



The  
**OUTER REEF**

**65**



## Story And Photography By STEVE C. D'ANTONIO

**S**ome folks are content to cruise on boats built by others. Often their boats are assembled in faraway places and, one trusts, under the watchful eyes and by the skilled hands of professional boatbuilders, experienced craftsmen and women, technicians, painters, and fiberglass tooling specialists. But there's another breed of boat owner, one who is never quite content with someone else's work. He longs to create his own boat, and if not to build it himself, at least to conceive the vision and then supervise construction of the craft.

Jeff Drucek is just such a man. After buying three vessels built by others, the last of which was a 77-foot pilothouse motoryacht, Drucek decided he could do it better. While he wasn't a boatbuilder by trade, he was a builder of some note, constructing custom homes in Long Island's exclusive and storied Hamptons region. He knew what he wanted in a capable, long-range cruising vessel, and he was confident there were others out there who wanted, and would be willing to pay for, the same thing.

In pursuit of this vision, Drucek started Outer Reef Yachts in 1996. In the process he developed a relationship with Tania Yacht Company of Kaohsiung, Taiwan. Tania had opened its doors in 1986 and now employs more than 100 boatbuilders, engineers, foremen, and administrative staff. In the more than 20 years that Tania has been in business, it has built over 200 luxury

motor and sailing yachts, while today all of its raised-pilothouse motoryacht production is dedicated solely to Outer Reef models from 60 to 105 feet.

Drucek is not only the owner of Outer Reef Yachts but also the designer and draftsman. It is from his pencil, mouse, and keyboard that the designs emerge. Tania's Chaucer Chen is the engineer and naval architect for all of Outer Reef's models.

### FIRST IMPRESSIONS

Like some of the other vessels I've had the privilege of touring, Outer Reef yachts are built to meet "Category A Ocean" rating standards, and thus the company touts all of its vessels as capable offshore passagemakers. The A rating as set forth by the International Marine Certification Institute is the most demanding, and it means, among other things, that the vessel is "designed for extended voyages where conditions experienced may exceed wind Force 8 [on the Beaufort scale, 34-40 knots] and include significant wave heights of 4 meters." This is a lofty goal indeed, and if Outer Reef Yachts' aim is to meet it, then good on them. Additionally, while Outer Reef yachts are not specifically built to meet any ABYC standards, the Outer Reef 65, like all Outer Reef yachts, is built utilizing American Bureau of Shipping (ABS) guidelines for construction and AC and DC electrical systems.

*Classic  
Luxury:*



As is often the case with a vessel that's already in the hands of a private owner, arranging a passage to carry out a *PMM* boat tour can be logistically challenging. Initially, I had been slated to cruise aboard another Outer Reef 65 late in 2006; regrettably, the timing did not work out. Months later, an opportunity arose for me to tour *Lucky Linde*, a 65 owned by Steve and Jayne Lindemann of St. Louis, Missouri. I boarded the boat, which had been commissioned just a few months before, late on a Friday evening in June in preparation for an early morning departure from Charleston, South Carolina, and a planned five-day passage north. Waiting for me at the City Marina in Charleston for our run to Norfolk, Virginia, were Steve and his son Steve Jr. (which made for an interesting time whenever someone called out "Steve" during our passage). Also aboard were crew members Capt. Mary Taylor and Ken Crowley.

The passage would give me the opportunity to thoroughly evaluate the 65's capabilities, since we planned to transit the ICW and also take the boat on the outside, depending on the weather conditions, in order to make the best time possible. (Traveling entirely within the waterway, the distance of the trip would have been 470 statute miles.) Fortunately, the forecast was as good as it could have been: a little too rough for a comfortable outside passage the first day, but settling down thereafter. Better still, the air temperature would drop from the 90s on the first day to the low 80s with lowering humidity for the remainder of the voyage.



Top right: Note the intricate design of the stainless steel anchor chafe protector on *Lucky Linde*'s bow. Stainless design, fit, welding, and polish are outstanding throughout the Outer Reef 65. Above: With a big Maxwell 3500 anchor windlass and Portuguese bridge, the Outer Reef's foredeck is all business.

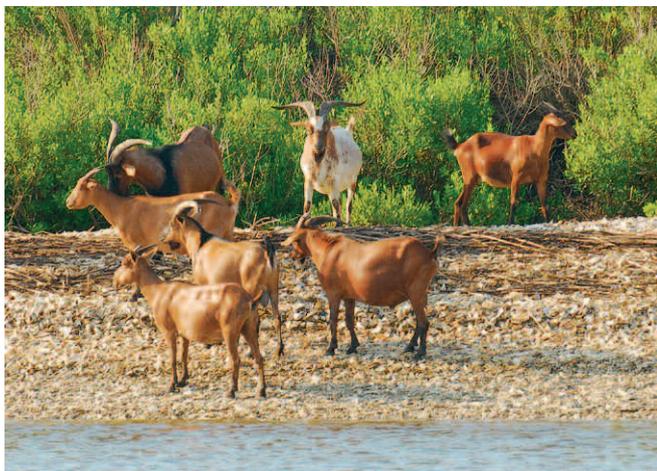
During the outside passage, between Little River and Cape Fear, conditions were lively enough to test the 65's stabilizers (and lay low one of our crew), with winds at 15 knots and 3-foot seas. *Lucky Linde* tracked well while exhibiting a stable and predictable motion.

