The Information Authority for the Workboat • Offshore • Inland • Coastal Marine Markets

Volume 30 • Number 9

Marine News

SEPTEMBER 2019
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Offshore Wind
New Tasks, New Vessels Coming

Vessel Conversion & Repair
Location, Location & ... Location

Dynamic Positioning
The new normal for navigators

Special Report
LNG as a Fuel

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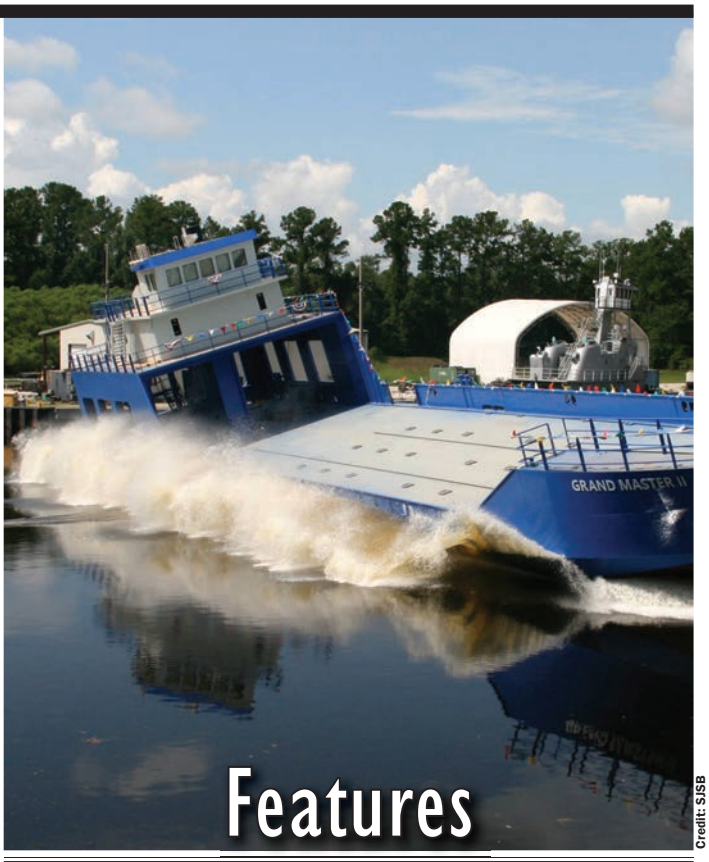

Credit: SJSB

ON THE COVER

The long-awaited advent of domestic offshore wind is almost upon us. With it brings the requirement for service vessels, a boon for domestic shipyards; newbuild and repair alike.

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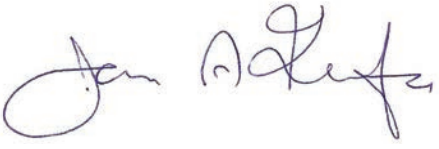
"Change is the New Normal"

As I assembled this particular edition of *MarineNews*, it occurred to me that no matter how staid or unchanging the domestic waterfront might sometimes seem, its actual nature couldn't be more of a polar opposite. Over time, we write about the same topics many times but the seemingly inevitable struggle to convey each subject in an original manner never really manifests itself. That's because the marine industry – especially our target market of brown water, inland, shallow draft sectors – continually evolves, whether we like it or not. This edition is a perfect example of that metric. Let me explain: The faint whisper of offshore wind has finally arrived at the North American coastline, and with it the need for tonnage – new and old – that incorporates existing technologies for rapidly evolving coastal duties. And, while U.S. operators and renewable energy developers can take guidance from experienced EU players, the vessels that we'll need will largely have to be Jones Act compliant. That reality will awaken a previously moribund offshore energy sector at exactly the right time and produce work for domestic shipyards in the form of newbuild and retrofit contracts alike.

We should never forget that the first cabin-forward steel constructed offshore supply vessels adapted East Coast designs for GoM requirements. Similarly, and when the East coast wind boom arrives in earnest, no one should be surprised if idle Gulf Coast OSV's return the favor, retrofitted for new duties, but still servicing the offshore energy industry. Sure, fit-for-purpose tonnage is the ultimate ticket, but we've got all the capabilities here on this side of the big pond to bridge the gap until those shiny news hulls slide off the ways. Hence, the headliner for this edition – Vessel Conversion and Repair – arrives at arguably just the right time.

Within this edition, we visit with two of the more recognizable shipyard names in the business. Charleston-based Detyens Shipyards continues to evolve and grow, servicing a wide swath of diverse customers – domestic, military and foreign flag alike. Separately, St. Johns Ship Building excels in both newbuild and repair work and today boasts an enviable backlog to go along with its fine reputation. No doubt both facilities will be a part of the coming offshore boom in the not too distant future. As the business needs of the domestic waterfront change, there is one thing that will no doubt come along for the ride. Of course, we're talking about Dynamic Positioning (DP), that now familiar but critical part of the offshore oil industry. As DP evolves ever more sophisticated, it also beckons to offshore wind contractors – who also need precise vessel handling and positioning – but also a dozen other industries as well. Heretofore thought of as a specialized skill, much like the also rapidly evolving world of autonomous vessels, DP will soon become a mainstream requirement that represents just one more way that the seafarer of tomorrow will differ from his or her counterpart of today. And you thought the waterfront was boring?



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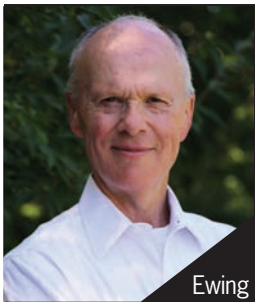
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SubM: A Look Back at Year 1; Looking Ahead to Year 2

The one year anniversary of the beginning of the phase-in for the new subchapter M towboat rules came and went on July 20, 2019, apparently without a whimper. But, it wasn't too long ago (December 2018, actually) that towing vessel SME and subchapter M expert Captain Pat Folan asked within our pages, *"What if they passed a law and no one complied?"* Folan continued, within that edition, *"I've spoken with the U.S. Coast Guard in multiple districts and they are wondering what the owners are going to do. I have spoken with owners and they are wondering what they are going to do. The Coast Guard doesn't have the manpower to shut down a big piece of an industry nor do I believe that it wants to. But what happens if 1,000 boats just don't comply? The Coast Guard at the District level is looking at the same thing."* He added, *"Probably more problematic for them is what would happen if all those boats waited until the last minute and then applied for a COI? This is the TPO worry, as well."*

So, what did happen? As it turns out, a little bit of everything. At least that's the word coming out of the AWO Subchapter M online Webinar held in late July, which featured, among others, USCG Captain Matt Edwards, who weighed in on all things "SubM."

The AWO Webinar had something for everyone, including few (non-scientific) survey questions, posed to Webinar participants. The first survey question asked, "Of the COI's achieved, by what method did you achieve these results. A total of 89 AWO members responded, and of those, 89% chose the TSMS route, just 7% took the Coast Guard option (a number which probably made the blue suits giddy with relief), and interestingly, 4% of respondents said that, for various reasons, they used both. It is also clear that, as the process evolved, more and more operators gravitated towards the TSMS option (especially looking at the numbers reported by the USCG through 6 November of last year (TABLE 1).

TABLE 1: Subchapter M Progress (through 6 November 2018)

DISTRICT	Total COI's	TSMS Option	USCG Option
1st (New England)	14	11	3
5th (Mid-Atlantic)	10	9	1
7th (Southeast)	10	6	4
8th (Heartland/Gulf)	128	102	26
9th (Great Lakes)	8	2	6
11th (California)	2	2	0
13th (Pacific Northwest)	10	5	5
14th (South Pacific)	1	1	0
17th (Alaska)	3	0	3
TOTALS:	186	138	48

Source: U.S. Coast Guard

By the Numbers, and as reported by the U.S. Coast Guard's Towing Vessel National Center of Expertise on 23 July, the subchapter M compliance numbers looked something like this:

- ***914:*** *Total COIs issued: 914*
- ***687:*** *TSMS Option COIs: 687*
- ***450:*** *Approximate number of COI's in progress at the end of July*
- ***227:*** *USCG Option COIs: 227*
- ***25.7:*** *PCT of Sub-M fleet that includes issued COIs and COI applications in process*
- ***16.5:*** *PCT of Sub-M fleet issued COIs*

With regard to the numbers depicted above, the "75/25 PCT TSMS/USCG split" (issued COI's and those in progress) was supposedly better than what the Coast Guard had hoped for at this point, but that said; the so-called 'mom and pop' and single boat owner operators are still out there. These are not counted in the numbers above and many, if not most, are expected to use USCG option because of cost.

AWO members were asked to describe their situation in terms of compliance and percentage of fleets that had COI's. Predictably, no one admitted that less than 25% of their fleet had received the required COI, almost half (48%) reported that more than 25% of their fleet was in compliance, and a similar number (52%) said they had achieved the required 25% compliance.

There were reasons for the slower than hoped for progress towards SubM compliance. Among them was the reality of tramp schedules through multiple districts, prompting cancellation of some inspections. Business is business. When you finally get that desperately needed charter, sometimes that supersedes all else. For its part, the Coast Guard says that more than 400 COI's [not completed but in progress] are a reflection of the painful government shutdown which crippled a carefully planned process at exactly the wrong moment. Hence, all things considered, the system is close to being on schedule. With that in mind, enforcement is taking place for those laggard towboat operators. The Coast Guard calls this 'targeted enforcement.'

Still, some operators – especially the ones who have fully complied and have 25% or more of their fleets in compliance – ask why there is no (perceived) enforcement of those ***not*** in compliance. Pat Folan's hypothetical question of, *"What if they passed a law and no one complied?"* sud-

denly takes on new meaning.

For its part, the Coast Guard says that 'Targeted Enforcement' involves a particular vessel which experiences a casualty, deficiency or detention, something that might spur a closer look at the entire fleet, especially if that total fleet isn't yet in compliance with subM requirements. In other words, when looking at a casualty event, the first thing an inspector might ask is, "Are they in 25% compliance?" If not, they'll look for root causations and then look at all vessels in that particular fleet for similar issues.

Moreover, and with regard to the first deadline (25% PCT compliance mandate), the Coast Guard insists that the completed COI's and those COI's in queue excludes single owner vessels (this group not due until next year), hence it is not a true picture or a linear one).

Although ***MarineNews*** was able to obtain regional numbers in the November accounting (TABLE 1), the Coast Guard declined to provide those statistics again. Why? The Coast Guard says that many companies operate on a "national" level, so regional numbers don't reflect regulatory obligations of individual companies. Moreover, says the Coast Guard, *"We have data to show us how individual companies have performed and will analyze that in the coming weeks to aid the Coast Guard in working with vessel owners and operators to meet their regulatory requirements."* We were unable to get that data before press time.

Also discussed during the webinar was the "average processing time" for companies, tracking from initial submissions to ultimate issuance of the COI itself. Almost half of the firms (46%) said that they had completed that process in 8 weeks or less; 27% got it done in three months or less and almost 19% sped though the new regulatory labyrinth in less than four weeks. Almost ten percent (8% actually) unhappily received their approvals in a process which exceeded three month.

A typical towboat operator complaint (perception?) is that the Coast Guard is giving priority to TSMS applications, something the Coast Guard denies. That said; the biggest delay causation, insists the USCG, typically involves incomplete documents. Nevertheless, when an agency openly advocates the TSMS option over the other, it isn't hard to see why some operators have their doubts. These are fair questions to ask.

The Webinar was interesting in more ways than one. For example, questions about laid up tonnage and what to do when bringing those idle vessels out, were raised. Beyond this, asked some, *"Do these laid up vessels count against 25% PCT numbers?"* From our view, those and other issues and questions weren't necessarily settled when the Webinar ended.

Towboat operators are concerned about the perceived lack of consistency between OCMI's in different districts. The issue is reminiscent of the 'venue shopping' that mariners took advantage of in the 1970's, 1980's and 1990's when one district might be more lenient about sea time and license upgrade eligibility requirements than another. Don't like the answer you get in Paducah? Take it up the river to Cincinnati. This very real problem was (in part) a reason for shuttering the 17 Regional Exam Centers (REC's), leading the centralization of the Coast Guard's mariner credentialing center in West Virginia.

The Coast Guard, like industry, has embarked upon its own learning curve when it comes to subchapter M compliance and regulatory oversight. The Coast Guard, referencing the first year of inspections, compliance and certifications, said, "It is clear to see which owners care and those that do not." They further reported that, In terms of detentions when conducting inspections, just 25% of detentions occurred as a function of TSMS owners. The remaining 75% of those detentions were levied on those boats using the USCG option. A detention is defined by the Coast Guard as "a failure of SMS."

Separately, Pat Folan asks, *"Every mariner with a few issues under his belt will tell you the same thing: At all costs keep the Coast Guard off my boat. So why invite them on?"* It turns out that the answer involves the cost of the outside auditors and consultants. Many of the 'Mom and Pop' outfits simply cannot afford it. Hence, looking ahead to the journey for one-boat operators in the coming months, it is possible, even likely that the numbers depicted in this report will change and industry consolidation will continue.

