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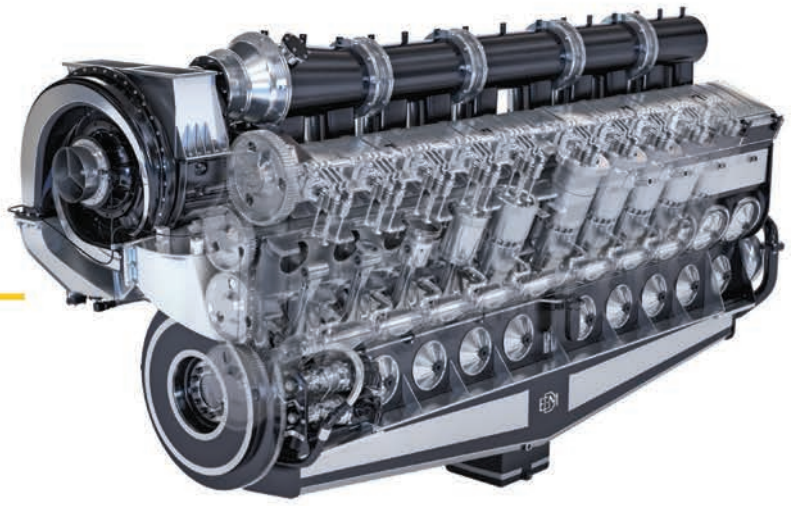

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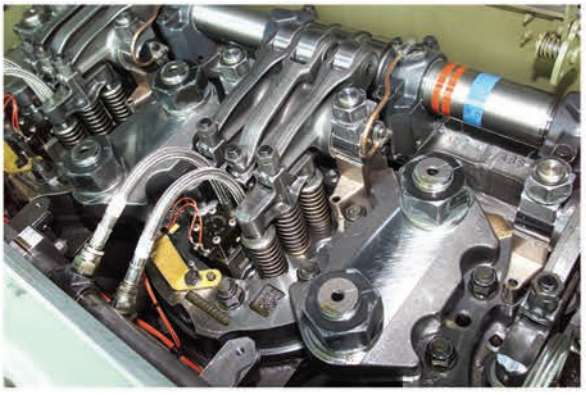

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On the Cover

Ocean Craft Marine's new 11.5-meter Offshore Interceptor RHIB features some of the industry's most cutting-edge technologies.

(Photo: Ocean Craft Marine)

Editor's Note

Eric Haun, Editor,
haun@marinelink.com

Patrol craft are the fastest moving vessels we cover in the pages of Marine News. But innovation in this sector isn't exactly moving ahead at full throttle, according to Todd Salus, vice president at Maryland-based RHIB builder Ocean Craft Marine. Salus says the nature of the acquisition process for these vitally important vessels can often be stifling to innovators that seek to bring fresh ideas and cutting-edge technologies to market. So, the OCM team has set out to break the mold, partnering with a group of forward-thinking companies to drive technological innovation in a meaningful way, starting with the builder's new 11.5-meter Offshore Interceptor. Read more about this project starting on page 34.

Innovation is also happening in the world of marine autonomy, where, more and more, groundbreaking tech is starting to hit the water. Of course, autonomy exists in many forms, and its applications can drastically change everything about a vessel and how it can be operated in the real world. Figuring out how to make the technology work is one thing, but solving the regulatory puzzle is proving to be a long and complicated process—no surprises. Tom Ewing's feature story on this subject begins on page 28.

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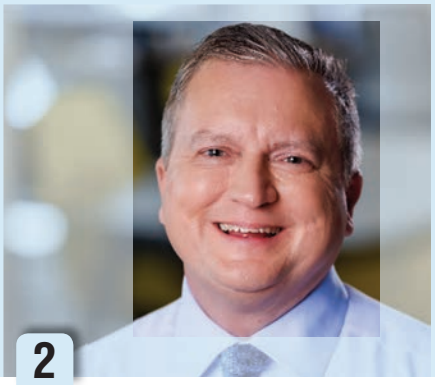
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By the Numbers

USCG Cyber Trends and Insights

The area where we've seen the most evolution is around cyber and cyber risk in the marine transportation system. – Adm. Linda Fagan, Commandant of the U.S. Coast Guard (April 2023)

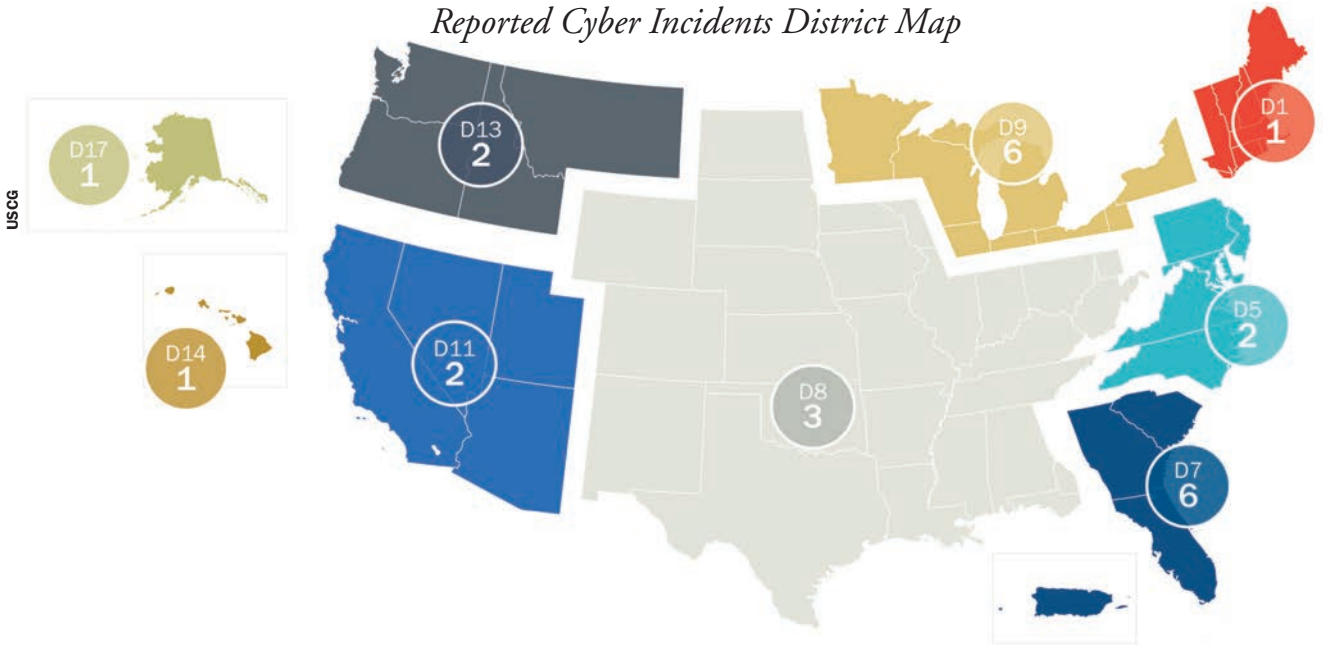
In April, the U.S. Coast Guard Cyber Command (CGCYBER) published its 2023 Cyber Trends and Insights in the Marine Environment (CTIME) report, providing relevant information and lessons learned about cybersecurity risks as well as best practices to drive hardening actions and secure critical systems across the marine environment (ME).

The ME consists of 25,000 miles of coastal and inland waterways, serving 361 ports, 124 shipyards, over 3,500 maritime facilities, 20,000 bridges, 50,000 federal aids to navigation, and 95,000 miles of shoreline that interconnects with critical highways, railways, airports, pipelines, countless shipping vessels, as well as undersea cables carrying 99% of U.S. communications abroad. This integrated ecosystem supports the flow of approximately $5.4 trillion in goods and services, constituting 25% of U.S. gross domestic product. As the maritime industry continues to make strides into the digital realm, new vulnerabilities are unlocked, demanding greater attention to cybersecurity.

Among the key takeaways in the CTIME report, CGCYBER observed a significant uptick in reported Advanced Persistent Threats targeting the ME. Announced in the Joint Cyber Security Advisory released in May of 2023 (AA23-144A), Volt Typhoon, a state-sponsored actor associated with the People's Republic of China (PRC), is believed to have targeted networks across U.S. critical infrastructure sectors, including within the ME.

CGCYBER also found the surge of ransomware incidents continued in 2023. CGCYBER's Maritime Cyber Readiness Branch (MCRB) observed an 80% increase in the number of incidents in 2023 (18) compared to 2022 (10), and the average requested ransom more than tripled. The average cost of breach for critical infrastructure rose 4.5% in 2023 to $5.4 million, while the average cost of all breaches rose 2.2.% to $4.45 million. Types of organizations targeted include maritime shipping companies; liquid natural gas processors/distributors and petrochemical companies; and maritime logistics and technology service providers.

Reported Cyber Incidents District Map



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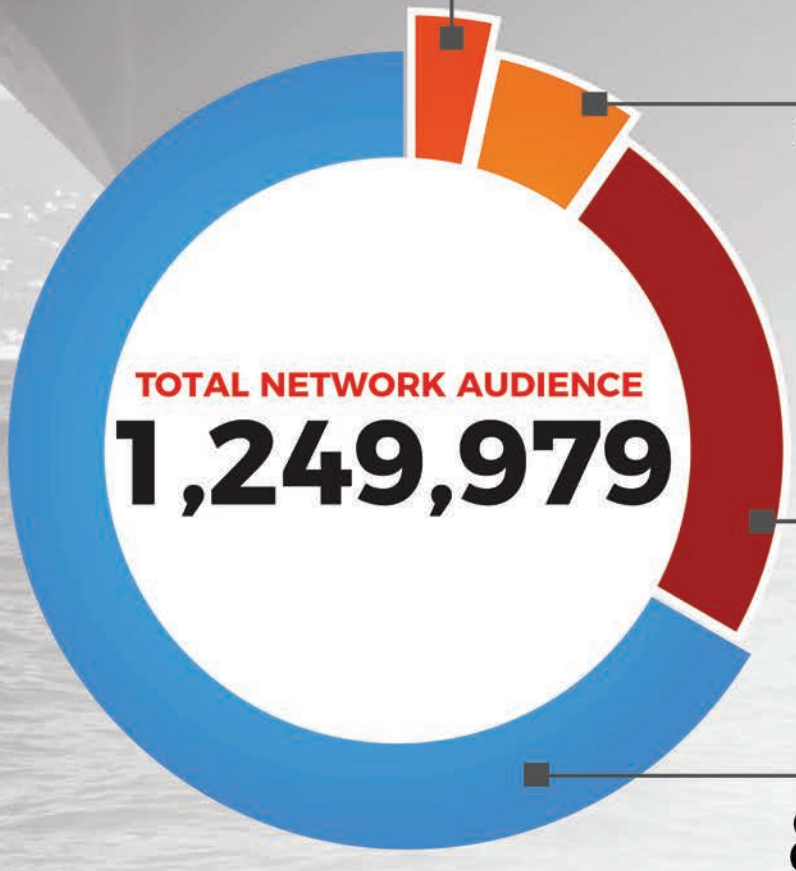

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Richard Schwarz

CEO, SAFE Boats International

When Richard Schwarz joined SAFE Boats International as chief financial officer in 2015, he brought to the company a healthy dose of experience in defense and aerospace manufacturing, primarily gained on the financial side of the business. About 2.5 years later, he transitioned to become chief executive officer of the Pacific Northwest boatbuilder, which constructs aluminum vessels for a diverse set of customers.

"The mix changes from month to month, year to year, but the primary areas where our customers sit are state and local law enforcement, first responders—towns, cities, counties, states, everything from sheriffs to fire departments to resource and wildlife agencies," Schwarz said. "There's also a U.S. federal government component to the business—a lot of programs for the U.S. Coast Guard, U.S. Navy, Customs and Border Protection, as well as a variety of different agencies and branches of the military."

While many U.S. shipbuilders have struggled to crack out of the U.S. market, SAFE Boats—which has delivered approximately 2,600 boats over the last 27 years—has found success building vessels for end users overseas. "A substantial component to the business is and has been international, both through foreign military sales contracts to the U.S. Coast Guard and U.S. Navy, State Department, as well as direct sales to international customers. We have boats in service in about 70 different countries," Schwarz said.