At the conclusion of the first day's run, *Lucky Linde* found herself 125 miles from Charleston after 12.5 hours under way. Setting our anchor in Calabash Creek, just south of the North Carolina state line, the crew breathed a collective sigh of satisfaction, if not relief. It was the first time we had cruised together, and so the day had been spent enjoyably, getting to know each other and *Lucky Linde*'s behavior and characteristics.

### HULL AND DECK

As anyone who has traveled the Intracoastal Waterway knows, traversing it affords those who are off watch plenty of time to relax and watch life go by. From Marine Corps hovercraft and fast assault craft whizzing about to herds of feral billy goats grazing on tough barrier island vegetation, the sights range from the fascinating to the mundane. During stretches of the latter, I took some time to give *Lucky Linde* a careful going over, crawling over and through the boat from the flybridge hard top to the engine room bilges.

Outer Reef's construction technique isn't groundbreaking by any means. Rather, it is a tried and true approach toward quality boatbuilding. The hull is "handlaid up," meaning the fiberglass fabric and resins are placed in the mold by people rather than spewed from the end of a tool called a chopper gun. Chopper



guns are fine for certain portions of boatbuilding (particularly outer skins and lightly loaded parts); however, because the strands of reinforcing glass that issue forth from the gun are very short, they aren't especially strong. Therefore, their use is best kept to a minimum where major structures such as the hull are concerned.

The 65's hull is made using the equally tried and proven cored composite construction technique (see *PMM* Dec. '06 and Feb. '07 for more on cored construction). And it's vacuum-bagged, which ensures a strong, light, void-free laminate with a proper resin-to-glass ratio. Divinycell PVC foam core material is used between inner and outer layers of polyester resin and glass fabric skins. The construction is noteworthy in the respect that the outer fiberglass laminates of the wetted section, from the bottom of the keel to 6 inches above the waterline, are "skincoated" with vinyl ester resin, the primary advantage of which is resistance to osmosis and the resulting blisters. (Outer Reef Yachts offers a five-year "hull defect" warranty, which appropriately covers osmotic blistering.) Additionally, from a structural standpoint, vinyl ester is both stronger and more resilient than its polyester cousin. Following a belt-and-suspenders approach, Outer Reef finishes off the bottom with five coats of epoxy barrier coat. This provides an added measure of blister protection and serves as an excellent primer for antifouling paint (see *PMM* Aug. and Sept. '06 for more on blisters and osmosis). The combination of a vinyl ester skincoat and a full epoxy barrier coat is precisely what I use and have written about on a regular basis.

The boat's rubrails, an integral part of the hull, are adequately sized for a vessel of her displacement. (This is not as much of a given as you'd think; many rubrails are undersized or not robust enough.) Capped with a thick stainless band, the rubrails look as if they could easily

shrug off creosoted, barnacle-encrusted pilings and bulkheads. An equally rugged-looking spray rail extends forward from the swim platform for about one-third of the hull's length. The 65's chain lockers are clean, smooth, and nicely finished, with no ragged shards of fiberglass filament or exposed bulkhead core. This says a lot, as I'm a firm believer in the notion that you can determine much about a boatbuilder's attention to detail by looking at the finish inside the chain locker.

The deck and cabin structures are constructed in virtually the same way: PVC core, polyester resin, and vacuum bagging. (Vinyl ester is not used above the waterline, nor is it necessary; its anti-blister attributes are



Top left: The passage from Charleston, South Carolina, to Hampton Roads, Virginia, offered a variety of sights, including this herd of feral goats roving a barrier island. Above: Patrol craft treated *Linde's* crew to a fast "flyby" in the Camp Lejeune Marine Corps operations area.

not required.) Walking around the deck of the boat, as I did dozens of times, I couldn't help but marvel at the quality of the stainless hardware. All of the stainless steel used on the 65's weather decks is 316L alloy. In the marine environment, this is the only way to go, since 316L is highly resistant to rust, corrosion, and staining. I see many new boats in my line of work, and I'm amazed by how many have deck-mounted hardware that's streaked with brown stains before the boat has left the dealer's dock. I could find no such staining anywhere aboard the 65, and it's awash with custom-made stainless steel hardware. The quality of the welding is equally impressive—clean and smooth with well-ground, polished weld beads throughout—and represents a



The flybridge helm features a range of owner-selected instruments and electronics, including a remote-operable shift and throttle control.

considerable investment of time and effort. This is not surprising from a shipyard located in Taiwan, where metalworking, among many other skills, has been honed over more than half a century of high-volume production and custom boatbuilding.