What we do know is that with the addition of towing vessels (which started getting inspected under 46 CFR Subchapter M in July of 2018) the size of the U.S. inspected fleet grew by approximately 6,500 to a total fleet size of nearly 20,000 vessels, an increase of 50%. As that happened, and in comparison to last year, the first year the Coast Guard published their annual report, the number of vessel inspections increased by 1,624 and the average number of deficiencies identified per inspection rose nearly 8%. *That may have something to do with the introduction of all those previously uninspected subM hulls. Or, not. 2019 will show a clearer trend.*

Importantly, since this report covers the 2018 calendar year and the compliance date for implementation of towing vessels was July 20, 2018, only five months of data for inspected towing vessels is included in this report. *Hence, the numbers may actually be far worse on an annualized basis, looking ahead.*

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ALWAYS ON

Loy Stewart, Jr.
President, Detyens Shipyards

Loy Stewart, Jr. is a 1991 graduate of the US Merchant Marine Academy in Kings Point where he earned a degree in Marine Engineering. After several months sailing on the Sealift Atlantic, Loy began working at Detyens as a Ship Superintendent and coordinated work on numerous commercial and navy contracts. In 1996, when the Detyens Shipyards were divided into separate profit centers, Loy Jr. was promoted to Profit Center Manager of the Wando facility. In 2002 he was made PCM of the Main Yard in North Charleston and promoted to Executive Vice President in 2003. On October 1, 2004 Loy becomes the company president and in 2010, he and his two younger brothers purchased Detyens Shipyards from their father becoming the third generation of family ownership. The road from the humble beginnings of the Detyens brand to its current position as a well-respected and prominent shipyard and repair facility has been anything but easy. Along the way, this Charleston, South Carolina-based business has built a tradition of quality workmanship at a reasonable price. Family owned and operated since its inception, the company has continually emphasized customer service, family values and safety in the workplace. Loy Stewart, Jr. lives the Detyens Creed – "Customer before Company, Employee before Owner, Family before Self, and Safety Above All" – every day. Listen in this month as he weighs in on the complicated and competitive world of ship repair.

One of the key strengths of your repair yard is its ability to cater to a wide range of sectors, including government, commercial, shallow draft and blue water tonnage. That kind of business mix can be challenging and widely diverse. Tell us about your equipment mix and the skills of the employees that combine to make it all come together.

Yes, we have been updating our equipment through the years. We have four drydocks; the largest being 755' and all the necessary tools to carry out ship repair, but it is not our equipment that makes us such a diverse shipyard. It is our employees, their willingness to work hard and learn new technologies. We strive to keep all the work inside our facility so the shipowner and owner's representatives can monitor every aspect of the ship overhaul. In a nutshell, we pride ourselves as being a one stop ship repair yard.

Location seems to be one of Detyens greatest strengths – among many others. But, being in the right place, positioned conveniently near the busy Caribbean, the northeast corridor and the Gulf Coast, vessels of opportunity has to be a big part of your business mix, yes?

Location is one of our strengths, but as I said before, our employees are our greatest strength. Charleston has always been a naturally deep harbor. Colonial settlers arrived in the 1670 and with continued Corp of Engineers support and the Port of Charleston's initiatives to dredging the harbor and our channels do bring added advantages to our location. But, without employees, what good is our facility? A small portion of our yearly mix is emergency dockings, but those are fewer and far between the regulatory and planned dockings that we currently have on the books. We can't just sit back and wait for that 'opportunity' vessel; we aggressively bid projects to fill our pipeline with work for the weeks, months and quarters ahead.

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emergency dockings, etc., or are their clients that plan months in advance for work?

Give us a sense of how that work evolves. Typically, the foreign flag work is container vessels trading in the Caribbean area, as well as offshore oil vessels transiting from the North Sea and West Africa regions into the US Gulf. These projects are brought to us through our worldwide agent network. The past several years has seen a slowdown due to the oil patch work drying up and the weak EURO. We have also seen increased competition for those vessels in the Caribbean area and the vessel owners are able to reposition those vessel to Asia for much cheaper alternatives when it comes to regulatory dockings. We do get 3 to 5 foreign flag vessels annually that need emergency or unexpected repairs. Those types of projects are quick and painless for our workers, importantly, for the vessel owners and operators.

At one time, 90% of your business was government work, but as the Navy transitioned elsewhere, you also saw your work mix move more to the commercial side of the equation. But, you still do a lot of government work, don't you? What's the key difference between government repair work and the commercial jobs?

Yes, back in the day, we did a lot of Navy work, but when the Navy left Charleston, so did our largest customer base. We had to change with the tide so to speak and revert to doing more and more commercial work. Over time, we became less practiced in doing Naval "NAVSEA" vessels and more accustomed to commercial "Auxiliary USNS/MARAD/MSC" vessels. However; we see changes ahead coming for all government sector vessels; including but not limited to U.S. Coast Guard vessels, NOAA assets, auxiliary fleet and/or Naval Combatants Ships. One thing is for certain, change is constant and if we are to stay relevant in the domestic ship repair business for the next 50 years, we have to makes changes to the way we do business in order to accommodate our customers' requirements. And we have, and we will continue to do so, as needed.

Loy with long time employee 'Pee Wee' on his retirement day. 58 Years of Service!

In keeping with the Detyens creed of 'Customer before Company,' your firm strives to deliver on-time, excellent service. A ship in the yard is not making its owner money. You've also said that you aren't looking to make the short term profit; you want to make money now, of course, but it is the long term relationship that you aspire to. Tell us a bit about how you actually make that happen.

All of our employees realize that our customers are the most important people at the shipyard. If not for customers, why would we need employees? The employees understand that the ship makes no money for its owner while it is at the yard and we have created a bonus plan that incentivizes the employees to treat the customer with respect, do a quality job and get the ship out in time. Actually, repeat customers normally ask for certain workers before they even arrive. Our bonus structure rewards the employees with a percentage of the gross receipts of the project whether the company made or lost money as long as the vessel left on time and the owner was happy. Last year they received over 6 weeks of pay in their bonus checks.

Also in keeping with the Detyens corporate philosophy of caring for 'the employee before owner,' you also share the business rewards with employees, families and the local community. That all sounds good. How does it work in real practice? Give us some real life examples of that policy in play.

The hourly employee bonus pool is based on customer satisfaction and not profit. All our employees get their health care coverage for free and we offer an onsite medical facility for the employees and their families free of charge. There is a small cost for full family health care coverage at a nominal fee, but the medical center visits and the prescription medicines are free of charge. We also house and support The Harvest Free Medical Center. Harvest Free is a free medical clinic that supports those less fortunate in pour population that don't have affordable health care. Detyens is also involved in ALS research in hope of finding a cure for this terrible disease.

You pride yourself on running one of the most successful ship repair businesses in the U.S., a privately owned operation focused on what it knows best: ship repair. Any thoughts to bidding for new builds in the future? You've certainly got the real estate; the lay down space and the equipment. Why or why not?

Yes, we have a big facility and back when the Navy occupied the yard, they did build ships here; however, a new build yard and a repair yard are like night and day. We took up the position 25 years ago that we were going to become the best commercial ship repair in the country and we are going to stay the course.

Last fall, you said that you'd be moving the hull and pipe shop into bigger buildings. The move was said to be aimed at attracting even larger jobs, and to situate the company to grow for another 50 years. How's that move going, is it complete and has it yielded the premium assignments you've envisioned?

The move has gone as planned and we are happy with the outcome. Everyone always asks, "How are you going to grow, how can you get bigger?" Well, we have four drydocks, eight deep water piers, hundreds of thousands of usable square feet of inside workshops and machining centers, but there are only so many hours in a day and days in a year. Our growth opportunities for the immediate future come with improved efficiencies.

What kind of foreign flag work do you typically perform? Do these tend to be 'vessel of opportunity'

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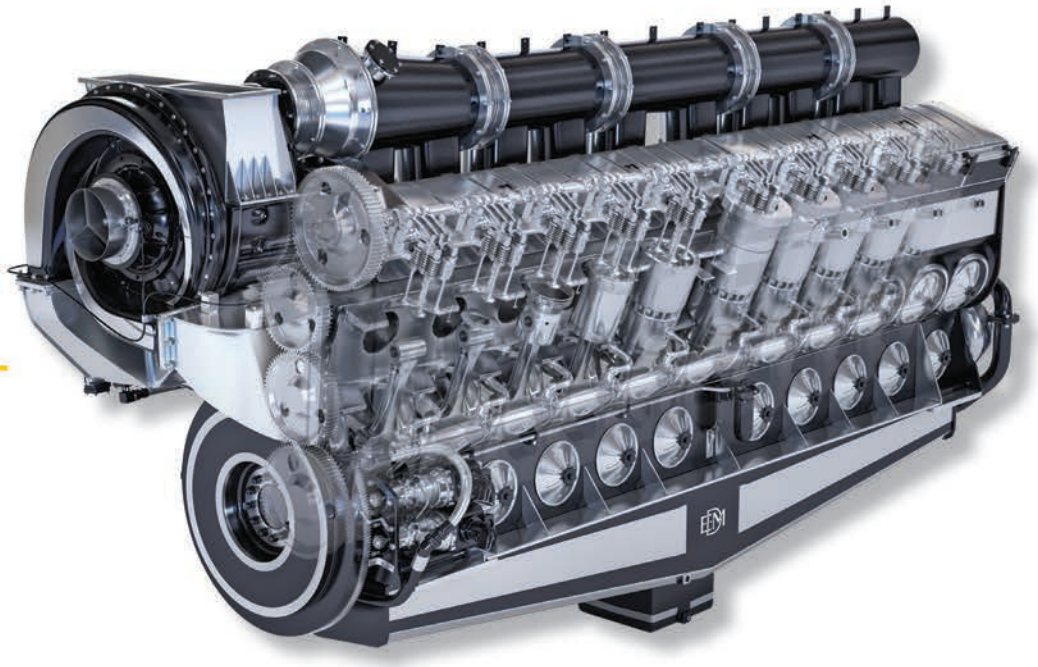

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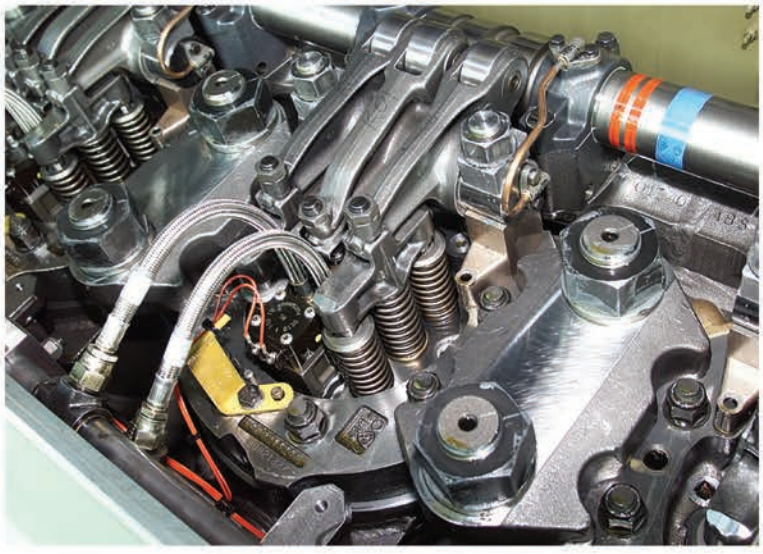

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Offshore Wind:

Set to Soar, Taking Offshore Support Industry With it.

By Nicolette Nye

Nye

Offshore energy development is opening a new front in the United States – the Atlantic seaboard, with strong winds, a shallow continental shelf and a proximity to dense population centers is driving strong interest in offshore wind development. The offshore oil and gas supply chain stands to benefit in a big way from billions in coming investment. In fact, it is already playing a role.

Companies in the Gulf of Mexico, which traditionally support the offshore oil and gas sector, helped build and install the nation's first offshore wind project, the Block Island Wind Farm (BIWF), which has been operating offshore Rhode Island since 2016. Louisiana-based Gulf Island Fabrication, Inc. constructed the jacket foundations supporting BIWF's five turbines. Lift boat operator Falcon Global (formerly Montco Offshore), also based in Louisiana, provided feeder vessels and crews to install BIWF.

While a landmark project, the five turbine, 30 MW BIWF is small compared to the much larger commercial scale projects that are on the horizon. Today, offshore wind projects totaling 3,110 MW of capacity are contracted to provide electricity in Rhode Island, Massachusetts, Connecticut, New York, New Jersey, Maryland and Virginia. Additional offshore wind power contracts are expected to be signed in New York and Maine in 2019, bringing to eight the total number of states to which offshore wind power will soon be providing electricity.

