hard copy drawings, sketches, and diagrams to LCD screens, iPads, and iPhones. I was soon taken aback by the realization that Coastal Craft’s vessels are among the most technologically complex I’d ever encountered, truly cutting edge—technology gaffe forgivable, and the delay gave me the opportunity to sample some wonderful seafood chowder at the Olive and Anchor café in Horseshoe Bay.

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**DIGITAL SWITCHING: A HIGH BAR**

Want to turn on the heat or air conditioning a few hours before you arrive? Not a problem. Simply access the vessel via your phone, iPad, or laptop, and you can control anything that you would normally control via E-plex while aboard. While that’s a valuable feature embodied by this system, there’s much more to it than remote controls.

Digital switching is far from commonplace and would describe it as controversial (others would call it infernal); its debut into the recreational marine market a decade or so ago was something less than a rousing success. In essence, it relies on a central power bus that runs throughout the vessel. Most electrical equipment, lights, pumps, and heating and air conditioning systems are connected to this source of power via inline, digitally controlled switches, essentially “On”/“Off” switches.

The switches in turn are actuated via touch-screen panels and remote controls, etc. The interconnection between the vessel’s built-in touch screens and the digital switches is via small data cable-type wiring, while wireless remotes interface via onboard wi-fi. The results and advantage is manifold. Heavy gage wiring no longer runs to a similarly large and bulky main electrical panel, saving both weight and space. Control of the equipment can be accomplished onboard, from any position as long as the user has a remote, his or her iPhone or iPad, etc. along with convenient remote controls. Remote control from afar is also easily accomplished as long as the user and the boat have an Internet connection. This remote log-in is available through any Internet connection including mobile devices. This is in conjunction to the Vessel Monitoring/Security system that is also standard on all Coastal Craft vessels.

The vessel security system sends out notifications, reporting conditions on pre-determined sensors such as bilge pump activity, high water alarms, smoke, fire, temperature, battery voltage, shorepower status, security sensors, etc. Important alerts such as low battery voltage and high water are also sent to key Coastal Craft personnel, including company president, Jeff Rhodes. There have been cases where such an alert has been received and they were able to call an owner while he was aboard and review the problem before he even noticed it on his own instrumentation. Because it’s software controlled, the ability to finesse the controls of each piece of gear is nearly infinite. You could, for instance, program the system so that one virtual button turns on all of the gear you want to be on when you are ready to get underway, and another button switches the vessel into nighttime operating mode, and another can turn everything you want off when departing the vessel. The possibilities are endless.

Coastal Craft has been using digital switching systems since 2007, launching more than 30 boats with this setup, and logging well over 1,000 hours of actual data for review and analysis. That’s quite an achievement when many other builders have adopted digital switching systems and a substantial part of the market or are only now considering its application for their product.

Furthermore, Coastal Craft has developed technology to remotely monitor their vessels (using GSM and satellite connectivity) and separate technologies to allow them (the builder and servicing agent) and the vessel owners to log on to their vessels and, as previously mentioned, control and monitor onboard systems. As the manufacturer and servicing agent, Coastal Craft can gain remote access to the back end code that operates the distributed power and digital switching for maintenance and troubleshooting purposes from afar.

“We have been integrating E-plex into our vessels since 2007. In the beginning it was simply switching and monitoring the digital hotel systems,” Rhodes says. “Today’s system is fully integrated into all aspects including control of in-room radiant heating, air conditioning, distribution, and control of power management features that allow seamless user interface of high AC loads through large inverters tied into large lithium cells without the immediate dependency of the generator. The manner in which we monitor and manage loads simplifies the user’s experience and we have been successfully using this technology to offer the user the conveniences of being ‘on the grid’ while off the grid (no generator use).”

According to Rhodes, E-plex has an app called iPlex, which allows an iPad to act as a stand-alone onboard remote control for the E-plex control panel. “This is connected into a dedicated onboard network that also receives Internet via GSM allowing the user to close the iPlex app and check emails and surf the web while being connected through the same wi-fi network that hosts the iPlex control,” he says.