The feeling of security on deck is palpable, with a full bulwark surrounding most of the main deck and a combination half bulwark and full stainless steel rail encompassing the foredeck area. A large Maxwell 3500 horizontal windlass equipped with twin chain wildcats handles the ground tackle. A 75-lb. CQR anchor with 300 feet of 3/8-inch HT (high-tensile) chain comes standard. Eight stainless steel combination hawse pipe cleats are located fore, aft, and amidships. If you decide to venture onto the teak-inlaid swim platform, you can take the port or starboard semi-curved companionway, both of which are enclosed on the outboard side and capped with a stainless steel handrail. Removable handrails also are installed on the aft edge of the swim platform itself (these are useful in preventing missteps off the edge of the platform when boarding at night). And,

of course, there's a built-in swim ladder.

I asked the folks at Outer Reef for an explanation of how they carry out "core closeout," the method employed to prevent water from entering a cored composite structure and to reinforce the structure where hardware such as cleats, windlasses, or ports are installed. Even foam core can absorb or channel water, and while the foam may not rot, the water adds weight and can wreak untold havoc within the structure. Furthermore, un-reinforced cored composite structures are susceptible to crushing when hardware fasteners are tightened.

The answer I received was one I always hope to hear from production boatbuilders but seldom do. Outer Reef's methodology for core closeout during construction involves inlaying solid fiberglass where hardware will be installed with a 25 percent overlap of the surrounding area to both spread load and afford a margin for error in the event that an installer's measurements are slightly off. Additionally, Jeff Drucek said that he and others at Outer Reef are "critical of all areas of aftermarket installations by clients—for liferafts,



tender chocks, tie-downs, et cetera. We lay out these anticipated areas in advance with solid lamination.” From my point of view, where core closeout is concerned, there’s simply no better way to do it for preestablished hardware installations.

The 65 is equipped with a flybridge hard top that is manufactured using Divinycell core to keep weight to a minimum and is well suited to today’s UV-light-conscious cruisers. The spacious extended boat deck provides ample room for sun bathing or just hanging out. During the cooler days of our passage, I sat here several times in the lee of the bridge, soaking up the warm sun.

owner opted for a full EZ2CY Enclosure installation. While far from inexpensive, it seems well worth the cost. I believe the entire crew gave it a thumbs-up. The enclosure’s transparent, semirigid curtains could be quickly and easily lifted out of the way when the weather cooperated, providing ample ventilation. When we happened upon a rain shower, we simply dropped the curtains, and the entire spacious flybridge area remained dry.

The helm station on the Outer Reef 65 is equipped with the usual array of gear and instrumentation (a magnetic compass is present, much to my relief), and



Above left: The aft cockpit easily accommodated all five of *Lucky Linde’s* crew for open-air dining. Twin transom and side deck doors offer a variety of boarding options. Above right: The crew, from left: Capt. Mary Taylor, Ken Crowley, Steve Lindemann Sr., and Steve Lindemann Jr. Right: The Lindemanns purchased and shipped to the yard a gas barbecue grill, which the builder installed just aft of the flybridge.



*Lucky Linde’s* 13-foot Nautica RIB, equipped with a 60hp Yamaha, and a 1,500-lb. capacity MarQuipt crane fill the available athwartship space with little room to spare.

As on many other cruising vessels, the 65’s flybridge became the focal point of activity while we were under way. The twin Stidd chairs make life easy for the helmsman and navigator/sightseer. I always think of Stidd chairs as fatigue mitigators; six hours in a Stidd chair feels like three or four. Twin L-shaped settees provide more seating or room for napping, and lockers underneath offer space for gear storage. *Lucky Linde’s*

engine gauges are now all-electronic multifunction digital displays. The helm features fully electronic Glendinning shift and throttle controls, commonplace nowadays and therefore unremarkable, but they are equipped with a very interesting option: a Glendinning wired walk-around remote. Engine throttle and shift, as well as the TRAC bow and stern thrusters, can be controlled from

the paperback-book-size black box. There are three plug-in locations around *Linde’s* deck where the box can be networked and then activated. It’s useful for close-quarters docking and is a nice touch.