SAFE's current orderbook includes an assortment of vessel types—from search and rescue boats, to patrol, law enforcement and fire boats—ranging from 19 to 85 feet in length. Its Bremerton, Wash. facility can handle vessels up to 65 feet long, and anything longer, such as the 85-foot Mark VI patrol boats currently in production for Ukraine, are built at SAFE's Tacoma facility.

To date, two of the eight boats in SAFE's current Mark VI program have been completed, and Schwarz said he

All images courtesy SAFE Boats International

expects production on the remaining vessels will wrap up in 2026. The contract from U.S. Naval Sea Systems Command (NAVSEA) is noteworthy for a number of reasons: one being Ukraine's need for naval assets amid its ongoing conflict with Russia, and another is the impact for SAFE Boats. Notably, the deal enabled the builder to reopen its Tacoma facility, which had shut at the conclusion of the previous Mark VI program for the U.S. Navy in early 2018.

According to Schwarz, the reopening of SAFE's second build site unlocks several benefits, such as added build capacity. "As the Mark VI program matures and we're really up to full consistent production and are looking to additional capacity, the plan is to be able to leverage both locations," he said.

Perhaps more importantly, the second site helps to expand the talent pool from which SAFE Boats can hire. Asked about the company's top challenge, Schwarz responded, "100% workforce. That's an easy one."

SAFE Boats and just about every other shipbuilder across the United States have struggled to recruit, hire and retain the skilled workers they need to thrive. Making matters worse, the manufacturing workforce—at SAFE Boats and elsewhere—has been graying, and aluminum welders, in particular, have been hard to come by. "[Workforce] is a constant topic. It's front of mind for us every day," Schwarz said.

"We're finding a lot of excitement, enthusiasm and interest from younger workers. They just don't have the level of skill and experience that probably SAFE Boats and most companies in our industry have been able to enjoy over the past few decades," Schwarz said. "The real challenge now is not necessarily to find enough people that want to go into manufacturing, that want to go into maritime, but it's really how do you take that population that has an interest and an enthusiasm for it and develop the skills and give them the training that they need to really be effective?

"Our focus is shifting from just recruiting people that have all of those skills to recruiting people who have an interest, who want to do something meaningful, who look at what we do and who we do it for and like that sense of purpose, and then being able to bring them into the company and give them the training, education and develop their skills to get them to the level that we need. We do that both internally, and then also work with outside partners, from high schools to technical schools, looking at ways to engage the community and support a lot of programs that are trying to help develop that next generation of manufacturing workers. It's forcing us to be much more engaged than we had to be in the past."

Employee ownership

SAFE Boats International is 100% owned by its employees. "It's my favorite topic to talk about," Schwarz said.

Up until about a year ago, the builder was primarily owned and controlled by a private equity group, and when that group sought an exit, SAFE began plotting its path forward, ultimately settling on an Employee Stock Ownership Plan (ESOP). "We got really lucky. We had support from our founders and folks that were willing to really stand behind and support this idea of selling the company to its employees," Schwarz said.

SAFE Boats completed the transaction transferring full ownership to its employees in 2023, concluding a journey that started in late 2022. "Every active SAFE Boats

employee owns shares in the company through an ESOP, which really acts a lot like a 401K plan, but it's invested in the company stock," Schwarz said. "What that means is that the people who built the company, the people who build our products, the people who are the heart and soul of SAFE Boats, now own the company. And that means that we, as a company, can engage our team in ways that are very different.

"SAFE Boats employees are thinking and acting like owners. If the company does well, it's not some outside investor that's doing well, it's our team. We get to focus on the important things: our customers, investing in the company, investing in plants and equipment, tools, training, developing our team. There's never a question of whether or not we can do the right thing for our customers or for our team. There's no conflict with the interests of an outside shareholder. It's our SAFE Boats team that we're focused on and our customers and mission."

According to Schwarz, the extra level of buy-in and company culture created through employee ownership is beneficial to both the company and its employees, and it even helps to make SAFE Boats more attractive in terms of recruitment and retention. "Our folks work for a company that is committed to its customers and also is committed to doing everything it can to create healthy retirements, build wealth," Schwarz said. "The statistics comparing savings, preparation for retirement, every measure of job satisfaction and the way team members feel about the company they work for is enhanced in an employee-owned company versus their non-employee-owned counterparts."

Technology shifts

The maritime industry as a whole is currently in a period of technological advancement, and interest in autonomous vessels continues to grow. Schwarz and SAFE Boats are not only monitoring this evolution, they're actively participating, but in a controlled and measured way, finding the projects and applications that match well with their

All images courtesy SAFE Boats International

expertise and product line.

"We, as a company, have taken a more conservative approach to autonomy. Rather than rushing into building an autonomous boat, we're looking to see how an autonomous vessel fits a particular customer's requirements. What is the mission, what is the need, and then how can we design a vessel and work with an autonomous systems provider to tailor a solution to that customer?" Schwarz said. "The autonomous hydrographic survey boat that we built for Mythos was an example of that. They're in a specific space, they had a very specific set of requirements, and ultimately, we worked with them and fielded a vessel that was tailored to their market and what they were trying to do. That's how we're looking at it more broadly."

The U.S. Navy is pushing forward with autonomous vessel technology in a big way. "There's a lot of interest, but there also seems to be a lack of clarity around what they really need, what they want, what the mission is. It's a little bit ready, fire, aim," Schwarz said. "That's something that I think everybody's tracking and monitoring. For us, it's really going to come down to is there a fit? Do the autonomous vessels that they need fit with the SAFE Boats line? Are they the kind of boats that we're good at building? And what do those requirements really look like, rather than let's just go try to put something out there that's autonomous so that we can say we're autonomous."

SAFE Boats is also seeing a lot of interest in decarbonization and alternative propulsion systems, Schwarz said, citing as examples electric, hybrid and hydrogen fuel cells. "There's a growing demand for vessels to be powered in ways that we haven't seen in the past, and a lot of those technologies are still emerging. But as we've seen in the auto industry in the last five or 10 years, we've gone from an industry that was in its infancy to one that is mainstream and robust. In the maritime environment, as we frequently do, we've lagged behind that curve. But we're seeing a lot of development in the technology space from the propulsion companies, and we're simultaneously start-

ing to get a lot of interest from customers in pushing that direction. Some customers are more progressive, some are still more conservative. And there are certainly power density challenges for some of those systems for the kinds of missions that most of our customers perform. But clearly, that's an area where we're going to have to spend a lot of time and energy."

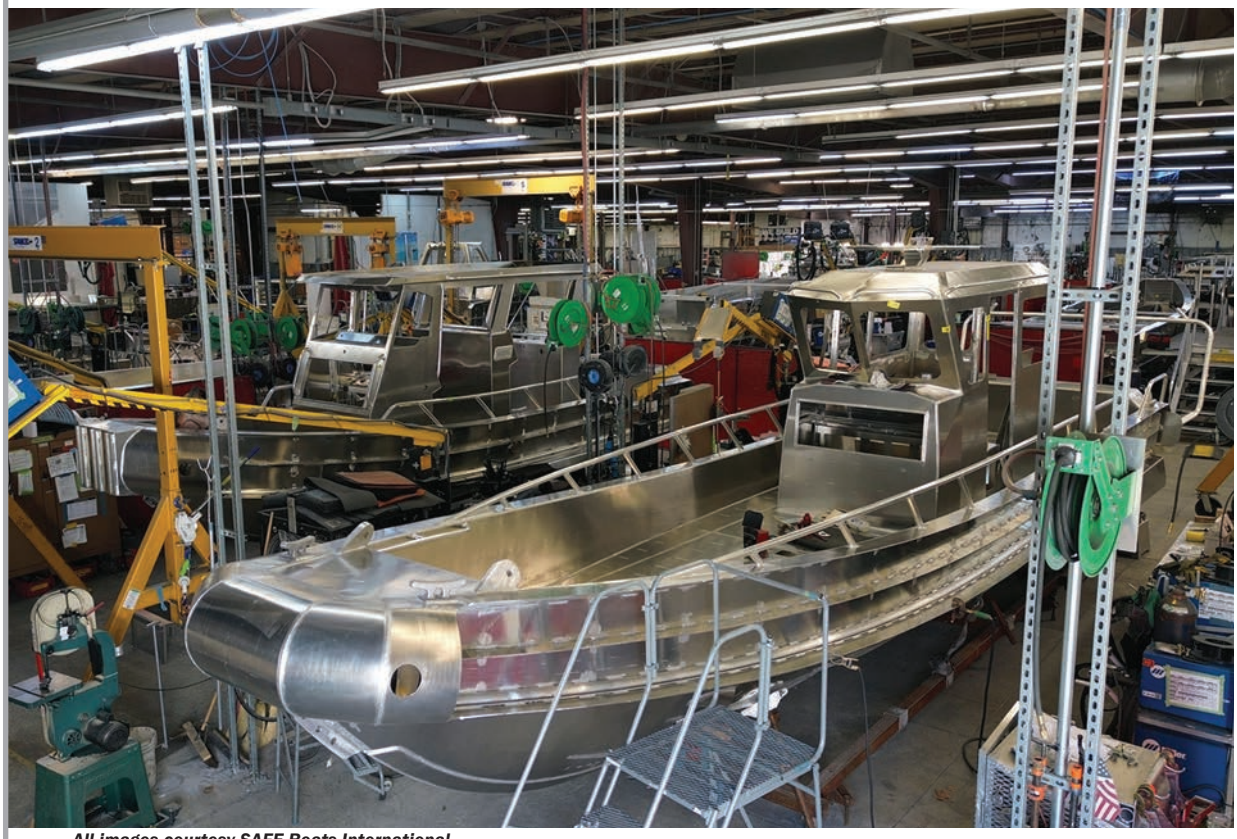
"An exciting period"

Schwarz is optimistic about the road forward, both for SAFE Boats and the shipbuilding industry in general. "Demand across the industry, from large ships down to smaller boats, is strong and likely to grow. The U.S. Navy has significant goals, from large ships all the way down to small autonomous swarms. There's a huge opportunity across the industry for all of us, whether it's defense and law enforcement or offshore wind. The challenge now is how do you invest and build infrastructure and find the people to be able to execute that and meet all the demands?"

Across the industry, Schwarz is seeing builders emerge from the pandemic and its supply chain and inflation challenges. "We're now at a point where we're really starting to invest in the business again," he said. "We're actively investing in people, training programs, education development, equipment, our facilities. We've put quite a bit into the Tacoma facility to get it back up and running, and are in the process of expanding our operations down there. We have a roadmap to invest in SAFE over the next couple of years."

"[The expected demand growth] is going to push SAFE Boats, as it probably is pushing the industry, to figure out how to implement technology, how to automate, how to become more efficient, and probably evolve in ways that, honestly, shipbuilding and boatbuilding has probably lagged behind other industries like the auto industry over the years.

"It's going to be an exciting period for the industry. And hopefully, as we mature as an employee-owned company, it's a real opportunity for us to be progressive and look ahead and figure out who we want to be and how to invest in that."



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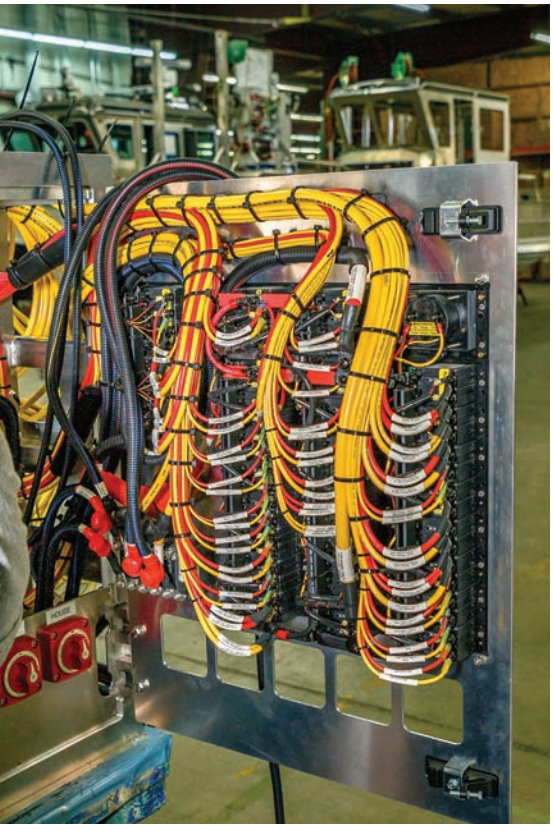

OpEd

Naval Shipbuilding

Unexpected But Welcome:
US Navy's Amphibious Warship Plan Supported Across Political Parties & Government Branches

By Greg Alan Caires, Non-Resident Fellow, Lexington Institute

HII

Here's some good news

for America's sea power. While the U.S. Navy has initiated another review of its 30-year shipbuilding plan in the face of widespread dissatisfaction, one element within that plan has been praised: the decision to provide funding for continued construction of amphibious warfare ships. These vessels offer unmatched flexibility and the capability of transporting, deploying, and supporting ground combat forces – typically U.S. Marine Corps – to conduct amphibious assaults, humanitarian operations, or disaster relief missions. This capability is essential for the United States as a maritime nation with a global security commitment. Whether responding to a natural disaster or deterring aggression, amphibious warships provide a unique platform for rapid and decisive action.