And, this is just the tip of the iceberg. Many of the same Atlantic states have their own offshore wind power commitments stretching to 2030 and beyond. In addition to the 3,110 MW of offshore wind projects already contracted to supply power, contracts are expected to be signed for approximately 17,000 MW of additional projects as a result of state commitments by 2030, bringing the total forecasted amount of contracted offshore wind power between 2020 and 2030 to over 20,000 MW.

To date, the Bureau of Ocean Energy Management (BOEM) has issued 15 active offshore wind leases that have generated $473 million to the U.S. Treasury. Much

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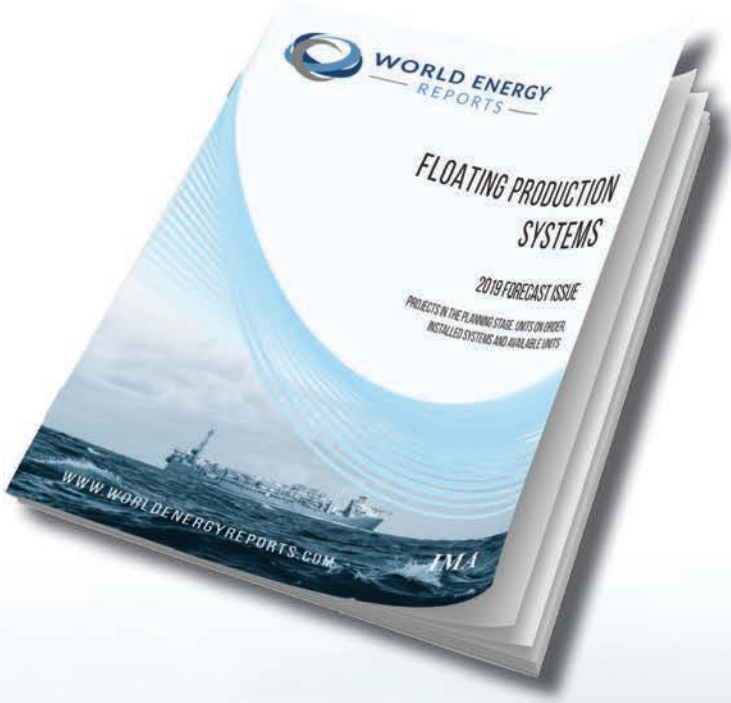

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of that revenue – $405 million – resulted from the December 2018 sale of three wind leases offshore Massachusetts. This record setting sale demonstrates the potential for huge amounts of revenue to the government from future offshore wind lease sales.

The promise of this new American energy industry is tremendous. Offshore wind is poised to make significant job, manufacturing, and infrastructure contributions not only along the Gulf Coast and other coastal states but also throughout the country. Significant investments are already being made to improve port infrastructure, train workers, construct crew vessels, and develop supply chains.

In a recent white paper, the University of Delaware's Special Initiative on Offshore Wind (SIOW) estimates that America's growing offshore wind power industry – projected to generate 18.6 GW of clean, cost-effective power in seven states on the Atlantic Seaboard by 2030 – presents a nearly $70 billion CAPEX revenue opportunity to businesses in the offshore energy supply chain. The report identifies significant opportunities for companies that will build, supply and support the U.S. offshore wind sector, including the need to procure, fabricate and install 1,700 wind turbine generators, 1,750 subsea foundations, 45 offshore substations, 16 onshore substations and approximately 5,000 miles of cable. While this capital investment alone is massive, the operations and maintenance needs will also be substantial, driving their own supply chain demands and opportunities.

The stage is set for offshore wind to boom off our Atlantic coast, and with BOEM working to start the process in the Pacific, developers and companies in the offshore energy supply chain need to get ready to build. To that end, the National Ocean Industries Association (NOIA) and the Offshore Marine Service Association (OMSA) are jointly hosting an offshore wind summit in New Orleans on September 19th to further our industry's understanding of the emerging U.S. offshore wind market and the opportunities it presents. Details of the NOIA-OMSA Offshore Wind Summit: Advancing U.S. Vessel Opportunities in the Emerging Offshore Wind Sector are available at www.offshoremarine.org.

The emerging U.S. offshore wind sector provides a tremendous opportunity for U.S. companies that actively get in and engage. With the inherent synergies between offshore wind and offshore oil and gas with respect to jobs, manufacturing, and expertise, opportunities abound for companies that have traditionally supplied and serviced the offshore oil and gas industry.

While competition from established supply chain providers in Europe will be significant, keep in mind that offshore wind is not just an American or European industry. Interest in offshore wind is growing globally, and companies that engage in this space domestically will have the tools to compete as Asia, Africa, the Middle East and others look to this affordable energy resource as a key to the future.

The U.S. offshore oil and gas supply chain is full of companies that have experienced ups and downs and jumped into new industry opportunities (think deepwater) with both feet fighting for domestic and global market share. Offshore wind offers a similar dynamic; it is a win-win opportunity for all involved. Wind companies get the unrivaled expertise and skill of companies operating offshore in the Gulf of Mexico, and in turn, service companies tap a new revenue stream, learn a new industry, and can export their expertise globally in the future, driving growth and opportunity worldwide.

Offshore wind has arrived in the U.S. and is set to soar; those who grab it today will be positioned to take flight.

Nicolette Nye *is Vice President of Communications and Member Development of the National Ocean Industries Association (NOIA) in Washington, DC. She staffs NOIA's Offshore Renewables Committee. She joined the staff of NOIA in 2008, after nearly a decade at the Department of the Interior's Minerals Management Service (MMS). A retired Navy Chief Petty Officer, Nicolette served her final two military tours in Hawaii, where she was Senior Journalist for the Commander in Chief, U.S. Pacific Command and Force Journalist for the Commander Submarine Force Pacific. She served two tours in Japan as a broadcast journalist at the Far East Network in both Misawa and Yokota. Nicolette serves on The National Oceanic and Atmospheric Administration (NOAA) Ocean Energy Advisory Board (OEAB).*

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More Money, Same Problems for U.S. Port Infrastructure

By Jeff Vogel


Vogel

It appears that Washington, DC, has finally taken notice of the need to make direct federal investment in the Nation's port infrastructure. The Consolidated Appropriations Act, 2019, provided $292.73 million for the U.S. Department of Transportation's (DOT) Port Infrastructure Development Program. After much anticipation, DOT finally published its Notice of Funding Availability (NOFA) on June 18, with applications due on September 16.

Similarly, port stakeholders are awaiting DOT's award announcements for the Better Utilizing Investments to Leverage Development (BUILD) Transportation grant program, which was appropriated $900 million for Fiscal Year (FY) 2019, a portion of which will go to port development (specifically including inland port projects). There is also an open NOFA for the Maritime Administration's (MARAD) America's Marine Highways Program, which was provided $7 million in funding for FY 2019, with applications due on September 20. In aggregate, the funding available for port infrastructure projects in FY 2019 far exceeds any prior year.

Looking forward, the current version of the Transportation, and Housing and Urban Development (THUD) appropriations bill under Senate consideration would provide $1 billion for the BUILD Transportation grants program, $225 million for the Port Infrastructure Development Program and $15 million for the America Marine Highway Program. In addition, Rep. Peter DeFazio, Chair

plications only from public port authorities and State, local or tribal government agencies. If an MTO wishes to participate in such programs it must do so through a public-private partnership with the public entity serving as the lead applicant. This often results in the MTO's objectives becoming secondary to the needs of the public port authority. It is a lost opportunity because MTOs often have critical information as to where federal investment is required. Moreover, federal investment may have an increased impact in improving intermodal productivity when it is paired with an MTO's private investment and strategic planning.

Challenging Environment for Inland Ports

The restrictions on federal funding are often felt more acutely at privately-operated inland port terminals, particularly in rural locations. These terminal operators may have greater difficulty developing the profile and stakeholder support necessary to develop a public-private partnership eligible to pursue federal funding. In addition, the projects at these smaller inland ports may not have the impact necessary in terms of economic value to be competitive in discretionary grant programs.

Grant programs often try to counteract these inherent impacts by creating preferences to develop regional diversification. For example, the BUILD Transportation grants program reserves 50% of its funding for rural projects.

Similarly, the Port Infrastructure Development Program considers "the geographic diversity among applicants" when making its award decisions. Notably, however, $92 million of the Port Infrastructure Development Program's current funding is statutorily reserved for the 15 largest coastal seaports and the minimum award under the program is $10 million, which may further limit the ability of smaller inland terminal operators to pursue such grants.

In aggregate, the restrictions on private applicants, competitive economic evaluation criteria, and often onerous application requirements ultimately diminish the value of federal port development funding for inland terminal operators.

The Automation Battle

Perhaps the most contentious issue in these port infrastructure programs is the role that federal investment will play in the development and implementation of automated technologies at U.S. ports. The Consolidated Appropriations Act, 2019, contained a Joint Explanatory Statement directing the DOT to ensure that any fully-automated cargo-handling equipment procured under the Port Infrastructure Development Program will not directly result in a net job loss or directly reduce the overall safety, reliability and efficiency of a port.

The previously-discussed FY 2020 THUD appropriations bill contains even stronger restrictions providing that the proposed $225 million in funding "may not be used to purchase fully-automated cargo handling equipment or to otherwise facilitate fully-automated cargo handling." The bill defines "fully-automated cargo handling" to mean "equipment that is remotely operated or remotely monitored with or without the exercise of human intervention or control."

Senator Wicker's version of the FY 2020 MARAD authorization bill contains similar language for his proposed Port Operations, Research, and Technology Act, which would provide an authorization for $600 million in port development grants. No funding under Sen. Wicker's program could be used "to purchase fully automated cargo handling equipment that is remotely operated or remotely monitored with or without the exercise of human intervention or control" if such equipment would result in a net job loss.

Clearly the contentious issue of port automation has caught Congress' attention and will remain at the forefront of any debates about federal investment in U.S. port infrastructure. MARAD has also taken note, issuing a Request for Information (RFI) on opportunities, challenges and impacts of automated port technologies on August 2, 2019. The RFI seeks information on ports' plans to automate operations, and obstacles and opportunities that exist in implementing those plans, including regulatory impediments.

Ultimately, the federal government is making strides to increase investment on the American waterfront. It is now up to port stakeholders – including port authorities, MTOs, labor, and vessel operators – to actively engage with Congress and the Executive Branch to ensure that these increased funding opportunities have a meaningful impact.

***Jeff Vogel** is a member in Cozen O'Connor's Transportation & Trade Group. Jeff focuses his practice on strategic and operational matters affecting the U.S. maritime industry and on government contracts across all industries. He can be reached at jvogel@cozen.com.*

of the House Committee on Transportation and Infrastructure, continues to press forward in his efforts to pass the Full Utilization of the Harbor Maintenance Trust Fund Act, which would unlock more than $9.3 billion in funding for harbor maintenance and dredging projects.

Notwithstanding these positive indicators, significant questions remain about the ultimate impact of these additional federal funding opportunities.

No Private Parties Allowed

One of the largest challenges is that only public entities are generally eligible for federal grant programs and direct funding is therefore unavailable to private marine terminal operators (MTOs). For example, both the BUILD Transportation grants program and the Port Infrastructure Development Program permit ap-

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medical improvement. 'Maintenance and Cure' is a seaman's benefit that takes care of an injured seaman while he is ill; it does not compensate him for sustaining the injury.

On the other hand, negligence and seaworthiness claims require a finding of fault before a seaman can be compensated. These claims compensate the seaman for his injury by providing an award of damages including general damages for pain and suffering and pecuniary losses such as lost wages, future medical care, life care, etc.

Although negligence and seaworthiness claims are intertwined, they arise from two separate bodies of law. A seaman's negligence claim against his employer was authorized by Congress via the Jones Act, and the seaworthiness claim is based upon the General Maritime Law, the body of common law created by the United States Federal Courts.

Looking Back

Historically, the courts have not allowed punitive damages in maritime claims. In 1990, the Supreme Court affirmed this notion in Miles v. Apex Marine holding that a Jones Act seaman alleging a claim for negligence under the Jones Act was limited to the recovery of pecuniary losses. As punitive damages are non-pecuniary, Miles held that a Jones Act seaman could not recover punitive damages in a negligence action brought against his employer.

After nineteen years of vessel owners being shielded from punitive damages, the Supreme Court in Atlantic Sounding v. Townsend partially opened the door for punitive damage awards. The Townsend decision held that a seaman could recover punitive damages for a willful, wanton, and wrongful denial of maintenance and cure benefits. The Court reasoned that the maintenance and cure remedy, including punitive damages, predated the passage of the Jones Act and there was no indication in the Jones Act that Congress wanted to alter the pre-existing common law on the subject. As such, the Court ruled that punitive damages were recoverable for the wrongful denial of maintenance and cure benefits.

As the Supreme Court had held that punitive damages were not allowed for Jones Act negligence claims but were allowed for maintenance and cure

It Is Finally Settled:

There Will Be No Punitive Awards for Seaworthiness Claims.