*Linde’s* owner also insisted on the installation of a huge Jenn-Air LP barbecue. At first I thought the grill was oversized, but I quickly fell in love with it when I was called upon to cook chicken breasts. It was the perfect size for our crew. Regrettably, the grill’s installation is somewhat marred by the fact that the LP gas tank storage locker is not ABYC compliant



The Outer Reef's gleaming pilothouse is comfortable and user friendly. The Stidd chair, table, and settee (farther aft) provide ample accommodations for those on and off watch. Note the generously proportioned companionway to the flybridge.

(remember, Outer Reef does not necessarily follow ABYC's voluntary guidelines). The locker is not separated from the cabinet in which the grill is installed. Although I'm sure this could be easily rectified, if a leak were to develop in the locker, gas could accumulate and ultimately reach the grill's flames, with potentially serious consequences. While it's true that the ABYC's LP gas installation guidelines are among the most difficult with which to comply, I would encourage the folks at Outer Reef to reevaluate this and future installations in order to ensure safe operation.

The companionway leading from the pilothouse to the flybridge is comfortable, well-proportioned, safe, and easy to ascend and descend. This is a welcome contrast from so many boats whose designers treat these vital areas as an afterthought. The hatch that separates the flybridge from this companionway is beautifully crafted, custom made from a stainless steel frame and smoked glass. Clearly, a craftsman at Tania's yard spent a considerable amount of time building this component. It latches and slides with little effort. There's just one

problem: the space that it "sweeps," just inboard of the door and adjacent to the helmsman's chair, is ideally suited for temporary storage of binoculars, coffee cups, food, and other items, and when someone opens the hatch, anything stored in this spot is bulldozed onto the deck. First it was a dozen hamburger rolls, then a cup of coffee, and finally one of my cameras. (The camera survived with minor damage and I was fully responsible for the fall; I had placed the camera there, and I was the one who opened the hatch.) Perhaps the door could be redesigned as a pocket door, sliding beneath rather than over the horizontal surface. As a boatbuilder I realize this is easier said than done. If Jeff Drucek and his team at Tania can think of a way to accomplish this, I'm certain *Lucky Linde's* crew will salute them.

### INTERIOR CABIN

I have to confess, I'm partial to cherry interiors, and the Outer Reef 65 does not disappoint. Its exquisitely book-matched veneer joinerwork is truly the highlight of the cabin. Knowing how difficult and time consuming



The elegant main saloon is exquisitely finished in a mixture of gloss- and satin-finished cherry joinerwork.

this work is, I have a special appreciation for the craftspeople who produce this feast for the eyes.

The 65's saloon, as one always wishes, is flooded with natural light that enters through seven large windows and through twin aft doors, which are equipped with deadlights. The measurements I took with my decibel meter in this area while under way at a cruising speed of 10 knots were well within the acceptable range, approximately 70dBA. Although *Linde* is not equipped with a large saloon table, other 65s are, and this would be needed for larger gatherings or meals for a crowd. An L-shaped settee, a large leather easy chair, and two high-backed stools facing the breakfast bar make seating for the owners and several guests easy indeed. It seems passé to point out the lifting flat-screen TV and entertainment system, these now being de rigueur aboard luxury cruisers such as the 65. *Linde* has all this and then some. (Steve Jr. spent several hours programming the universal remote.)

An overhead grabrail running down the centerline of the saloon completes the picture of luxurious comfort and sensible form afloat. The headliners throughout the

65, by the way, are removable, and while not many owners in this vessel class think about this feature, it makes a notable difference for the service, repair, and accessory installation folks (the difference being that it saves the owner money, as the work goes more quickly). The sole is carpeted in this area, as it is in all accommodation spaces.

The instrumentation and nav gear in the pilothouse duplicate those of the bridge; this is now so much simpler with electronic engine instrumentation. A single Stidd chair and a long settee and table aft of the helm provide ample room for the skipper, mate, and guests. (The table is adorned with an inlaid compass rose, another nice touch.) Five forward-facing windows, three of which are equipped with wipers/washers, provide excellent forward visibility. A magnetic compass is also installed here, and again, I'm happy to see that Outer Reef has resisted the temptation to go *all* electronic. There's nothing like being able to check yourself and your plotter/GPS with a quick glance at the card of a magnetic compass.

Watertight port and starboard wing doors are



The galley is intelligently laid out and equipped. The size is ideal for underway meal preparation; one can move easily from sink to counter while not straying too far from a surface to lean on. The owners chose all household-variety appliances.

equipped with the now-popular Phantom screens (there's one on the aft saloon door as well). Since the weather was so delightful for most of our passage, we made regular use of these. They do have one drawback, however. It's easy to forget they are there, so you quickly learn what it feels like for a bird that flies full speed into a window screen. The pilothouse's teak-and-holly sole is finished in high-gloss varnish. It's pretty, but it will be difficult to keep it looking that way. My preference is for satin soles.