A few years ago, Congress mandated that the Navy maintain a fleet of 31 large and medium-size amphibious warships. To achieve this, building more San Antonio-class landing platform dock (LPD) ships is critical. Previous Congresses provided funds for these ships, but the Pentagon had been hesitant. Until submission of the Fiscal Year 2025 Pentagon budget to Congress last month, the Defense Department was considering either ending acquisition of these ships or changing their designs to reduce construction costs. As a result, the Navy was in an amphibious shipbuilding pause.

But those alternatives are no longer being considered, and in a rare and welcome moment of bipartisan, bicameral, and Executive-Legislative branch unity, both parties now support the plan for 31 amphibious warships. This about face is due in part to "perceived operational shortfalls" in the amphib fleet, according to Hudson Institute's Bryan Clark, when such warships were not available to support disaster relief in Turkey or evacuate noncombatants from South Sudan last year. "It was a black eye," he recently told Jane's.

The Navy now plans to buy three new San Antonio-class ships: LPD-33 in FY25, -34 in FY27 and -35 in FY29. The Flight II LPDs are sophisticated ships, with upgraded AN/SPY-6 air surveillance radars and the ability to land MV-22 Ospreys, the combat-proven Marine tiltrotor aircraft. The newest LPDs are outfitted for defense against drones and gray area threats. With consistent funding and a stable schedule to start construction of these ships every two years, it is widely agreed that this plan will maintain a healthy supply chain and industrial base for the amphibious warship fleet. Case in point: the LPD engines are made by Fairbanks Morse Defense, the last surviving U.S. maker of this type of marine engine.

America's current inventory of large and medium-size amphibious warships is composed of five classes of four different ship types:

Landing Helicopter Assault (LHA) – Two America-class "big deck" ships, successors to the Wasp-class, built starting in the 2010s. These carry more than 1,500 Marines and two dozen fixed-wing, rotary-wing and tiltrotor aircraft – including the F-35B variant capable of short takeoffs and vertical landings (STOVL). Two more LHAs are under construction and long-lead advanced procurement activities for a fifth ship are underway.

Column
Naval Shipbuilding

Landing Helicopter Dock (LHD) – Seven Wasp-class "big deck" ships, built during the late 1980s into the early 2000s, capable of carrying similar quantities of Marines and aircraft as the newer America-class ships.

Landing Platform Dock (LPD) – Twelve San Antonio-class ships, the first built in the year 2000. Each carry about 700 Marines who go to shore aboard a variety of landing craft or inside aircraft that launch from but do not reside aboard these ships. The 13th and final "Flight I" San Antonio is under construction; the first three Flight II LPDs – redesigned to improve capability and affordability – are being built. If the FY25 budget is approved, construction of the next three Flight IIs will be authorized.

Landing Ship Dock (LSD) – Six 1980s-vintage Whidbey Island-class and four 1990s vintage Harpers Ferry-class ships the Navy would like to retire before the end of this decade. Their exact retirement dates will depend on when new LPDs are available to relieve them.

The Navy wants to further boost this highly capable force mix with a fifth type of amphibious warship: the Landing Ship Medium (LSM), formerly known as the Light Amphibious Warship. These are the modern versions of the World War II ships the Navy used to "Island Hop" across the Pacific to defeat Imperial Japan. In its FY25 budget request, the defense department asked for almost $270 million to buy the lead ship of this new class, designed to fit between the larger LHA/LHD/LPDs and the smaller landing craft that deliver Marines ashore. This new ship is being designed to support the Corps' new Marine Littoral Regiments, each of which is expected to need nine. The Navy could buy between 18 and 35 of them and, because of their smaller size – despite their new name that includes the word "medium" – they are not expected to count toward the congressional mandate for 31 large and medium-size amphibs.

The Navy's commitment to a robust amphibious warship construction plan is a strategic necessity in an increasingly complex and contested global landscape, especially in the western Pacific. These versatile vessels are the backbone of American power projection, serving as critical assets for humanitarian missions, disaster relief, and national defense. Investing in a modern and capable amphibious fleet ensures the Navy's ability to safeguard vital interests, protect allies, and deter potential adversaries.

USS Fort Lauderdale (LPD 28) departs HII's Ingalls Shipyard to conduct acceptance trials in the Gulf of Mexico in January 2022.

Dustin Knight / U.S. Navy

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Column

Shipyard Politics

Government Shipbuilding Could Soon Enter American Living Rooms

By Craig Hooper, CEO, Themistocles Advisory Group

With the U.S. Navy and U.S. Coast Guard FY 2025 budget requests offering uninspiring news for traditional shipbuilders, industry observers might be forgiven for checking out and dismissing 2024 as just another dull year in the frustrating business of government shipbuilding.

But with an election underway and an increasingly disorderly sea, the year may end up being far more exciting for industry than most U.S. shipbuilders expect.

In fact, it might even be time to prepare for a "Remember the Maine" moment. Back in 1898, after the USS Maine (ACR-1) blew up in Havana harbor, the sudden loss of the battleship and some 268 sailors pushed the American public into a warlike mood, setting the stage for the Spanish American War, and sparking far more public interest in building naval combatants.

The recipe for an otherwise unexpected surge of public interest in government shipbuilding is in place. The 2024 Presidential Election is still taking shape, and, while government shipbuilding hasn't been directly addressed

Daniel Perez / U.S. Navy

on the campaign trail, world events could force politicians to weigh in. By the time the ballots are counted in November 2024, government shipbuilding may well have made it into America's living rooms.

The dynamics are fascinating. The U.S. Navy is, essentially, waging an undeclared maritime war against Iranian-backed Houthis. In the Mediterranean, U.S. Army troop-sailors are struggling to deploy an aid pier in Gaza. The People's Republic of China is ramping up maritime pressure across the Asia maritime, but, again, these threats are, to the average citizen—and to the click-bait, traffic-driven general media—remote, out-of-sight, and out-of-mind.

But this could change in an instant. The consequence of a surprise hit on a U.S. military vessel by Houthi drone or a terror attack on U.S. vessels off Gaza is hard to estimate, but, as the explosion of the USS Maine showed back in 1898, an unexpected event can quickly and fundamentally shift American attention towards the maritime.

The same dynamics are in place with China. A sudden event or unexpected change in status quo off Taiwan, the South China Sea, or elsewhere, is likely to accelerate the American public's growing disillusionment with the direction chosen by the tiny cadre of China's top leaders, and, potentially, drive political interest in streamlining NAVSEA and resourcing a far larger U.S. fleet.

And, with the Presidential campaign underway, any maritime accident, crisis or challenge can easily feed back into the political race, offering dramatic and otherwise unanticipated consequences for America's maritime industries.

Another aspect that may drive interest in American shipbuilding is foreign investment. Right now, two major South Korean companies, Hanwha Ocean and HD Hyundai Heavy Industries Co., Ltd., are trying to enter the U.S. government shipbuilding market. In Washington, Navy leaders are extolling the virtues of overseas shipbuilders, and openly discussing opportunities to outsource work. These proposals are already sparking resentment at the waterfront, stirring America's pride, and they may end up being useful tools for politicians eager to supercharge representation at the ballot box.

Other interesting international efforts—like a simmering effort to explore a wide-ranging collaborative effort to build small icebreakers and ice-ready ships—may drive America's interest from a more positive direction, highlighting America's commitment in working with allies in rolling back Polar land-grabs by Russia and Chinese forces.

Congress is getting into the action as well. In early May, Republican Florida congressional representative Mike Waltz (FL-6) released a bipartisan, bicameral National Maritime Strategy Report. The report, supported by Arizona's democratic Senator Mark Kelly,

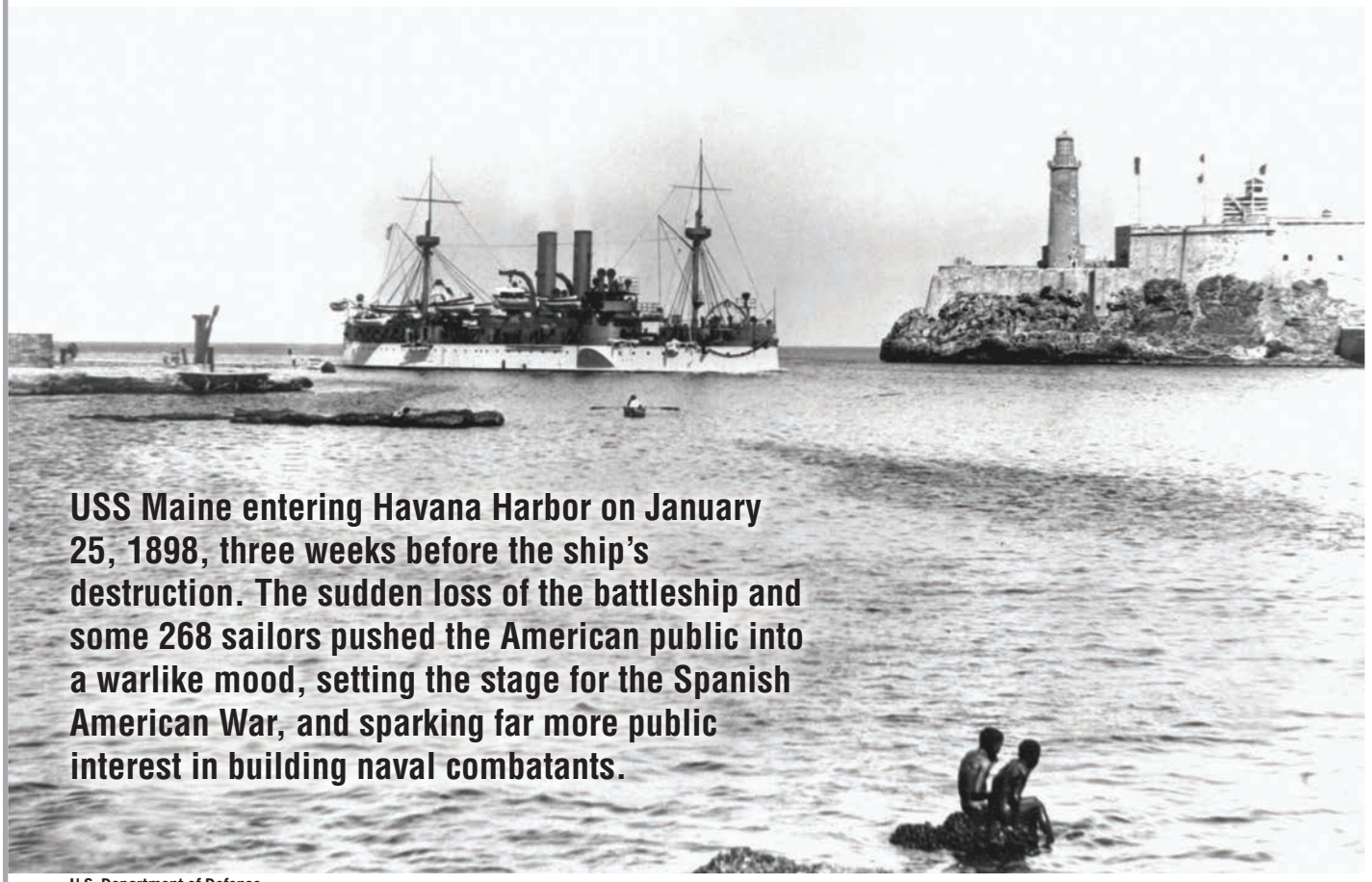
Column
Shipyard Politics

Senator Marco Rubio (R-FL) and U.S. Congressman John Garamendi (CA-8), "provides a comprehensive vision for planning guidance, strategic objectives, and actionable steps to revitalize our nation's maritime sector."