By Larry DeMarcay

DeMarcay

If you have been to a marine industry function over the last few months, the buzz has been about punitive damages. Specifically, the discussions have revolved around the Supreme Court's decision to consider a case to determine whether punitive damages were available to seamen who allege seaworthiness claims against vessel owners.

With the goal of providing a complete overview of the status of punitive damages for marine claims, this article provides an overview of the potential claims an injured seaman possesses, a description and history of punitive damages in maritime law, why the Supreme Court needed to address the seaworthiness issue, and how the Supreme Court resolved the issue in the industry's favor.

Punitive Damages 101

The addition of punitive damages to seaworthiness claims would significantly change the way that marine operators manage risk. That's because the addition of punitive damages would drive the value of a maritime personal injury claims up significantly, as each claimant would argue that he could recover such damages at trial. Most importantly, punitive damage awards are not usually covered by standard marine insurance policies and, if awarded, could provide a significant uninsured exposure to the company. As such, the firm could be put in a situation where a jury provided a damage award to compensate the seaman, which would be covered by insurance and a punitive award that would not be covered by insurance. If a vessel owner did not have the resources to pay such a claim, it could jeopardize the solvency of the operation.

To put this issue in context, take a look at the claims that are usually alleged by a Jones Act seaman and how the courts handle each issue with regard to punitive damages. Each seaman will typically allege three separate and distinct claims when filing a lawsuit. These allegations include claims for negligence, seaworthiness and for maintenance and cure.

A claim for maintenance and cure does not require a finding of fault and provides the injured seaman with medical care and a per diem payment to assist him with some basic living expenses until he or she reaches maximum

Credit: AdobeStock © Renaschil

"Although negligence and seaworthiness claims are intertwined, they arise from two separate bodies of law. A seaman's negligence claim against his employer was authorized by Congress via the Jones Act, and the seaworthiness claim is based upon the General Maritime Law, the body of common law created by the United States Federal Courts."

claims based on General Maritime Law, the lower courts did not have any guidance from the Supreme Court as to whether punitive damages were recoverable for seaworthiness claims that were based upon the General Maritime Law. As a result, a split in the Circuits developed where some courts prohibited punitive damages and others did not. Unfortunately, this split created economic uncertainty for the domestic maritime industry as maritime employers could not properly estimate the value of claims or mitigate the potential risks associated with operations spanning multiple jurisdictions.

Settled Law

With a split in the Circuits, the issue was ripe for Supreme Court consideration. To resolve this issue, the United States Supreme Court considered The Dutra Group v. Batterton, a case that originated in California which allowed punitive damages. Ultimately, the United States Supreme Court, in a 6-3 decision, resolved the split in favor of marine employers, ruling that punitive damages are not recoverable by a seaman pursuing a seaworthiness claim.

Looking a little closer, Batterton was a crewmember on a vessel owned and operated by the Dutra Group, a dredging contractor. Batterton alleged that a pressurized hatch cover blew open while he was working on the vessel, injuring him and causing permanent disabilities. Batterton alleged that the vessel lacked an appropriate exhaust mechanism that would have prevented the blast, rendering the vessel unseaworthy under the General Maritime Law. Both the District Court and the Ninth Circuit Court of Appeal allowed Batterton to pursue a claim for punitive damages related to the seaworthiness of the vessel.

The Supreme Court ruled that punitive damages were not recoverable for seaworthiness claims. The Court found that there was no historical precedent for punitive damage awards for seaworthiness claims under the General Maritime Law. Furthermore, the Court held that a Jones Act negligence claim and a seaworthiness claim were similar and duplicative in nature and that it would not make sense to treat the two claims differently as to the recovery of punitive damages. Based upon this reasoning, the Court held that punitive damages are not permitted with seaworthiness claims.

So, based upon the Supreme Court rulings of the last thirty years, marine employers and vessel owners are immune from punitive damages for seaman claims related to Jones Act negligence and the seaworthiness of the vessel. With the issue is settled, the maritime industry can now move forward with some degree of certainty when evaluating potential risks and the best methods for mitigating these risks.

However, marine employers and vessel owners must recognize that the Supreme Court has affirmed punitive damages in situations where the employer wrongly denies maintenance and cure benefits. As such, it is important that you make a well-reasoned and supported decision, anytime that denying an injured seaman maintenance and cure benefits is considered. Any termination that could later be determined to be willful and wrong could expose the company to a potential punitive award.

Mr. DeMarcay *is a partner in the law firm of Baldwin Haspel Burke & Mayer. His areas of practice include Commercial Litigation, Admiralty, Personal Injury, Transportation, Real Estate, Construction and Corporate Law. Prior to attending law school, Mr. DeMarcay served on the Washington based legislative staff of Congressman Jimmy Hayes. On the WEB:* **www.bhbmlaw.com**

Putting Palatka Back on the Map:

Diverse and conveniently located, St. Johns Ship Building has quickly developed into a reliable partner for its many repeat customers. Today, and as a direct result, a lot more people know exactly where Palatka, Florida is located.

By Rick Eyerdam

On the St Johns River, just 60 miles south of Jacksonville, lies the sleepy town of Palatka, Florida. Founded as a trading post in 1821, its location on the highly navigable river made the area attractive to orange growers and timber men alike.

In its heyday between 1875 and 1900, Palatka – "the gateway to Florida's interior" – was a tourist destination with several posh hotels having the capacity to host up to 6,000 guests. Palatka was known in those days as "The Gem of the St Johns River." Unfortunately, the fire of 1884 destroyed the grand hotels. Deep freezes in 1894 and 1895 ruined the citrus groves. Commerce sadly declined.

Today, Palatka boasts a stable economy that is ready for commercial growth. It has a historic downtown business district with murals on many of its buildings and a beautiful waterfront park. Just down the road from that park, if one were to venture west toward the historic Stokes Landing made memorable by William Bartram in his 18th Century explorations, at the end of the road, he or she would find the gates leading to one of Palatka's modern day commercial gems: St John's Ship Building.

GIANT TUGS AND FERRIES AMONG THE PINES

Nestled amid the pines and along the banks of the river, is the 98-acre, full-service shipbuilding and repair facility known as St. Johns Ship Building (SJSB). Founded in 2007, the President and Owner, Steven Ganoe, his management team, and craftsmen have steadily grown the operation into a capable shipbuilding and repair business. What began as a modest facility is now capable of drydocking vessels up to 1,100 tons, has over 1,800-feet of wet dock area, features a 425-foot by 75-foot fabrication shop, and 20,000 square foot Aluminum Assembly Building. They have earned an outstanding reputation for quality and workmanship and now routinely handle of a variety of products to include offshore supply vessels, aluminum construction, landing crafts, dive boats, tugs, barges and other types of vessels for both commercial and government operators. In other words, the perfect venue for workboat newbuilding and repairs.

The customers of SJSB are about 70 percent American owned. That's not to say they can't compete in the workboat export markets. They can and do. Ganoe says, "We have built vessels for four different countries, but we are al-

Credit: SJSB

Credit: Vane

ways looking at growing markets." Never fully dependent on the oil and gas market, it has been able to keep business steady during the downturn in that sector. Now aluminum offshore service vessels, especially for the offshore wind market present an opportunity the company is exploring.

Today, there are nine major boat-manufacturing projects in the carefully organized yard. One, all glossy in the river reflection, is a 95-foot, 350 passenger catamaran ferry designed by Incat-Crowther on its way to service a metropolitan area. She is the first of three that are currently under construction. Close by is the second of four new 152'x 52'x 12', 150-passenger, 30-vehicle ferries. Designed by Seattle-based Elliott Bay Design Group, the new boats, featuring 8' drafts, will also be able to handle concrete trucks. Both classes of ferries are very different in material choice, design and construction but each holds its own complexity and challenges that SJSB personnel have managed through.

VANE BROTHERS PRIDE

Although constrained by many confidentiality and nondisclosure agreements, the yard can talk about the eight, ocean-going tugs for The Vane Brothers Company, which has served the maritime industry in the Port of Baltimore and along the U.S. Eastern Seaboard since 1898. Today, the company has a fleet of nearly 150 tugboats and barges working out of seven East Coast locations. Eight of them are from SJSB.

Back in 2014, Vane's Senior Port Captain Jim Demske and Property Manager D. Michael Barr were searching the Florida coast for a "hurricane hole" to find protection for a major storm when they visited St. Johns Ship Building. "The yard has a tremendous reputation and has constructed many

Credit: SJSB

Credit: Maritime Assoc. of NY/NJ

"The 4,200 horsepower Elizabeth Anne Class tugboat is the ultimate workhorse, bringing exceptional power and performance to Vane's growing fleet. We are thrilled with the results coming out of St. Johns Ship Building, and we know that our crews appreciate the comfort, safety and efficiency that are built into each new towing vessel."

– Vane Brothers President C. Duff Hughes

of the barges we use in our Southern Fleet," reports Demske, "We were happy to make a lasting business connection."

After a meeting of the minds with Ganoe, General Manager, Bobby Barfield, and Senior Project Manager, Steve Torok, Vane suggested that SJSB build eight newly designed 4,200 horse power Elizabeth Anne Class tugboats. They were to be innovative and special, named as they were for Elizabeth Hughes, who is Vane Brothers' Vice President, the mother of President C. Duff Hughes and the wife of former Vane Chairman Charles F. Hughes Jr.

For its part, Vane is effusive in its endorsement of SJSB products and service. "The 4,200 horsepower Elizabeth Anne Class tugboat is the ultimate workhorse, bringing exceptional power and performance to Vane's growing fleet," says Vane Brothers President C. Duff Hughes. "We are thrilled with the results coming out of St. Johns Ship Building, and we know that our crews appreciate the comfort, safety and efficiency that are built into each new towing vessel."

Designed by Frank Basile, P.E. of Entech Designs, LLC, the Elizabeth Anne Class tugboat is a close cousin to Vane's Basile-designed Patapsco Class tugboats, 15 of which were produced between 2004 and 2009. Measuring 100 feet long and 34 feet wide, with a hull depth of 15 feet, the model-bow Elizabeth Anne has two Caterpillar 3516 Tier 3 engines, each generating 2,100 horsepower at 1,600 rpm.

The tug, New York was modified after assembly to included the elimination of the double-drum towing winch, tow span, and deck sheaves in favor of an innovative Beacon Finland JAK-400 Hydralok AT/B coupling system.

Credit: SJSB

An aerial view of St. Johns Ship Building, south of Palatka, Florida

The Elizabeth Anne also has Reintjes marine gears supplied by Karl Senner, LLC, Kenner, LA.

Two John Deere PowerTech 4045, 99 kW generators deliver service power to the boat, while a third John Deere 4045, teamed with an Allison transmission, drives the chain-driven Intercon DD200 towing winch.

The Elizabeth Anne features the latest in solid-state, Simrad electronics and has handsomely appointed, mahogany upper and lower pilothouses, along with spacious accommodations for up to seven crewmembers. "The new tugs from St. Johns will incorporate many new features and niceties that will end up making these boats standouts and a pleasure to work, for sure," Demske said. "The folks at Saint Johns are excited to build for the Vane fleet and they are anxious to show off the talents of some of these great Florida boat builders."

The Elizabeth Anne is the 27th ves-

builds, St. Johns Ship Building will begin work on a second pair of identical tugs, as well as a pair of 39-ft truckable tugs, for Smithbridge.

Separately, St. Johns Ship Building built the 190-foot landing craft Grand Master II for Bahamas Ferries. Propulsion is provided by twin Cummins QSK19 engines, each generating 700 hp, while electrical service comes from two John Deere 99-kW gensets. A 22-inch Wesmar electric thruster is installed at the bow.

The vessel has 6,400 square feet of cargo space and a two-story deckhouse for crew quarters, passenger accommodations and a galley. The wheelhouse and captain's quarters are on the second deck. Grand Master II is the first of three 190-foot landing crafts the shipyard is building for Caribbean customers.

As part of an ongoing process to ensure that the Vane Brothers fleet remains as safe, modern, and productive as possible, work has wrapped up on another new articulated tug/barge (AT/B) unit and other purpose-built vessels are scheduled for delivery in the next few months. The 100-foot-long, 4,200-horsepower AT/B tug Jacksonville was completed at St. Johns Ship Building. Originally envisioned as a traditional hawser tug, the Jacksonville was modified while under construction to become a more modern AT/B tug.

Vane Brothers Port Captain Jim Demske explains that the modifications primarily included the elimination of the double-drum towing winch, tow span, and deck sheaves in favor of an innovative Beacon Finland JAK-400 Hydralok AT/B coupling system. A custom-built Schoellhorn-Albrecht accommodation ladder is being used for access between the tug and barge. A second tug modified for AT/B, the New York is getting ready for launching at St. Johns Ship Building.

As SJSB looks forward to successfully completing these projects and moving forward to even more challenges in the future, SJSB's signature quality and customer relationships have developed as the Hallmark of its business. And, that's a pretty good place to start – and finish – your next project.