The galley affords a transition between the pilothouse and the saloon. While the space is not terribly large—a fact that many cruisers find an advantage because it keeps the chef from being jostled in a seaway—it's more than adequate. The granite counters and deep, stainless steel double sink are ideal for meal preparation. (Steve Jr., a talented cook as well as an expert remote programmer, prepared delicious meals several times each day in *Lucky Linde's* galley.) The refrigerator, dishwasher, microwave,

range and oven (both electric), trash compactor, and garbage disposal are high-quality, easily serviced domestic models. A wine cooler located across from and forward of the galley rounds out the appliance selection. The day head, directly across from the galley, can be configured as an optional pantry. (The 65 built immediately prior to *Lucky Linde* is arranged in this manner.) A china cabinet stands aft of the head, with an interior custom built by the yard to accommodate the Lindemanns' china. Each set of dishes and serving bowls nestles safely in secure, divided spaces.

Staterooms aboard the Outer Reef 65 can easily accommodate the owners and six guests. The aft quarters are designated as "crew" but are fully equipped and just as luxurious as the others. The nearly full-vessel-width owner's cabin is cavernous, as are its twin walk-in closets/lockers. There are also ordinary hanging lockers and ample drawer space. The forward guest cabin is equipped with an island queen berth. An overhead



Top: The full-beam master stateroom, located just forward of the engine room, leaves no doubt that you are aboard a luxury cruising vessel. Cherry joinerwork, diffused lighting, and a shoji screen complete the atmosphere. Above left: Although technically listed as “crew quarters,” this cabin is appointed in much the same way as all other accommodation spaces. It’s ideally suited for adult guests or grown children as well as grandkids. Above right: The master stateroom’s head, like all others on the yacht, is tastefully decorated and highly functional. Granite vanities and voluminous showers—it’s difficult to refer to them as stalls—are in keeping with the vessel’s level of finish and intelligent design.



“Bright” and “clean” are the first words that come to mind when describing the engine room. Access to the twin Cat C9s, generators, and other gear is excellent. The engine room also is equipped with a fixed clean-agent fire extinguishing system.

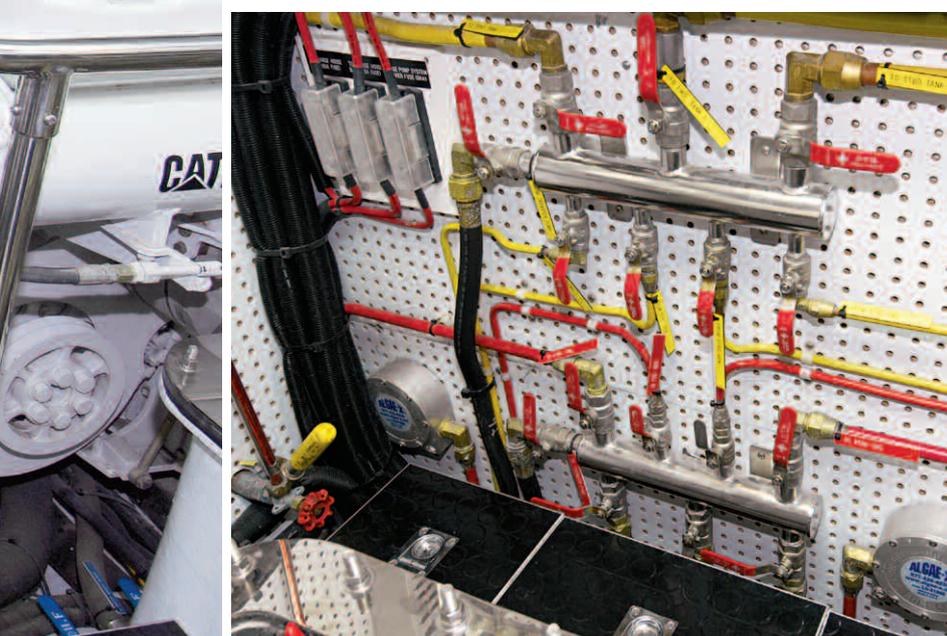
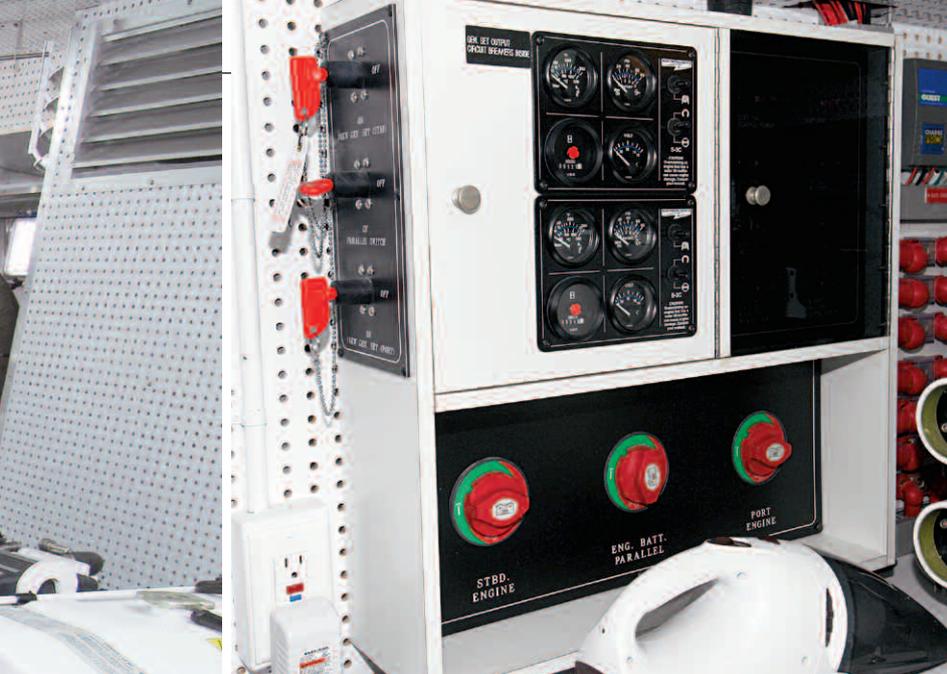
screened, shaded hatch allows for natural ventilation in cool weather.