The Congressional effort, a sober collection of smart maritime initiatives, is a "to-do" list for Congress. Normally that's not something that will move the needle, but, with the potential for a sudden uptick of public interest in the maritime, a Congress armed with a legislative outline—an outline backed by four powerful members—could exploit public outrage to quickly reshape the American maritime.

Right now, aspiring government shipbuilders have an obligation to review their contingency plans and get ready. The opportunity posed by an unexpected outpouring of energized voter interest is not something the industry wants to miss. Facility expansion plans need to be as shovel-ready as possible, option ships need to be priced out and ready, and worker-training programs prepped to absorb a surge of activity or funding.

With America's political and maritime environments as volatile as they have ever been, any small spark or perceived outrage offers an unprecedented opportunity to push shipbuilding directly into America's living rooms. To exploit this potential, both parties must put real thought into just who might be the right fit for maritime leadership positions. America may not see the return of another larger-than-life John Lehman-like character, pushing naval expansion at all costs, but America's decaying maritime position and the state of the U.S. shipbuilding industrial base will be an election-year issue worthy of real and expert attention. So, rather than being just another boring year of little substance in government shipbuilding, 2024 could be the year prepared and ready shipyards get an unexpected windfall.



USS Maine entering Havana Harbor on January 25, 1898, three weeks before the ship's destruction. The sudden loss of the battleship and some 268 sailors pushed the American public into a warlike mood, setting the stage for the Spanish American War, and sparking far more public interest in building naval combatants.

U.S. Department of Defense

Column

A New Era

The Evolution of Modern-day Shipbuilding

By Jeff Dixon, President, TOTE Services

In the grand tradition of American innovation, we've long been masters of the maritime domain, building advanced ships for our Navy, the preeminent force in the world. But times have changed, and seas are more treacherous than they used to be. With this, there are ample opportunities for innovators to launch a new era of shipbuilding for the 21st Century.

When people think of American shipbuilding, they often look to U.S. shipyards' historic shipbuilding in World War II. Production lines pushed out almost 3,000 Liberty Ships crewed by talented Merchant Mariners. These vessels were integral to carrying the guns and butter needed to win the War. Since those glory days, processes have evolved and improved given new technology, information and lessons learned from the past.

Building a new ship – of any kind – is no small feat. A new government or large-scale commercial vessel requires millions of dollars, thousands of people, and hundreds of custom parts – not to mention the right shipyard, a strong industrial base of suppliers and, ideally, both speed

The Empire State was the first NSMV completed as part of TOTE Services' VCM award from MARAD. The ship was delivered on-time and on-budget. Four additional ships are scheduled to be delivered in the next two years.

TOTE Services

Column
A New Era

and patience.

Today, the vessel construction management (VCM) model presents a common-sense, efficient approach to building new non-combatant ships for the Navy, Coast Guard and other U.S. institutions such as our country's maritime training academies. VCM is designed to utilize best practices in commercial shipbuilding for the benefit of new government shipbuilding programs. Together, private sector innovators and public sector leaders can maintain and build on this country's strong maritime history.

Conceptually, the VCM model is similar to hiring a general contractor to build a home. The vessel construction manager identifies the right experts and team to meet the design specifications for the customer – in this case the US government.

With VCM, the government identifies vessel requirements and empowers the vessel construction manager to execute the contract based on best commercial practices. This arrangement – as seen with the National Security Multi-Mission Vessel (NSMV) construction program currently in progress at TOTE Services – has many benefits including:

- Providing the government with one point of contact, the VCM;

Philly Shipyard

- Allowing all involved parties the ability to focus on their expertise, in particular the shipbuilder;
- Identifying and empowering a VCM to drive accountability, timeline and budget goals;
- Expands the number of available shipyards that can compete for government shipbuilding;

In the case of TOTE Services' NSMV VCM contract, this model has delivered the first vessel on time and on budget (within 1%), with the remaining four vessels currently scheduled for delivery over the next two years.

At times, past government vessel construction projects have surpassed budget estimates by upwards of 30% while also experiencing significant delays in construction as highlighted in a May 2024 report by the Government Accountability Office (GAO).

While not all government-run vessel construction projects face these challenges, utilizing the VCM model provides a strategic opportunity for partnerships that leverage existing knowledge and expertise throughout the shipbuilding process.

Recently, the Secretary of the Navy, Carlos Del Toro, noted during a speech at Harvard's Kennedy School that the shipbuilding and commercial infrastructure is critical to U.S. national security and also it is critical to "invest in commercial shipyards here in the U.S., modernizing and expanding our shipbuilding industrial capacity and creating a healthier, more competitive shipbuilding workforce."

In addition to the Navy, the U.S. Coast Guard is focused on vessel construction with the recapitalization of certain ship classes.

Vessel construction management can expand shipbuilding efforts in the United States that, in return, bolster the broader domestic maritime sector. In addition, it results in benefits to the taxpayer, resulting in projects that are on budget and on time.

In its recent report, the GAO also noted the importance of leveraging commercial expertise and processes when designing and building ships for the Navy. The report highlights that:

- Commercial ship buyers and builders have a shorter and more predictable time for ship construction;
- Leading practices are able to successfully manage the shipbuilding process which includes meeting the customer's needs;
- Commercial focus on finalizing the ship design ensures clarity on schedule, cost and performance.

As noted above, TOTE Services' contract with the Maritime Administration (MARAD) for the five NSMVs highlights both the opportunity and success for VCM to support U.S. shipbuilding. As part of this process, TOTE Services managed the NSMV design and building through critical partnerships with naval architects and Philly Shipyard. The NSMV contract included a firm fixed-price contract, fully designed vessel and little room for change orders. Further, the commercial experience was leveraged to manage risk and potential delays across the multi-year program including throughout the COVID-19 pandemic and resulting supply chain challenges.

It's time for the U.S. to fully embrace VCM and leverage the expertise and benefits of this model. These partnerships and collaboration are good for all aspects of the maritime sector, national security and the taxpayer.

Column

Washington Watch

Congress Raises the National Security Alarm on Shipbuilding

By Jeff Vogel, Partner, Cozen O'Connor

A bipartisan, bicameral group is emerging in Congress as the thought leaders for future maritime policy. On January 30, 2024, Senator Mark Kelly (D-AZ) and Representative Mike Waltz (R-FL-6) led a letter to President Biden, joined by 17 other members of Congress, urging the White House to embrace a "bold and clear vision" for the future of U.S. sea power. Among other recommendations – including establishing an interagency maritime policy coordinator – the Congressional group urged President Biden to issue a Presidential Determination to establish "commercial, civil, and military shipbuilding and shipping industries, with their associated domestic infrastructure and workforces, as elements on the nation's critical infrastructure sectors list and authorize the Department of Defense to utilize its Defense Production Act Title III authorities to invest in the commercial shipbuilding and shipping industries and civilian infrastructure and workforces, in coordination with the Maritime Administration."

The letter was squarely aimed at enhancing the U.S. industrial shipbuilding base, in both the commercial and military sectors, to counteract the growing strategic influence of the People's Republic of China (PRC) over the maritime space. Senator Kelly and Rep. Waltz doubled-down on their position, joined by Sen. Marco Rubio (R-FL) and Rep. John Garamendi (D-CA-8) on April 30, 2024, with the issuance of the Congressional Guidance for a National Maritime Strategy. The members did not mince words, stating plainly, "Decades of neglect by the U.S. government and private industry has weakened our shipbuilding capacity and maritime workforce, contributing to a declining U.S.-flag shipping fleet to bring American goods to market and support the U.S. military during wartime." The Congressmen again took aim at the threat of growing PRC influence over the maritime domain, stating that the PRC had become "the world's top shipbuilding and shipping nation, boasting 230

Shelby West / Norfolk Naval Shipyard

times more shipbuilding capacity than the United States, according to the Office of Naval Intelligence." That is a startling number that should concern any U.S. maritime stakeholder. The Congressional Guidance specifically cited to the fact that Chinese shipyards received over 1,700 orders in 2023, employing a workforce of over 600,000, while U.S. shipyards received less than five orders during the same period, employing less than 153,000 workers.

Among other strategic objectives, the unified Congressional group seeks to:

- Invest and innovate in domestic shipbuilding and U.S.-flag shipping capabilities and capacity to advance the power and influence of America's maritime industry.
- Leverage existing, unused authorities to speed the flow of taxpayer resources towards U.S.-flag shipping and domestic commercial shipbuilding.
- Encourage public outreach to demonstrate how American shipbuilding and U.S.-flag shipping are critical to national security, and that maritime workers are essential.
- Attract private investment into U.S.-flag shipping and domestic shipbuilding while restricting cash flow into the PRC's maritime shipping and shipbuilding industries.
- To implement these strategies, Sens. Kelly and Rubio and Reps. Waltz and Garamendi have called upon Congress to provide the authorities and funding necessary to support domestic shipbuilding and to explore treaty ally collaboration to expand domestic shipbuilding opportunities and insource capabilities to the U.S. market.

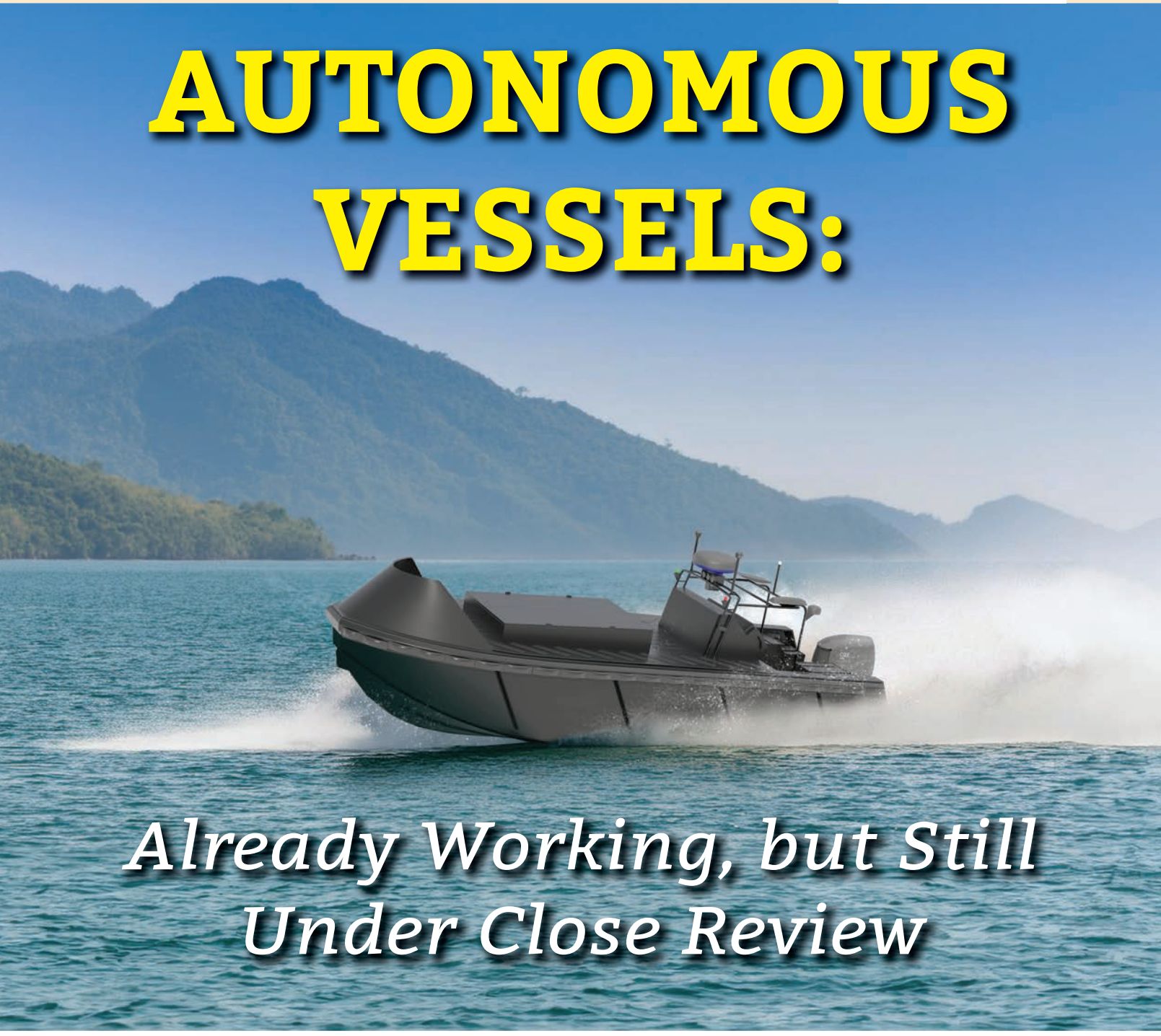
These Congressional members are not alone in voicing their concerns on the relative state of the U.S. and PRC shipbuilding industries. On March 12, 2024, a collective group of labor unions filed a petition with the U.S. Trade Representative (USTR) regarding the PRC's policies in the maritime, logistics, and shipbuilding sector. In the petition, the unions assert that the "American commercial shipbuilding industry is a shell of its former self" now producing "only a fraction of one percent of the world's commercial vessels, falling to 19th place" worldwide. As the petition asserts, "The biggest obstacle to the industry's recovery is the unfair trade practices of the world's largest shipbuilding nation: China." The petition argues that numerous strategic discriminatory actions by the PRC over the past 25 years have led to Chinese domination in the shipbuilding industry, including, (a) directed mergers and anticompetitive actions, (b) over $91 billion of direct government intervention (often through state-owned banks), (c) preferences for Chinese-owned vessels through port and logistics policies, (d) control of upstream markets, and (e) intellectual property theft.