Rick Eyerdam is an award winning journalist and editor. Formerly, he was Editor of Florida Shipper Magazine. Additionally, he was Executive Director of the Miami River Marine Group and Captain of the Port of the Miami River. He is a graduate of Florida State University with majors in English and Government. His articles have appeared in myriad shipping magazines and newspapers since 1970.

sel completed for Vane Brothers under the supervision of Senior Port Captain Jim Demske, whose reputation for delivering superior tugboats that emphasize functionality, crew comfort and safety is widely recognized in the maritime industry.

"Midway through our contract with St. Johns Ship Building, we are thrilled with the high quality of the four Elizabeth Anne Class tugboats that are now hard-working members of the Vane fleet," Hughes said. "The Delaware and her three sister tugs (built by SJSB) bring heightened performance, crew comfort and safety to the ocean-service towing sector. We look forward to more of the same from the four remaining tugboats being delivered by St. Johns later this year."

ST. JOHNS SHIP BUILDING

SJSB boasts a line of sub-25 foot tugboats with a variety of custom packages that makes them an extremely attractive product for a variety of barge operators, marine construction companies and inland-waterway transients. Two of these custom-built twin-screw push tugs, the Lady Shayne and the Lady Dashelle, for Smithbridge of Brisbane Australia. These 25-ft tugs feature twin John Deere model diesel engines with a combined rating of 600hp and conventional shaft drives with reversing gears.

"The Lady Shayne and Lady Dashelle will be assigned to a very high profile marine construction site in Botany Bay in Sydney, Australia where a new bulk liquid terminal is being built to accommodate tankers," said Ron Mason, Marine Operations Manager and New Construction Projects Manager for Smithbridge.

With these tugs, Smithbridge can adapt various kinds of utility equipment to the front of the vessel for different project requirements, "thanks to the excellent job St. Johns did in developing our hydraulic anchor handling frame for the front," said Mason. The Shayne and Dashelle will handle the 160-ft by 80-ft piling barge as it goes through the piling process for the terminal.

Although SJSB has attempted to expedite builds and routinely starts new 25 foot tugs on spec, there has not been any that have been completed prior to a customer purchasing the future product. In addition to these new-

The second of four new 152'x 52'x 12', 150-passenger, 30-vehicle ferries, designed by Seattle-based Elliott Bay Design Group.

SJSB boasts a line of sub-25 foot tugboats with a variety of custom packages that makes them an extremely attractive product for a variety of barge operators, marine construction companies and inland-waterway transients. Two of these custom-built twin-screw push tugs, the Lady Shayne and the Lady Dashelle, are for Smithbridge of Brisbane, Australia.

LNG AS A FUEL

Some forecasts expect 10% of the global fleet to be powered by LNG by 2030, a proportion that could rise to just under a quarter of the fleet by 2050. Will your vessels be among them?

By Giorgos Plevrakis

The year-end sulfur cap on marine fuels and recent industry commitments to reduce its collective carbon footprint are behind a surge of interest in LNG as fuel; widespread adoption, however, still faces strong headwinds on several fronts.

After a period where the costs of transitioning to LNG as fuel – at the operational and capital expenditure (Capex) levels – had appeared to constrain demand, the IMO's recent commitments to reduce the greenhouse gas (GHG)-related emissions from international shipping has rekindled industry interest.

The vast majority of the vessels that are able to use LNG as fuel are LNG carriers, but the last few years has seen other vessel segments opt for the lower carbon alternative. That said, the number of vessels remains a comparatively small portion of the global fleet; fewer than 700 ships currently use LNG as fuel, a number that will grow to about 1,000 when the current order book is delivered.

Credit: © Harvey Gulf

The first shore-to-ship LNG bunkering of the offshore supply vessel Harvey Energy by Harvey Gulf International Marine at the company's dedicated shoreside facility at Port Fourchon, La.

Drivers

The pace at which new fuels (beyond heavy fuel oil [HFO] or marine gas oil [MGO]) are being adopted is primarily driven by two core factors: regulation and economics.

On the regulatory front, the IMO's decision to cap the sulfur in marine fuels at 0.5% (lower in environmental control areas [ECA]) from the end of the year and set firm medium-term and long term GHG emission-reduction targets has created a foundation for investment decisions.

LNG is the cleanest-burning fossil fuel currently available at scale; its use as a marine fuel is supported by an emerging network of infrastructure and advanced engine technologies that have been proven in practice.

As such, with the sulfur cap looming at the end of the year and the IMO's GHG strategy, it is seen as a primary option for ships involved in international trade. Some forecasts expect 10% of the global fleet to be powered by LNG by 2030, a proportion that could rise to just under a quarter of the fleet by 2050.

The LNG Debate

As a fuel, it reduces nitrogen oxide emissions, eliminates most sulfur oxides (SOx) and particulate matter, and contributes to reducing carbon dioxide (CO2) when used in place of traditional marine fuels. At the same time, the question of just how much using LNG as a marine fuel reduces CO2 when compared with HFO is a matter of growing debate. Some studies estimate LNG's lifecycle (commonly referred to as 'well-to-wake') CO2-reduction potential to be as high as 21% when compared to HFO.

Other analyses have estimated its potential to reduce shipping's CO2 output to be far less. These studies take different perspectives on the production processes, transportation, combustion cycles and measuring points, and deliver results that are not supportive to LNG.

Because using LNG as a marine fuel can eliminate most SOx that would be produced by fuels such as HFO, the IMO's 2012 announcement of the 2020 sulfur cap compelled some owners to investigate its potential to support compliance.

That interest waned for a period when the price of fuel oils dropped. The delta between fuel oils (and their cap-compliant distillates) and LNG – in addition to the comparative installation costs of LNG propulsion technology vs. scrubbers – temporarily created an unfavorable commercial environment.

However, the IMO's decision last year to set firm GHG targets for 2030 (at least a 40% reduction per cargo tonne/mile against 2008 levels) and 2050 (50% less GHG output) created the regulatory foundation for longer term investment strategies and rekindled earlier momentum.

The cost of adopting LNG as fuel has been an early barrier to adoption, particularly when regulation remained uncertain; it is estimated that the initial investment cost of using LNG- fuelled propulsion has been 1.25 to 1.4 times higher than conventionally fueled vessels. In particular, this variable has put a damper on demand for retrofits.

LNG: anything but 'hot air'

ABS, the leading class for gas ships, is supporting industry efforts to improve systems installation and generate new ship designs to help make the adoption of LNG as fuel a more sustainable proposal for owners. It stands to reason that if the cost of LNG fuel remains lower than conventional options, the operating costs will be competitive as well.

Just how big an influence capital costs and regulation had on the pace of development for landside infrastructure to supply LNG-propelled ships is unclear; but it is safe to say that the development of infrastructure and assets -- ashore and at sea – to support the use of LNG as fuel has proven slower than many forecasts.

What is known is that Europe has taken the lead in developing bunkering infrastructure, supported by EU policy that requires at least one LNG bunkering port in each member state. About 10% of European coastal and inland ports ultimately will be included in that continental network, which will span 139 ports. Assuming all goes to plan, EU coastal port LNG infrastructure is to be completed by 2020 and by 2025 for inland ports.

In the U.S., the Energy Information Administration (EIA) expects the use of LNG in national marine bunkering to be limited in the next five years, citing the limited present infrastructure for LNG bunkering at U.S. ports and the high initial development cost. As the infrastructure matures, the EIA expects LNG to capture 7% of national bunkering activities by in 2030 and 10% by 2050. These expectations could rise as the U.S.'s transition to a gas-rich economy gathers pace.

Certainly, small-scale LNG supply is one of the important challenges facing would-be adopters; in fact, it is a current constraint. There are regions where bunker facilities are nonexistent, making LNG as fuel a riskier choice for some vessel segments.

In some respects, it is the classic 'chicken or the egg' dilemma: investment decisions for vessels are being delayed until the supporting landside infrastructure matures, while LNG suppliers are waiting for demand to mature before they build the required infrastructure to serve shipping. The industry and its suppliers have spent the past decade preparing the infrastructure to serve LNG's rise as a fuel for marine use. Yet that network presently serves less than 1% of the global fleet above 500GT.

Looking Ahead

In the short-term, the pending sulphur cap is the driving force behind the recent surge in interest in LNG as fuel, but the IMO's emissions targets also may be having an influence, which can be expected to grow. Organizations that provide technical support for the associated technologies and systems, such as ABS, are seeing surging demand for everything from feasibility studies and technology qualification to design approvals and HAZOP and HAZID workshops.

The creation of ECAs for shipping is also playing a role. When a ship operates solely within an emission-regulated area it creates a friendlier investment profile for building the capacity to run on low-emission fuels; as we move towards 2030 and 2050, this point is expected to have a more global context.

There is a school of thought that the 2030 emissions targets can be achieved through a combination of new operational and technical measures. Lower-sulfur fuels such as LNG will have a role to play, as will measures such as those that optimize transit speeds, a transition to data-driven just-in-time delivery and enhanced hull and propeller designs.

With internationally trading ships destined to travel in and out of multiple ECAs and national jurisdictions, building in fuel flexibility is also emerging as an important strategy on some sectors, a fact that could boost the prospects for LNG as fuel.

Regardless of how stakeholders view LNG's emissions-reduction capacity and its potential to contribute to meeting the IMO's targets for 2030, one point is becoming increasingly clear: the 2050 goals cannot be met using the fuels and technology available to shipping today. This will take innovation and an industry environment that rewards first-movers.

In the interim, given that the technology and supply networks supporting LNG are the most mature of the alternative fuels, it is expected to be a prominent contributor to the industry's decarbonization efforts.

***Giorgos Plevrakis** is ABS's Director, Global Sustainability.*

offshore demonstration project in Lake Erie, eight miles from downtown Cleveland. It will be the first freshwater project in North America. It is winding down its regulatory and permitting requirements, awaiting final okay from the Ohio Power Siting Board. Construction is slated for 2022.

The project most likely to start after Dominion is Vineyard Wind, off Massachusetts, about 14 miles from the southeast corner of Martha's Vineyard. Where power is concerned, this is the real deal: 800 MW, up to 100 offshore wind turbine generators.

A check on the federal Permitting Dashboard shows that Vineyard is tantalizingly close to completing seven major federal studies required to move to construction. Vineyard's work is estimated to be complete by November 14, 2019. (See Table 2 for a list of the federal studies required from Vineyard.)

Shortly after Dominion's optimistic announcement, Vineyard Wind received troubling news: that BOEM would not have its final approval – a Record of Decision – for the company's Environmental Impact Statement, expected on July 5. BOEM said its review was not complete, that it needed to push its deadline to August, later than expected, but still within the Agency's promised two-year window.

On its website, Vineyard Wind presented a stoical reply, commenting that the delay was disappointing, but not surprising for a first-time project. Vineyard Wind needs the formal Record of Decision (ROD) by BOEM to set its construction team in motion. The logistics are daunting.

Table 2: Federal Studies Required to Complete Vineyard's Federal Environmental Review & Permitting Process:

Study	Agency
Construction and Operations Plan	Department of Interior (DOI) and BOEM
Endangered Species Act (ESA) Consultation	DOI – Fish & Wildlife Service (FWS)
Section 10 Rivers and Harbors Act of 1899 and Section 404 Clean Water Act	US Army Corps of Engineers
ESA Consultation	Department of Commerce (DOC), and NOAA
Magnuson-Stevens Fishery Conservation and Management Act, Section 305 Essential Fish Habitat (EFH) Consultation	DOC and NOAA
Incidental Take Authorization – DOC - NOAA/NMFS (National Marine Fisheries Service)	DOC, NOAA, NMFS
Environmental Impact Statement (EIS)	DOI, BOEM

(*) This Table is just an example. Some projects require additional federal studies.

There was more bad news for Vineyard Wind. This summary has only focused on federal reviews. In fact, of course, there are state and local reviews. And in Edgartown, MA, on Martha's Vineyard, the Edgartown Conservation Commission voted to deny Vineyard Wind the right to bury its transmission cables beneath Muskeget Channel, running through Nantucket Sound.

This unexpected "no" vote sent some difficult messages. Among many state governors and legislators offshore wind is unquestioned as a social and economic boon. At the local level, support is fractured. Vineyard Wind has since requested a superseding order from the Massachusetts Department of Environmental Protection (MA DEP) to overturn the Edgartown decision.

Residents in Easthampton, on Long Island, have raised similar, oppositional questions about the nearby South Fork project and its impact on Easthampton. Town officials may seek outside project review. New York's Department of Environmental Conservation has filed a preliminary nine-page set of comments advising NY's Public Service Commission that additional, extensive analysis is required before the project should be considered for a Certificate of Environmental Compatibility and Public Need.

In a message to BOEM, Vineyard Wind noted that "for a variety of reasons, it would be very challenging to move forward the Vineyard Wind 1 project in its current configuration if the final EIS is not issued within, approximately, the next four to six weeks" – or the end of August. MA DEP has up to 70 days to review Vineyard Wind's request. A DEP spokesperson said the review will likely not take that long.