The portside guest stateroom, where I slept, is arranged with a double bed below and a single upper bunk. While the cabin itself was cozy, it was comfortable and afforded full privacy. “Crew” quarters are located aft, accessed through either the engine room or the transom hatch. Every cabin has its own full-size head and shower (the Tecma commodes worked flawlessly throughout the passage), as well as closets, lockers, bookshelves, reading lamps, a climate-control console, TV, CD/stereo, and carbon monoxide detector. In short, all the comforts of home, and then some. Sleeping in the portside guest stateroom’s lower berth, my single complaint was that the stereo’s illuminated graphic display sat right next to my

head. (I gave up trying to shut it off and finally placed a pillow over it.)

## ENGINEERING

There’s nothing like a bright, white, well-illuminated engine room, and the 65’s is just that. Nearly everything, from the twin Cat C9s to the bulkheads and overhead, is finished in white, and the lighting is superb—a mechanic’s dream. (Although it’s a popular trend, I do wish the fuel tanks weren’t covered with insulation.) Twin watertight bulkheads and deadlight-equipped hatches segregate the engines from the remainder of the vessel’s interior spaces, and they do so quite effectively. There’s no shortage of sound insulating material, and the effect is obvious: not much noise escapes this compartment.



Top right: Engine and house battery disconnect switches, as well as generator instrumentation, are centrally located in the engine room. Above right: Although complex (there are 15 control valves), the Outer Reef's fuel distribution manifold is neatly laid out and well labeled. A notable feature is the spring-loaded valves that ensure that fuel tank sight glasses remain unpressurized at all times other than when the fuel level is being checked.

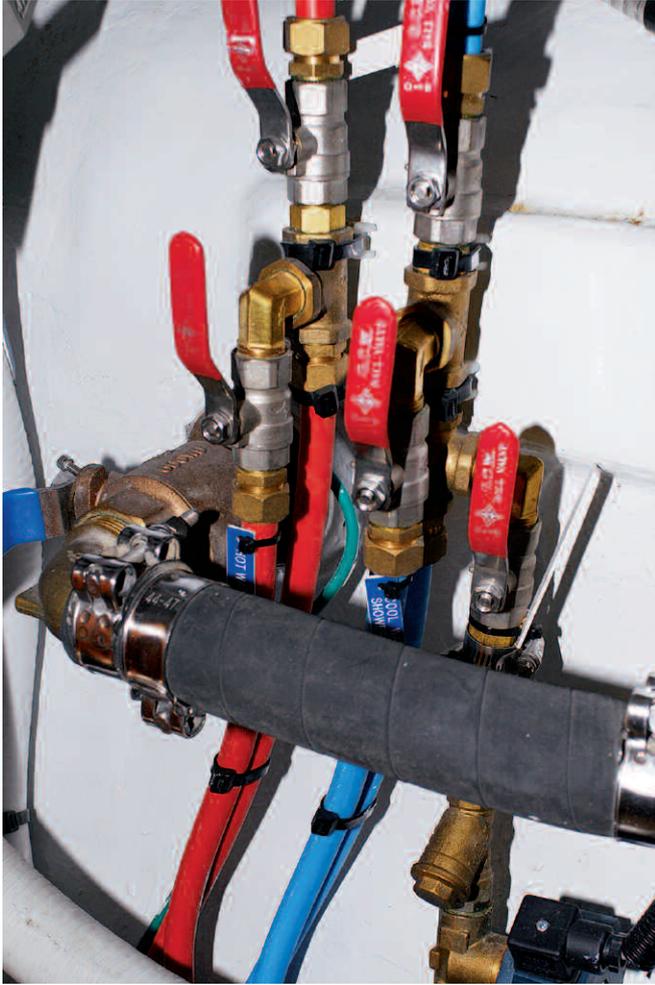
ZF gearboxes are attached via Evolution shaft couplings to 2.75-inch Aquamet 22 shafts driving four-blade nibral props. Large fiberglass catchment sumps are located beneath each engine to contain leaks and spills. Two Northern Lights 16kW gensets provide all of the 65's AC electrical needs. One 16kW and one 8kW genset are the standard mix, but *Linde's* owner opted for identical sets to simplify maintenance and the spare parts inventory. The generators are located within full sound enclosures, yet access for maintenance is easy and straightforward because the shields' side panels drop