The petition has strong Congressional support, with Rep. Raja Krishnamoorthi (D-IL-8), Ranking Member of the House Select Committee on the Strategic Competition Between the United States and the Chinese Communist Party (CCP), immediately releasing a statement providing, "Given the strategic importance of commercial shipbuilding to our economic and national security, dependence on the CCP creates a vulnerability that undermines our maritime capabilities. We need to shore up our critical maritime supply chains and ramp up our domestic manufacturing capacity to build resilience. The Biden Administration has been a leader in supporting domestic manufacturing and U.S. workers. I encourage the Office of the United States Trade Representative to launch a new investigation to uncover how the CCP has negatively impacted the U.S. commercial shipbuilding industry and how we can create more jobs in this critical sector here in the United States." Other Congressional members called for the USTR to immediately initiate an investigation under Section 301 of the Trade Act of 1974, including Senators Tammy Baldwin (D-WI) and Bob Casey (D-PA).

The demands from Congress have clearly been heard as the White House announced on April 17 that the USTR is taking up the labor unions' petition, initiating a Section 301 investigation into the PRC's unfair trade practices. In announcing the investigation, Ambassador Katherine Tai stated, "The petition presents serious and concerning allegations of the PRC's longstanding efforts to dominate the maritime, logistics, and shipbuilding sectors, cataloguing the PRC's use of unfair, non-market policies and practices to achieve those." Further, "The allegations reflect what we have already seen across other sectors, where the PRC utilizes a wide range of non-market policies and practices to undermine fair competition and dominate the market, both in China and globally. I pledge to undertake a full and thorough investigation into the unions' concerns."

In the background of these actions, the Maritime Administration (MARAD) remains focused on developing the National Maritime Strategy, working with the Center for Naval Analyses. We understand that MARAD is aiming to have a draft of the strategy developed by the end of the year, with final publication to occur in 2025. Undoubtedly, the strategy will focus heavily on building the U.S. shipbuilding industrial base to counteract PRC influence. When coupled with the actions of Sens. Kelly and Rubio and Reps. Waltz and Garamendi, and the pending USTR investigation, it appears that many in Washington are finally ready to make the investment necessary to reestablish the U.S. as a competitive force in the international shipbuilding market.

Sea Machines



Graphical rendering of **SELKIE 7 USV**, unveiled in April 2024.

AUTONOMOUS VESSELS:

Already Working, but Still Under Close Review

By Tom Ewing

Advances in autonomous vessels – from R&D to regulatory policies to actual work – are moving rapidly. AVs include a range of vessel types and missions, from freight to law enforcement to research to defense. There are many acronyms. Some examples –

- AV stands for autonomous vessel.
- AUV is autonomous underwater vessel.
- MASS stands for "maritime autonomous surface ship."
- NOMARS is a U.S. Department of Defense term for "no manning required ship."

Different...but maybe not so different

Surface and underwater operations present rather obvious contrasts regarding changes and challenges that AVs can imply for ports and harbors. A research AUV launched from a mothership in a remote area, for example, usually doesn't raise questions about harbor operations.

In contrast, port and energy officials along the East Coast will likely be pacing the floors when the first trans-Atlantic MASS containership moves closer and closer during an Atlantic storm, working its way between new wind turbines.

With AVs, though, above water or below is just part of the story. There are common issues across AVs and applications and missions. It's important to keep in mind that with AVs, autonomy itself is a separate subject, really the paramount subject, and it's the developments in autonomy that are the game changers. This extends beyond the electronic wizardry and algorithms that create "situational awareness." Autonomy can change everything about a vessel – its shape, materials, design and propulsion. Autonomy presents a chance to completely rethink maritime machines, uh, ships.

Again: new perspectives. Surface vs. submerged is variable. That mothership notion is dated. An AUV can sail as a MASS vessel. Consider an AUV launching itself from, say, a site on the Patapsco River, south of Baltimore, heading toward the Chesapeake Bay but not submerging until it's well past Virginia Beach.

A final mission may be remote and underwater, but not the trip to work and back home.

Maritime experts expect strong demand for AV operations. Issues and questions about risk, safety and oversight are at play now. The International Maritime Organization (IMO) is reviewing and evaluating AV operations, for surface ships and for ports. So too is Transport Canada. In the U.S., National Transportation Safety Board (NTSB) personnel have autonomous issues on their radar, across all transport modes. NTSB works with the U.S. Coast Guard (USCG) on IMO's AV policy efforts.

Coast Guard Policy Letter

On April 30, the USCG updated Policy Letter 22-01, which presents "Guidelines for Human-Supervised Testing of Remote Controlled and Autonomous Systems On Vessels," first released in 2022 (the update adds reference to using AVs for spaceflight recovery).

In the letter, the Coast Guard notes that "artificial intelligence and computer controls potentially provide the maritime industry with new and innovative tools to expand remote and autonomous systems beyond that permitted under current legal and regulatory structures." The letter presents an application pathway for USCG project review, starting with the Captain of the Port, then moving up to the Marine Safety Center for final decisions.

Since publishing the Policy Letter, the USCG said it has received just five inquiries for port and harbor AV projects. It added, though, that these projects were somewhat "hypothetical," falling outside the scope of the policy letter.

Making AVs work in the real world – the Yara Birkeland

Yara, based in Norway, is the world's leading crop nutrition company. In 2017, Yara teamed up with Kongsberg, the Norwegian engineering-technology company, to build the world's first autonomous and zero-emission container vessel: the Yara Birkeland, a 120 TEU vessel to transport fertilizer from Yara's Porsgrunn plant, across a fjord, to a port in Brevik, replacing 40,000 diesel truck loads per year. The ship was built by Vard.

The joint venture led to a new company – Massterly, established specifically to operate autonomous vessels (note that the name builds on MASS "Maritime Autonomous Surface Ships").

Yara Birkeland started operation in spring 2022. Full autonomy is planned for 2024. Then, operations will be

tracked from Massterly's remote operations center (ROC).

Roger Trinterud is Chief Growth Officer at Massterly. As the two-year testing phase concludes, Trinterud said that the initial onboard crew of five has been scaled back to two. Automated systems and supervision have moved to the ROC. He expects it will be another year before the ship is completely uncrewed. The operational shift has been deliberately gradual, providing time to test, verify, and possibly change, each task. "This has proven to be more time-consuming than expected," Trinterud said, but he added that the "safety and performance of the Yara Birkeland has been outstanding."

Trinterud explained that redundancies dominate power, propulsion, control and communication systems. Twelve high-definition cameras and two radars integrate with AIS and vessel charting, creating a "clear picture" of vessel surroundings, information simultaneously sent to ROC operators who can intervene.

Connectivity depends on three independent communication links which are used variously, depending on activity, operational area and potential risk.

Trinterud said that absent international regulations it is expected that the Norwegian Maritime Administration will allow regulatory exemptions after project managers complete an evaluation and analysis showing how "all thinkable fault scenarios" will be dealt with.

Discussions continue regarding the removal of systems required for traditional ships, but not important on an AV. "Getting this resolved," Trinterud said, "is paramount to reducing the cost and complexity of autonomous ships."

Finally, Trinterud was asked about port modifications. At Porsgrunn, a new mooring system and quay and a crane were added. The Brevik export terminal needed just minor modifications.

Making AVs work – underwater, anywhere... Cellula Robotics

Alex Johnson is Director of Products for Cellula Robotics Ltd., headquartered in Burnaby, British Columbia. Cellula develops and builds advanced AUV systems. Cellula's various Solus vehicles provide a range of capabilities, from noise monitoring to seabed mapping.

Johnson was asked about emerging demands within the submersible market. He highlighted two top customer concerns: range and endurance for extended missions. Older AUVs, he said, could work solo for two or three days before needing a recharge. Now, new vessels can operate for weeks, possibly months.

"The inquiries we get," Johnson said, "all pertain to vessel capabilities and how long it can stay somewhere. These vessels are building an operational capability that people haven't considered until now." Range can exceed 3,000 kilometers, working solo for three to four weeks.

"Having lots of energy allows (an AUV) to go down, throttle back, so to speak, and remain dormant," Johnson said. An AUV, for example, can explore a particular site, stay quiet for a few days, then return to document any changes. Typical tasks include geophysical surveys and pipeline and subsea cable inspections, as well as defense missions, e.g., surveillance.

Advances with hydrogen fuel cells are proving critical. "We're trying to leverage consumer automotive H2 fuel cell technology," Johnson said, "because that lowers the barrier to entry and existing infrastructures provide consumer confidence."

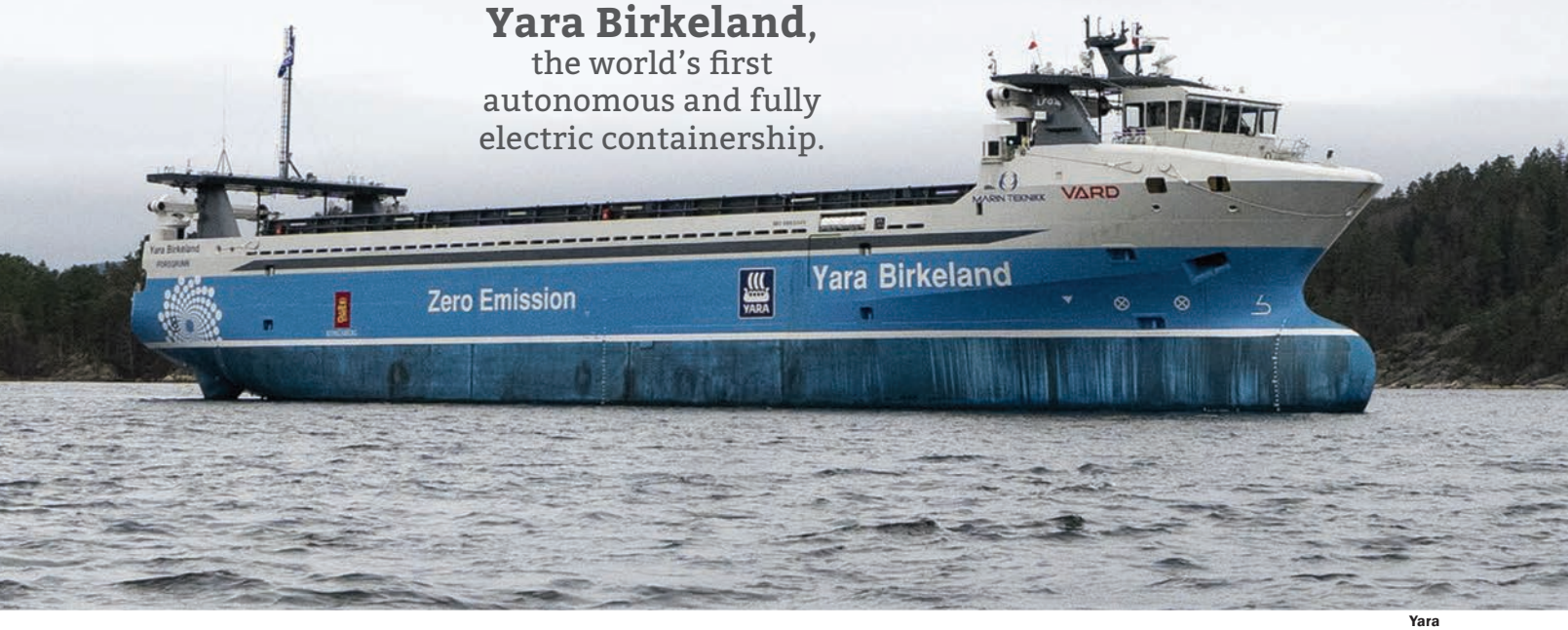
Placing a H2 system in an undersea vessel, though, requires some serious engineering adaptations. A surface H2 system can pull oxygen from the air. Underwater, oxygen – and H2 – have to be carried. Explosive gases can't be vented. Johnson said that "a lot of industry research right now is going into H2 power systems that meet the unique demands of operating under water."