For Vineyard Wind, events may still turn as the company needs, but will that be timely? A Record of Decision is not an ending; it allows the next step within a much bigger process and sequence. A ROD confirmed in September could mean staying on schedule for work planned for November. A confirmation in November might be too late, for many reasons: weather challenges, marine mammal restrictions and, critically, too late to confirm contracts with specialty equipment suppliers and vessel operators.

All Logistics are Local

After BOEM's decision, next steps aren't much easier. Construction requires specialized vessels and equipment. Just how that might work is drawing a lot of brain power. The central challenge is that there are no American vessels available, as required by the Jones Act, for work in U.S.

Offshore Wind: *a Freshening Breeze?*

July brought news about offshore wind. There was something for everyone: optimism, disappointment, and construction, too.

By Tom Ewing

Finally, starting with Dominion Energy's Coastal Virginia Offshore Wind Project, a joint venture with Danish wind developer Orsted is underway. True, this is a small project – just two wind turbines to be installed 27 miles east of Virginia Beach. But considering all the preceding hurdles, news about Dominion blew in as proverbial, hopeful fresh air. Surely, additional offshore wind construction news would quickly follow; news about a full line-up of projects ready to bust through interminable studies and studies of studies.

Indeed, there is a lot of offshore wind energy in the developmental pipeline. The table below shows wind energy areas (WEAs) from the Bureau of Ocean Energy Management (BOEM) website, part of the Department of Interior. BOEM leads all federal offshore energy siting and development in the Outer Continental Shelf (OCS), including wind.

Offshore Wind: harder to install than an oil platform

Importantly, a lease doesn't mean there is a project is ready to go. In reality, there aren't many projects advancing within most of the WEAs. There are a lot of project ideas. New York State, for example, on July 18, announced its selection of two ocean-based wind proposals, a selection in response to a high-profile solicitation last November. The projects, Empire Wind and Sunrise Wind, are planned for Atlantic Ocean WEAs OCS-A 512 and OCS-A 487, respectively.

Except for Block Island in Rhode Island, all the work on US offshore wind is still preliminary, really just a library. Actually, the studies themselves are the projects. This investigative work is quite advanced in one or two WEAs. In others, lease holders have requested extensions. In some cases, work has stopped.

Importantly, the Atlantic isn't the only site with emerging projects. Icebreaker Wind is a six turbine, 20.7-megawatt

Lease Number/Year	Company	Acres	State	Current Status
OCS-A 0482/2012	GSOE I, LLC	70,098	DE	SAP
OCS-A 0519/2018	Skipjack Offshore Energy, LLC	26,332	DE	COP
OCS-A 0483/2013	Virginia Electric and Power Company	112,799	VA	SAP
OCS-A 0486/2013	Deepwater Wind New England, LLC	97,498	RI/MA	COP
OCS-A 0487/2013	Deepwater Wind New England, LLC	67,252	RI/MA	SAP
OCS-A 0490/2014	US Wind Inc.	79,707	MD	SAP
OCS-A 0498/2016	Ocean Wind LLC	160,480	NJ	SAP
OCS-A 0499/2016	EDF Renewables Development, Inc.	183,353	NJ	SAP
OCS-A 0500/2015	Bay State Wind LLC	187,523	MA	COP
OCS-A 0501/2015	Vineyard Wind LLC	166,886	MA	COP
OCS-A 0508/2017	Avangrid Renewables, LLC	122,405	NC	SAP
OCS-A 0512/2017	Equinor Wind US LLC	79,350	NY	SAP
OCS-A 0520/2018	Equinor Wind US LLC	128,811	MA	SAP
OCS-A 0521/2018	Mayflower Wind Energy, LLC	127,388	MA	SAP
OCS-A 0522/2018	Vineyard Wind LLC	132,370	MA	SAP
Total		1,742,252		

Source: US Bureau of Ocean Energy Management (BOEM) / Notes: The lease number references location, ocean positioning and the filing year. SAP=Site Assessment Plan; COP=Construction and Operations Plan.

territory. It appears there are no vessels in the U.S. shipyard construction queue, either.

There are vessels available on the world market, but the Jones Act makes it difficult – almost impossible, save a waiver – for non-U.S. vessels to work in the United States. The Jones Act requires that all vessels working in US waters are American owned, American built and American crewed.

Emily Huggins Jones is an attorney with Squire Patton Boggs, based in Cleveland. She recently participated in a panel discussion, in Amsterdam, presented to European firms interested in the emerging US offshore wind market. Her advice: don't expect a Jones Act waiver.

Huggins Jones predicts that an initial project will follow the protocol used for Block Island: the requisite, foreign equipment will be moved to a work site, but not to a U.S. port. However, it will be supplied by Jones Act compliant vessels and barges.

She said this deliberate distancing can work to get this new industry started. "Will it be the same in ten years?" she asks rhetorically. "Probably not," she adds, "but we'll likely be at a place where those issues have been worked out." Huggins Jones said discussions are underway now at various corporate levels about whether it makes sense to have a pool of equipment, like the oil and gas industry. High costs are not the only problem. A bigger concern lurks in the background: whether there will be enough offshore wind work to justify those investments.

Separately, Icebreaker Wind officials (Lake Erie) are also thinking about the Jones Act. Dave Karpinksi is Icebreaker's VP of Operations. He was asked about plans for vessels and equipment. Ideas include bringing in a heavy lift vessel through the St. Lawrence Seaway or modifying an available barge with a heavy crane. "We haven't committed to one plan yet," Karpinski said, adding, "We'll need approximately 1 to 1½ years lead time." Karpinski said a foreign heavy lift vessel would be Jones Act compliant because "we wouldn't be coming into any U.S. port. This is how the Block Island Wind Farm turbines were installed."

Separately, Orsted responded to questions about their marine strategy by saying in a prepared e-mail message, "While we won't be using a Jones Act compliant vessel for the installation of the foundations and the turbines, because one does not exist, we will ensure that any construction activities are fully compliant with all relevant rules and regulations."

Looking Ahead: one size does not fit all

On the world market, then, there is considerable doubt that the equipment is available to take on the addition of concurrent U.S. offshore wind construction projects.

Jurgen de Prez is Commercial Director of Jack-Up Barge (J-UB), a Netherlands based company that provides self-elevating platforms for the global offshore energy market. De Prez was asked about supply and demand. Right now, he said, there is some overcapacity in jack-ups. But he expects that to change when new U.S. and Asian projects start, placing new demands on existing equipment working in the North Sea. Another upcoming issue, de Prez explained, is that increases in turbine capacity require jack-ups with

Credit: Jack-Up Barge

longer legs and larger cranes. "In this emerging market segment," de Prez noted, "there will be an undersupply."

Equipment used by the oil and gas industry cannot install foundations and wind turbines. Right now, J-UB's contracts are set about two years in advance. De Prez estimated industry lead time averages between one and a half and two years.

Offshore wind requires multiple specialized vessels. Each project is different, but De Prez said that, generally, a jack-up barge would be towed to the work site. Some jack-ups are outfitted with propulsion systems, allowing autonomous movement within the offshore windfarm. The exact vessel used depends on the phase of construction, de Prez explained. Foundations could be installed by a floating unit or a jack-up, but only a jack-up installs turbines. Cable lay vessels link it all together.

In a way, actually building an offshore wind farm isn't the hardest part. The hardest part, really multiple parts, is starting a new industry almost from zero. It takes a lot of energy to reach critical mass – before it's all linked together.

Only one thing is for certain today. When it comes to offshore wind – domestic offshore wind – getting these clean, green and renewable energy projects done is probably more difficult than getting permission to build a refinery. Opposition comes from many – sometimes surprising – quarters. The wind is coming; you can almost feel the breeze. The only question is: when?

Tom Ewing is a freelance writer specializing in energy and environmental issues.

Credit: Beier Inegrated Systems

The ABC's of DP 101

Dynamic Positioning has been around for a while, it is evolving and it is here to stay. Here to sort it all out are two of industry's more familiar stakeholders who also explain what might come next.

By Joseph Keefe

When it comes to critical offshore operations and vessel handling, this is not your grandfather's marine industry, and it hasn't been for some time. That's because the bridge layout and equipment commonly found on any recently delivered offshore service vessel would be unfamiliar to the typical deck officer of just 20 years ago. Much of that can be attributed to the advent of dynamic positioning equipment systems.

DP – perhaps like no other skill at sea – has changed the role of the deck officer. The technical requirements to qualify and operate this equipment are vast. And yet, Ben Todd, Vice President and COO of Beier Integrated Systems, a major stakeholder in the DP equipment markets, discounts the impact, saying, "I don't believe DP technology was disruptive at all. The companies that embraced the technology, properly outfitted the vessels and adequately trained the crews increased safety, gained efficiency and performed offshore operations that were not possible prior to DP."

Dave Johnson, Product Development Director of GE's Power Conversion business, puts it a different way. "It is fair to say DP was a disruptive technology when introduced. It changed the game for two ships when working in close proximity. Now DP is the indispensable technology for offshore operations."

Both Beier Integrated Systems, LLC and GE's Power Conversion business own and operate U.S. Gulf Coast-based training facilities that specifically target dynamic positioning skills. The Marine Training Institute (TMTI) located in Gray, LA is owned by Beier Radio Company. Among other navigation specific courses, the school offers Nautical Institute Basic and Advance, and OSVDPA

"DP will be just as important to the offshore wind market as it is to offshore oil and gas. *Both need a stable, well positioned vessel to provide equipment, support, maintenance and supplies to the offshore structures."*

– Ben Todd, Vice President and COO, Beier Integrated Systems

(Phase 1, Phase 3 Courses and Assessments) for dynamic positioning. Almost 1,500 mariners have passed through this school since 2014, many of them, repeat customers.

GE's Marine training school in Houston provides training on all aspects of diesel electric propulsion systems and Dynamic Positioning systems. GE dedicates classrooms to Dynamic Positioning Systems Basic Induction Training (where new DP candidates are introduced to the concepts of DP), DP Advanced Simulation (where experienced DP operators are tested and given final DP certification) and a program dedicated to DP Sea time reduction. According to GE, students utilizing their full bridge simulator can reduce the requirement for DP hours at sea by undergoing advanced simulation scenarios, exposing the operators to a wide range of experiences and equipment failure scenarios.

Both schools provide training that complies with both the Nautical Institute and the newer Offshore Service Vessel Dynamic Positioning Authority (OSVDPA) requirements.

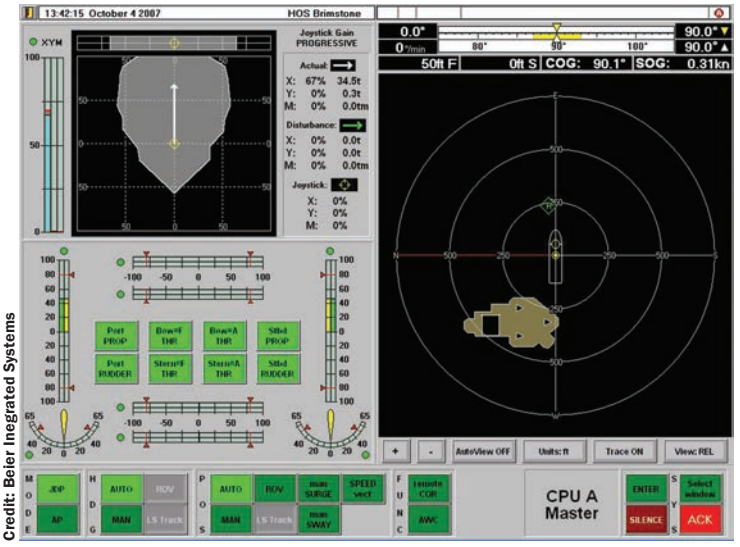
TMTI uses the latest state-of-the-art DP equipment; in this case, the Beier ICVS 4000 DP System. Similarly, GE's facility was designed from the ground up to use the latest generations of GE Dynamic Positioning equipment, as well as its C series automation and propulsion drive technologies. Here, like at TMTI, students can get 'hands on' experience with the actual equipment they will encounter on ships.

The DP credentialing process is very straight forward in all the schemes, with each posting the process on their respective websites. There are some differences between OSVDPA, NI and DNV, but any USCG credentialed mariner can start the process by taking an OSVDPA Phase one Induction course, or NI induction course. Under both the Nautical Institute and OSVDPA certification schemes, certificates expire after 5 years. And, they both require actual time on DP vessels, utilizing the DP system in order to revalidate their certificates. In order to maintain a DP operator's license, the operator must continue to work a number of hours per year at the DP desk to maintain familiarity. These hours can also be accumulated on a Class A Full mission simulator. GE's Johnson adds, "After a long lull in activity we are now seeing the uptick in demand for experienced DP operators with associated increased throughput in our training school."