Using a readily available off-the-shelf CradlePoint router we have configured a smart network that offers Internet through multiple connection points, including a dedicated onboard GSM device, incoming wi-fi, as well as the ability to configure an onboard phone as a hot spot. By setting up connection properties and priorities in the router, the connection management is seamless.”

Rhodes says another advantage is the ability to add other systems to the network, including entertainment systems and wireless music streaming, again using an iPad as the remote. IP addressed security cameras can be configured on the network, too, allowing owners to log on to the boat to watch camera feeds.

Ultimately, it’s no exaggeration to say the possibilities with digital switching are nearly endless. In order for it to work well and reliably, however, the folks designing, installing, and programming digital switching systems must have a master plan. Coastal Craft is the company that has that plan, and it’s called Coastal Craft has the right stuff to make all this work.

**SPEED AND SOUND**

Under way, the 560 IPS kicked up her heels and held a bone in her teeth, moving with alacrity up to 31 knots at 2100 rpm. Noise levels throughout were very reasonable, due in part to generous application of acoustic insulation as well as a few other special switches that. Levels were measured as follows: salon/pilothouse, 70 dBA; master cabin, 67 dBA; and guest cabin, 77 dBA (it’s closer to the engines). At 10 knots and a leisurely 4800 rpm, those figures dropped to 62dBA, 58dBA, and 67 dBA respectively.

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TANKAGE DETAILS

Not surprisingly, the boat’s single 800-gallon fuel tank is all aluminum, integral construction, integral construction, where tanks are concerned, makes good sense. What I found both surprising and comforting was that this was the only integral tank. While aluminum is well suited for fuel use, it’s a poor choice for sanitation and potable water systems. Recognizing this weakness, the Coastal Craft 560 IPS uses 36L stainless steel for its 150-gallon potable water tank, an excellent choice for this application.

The 70-gallon sanitation tank is also stainless steel; effluent is extremely corrosive and regardless of the corrosion resistance of the alloy that’s chosen, this often proves to be a very challenging environment for any metal. The good news is Coastal Craft reports no service failures of these tanks. Given this, my material preference for sanitation tanks would be fiberglass or polyethylene.

COASTAL CRAFTSMANSHIP

All the high-tech gear, digital switching, joystick, and web interface are of little consequence aboard a vessel that isn’t seaworthy, reliable, safe, comfortable, and pleasing to the eye. Read about all aspects of the craftsmanship that goes into Coastal Craft boats: Why painting aluminum is more than just applying a coating. Why it requires planning and adherence to a process. How the interiors are contemporary in design and impressively joined. And how, thus far, the company has had excellent success with lithium-ion batteries. Visit www.passagemaker.com, click on the Magazine tab, then Web Extras.

Located under the salon, both rely on a fully automatic, temperature- and pressure-sensitive Delta “T” ventilation system. A separate and proprietary Delta “T” head ventilation system is also employed in the accommodation spaces.

TECH OR NOT?

Is technology really the solution to all of our woes aboard? No, and in some cases, particularly when poorly applied, technology can be the source of far more trouble than it’s worth. Simply put, high tech isn’t necessarily the answer and it doesn’t work for every boat.

Still, this is the 21st century and I am a strong believer that new boatbuilders will benefit from delivering the type of technology-derived comfort and security to which boat owners/buyers have become accustomed in their homes and automobiles. Coastal Craft appears to have risen to that challenge. “We try not to do too much at once; we try to get it right, stable, and reliable first. We have no ego, and a thick skin,” Rhodes says.

A self-leveling system, a user can turn the system on or raise the heat before leaving the master stateroom’s combination of warm wood tones, light-colored bulkhead coverings, a walk-around berth, and bright finish offer a comfortable home-like atmosphere.

The engine room, which is located under the cockpit, and machinery space,

SEA TRIAL CONDITIONS

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I believe success is sometimes a result of not knowing it can’t be done. There are folks in this industry who simply set their mind to doing something. They surround themselves with the right people to help them do it, and then they succeed, and often make it look easy. In essence, that’s Coastal Craft’s M.O.