Johnson was asked about connections between subsea and MASS vessels.

He predicts that regulatory issues will impact both. In Canada the subsea industry expects that AUVs will need to be MASS compliant. "Hopefully," he commented, "both the commercial and defense sectors can rapidly adapt, along with regulators, so AVs evolve to everyone's benefit."

Making AVs work: ports and harbors – Sea Machines

In April, Sea Machines Robotics, based in Boston, unveiled a new uncrewed surface vessel (USV) – the SELKIE 7 – geared for missions ranging from hydrographic surveying, logistics, and persistent on water operations such



Yara Birkeland,
the world's first autonomous and fully electric containership.

Yara

as security and environmental studies. The SELKIE is convertible, i.e., when needed, an operator can take over manual control.

Emma Grant, a spokesperson for Sea Machines, said that project designers worked from established specifications and capabilities; vessel components were selected to ensure optimal performance and allow seamless AV-human integration. The Sea Machines team used HDPE construction and oversized hardware, where possible, to offset the fact that without a crew structural fatigue and damage could go unnoticed.

Grant said AV vessels are difficult to produce – at scale – that combine ruggedness, reliability and are intuitive. She said the SELKIE's "turnkey solution" combines these attributes and avoids downtime because it can

be operated via different pathways. Range and endurance are up to 500 nautical miles and up to 30 days. Cargo storage is equivalent to 2 x 1.3 meters (two Euro Pallets) and remotely controllable deck hatches can deploy payloads at sea. The 23' length with high-freeboard, Seakeeper gyro and wave break makes SELKIE suitable for open ocean operations, up to at least Sea State 5.

Grant was asked about port revisions for SELKIE operations. She said, "No revisions must be made to have SELKIE 7 integrate with port or docking facilities."

She added, though, that Sea Machines and its customers plan AV operations with local Coast Guard sectors. She commented that the USCG, regarding AV issues, "has been great to work with." Overseas, Sea Machines follows a host country's regulations; the company has active AV projects across Europe, Australia and in the United Arab Emirates.

Preparing for more work – IMO regulations being developed

The IMO has been focused on AV operations for a number of years, but its work has been particularly active in the last two. In April, for example, the IMO Legal Committee approved a "revised road map for addressing

Solus-XR at sea trials. Solus-XR is designed to achieve 5000 km range over 45 days of continuous operation and hibernate in low power mode for months on the sea floor.

Cellula Robotics

legal issues related to MASS." Also, in April the IMO hosted a webinar on MASS challenges for ports and public authorities.

In May, the IMO's Maritime Safety Committee's agenda continues its MASS work, focusing on a 2023 Joint Working Group report detailing inherent MASS issues and concerns. Some seem almost otherworldly. For example, the JWG cites agreement that:

- There should be a human master responsible, regardless of mode of operation or degree or level of autonomy. However, the master may not need to be on board, depending on the technology used;
- Regardless of operation or level of autonomy, the master should have the means to intervene when necessary;
- Requirements for remote operators need further discussion;
- One person may be responsible for multiple MASS; again, more discussion needed;
- At a ROC, individuals not directly working with a ship (e.g., researchers) should not be considered as remote operators.

The IMO's MASS "roadmap" work is expected to continue until 2027. Important steps and dates include:

- An assessment, by spring 2025, of the final non-mandatory MASS code and consideration of treaty amendments and proposals and guidelines for new rules.
- By spring 2026, finish work on the mandatory MASS code and review new rules presented for consideration.
- Then, by spring 2027, adopt or approve "amendments to, or interpretations of, treaties under the purview of the Legal Committee."

The U.S. participates in the MASS Joint Working Group, which also includes observers from various non-governmental organizations (NGOs) who attend "in consultative status," according to the 2023 JWG Report. Some NGOs include the International Chamber of Shipping, the International Organization for Standardization, the International Maritime Pilots' Association and the Harbour Masters' Association and the World Shipping Council.

All images courtesy Ocean Craft Marine

INSIDE PROJECT PERFECT STORM

By Eric Haun

The latest high-tech rigid hull inflatable boat (RHIB) from Annapolis, Md. based boatbuilder Ocean Craft Marine (OCM), the 11.5-meter Offshore Interceptor, is the result of an innovation push involving some of the industry's top players.

"The design itself is an evolution of existing designs we've done, but taking it to the next level," said Todd Salus, OCM vice president of operations. "It's the latest and greatest innovation."

The company's founder and CEO, Roy Nouhra, said the boat's origins trace back a few years to a design OCM developed for a "very secretive organization" within the U.S. Department of Defense, to be delivered as commando boats for a military in the Middle East.

"We got the contract, we developed and delivered the boat and we gave them training," Nouhra said. "A year later, we gave them another training and learned about their unmet needs, because we didn't have a chance to talk to the end user before. From there, we went back to our drawing table to produce version two of that boat, building on the feedback we got and bringing more innovation into it."

At this time, OCM established the Accelerator for Innovation in the Maritime Ecosystem (AIME), a platform to collaboratively drive innovation integration, especially within the professional and military segments, but also in other parts of the maritime industry. OCM said it plans to invest more than $250 million over a 10-year period to establish the independent maritime innovation laboratory.

According to Salus, many government customers in the patrol boat space are typically slow-moving in adopting new

technologies, and their acquisition processes can be suppressive to innovation. "There's nothing innovative going on there," he said. "So, we're pushing them to innovate."

AIME is an attempt to break the mold. "AIME is about bringing the best of the industry together with people that are forward thinkers—people that want to push the evolution," Nouhra said. "It's a lot of knowledge-sharing with people that, with an open heart, are willing to give the knowledge for the industry to benefit. And we want to all push it together."

AIME's first fruit came relatively quickly. Dubbed Project Perfect Storm, the OCM-led initiative brought together companies such as Ullman Dynamics, Porta Performance Products, Skydex, Military Systems Group, Livorsi Marine, Hefring Marine, Structural Composites, TMS Group, TotalSim, Diverse Dimensions and SEA-IT, to produce the state-of-the-art 11.5-meter Offshore Interceptor.

Constructed in aluminum, the boat's hull offers excel-

lent seakeeping and tactical turning capabilities as well as fast holeshots, according to the builder. Powered by 1,200-horsepower Mercury Marine V10 triple outboard motor configuration (complete with Mercury's Active Trim System), the boat offers an operational range exceeding 400 miles at 36 miles per hour (mph) cruising speed, and at wide-open throttle it can top out at 64 mph.

The vessel features OCM's hybrid constructed polyethylene closed-cell foam-filled "D"-shaped Collar, with options for heavy-duty Orca 866 Hypalon and Polyurethane finishes.

The boat's weapon mounts, which feature an articulated swing arm, are designed by Military Systems Group and are a brand-new design created through a collaborative process that saw partners talking with one another to create a new solution, Nouhra said.

This vessel's spacious deck layout is carefully designed and packed with innovation from AIME partners. It features two consoles to optimize division of labor and is engineered to enhance visibility and situational awareness, and t's also easily reconfigurable thanks to Ullman Dynamics' shock-mitigating seats mounted on deck tracks. The suspension seating and Skydex shock-mitigating flooring system are engineered to boost crew comfort and safety.

"The boat is designed as an offshore interceptor, but it's very appropriate in inland waterways as well. It could just as easily be a police boat in any harbor—there's even a firefighting variant too," Salus said, noting the vessel can be built in either open or cabin configuration.

At the end of the day, the goal is to deliver to the customer the best possible boat that fits their requirements, and OCM's work to incorporate state-of-the-art technologies is part of that mission.

Asked about demand for new RHIBS such as the 11.5m Offshore Interceptor within the market, Salus said, "There are a lot of assets out there that are not only ready to be retired, but that are not performing as advertised and not to the customer's satisfaction. We hear that a lot. They're looking for someone to cure their pains. And we're very good at that. We were very good listeners and we try to give the customer exactly what they need and the performance that they desire."

"We're coming together in an unprecedented way to incorporate all of the latest innovations into one platform," Salus said. "And we hope to be an exemplar to our federal customers of what can be done and the innovation that can happen and happen quickly and collaboratively rather than everyone being in their silo and fighting each other. We can work together because we augment each other, we complement each other. "

Situational awareness is key on board any working vessel, but especially high-speed patrol boats, which routinely encounter some of the world's harshest and most dangerous environments.

Ocean Craft Marine's 11.5-meter Offshore Interceptor is equipped with fully integrated a wireless 9100 Digital Marine Communication System from The David Clark Company, which reinforces crewmember interoperability and amplifies mission safety and success, according to the builder.

The Series 9100 is a mission-critical, marinized digital communication system offering unmatched ease of use, programmability, scalability and versatility, with a proven track record in the demanding patrol boat/interceptor market. It's been chosen for hundreds of installations for the U.S. Department of Homeland Security and U.S. Customs and Border Patrol interceptors, as well as on many U.S. Coast Guard small boat programs and international police, SAR and security vessels in the EU, Middle East and Asia Pacific regions.

OCM said David Clark comms were chosen for:

- **Enhanced crew coordination:** The wireless system significantly improves intra-crew communication, enabling better coordination and efficiency during operations.
- **Situational awareness:** With clear and reliable communication, crews can maintain high situational awareness, crucial for safety and effective mission execution.
- **Reduction of crew fatigue:** The headsets are designed to mitigate the effects of prolonged exposure to wind and engine noise, reducing fatigue and improving overall crew well-being.
- **Proven reliability:** David Clark Company's products have a long-standing reputation for durability and reliability, making them a trusted choice in the maritime industry.
- **User-friendly design:** The headsets are easy to use, allowing crews to focus on their tasks without being distracted by complex communication systems.
- **Versatility:** This communication solution is versatile and adaptable, making it suitable not only for the OCM 11.5M but also for a wide range of other vessels used in professional maritime operations.

"The [David Clark] wireless headset communication system has been a game-changer for our professional maritime end-users, enhancing crew coordination, crew inoperability, and overall communication capabilities both onboard the boats and externally" Salus said. "These systems greatly increase our situational awareness and our crew's effectiveness, making it a must-have for any professional boat operations. Furthermore, the headsets greatly reduce crew fatigue from prolonged exposure to wind and engine noise."

Book
Review

Deflating Mythology:

New Book Unpacks the History Behind the Jones Act

By Eric Haun

The impacts of Section 27 of the Merchant Marine Act of 1920, today commonly referred to as the Jones Act, are often debated in maritime circles. But the well-known U.S. law, which requires vessels that transport goods between U.S. ports to be American-built, -flagged, -owned and -crewed, hasn't always been a hot button issue, according to Charlie Papavizas, author of a new book on the subject, *Journey to the Jones Act: U.S. Merchant Marine Policy 1776-1920*.

A leading maritime attorney, Papavizas has been helping his clients navigate the Jones Act for nearly 40 years, and he said his new book arose, in part, to help set the record straight. The law and its origins, he said, are often misunderstood, and somewhere along the line, a false mythology was created. "I wanted to write a proper history of how we got to the Merchant Marine Act of 1920, and to give it its due as a whole, rather than the part that everybody complains about or thinks is the greatest thing since sliced bread."

Section 27, it turns out, was only a very small piece of what Senator Wesley Livsey Jones was doing when he introduced the Merchant Marine Act. Before setting out to write the book, Papavizas had an inkling that this was the case, that what is today known as the Jones Act was of lesser importance in 1920. "What I didn't expect to find," he said, "was that it was of no importance, not lesser importance."