away at the press of a few latch buttons.

Also in the engine room is a properly sized, fixed clean-agent fire extinguishing system. If it should discharge, either manually or automatically, it will shut down both engines and generators and close the louvered air intake dampers. (There's a single pull station in the pilothouse for manual discharge; I'd like to see another just outside the engine compartment.) The main battery disconnect switches, the instrumentation and circuit breakers for the generators, the chilled-water air conditioning compressors, and the 1,400-gallon-a-day Aquamatic watermaker all are located on the aft engine compartment bulkhead (the last two items are on shelves above the generators). The graphic, self-diagnostic touch screens for the watermaker, one at the unit in the engine compartment and another in the pilothouse, are outstanding and make operating this equipment simple. The generators can be started and stopped from the pilothouse. While full generator instrumentation (DC voltage, coolant temperature, and oil pressure) is provided in the engine room, I'd also like to see a twin panel located in the pilothouse (an option offered by Northern Lights) so that this vital equipment can be more easily monitored.

Fuel filtration is provided for the main engines via tandem Racor MAX 1000 series turbine filters; both are easily accessed between the engines. The generators utilize the same filter in the single version, so filter elements are common to both. Plastic-coated, color-coded copper lines carry fuel to and from engines, gensets, and manifolds (the supply and return manifold is located low on the port forward engine room bulkhead). To prevent cross-contamination and reduce the likelihood of leaks, there are no crossover tubes between the boat's three fuel tanks. An Algae-X polishing system keeps fuel in the tanks clean and free of water. The tanks located outboard of the engines are equipped with sight glasses and spring-loaded valves that remain closed at all times other than when the fuel level is being checked, in compliance with ABYC guidelines.

The electrical system aboard the 65 is necessarily



Polyethylene-clad aluminum tubing, the red and blue pipes shown here, with stainless valves and brass fittings is used for the boat's domestic water system. Flanged seacocks, heavy-duty raw-water hose, and T-bolt clamps convey gray water over the side.

complex, and the installation and attention to detail, even in areas that could not be readily observed and accessed, are excellent. The majority of DC loads are 24 volt, which makes perfect sense aboard a vessel of this size, since it saves thousands of pounds of wire and reduces the size of wire troughs. A smaller, 12-volt panel is also available, and full volt and ampere instrumentation is readily displayed for both. The AC panel also offers full instrumentation as well as hertz measurement for the 240-volt, 50-amp service. I did find this panel's layout to be somewhat confusing, with three groups of breakers, two groups of instruments, and two "leg" selector switches. I'm sure it's straightforward enough, but it isn't intuitive. The wiring behind the panels was clean, neat, well-labeled, and secured against chafe and vibration.

Two 15kVa isolation transformers ensure that the

### OUTER REEF 65

LOA	65'
LWL	58' 6"
BEAM	18' 6"
DRAFT	5'
DISPLACEMENT	93,500 lb.
FUEL	2,000 U.S. gal.
WATER	400 U.S. gal.

Outer Reef 65's shorepower supply remains clean, properly polarized, and safe from corrosion-inducing galvanic current. A 4kW Trace inverter supplies selected AC needs as well as battery charging for the AGM house, engine, and genset banks through a battery isolator. The 65's underwater metals, seacocks, running gear, etc., are fully bonded to a central copper bonding strap and sacrificial zinc anode.

On the domestic water side, the 65 provides everything the discerning owner and guests could ask for. A super-powerful Headhunter water pump provides astonishing pressure at every tap. With a 50gph watermaker filling the tanks, why not? (There are actually two water pumps; one serves as a backup. A wise plan, since nothing can ruin a cruise quicker than a lack of potable water.) The potable water plumbing utilizes a composite arrangement I'm seeing more and more of aboard vessels manufactured in the Far East: plastic-coated aluminum referred to as "PEX



With ample rubrails and spray rails, a high freeboard, and substantial bulwarks, this vessel is ready for extended cruising.