A DP operator who certifies on one OEM's equipment can legally operate on another. The equipment manufacturer is not part of the certification process. The "buttonology" from one system manufacturer to the other is different but the function of the systems is essentially the same. Ben Todd explains, "The DP training schools provide operator training to the students. This includes DP operation planning, risk assessing, communications, use of decision support tools (ASOGs, CAM/TAM), manual control of vessels and structured practical experience. It is not system, manufacturer or vessel specific. There is no way for a school to train on every system configuration or

vessel configuration. The vessel and system specific training is performed on the vessel the DPO is assigned to by the crew or the vessel owner's representative."

GE's Dave Johnson also weighed in, explaining, "Although the training here is carried out on GE's DP system, what we are really training people in, is the safe and efficient operation of DP systems and vessels. We do, however, also provide training courses aimed at people transitioning from other DP to GE DP systems. These are simple familiarization courses that assume the operator understands the underlying principles of Dynamic Positioning and focuses on efficient operation of our systems."



Credit: Beier Integrated Systems

Nevertheless, cautions Johnson, "We would always recommend that an operator becomes familiar with the latest equipment he is operating. Often in normal operation the transition to a new system appears very straight forward, but a DP operator must be able to smartly assess and act in failure conditions. As such, we recommend all people new to using our systems to attend the training class."

DP: Software, and hardware, too

Beier boasts as many as 650 DP systems in use worldwide. GE has, since the 1970's, built more than 950 systems. Beier has been distributing, manufacturing and supporting DP and DP-related equipment for a similar period of time. Both list many of the recognizable offshore stakeholders as repeat clients; Hornbeck Offshore and Logitel Offshore, to name just a couple.

Beyond the requirement for mariners to be qualified for DP operations by a recognized authority, the same can hold true for the vessels, as well. For example, some vessels are "certified for DP" and others are not. Typically, these determinations are made by the ship owner as an early part of vessel development. Some vessels do not have a formal need for DP, yet equipped with one for the convenience of operation. DP class notification is provided by the classification societies such as ABS, LRS or DNV. Jonson adds, "Primarily it is the vessel end user – or charterer – who dictates what type of vessel they need and whether there is a requirement for a certain DP class."

At the same time, the terms 'DP1' and 'DP2' (redundancy) are frequently bantered about – especially by operators trying to boast about their tonnage and its safety. Moving from DP class 1 to 2 and 3, the DP and most significantly the ships propulsion systems are configured with a higher level of redundancy, meaning the system can safely operate through more levels of supporting equipment failure. Higher class DP systems are attractive to charterers. They greatly reduce the risk of an equipment failure resulting in the ship having to return to the shore for repairs.

Changes in the Wind

DP has been described as a 'mature technology.' With that maturity, the pricing to outfit vessels with DP has come down appreciably. And, says Beier's Todd, "The software is mature but advancements in hardware and sensor technology continues to evolve; therefore R&D continues." GE's Johnson agrees, adding, "It has never been so cost-effective to outfit a vessel with a DP system."

GE's DP equipment has a long history with proven reliability. Its latest 'SeaStream' DP technology involves an operator interface that was totally revised form the ground up, producing the latest in state-of-the-art intuitive operator interfaces. "The interface is highly suited to the latest generation of mariners who expect interfaces to be as simple and intuitive as those found on modern consumer electronics such as iPhones," adds Johnson.

DP: Critically Important Now, and in the future

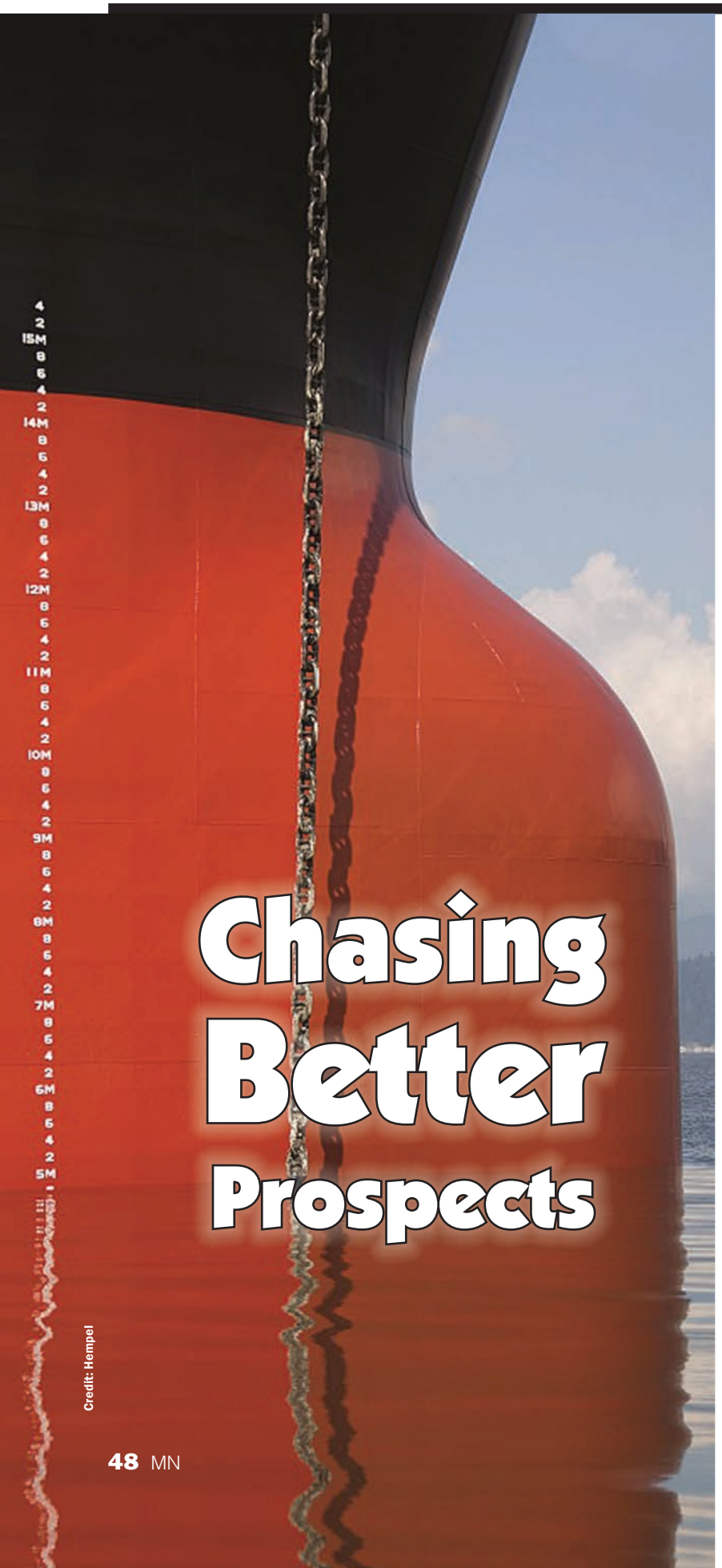
Since its inception, DP has always been important when it comes to offshore oil and gas work; in good times and bad. As the offshore wind boom finally looks to be taking off in the United States, DP operations will take on an increasingly important role, especially if the Jones Act creates a market for 'repurped' OSV tonnage to satisfy domestic offshore wind requirements. Underscoring that reality, Ben Todd explains, "DP will be just as important to the offshore wind market as it is to offshore oil and gas. Both

Credit: Beier Inegrated Systems

need a stable, well positioned vessel to provide equipment, support, maintenance and supplies to the offshore structures."

All that said; any type of offshore operation that needs precision maneuvering and stable positioning will benefit from DP. For example, GE's DP system was recently chosen by Shanghai Salvage Bureau for its deep-water dive support vessel (DSV). Separately, dive vessels, fishing vessels, cruise ships, heavy lift vessels, autonomous vessels and military vessels are just a few examples of vessels that benefit from DP. As DP technology evolves, sensor technology is allowing DP systems the capability to do things they couldn't, just 10 short years ago. Todd adds, "As this technology continues to develop, it will open new opportunities for DP in other market sectors."

As DP systems evolve further, more efficient operations via simpler operator interfaces will produce 'greener' operating modes that help reduce fuel consumption and emissions. After all, anything that contributes to reducing any vessel's carbon footprint is becoming increasing important. Providing a glimpse of what comes next, GE's Johnson predicts, "There is a growing demand for more and eventually fully autonomous vessels. DP systems provide a more precise way to control a vessel's systems, whereas the guiding inputs to the DP may come for advanced AI systems rather than operators." No one will be surprised if he is right.



Chasing Better Prospects

Credit: Hempel

As the offshore industry recovers, choosing the right hull coating for those newly activated assets will be equally important.

By Davide Ippolito, Hempel A/S

The global offshore support vessel (OSV) market is still recovering from a protracted slump, but thankfully momentum is now returning with predictions for significant activity for OSV's ahead. As summarized in a report by market analysts Grand View Research, projections are for the OSV market to exceed USD 71 billion by 2022 on the back of a significant increase in projects reaching final investment decision (FID) status, and a rising demand for oil and gas worldwide. This translates into a compound annual growth rate of more than 11 percent from 2015 and represents significant opportunities for owners and operators of these workhorses of the offshore energy industry.

Yet, it would be remiss to suggest the picture is entirely positive. A significant proportion of existing offshore support vessels are still laid up, sitting out of action waiting to secure favorable rates. According to figures from market data platform VesselValue, 36 per cent of OSV's were laid up at the start of this year, with similar percentages out of action in the US Gulf, Middle East, West Africa and North West Europe. This represents a sizeable portion of the global OSV fleet sitting idle or in dry dock. Many of these vessels have been out of service for quite some time, and – with better prospects on the horizon – owners ought to be preparing these ships to come back into service.

Getting Back to Work

Ensuring the right hull coatings are applied in good time is a critical step, and careful consideration is given to investing in protective coatings solutions that will enable these vessels to operate efficiently for the longest possible amount of time. It is widely known across the maritime industry that fuel consumption is greatly influ-

"Hempaguard coatings retain effectiveness when switching between slow and fast steaming and low/high activity – **so a vessel can change sailing routes and trading patterns without losing performance.** *What's more, these coatings remain effective in waters of varying temperatures and during idle periods of up to 120 days – again, critical to offshore support operations – which regularly sit in stasis for extended periods before springing into action."*

enced by the quality of the antifouling system used. The smallest micro-fouling is caused by slime and can result in an increased fuel consumption of between 1-2 percent, as the vessel uses more fuel to counter drag caused by bio-fouling. Macro-fouling – seaweed, barnacles, oysters and mussels – could increase fuel consumption by as much as 40 percent, by increasing resistance against the hull as the vessel moves through the water. This means, at its most basic component, that more power is required to move the vessel at the desired speed. Most hull coatings today are designed to reduce this hydrodynamic drag by making the hull as smooth as possible and by preventing the build-up of marine organisms. It seems obvious to say, but it is a point often ignored: it is more cost efficient to apply an effective hull coating from the outset and avoid the extra fuel to counter the drag caused by fouling.

Knowing What You Want

As a leading worldwide manufacturer of coatings, Hempel understands the unique operational and environmental pressures that OSV's must withstand and have worked for many decades to develop new technologies and finesse our solutions to deliver maximum returns. Our coatings are selected and applied based on a rigorous assessment of vessel particulars, anticipated trading patterns and service life, amongst other factors. Working closely with owners, yards and applicators – to ensure that the most appropriate solutions are applied and done so in a timely fashion – is a critical part of that interaction.

For all offshore support vessels, choosing a hull coating which reduces drag, minimizes downtime, enhances physical durability and protects assets for the longest period of time is a simple way to increase efficiency gains. For example, Hempaguard X7, Hempel's most advanced hull coating to date, is one of the best coating systems available for OSV's of all classes and specifications.

Hempaguard is the first coating to be built on the firm's Actiguard technology, which is the only paint to combine both silicone-hydrogel and advanced biocide control in a single coating. Unlike regular hull coatings, which are usually selected to meet the vessel's speed and activity level, Hempaguard coatings retain effectiveness when switching between slow and fast steaming and low/high activity – so a vessel can change sailing routes and trading patterns without losing performance.

This is absolutely critical for the offshore support operations, by providing shipowners and operators with enhanced flexibility in their fleet utilization. What's more, these coatings remain effective in waters of varying temperatures and during idle periods of up to 120 days – again, critical to offshore support operations – which regularly sit in stasis for extended periods before springing into action.

Thinking Longer Term

Naturally, owners and operators should be working with their coatings partner to find the most cost-effective coatings solution for their vessel and their business needs. This by no means should be about rushing to find the cheapest or most readily available products on the market. Rather, owners and operators should be more selective, and find a solution that will enhance operational efficiency and protect assets longer term.

This is why coatings based upon Actiguard technology are a prudent choice. It is important to remember that coatings are not purely aesthetic; they enhance a vessels ability to operate efficiently. Vessels coated with the right protection will stay in better shape for longer and will continue to attract the right attention as offshore players begin looking for partners. So, while these vessels may have been out of the game for a little while, there is no reason why – with the right armor in place – their operators should settle for anything less than the best the market can offer.