"After the act was signed by President Wilson in June 1920, as often happens after a law gets enacted, there was controversy about certain provisions. [Section 27] wasn't one of them. There was no controversy. There was no discussion," Papavizas said. "What that showed to me in spades is that what happened in 1920 was just part of an evolution. It was not a culmination point. It was not the beginning of a policy that everybody says it is."

Charlie Papavizas

In *Journey to the Jones Act*, Papavizas unpacks the history behind what has evolved to take on a life as the United States' most newsworthy and controversial maritime policy law.

ECO Edison

Ørsted

The first-ever American-built, -owned and -crewed offshore wind service operations vessel (SOV) was christened during a ceremony in the Port of New Orleans. Edison Chouest Offshore's (ECO) recently completed ECO Edison will play an integral part of the operation and maintenance of Ørsted and Eversource's South Fork Wind, Revolution Wind and Sunrise Wind projects as the U.S. offshore wind industry continues to ramp up in the U.S. Northeast. Built at ECO in-house shipyards in Louisiana, Mississippi and Florida, the 262-foot long liveaboard SOV will serve as a floating, year-round homebase for 60 of the first American offshore wind turbine technicians, who will work at-sea over the life of the wind farms, servicing and maintaining the wind turbines. ECO Edison is powered by two U.S. EPA Tier 4 certified Cat 3512E engines from Caterpillar Marine. The U.S.-flagged, Jones Act qualified vessel features a walk to work motion-compensated gangway that allows technicians to easily and safely access the wind turbines. A smaller daughter craft onboard can be deployed to efficiently maneuver crew across the wind farms.

SpaceShip

ULA

American aerospace manufacturer ULA has ordered a new ship to transport rockets from its factory in Decatur, Ala. to launch sites at Cape Canaveral Space Force Station in Florida and Vandenberg Space Force Base in California. ULA said it awarded a contract to build the 356-foot-long roll-on/roll-off vessel to Bollinger Shipyards, who recently started constructing the new ship at its shipyard in Amelia, La. Bristol Harbor Group, Inc. has been hired to oversee the project's design and build phases. Scheduled for delivery in January 2026, the new Jones Act compliant vessel, SpaceShip, will be the second in the ULA fleet and comes amid increased demand for ULA's next generation Vulcan rocket, according to Chris Ellerhorst, ULA's vice president of the Kuiper Program.

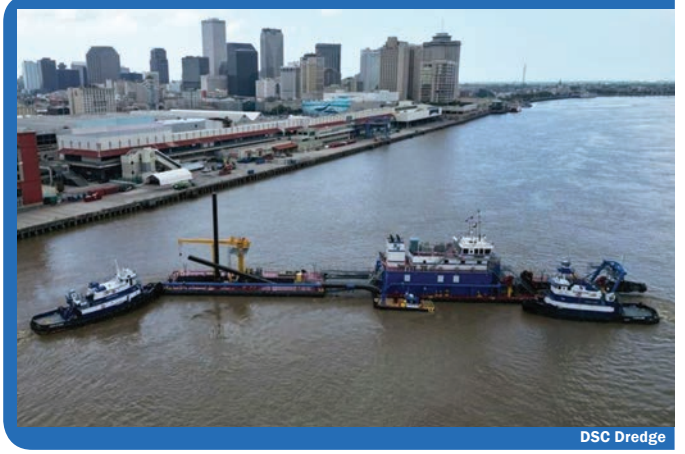
Vessels

SeaDog

Vita Power

A new commercial rigid inflatable boat (RIB) delivered to a San Francisco Bay Area marina operates 100% on electric power. The commercial RIB, a 5.5-meter SeaDog from electric marine technology specialist Vita Power, will support the daily operations of the Westpoint Harbor in Redwood City, located in the heart of Silicon Valley. Designed for high performance and practicality, the vessel features compatibility with fast DC charging and boasts a charge time of under an hour. The boat's high torque and Vita's proprietary responsive controls allow for precise maneuvers and strong towing and pushing capabilities, even at low RPM, the builder said. With a continuous use capability of up to 10 hours at reduced port speeds, the SeaDog is suited for the daily operations of Westpoint Harbor. Its DC supercharging technology enables rapid recharging, achieving a 20-80% charge in just 30 minutes, allowing for quick top-ups between shifts.

Vaneta Marie



DSC Dredge

Muddy Water Dredging held a christening ceremony for its Marlin Class dredge, Vaneta Marie, in the Port of New Orleans. The fully customized 371-foot-long Marlin Class dredge, built by DSC Dredge—equipped with DSC's survey-grade DSC VISION package and Dredge Rx remote monitoring system—is able to dredge a 400-foot-wide cut with an 80° swing arc. The diesel-electric dredge delivers 9,621 total installed horsepower, and its U.S.-built Wabtec generators meet EPA Tier 4 Final emissions standards without the use of urea. All dredge machinery is mounted on or above the main deck, and active monitoring of hull tank voids ensures early detection of water intrusion. Furthermore, it features a detachable carriage barge.

Angus R. Cooper II

The Cooper Group

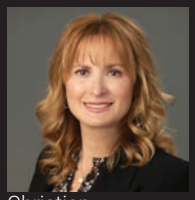
Crescent Towing has taken delivery of its newest tugboat, Angus R. Cooper II. The new escort tug was designed by Crowley Engineering Services and constructed at Blakeley BoatWorks in Mobile, Ala., to be added to Crescent's ship assist operations in the Port of Savannah. It is powered by twin Caterpillar 3516E EPA Tier 4 engines, each producing 3,004HP to power Kongsberg 255 azimuthing drives. The tug achieves ABS FFV1 class notation with firefighting systems (FFS-), main engine driven fire pump and twin remotely operated fire monitors, each capable of 5,230 GPM output at 145 PSI. The vessel is 92 feet long, 38 feet wide and drafts 19 feet. The vessel is built to ABS classification Maltese cross, A-1 towing, AMS, full ocean service, FFV1, international load line, UWILD and escort class towing.

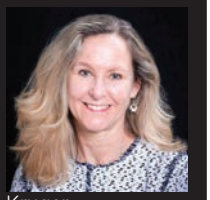
Long Island

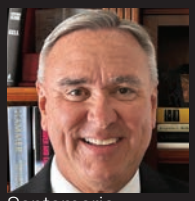
Eastern Shipbuilding Group

Eastern Shipbuilding Group (ESG) held a launch and christening ceremony for the ferry Long Island at its Allanton Shipyard in Panama City, Fla. Scheduled to be delivered later this year, the new Subchapter H passenger and auto ferry is being built for Bridgeport & Port Jefferson Steamboat Company, a subsidiary of McAllister Towing, for operations between Bridgeport, Conn., and Port Jefferson, N.Y. The 302-foot-long ferry is designed by Braintree, Mass.-based Gilbert Associates, with capacity for up to 1,000 passengers and 124 cars, or a combination of cars and up to six trucks. The vessel is powered by twin EPA Tier 4 Electro-Motive Diesel (EMD) 12 ME 23B, rated 3,000 HP at 900 RPM and driving Reintjes WAF 3445 3.083:1 reduction gears delivering power to fixed pitch propellers. It will be capable of operating at 17 knots. The ferry is also equipped with three John Deere 6135 AFM85 diesel generators, rated 300 KW at 1,800 RPM, as well as two Berg Model MTT113 FPL bow thrusters, each driven by John Deere 6135 AFM85 diesels rated 500 HP at 2,000 rpm and coupled to Reintjes WVS 234 1.50:1 reduction gears. Its steering gear is by Jastram.

People & Companies


Christian


Kruger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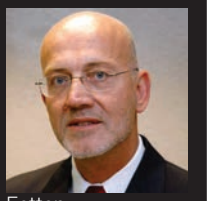
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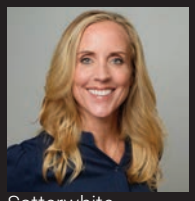
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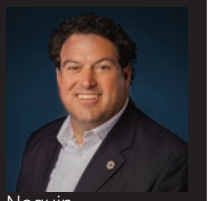
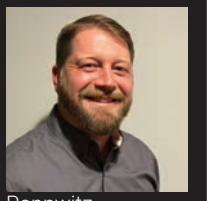
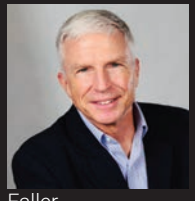

Naquin


Hughes


Ponnwitz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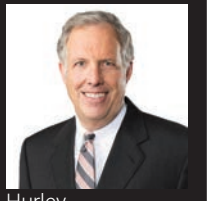

Hurley

Port NOLA CEO Steps Down

The Port of New Orleans' president and CEO Brandy D. Christian will step down mid-June 2024 to become CEO of Patriot Rail Company. Port EVP and CFO Ronald Wendel, Jr., will assume acting leadership.

New Leadership at Austal USA

Austal USA, a U.S. shipbuilding subsidiary of Australia's Austal Group, has appointed Michelle Kruger as president. The company has also named Mark Santamaria as its new chief financial officer.

Americraft Names Fetten Chairman

Americraft Marine, a maritime subsidiary of the Libra Group, appointed Peter Fetten as chairman.

Maritime Partners Adds New Execs

Maritime Partners has added Stephen J. Bordes and Greg Chase to its executive leadership team as chief financial officer and chief legal officer, respectively.

ABS Wavesight Hires Satterwhite as COO

ABS Wavesight has appointed Staci Satterwhite to serve as chief operating officer, a new role for the maritime software as a service affiliate of ABS.

Bollinger Promotes Naquin

Shipbuilding group Bollinger Shipyards has promoted Andrew "Andy" Naquin to lead its sales team as the company's new VP of sales.

Hughes Joins engines, inc.

engines, inc., a distributor of diesel engines and generator sets, has hired David Hughes as its new managing director.

Mack Boring Promotes Ponnwitz

Mack Boring & Parts Co. has promoted Christopher Ponnwitz to the role of chief commercial officer of Mack Sustainable Energy, a new division for the engines and power products distributor.

Faller Named SNA Chair

Retired Adm. Craig Faller has assumed the position of chairman of the board of directors of the nonprofit Surface Navy Association.

Hurley Elected MLA President

Grady Hurley, a partner and co-leader of the maritime litigation, arbitration and dispute resolution team at Jones Walker LLP, has been elected president of the Maritime Law Association of the United States (MLA)

DCE Elects New Board Leadership

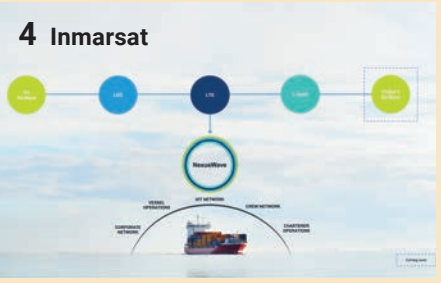
Trade group the Dredging Contractors of America voted to accept James Cottrell as the president of the DCA Board of Directors and Harry Stewart as its senior VP. Cottrell is president and CEO of Cottrell Contacting Corporation, and Stewart is president and CEO of the Dutra Group. Other DCA officers are Brian McGeorge, president of Pine Bluff Sand & Gravel Company, as DCA VP; Fred Paup, chairman of the board and executive VP at Manson Construction, as DCA VP; and Gordon Shelton of Cottrell Contracting as DCA treasurer.

Products

1 VETUS Maxwell

2 In-Mar Solutions

3 KVH



4 Inmarsat

5 Castoldi

1. Heavy Duty Windscreen Wiper

Heavy-duty wiper has a thermal cut-out in case of excessive operating temperature. Self-parking on either side, 2 speeds/2 shaft lengths. Fully adjustable wipe from 62º - 92º. Stainless steel parts and meet EMC requirements. 12 or 24 VDC.
https://vetus.com/usa/

2. In-Mar Solutions: Wynn Marine Pantograph Heavy Duty Window Wipers

Wynn Marine Pantograph window wipers are the ultimate solution for applications where complex window shapes need to be wiped effectively and economically. The wipers can be applied to anything from large commercial vessels to small and military vessels on land and at sea.
Pantograph wipers are available in a range of sizes from 2Nm of torque up to 110Nm with a wide variety of control systems and switch options. In addition, they can be supplied with heated arms and spray-jets.
www.inmarsystems.com

3. CommBox Edge

KVH Industries, Inc. has introduced its CommBox Edge Communications Gateway. CommBox Edge, a product of KVH's exclusive distribution agreement with Kognitive Networks, simplifies the modern multi-orbit, multi-channel connectivity found on commercial vessels by applying intuitive network and bandwidth management tools and onboard edge computing. CommBox Edge is an all-in-one management toolbox for maritime IT professionals who want to control the growing array of wide area network (WAN) options, such as VSAT, low earth orbit (LEO) services, 5G cellular, and other services available through the KVH ONE global network.