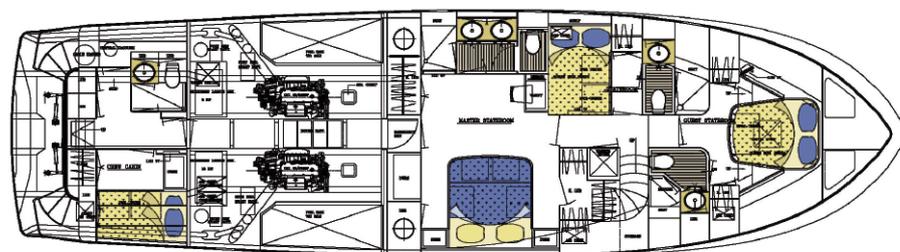
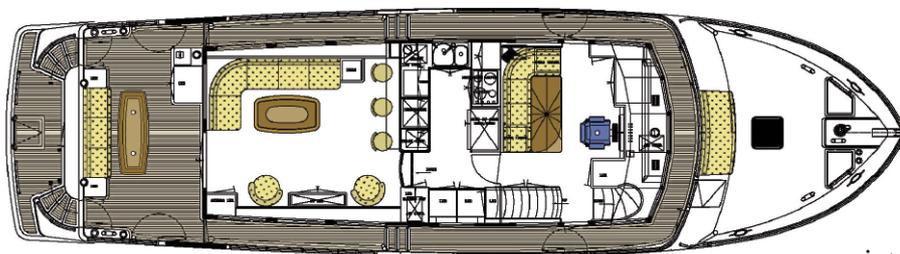


Illustration courtesy Outer Reef Yachts

## FOR MORE INFORMATION

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PAP" (cross-linked polyethylene plastic-aluminum-plastic). This tubing is strong, long lasting, and user friendly in that it retains the shape into which it is formed during installation. However, it's typically used in radiant heating equipment rather than for domestic water. Its use for potable water is acceptable, provided it carries the National Science Foundation listing for potable water applications (the polyethylene used in its construction must, among other things, be virgin rather than recycled).

I have one additional sentiment to share regarding the 65's potable water: it's too hot. The hot water is heated by an 18-gallon electric water heater and by a heat exchanger. What many vessel owners and some builders don't immediately realize is that the water heater's thermostat only controls the temperature of the water when it's heated with the electric heating element. Water that is heated by the engine via a heat exchanger remains unregulated. Therefore, if the engines operate at 195°F, as they routinely do, it's conceivable that the domestic hot water will be supplied at this temperature as well.

Two possible solutions exist. One, a mixing valve could be installed on the water heater. This would regulate the temperature of the water leaving the water heater by selectively mixing it with cold water (*officially*, mixing valves do not work quickly enough to be considered scald protection). The second option

would be installing faucets and showerheads that incorporate anti-scald features. Outer Reef is not alone in encountering the problem of too-hot water. It's common and easily rectified.

On the 65, primary seawater intake occurs via twin sea chests that are approximately 1 foot square and are located directly forward of the main engines. Their covers are transparent, which makes it easy to inspect the water level and look for possible fouling within. Multiple seacocks are plumbed to the lower portion of each chest. All of the

seacocks I saw aboard *Lucky Linde* were fully flanged and properly bonded and labeled, as were the raw-water strainers. Four 24-volt, 2,000gph bilge pumps, as well as a divertible starboard engine intake, can be used for bilge dewatering.

It all comes down to capable systems and their proper installation. Without these, regardless of how competent the vessel platform may be, reliability and thus enjoyment and confidence will suffer. The Outer Reef 65 rises to the occasion in this arena. Her complex, disparate systems are installed with clear attention to detail and are artfully intertwined in an aesthetically pleasing and seaworthy design.

## CONCLUSION

Arriving in Norfolk, one of the world's largest naval roadsteads, on Independence Day was a treat to be sure. Scores of warships from the United States and from abroad were fully dressed and prepared to celebrate the birth of our nation. We were awed by the volume of gray and white steel that lined the waterfront for miles, from the nation's first nuclear-powered aircraft carrier, *USS Enterprise*, and the guided missile destroyer *Arleigh Burk*, the ship after which the class is named, to the historic battleship *Wisconsin* and *NS Savannah*, the world's only nuclear-powered passenger and cargo vessel.

It was a fitting end to a cruise aboard the Outer Reef 65, which embodies a balance of luxury and seagoing good sense. Vessels of this size and larger run the risk of letting the crew forget they are aboard a boat, but there's no such danger on the Outer Reef. Her practical design, quality systems installations, fine joinerwork, and traditional features are mated with the appropriate degree of comfort and grace, making her a winner all around. 