4. NexusWave

Inmarsat, a Visata company, has launched NexusWave, a fully managed connectivity service underpinned by a bonded multi-dimensional network, offering high-speed connectivity, unlimited data, global coverage, and 'secure by design' infrastructure, according to Inmarsat. Delivered by a single provider, NexusWave offers fully managed service that seamlessly integrates multiple high-speed networks in real time – Global Xpress (GX) Ka-band, low-Earth orbit (LEO) services, and as-available coastal LTE service - with an additional layer of L-band for resiliency – for fast, always-on connectivity. The solution also offers enterprise grade firewall security trusted by global enterprises and governments.

5. Turbodrive 400 HCT

Castoldi launched the latest in a new range of hydrodynamically optimized waterjets: the Turbodrive 400 HCT, featuring a 400 mm jet housing, hydraulic gearbox/clutch and high thrust efficiency. The development of the new family of Castoldi HCT waterjets started 12 years ago, said Giacomo Castoldi, owner at Castoldi. "Thanks to the very latest developments in fluid dynamics, the new Turbodrive 400 HCT is around 12% more efficient than the outgoing model and is perfectly interchangeable with it." Capable of handling up to 882kW (1,200 mHP) of input power, the Turbodrive 400 HCT also fields a redesigned steering system.

2024 Editorial Calendar

Marine News

January 2024

E-Magazine Edition

Design & Construction: Advances in Naval Architecture, Marine Engineering & Shipbuilding

February 2024

U.S. Offshore Wind

- Passenger Vessels
- Mariner Training & Education
- Safety Equipment

Event Distribution:
CMA: Mar 12-14, Stamford, CT

March 2024

E-Magazine Edition

U.S. Inland Waterways Transport: Operations, Infrastructure & Dredging

April 2024

Towboats, Tugs & Barges

- 2024 Shipbuilding Report
- Navigation Technology
- Power & Propulsion

Event Distribution:
OTC: May 6-9, Houston, TX

May 2024

E-Magazine Edition

U.S. Maritime Workforce: From Offshore to Inland Waterways & Shipyards

June 2024

Combat & Patrol Craft

- Navy & Coast Guard Shipbuilding
- Autonomous Vessels
- Workboat Communications Wind

Event Distribution:
Multi-Agency Combat Craft (MACC)
Marine Money Week, New York, NY

July 2024

E-Magazine Edition

The Green Marine Annual: Improving Environmental Performance & Efficiency

August 2024

Boatbuilding & Repair

- Naval Architecture & Marine Engineering
- Shipyard Equipment
- Dredging

Event Distribution:
SMM 2024, Hamburg, Germany

September 2024

E-Magazine Edition

Fast Craft: Patrol, Fire, Police, Pilot Boats & Ferries

October 2024

Vessel Repair & Conversion

- Offshore Energy
- Electrification & Alternative Fuels
- Deck Machinery & Cranes Autonomous

Event Distribution:

November 2024

Workboat Edition

- Top Vessels of 2024
- Top Tech & Service Innovations of 2024
- U.S. Shipyards

Event Distribution:
Int'l Workboat Show: Dec, New Orleans, LA

December 2024

E-Magazine Edition

Power & Propulsion: Technology Spotlight

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NEW PRODUCTS

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36	Appleton Marine, Inc	www.appletonmarine.com	(920) 738-5432
39	Creative Systems	www.ghsport.com	(360) 385-6212
C2	David Clark Company	www.DavidClarkCompany.com	(800) 900-3434
13	Environmental Marine Inc.	www.ENVMAR.com	(606) 271-2711
17	Hilliard Corp.	www.hilliardcorp.com	(607) 733-7121
19	MACC 2024	www.navalengineers.org/Symposia	Please visit our website
1	Marine Systems, Inc	www.marinesystemsinc.com	(985) 223-7100
41	McDonough Marine Service	www.mcdonoughmarine.com	(504) 780-8100
46	NOAA/Eastern Region Acquisition Division	MarinerHiring.noaa.gov	(833) 724-5872
33	Prime Mover Controls	www.pmc-controls.com	(604) 433-4644
C4	R.W. Fernstrum & Company	www.fernstrum.com	(906) 863-5553
21	Ribcraft USA, LLC	www.ribcraftusa.com	(781) 639-9065
5	Volvo Penta Americas	www.volvopenta.com	(757) 403-8404

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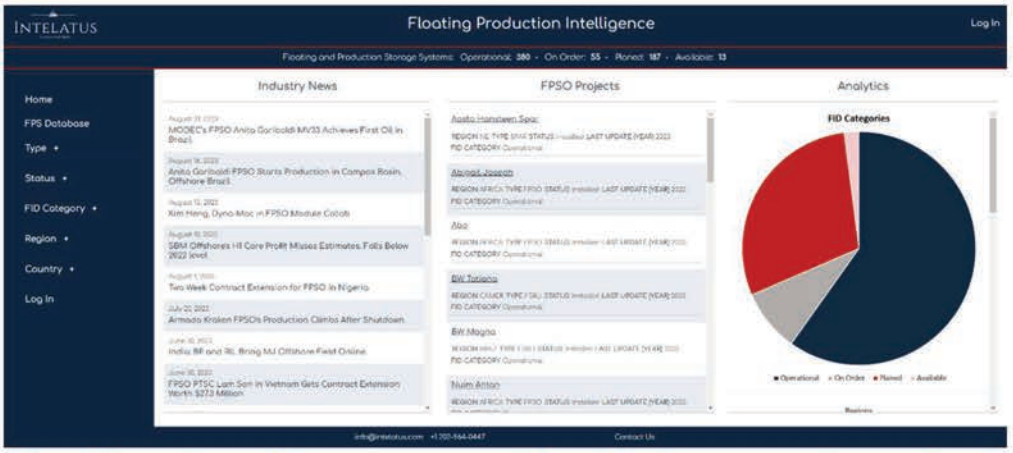
Floating Production Systems Intelligence



Introducing the **ultimate online resources for offshore energy professionals** - the Floating Production Systems Intelligence and the Floating Wind . This comprehensive database provides key technical and commercial details on all floating production systems worldwide.

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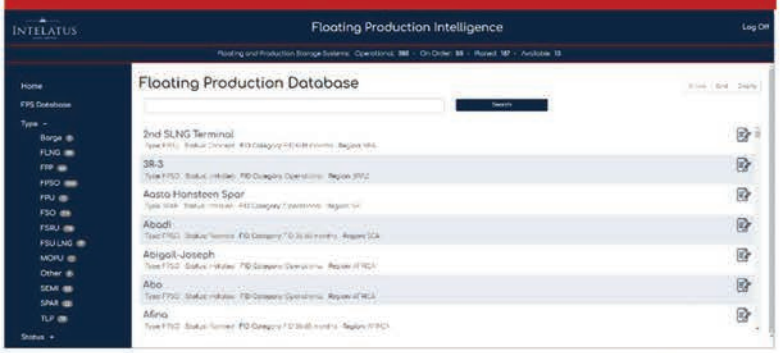

With over 700 floating production unit listings, the database is the most extensive compilation of FPSO, FPU, FPS and other floating production system information available.

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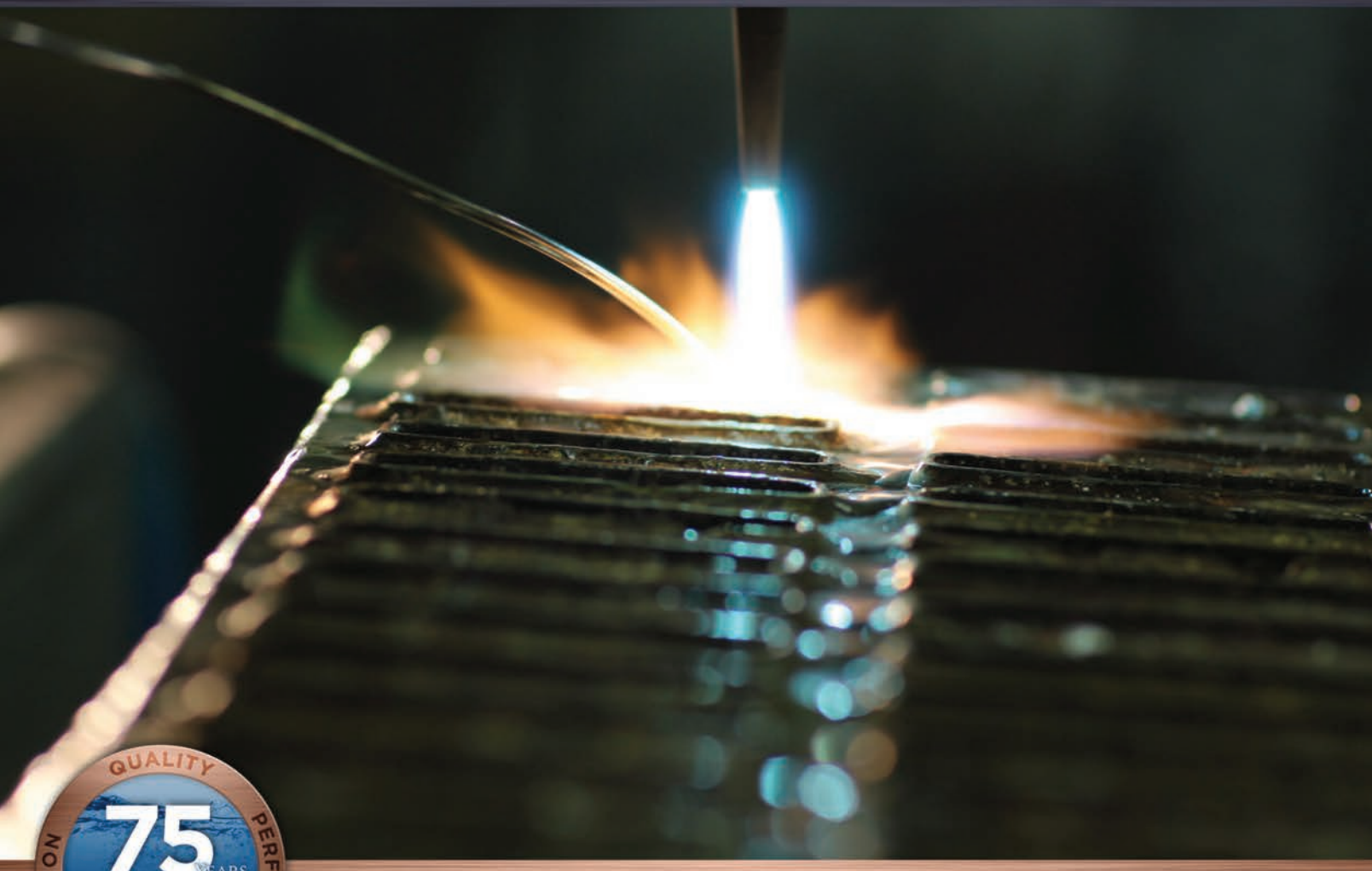

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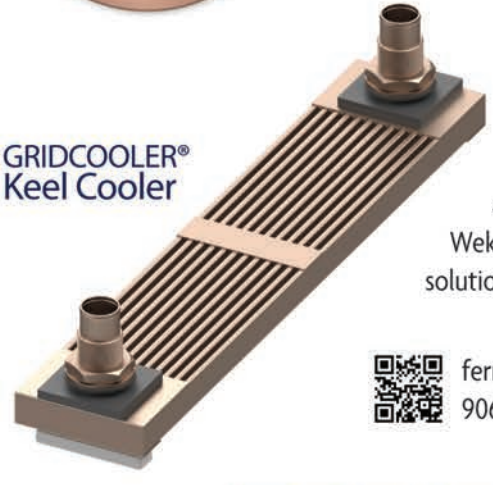

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Keel Cooler

By using 56% silver in every brazed joint, our Gridcooler® Keel Coolers hold more structural integrity and shock absorbant flexibility than our competitors- displaying a committment to quality in every joint. Between our Fernstrum Gridcooler Keel Cooler, Weka Boxcooler and Omega Pillow Plate, we offer customers a range of highly innovative solutions and promise the best in customer service. Call or visit our website for a custom quote.

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