Lowell Police Takes Delivery of New RIBCRAFT

On the Merrimack River in Massachusetts, the Lowell Police Department recently took delivery of a new RIBCRAFT 5.85 for patrol and enforcement duties as well as search and rescue operations. RIBCRAFT worked with the department to build a boat that meets their diverse operational requirements. Featuring a forward positioned center console with windscreen, an upgraded aluminum top T-top, antenna arch with integrated dive ladder, the 19' RIB provides a comfortable platform for long patrols while offering an open deck and easy access to the water for diving and rescue. Powered by a 115HP Yamaha, this 5.85 will reach speeds in excess of 40mph while still providing unparalleled safety and unsurpassed performance. The new boat will also provide water access for the Lowell Fire Department during dive team and medical rescue operations. Originally designed as a surf rescue craft, the RIBCRAFT 5.85 is small enough to maneuver in shallow waters and can be easily operated, yet large enough to carry ample crew and gear and handle large seas. This 19' model is a favorite among departments for its versatility, durability, safety, and performance.

RI Operator Takes Delivery of Second Gladding-Hearn High-Speed Ferry

Gladding-Hearn Shipbuilding, Duclos Corporation, has delivered a second high-speed passenger ferry for Rhode Island Fast Ferry, Inc., for service between Quonset Point, Rhode Island and Martha's Vineyard. The vessel features the designer's "S" bow hulls, which, according to the builder, have proved to provide excellent seakeeping, directional stability and a high tolerance to shifts in trim and displacement. Entrance into the boat is through the port and starboard side doors. With seating for 290 passengers on three decks, the Julia Leigh has more than twice the passenger capacity than the operator's other ferry on this route. Equipped throughout with Beurteaux seats and tables, the main cabin has generous seating for 142 passengers, a snack bar and three heads.

Architect: Incat Crowther	LOA: 113.5 feet	Engines: (2) MTU 12V4000M64, EPA T3
Vessel Name: Julia Leigh	Beam: 32.4 feet	Gears: (2) ZF 5055
Speed (loaded): 29 knots	Draft: 6.0 feet	Propellers: 5-bladed Ni/Br/Al
Fuel: 2100 U.S. gallons	Passengers: 290	Gensets: (2) 55kW RA Mitchell

Aluma Marine Delivers to Big Apple

Aluma Marine, LLC has delivered two (2) 30-foot Shoreline Survey Boats to the City of New York Department of Environmental Protection. The boats are tasked with supporting the City's Harbor Monitoring Program, which monitors water quality and other environmental matters in the waters surrounding New York City. The all-welded aluminum boats are powered by twin 250 HP Honda 4-stroke outboard engines. Impressively, and at factory sea trials, the boats ran at 55 MPH. The electronics suites include Furuno FZTL systems which incorporate 36-mile radars, plotters, GPS's and depthsounders. ICOM VHF radios are installed as well as Whelen siren/pa systems. The boats have heating and air conditioning that are powered by 9 Kw Northern Lights generator sets and Norcold refrigerators.

First Steel Cut for New Great Lakes Bulk Carrier

Fincantieri Bay Shipbuilding and The Interlake Steamship Company hosted a ceremonial first-cut-of-steel event last month, celebrating the historic start of construction on the first U.S.-flagged Great Lakes bulk carrier built in more than 35 years. The new River-Class, self-unloading bulk carrier is believed to be the first ship for U.S. Great Lakes service built on the Great Lakes since 1983. Measuring 639 feet in length (78 feet W / 45 feet H / 28,000 DWT), the ship will transport raw materials to support manufacturing throughout the Great Lakes region. The Interlake Steamship Company, Fincantieri Bay Shipbuilding and Bay Engineering are jointly designing the bulk carrier, complete with advanced vessel and unloading systems automation. Scheduled for completion in mid-2022, the carrier will generate business for partnering contractors, vendors and suppliers. Major partners for the project include ABS, EMD Engines, Caterpillar, Lufkin (a GE Company) and MacGregor.

Armstrong R/V Delivered to University of Alaska

The 40' x 13' research vessel Nanuq recently entered service for the University of Alaska Fairbanks College of Fisheries and Ocean Sciences. In a competitive solicitation process last year, the University selected Armstrong Marine's proposal to design and build the vessel. Nanuq is customized for research and teaching operations. The monohull features 28 to 32 knot cruise speed, hydraulic A-frame, overnight accommodations for five, full-service galley, head, Northern Lights 5kW diesel generator, and a Garmin/NMEA electronics package supplemented with a Furuno SC70 satellite compass. During Nanuq's maiden 11-day voyage, the boat performed beyond the scientists' expectations. In the challenging and rough Gulf of Alaska, the vessel transited with ease and quickness to the Sound.

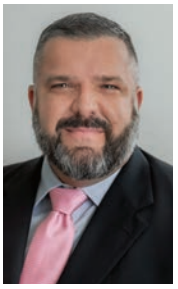
Nanuq is powered by twin Volvo D6 330hp diesel inboards paired with Aquamatic outdrives and Volvo hydraulic power steering. An aft deck second station and Side Power 8" electric bow thruster with joystick controls ensure superior maneuverability during research operations. 400-gallon fuel capacity provides crucial endurance for all operations.

AAM Delivers Another High-Speed Ferry for Kitsap Transit

All American Marine (AAM) has completed construction and delivered the last of three low wake and high-speed passenger vessels built for Kitsap Transit based in Bremerton, Wa. The Lady Swift, an aluminum catamaran coupled to a composite superstructure and a dynamic carbon fiber hydrofoil, was was designed by Teknicraft Design. The design of the new vessel was based upon the successful ultra-low-wake Rich Passage 1 (RP1), built by All American Marine in 2011. AAM, the exclusive builder of Teknicraft Design in North America, was selected as the sole source to build this vessel. Teknicraft's patented hydrofoil-assisted hull design is proven to have an industry-leading low-wake wash energy signature that will not degrade the sensitive shorelines of Rich Passage.


Fabrikant


Brill


Widener


Rheault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Wheldon

Seacor Holdings Acquires All Shares of Sea-Vista

SEACOR Holdings announced that it has become the sole owner of its consolidated SEA-Vista joint venture, acquiring through a subsidiary the 49% interest that had been owned by an affiliate of Avista Capital Partners. Purchase consideration consisted of $106 million in cash and 1,500,000 shares of the Company's common stock. SEA-Vista operates commercially under the Seabulk name, with a fleet of nine U.S.-flag petroleum and chemical carriers in the Jones Act, including the SEA-Chem 1, a modern, highly capable chemical parcel Articulated Tug and Barge unit. **Eric Fabrikant**, Chief Operating Officer of SEACOR Holdings Inc., said, "Acquiring full ownership of SEA-Vista underpins our continued commitment to remaining a leader in the transportation and logistics industry."

FUELTRAX Appoints Brill as Data Analytics Director

Johnalan Brill joins FUELTRAX as Director of Data Analytics for FUELTRAX to leverage operational data from FUELTRAX global fleet and provide expert analysis to determine best practices and operational efficiencies to clients. Brill previously was employed as a Data Analytics Manager at Mitsubishi Caterpillar Forklift America Inc. (MCFA).

Widener Joins The American Equity Underwriters

The American Equity Underwriters, Inc. (AEU) announced that **David Widener** has joined the firm as director of a newly created division, AEU Claims Advisory Services. Widener joins AEU with nearly two decades of experience in the longshore claims arena, most recently as a district director with the U.S. Department of Labor, where he oversaw operations for the Houston District Office since 2012.

Rheault Appointed Samson President & CEO

Samson, the worldwide leader in performance cordage, announces the appointment of **Christian Rheault** as CEO, effective July 1, 2019. Rheault comes to Samson with a strong combination of multinational experience. Most recently he was CEO of Greene, Tweed, a US-based global supplier of custom sealing engineered solutions for aerospace, oilfield, semiconductor, petrochemical, and power. He started his career at IBM Canada. Rheault has degrees in both Electrical Engineering and Business Administration.

GE Appoints Shepherd As GM, Global Marine Gas Turbines

Kris Shepherd has been appointed the General Manager of GE's marine gas turbine business. Shepherd is responsible for the full lifecycle of all GE marine gas turbine programs, product management, engineering, marketing, supply chain, services, and commercial organizations. Shepherd brings with him significant experience as a GE commercial aircraft engine product leader, serving Boeing and other GE engine customers. Shepherd graduated from the University of Cincinnati with a master's degree in industrial engineering and a bachelor's degree in mechanical engineering from Ohio University.

Summit Electric Supply Names Craven as CFO

Summit Electric Supply has announced that **Brent Craven** has been hired as the company's Chief Financial Officer. Craven recently served as Vice President Finance and Accounting and Chief Financial Officer for Aggreko LLC, a division of Aggreko PLC, which is a publicly held temporary power generation firm. He holds a Bachelor of Business Administration degree in Management from the University of Florida and a Masters of Business Administration from the University of North Florida.

JAXPORT Adds Wheldon to Commercial Team

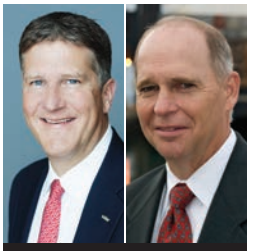
The Jacksonville Port Authority (JAXPORT) announced that **Lisa Wheldon** has joined the organization as Director, Cargo & Intermodal Rail. Wheldon will be responsible for developing containerized cargo business in major regional markets and for managing JAXPORT's relationships with rail service providers. Wheldon has more


HII

Saetre Fields Sabbatini Spaulding


Crowley

Menoyo Collins Sutton


AAPA

Connor Nagle


Wieland

HII Announces Leadership Changes

Damon Saetre has been promoted to vice president of integrated planning and production control at Newport News Shipbuilding. He brings 23 years of experience in planning and production control and four years of waterfront trades and design experience. A 1995 graduate of The Apprentice School, Saetre holds an associate's degree in mechanical engineering from Thomas Nelson Community College and a bachelor's degree in business administration from Averett University. **Brian Fields** is transitioning to vice president of business transformation and chief transformation officer. Fields began his shipbuilding career in 1990 as a test engineer in the Los Angeles-class submarine construction program, and has served in a number of leadership roles, including vice president of supply chain management. Fields holds a bachelor's degree in mechanical engineering from Auburn University and an MBA from the College of William and Mary. Separately, **Premo Sabbatini** was promoted to vice president of central planning and process excellence at Ingalls Shipbuilding. He succeeds **Rick Spaulding**, who has accepted a position as vice president of business process standardization at Newport News Shipbuilding. Sabbatini brings 33 years of shipbuilding experience to his new role at the shipyard. He holds a bachelor's degree in business administration from the University of Southern Mississippi and an MBA from American Intercontinental University. Spaulding will oversee yard-wide implementation of program and production standards and the establishment of phased reviews as part of Newport News' Execution Operating System. He will also lead a structured approach to institutionalizing Newport News' process improvements, as well as best practice-sharing across all HII shipyards. Spaulding arrived at Ingalls in 2008 after spending 25 years with Newport News.

Crowley Promotes Three to Key Management Roles

Crowley Logistics has promoted two of its leaders, **Sal Menoyo** and **Patrick Collins**. Menoyo has been named vice president, Caribbean logistics. Collins has been appointed vice president, terminal and marine operations for the U.S., including Puerto Rico and the Virgin Islands. Menoyo joined Crowley in San Juan, Puerto Rico, in 1993 as a mate in the tug and barge fleet and later serving as a senior port captain. He has a bachelor's degree in marine transportation from the Maritime College at Fort Schuyler, State University of New York (SUNY). Collins earned his bachelor's degree from Loyola University and graduated from Officer Candidate School of the U.S. Coast Guard. He served as executive, deck watch and training officer on various Coast Guard cutters and has held a USCG Master Mariner license for over 17 years. Crowley also promoted **Peter Sutton** to vice president of health, safety, security and environment (HSSE) and operations integrity for the company's Shipping business unit. Sutton joined Crowley in 2015 as manager of health and safety for the company's petroleum services group. He advanced to director of health and safety in 2016, and then became managing director of health, safety, security, quality and environment (HSSQE) in 2018.

AAPA Selects Connor as New CEO

The American Association of Port Authorities (AAPA) announced that it has unanimously chosen **Christopher J. Connor** as the association's next president and chief executive officer. Connor, the former Global CEO of Wallenius Wilhemsen Logistics (WWL) will begin transitioning into his new role on September 23, succeeding **Kurt Nagle**, AAPA's president and CEO since 1995.

Massport Votes to Approve Permanent CEO

The Massachusetts Port Authority (Massport) Board of Directors voted today to offer **Lisa Wieland** the position of Chief Executive Officer and Executive Director for a five-year term. Contract negotiations will occur at a later date. Wieland is currently the Port Director at Massport, and has held this position since 2015. She is a graduate of University of California, Los Angeles. She received a master's degree in business administration from Harvard Business School.


DeVilbiss


Chao


Pyne


Andersen & Stevenson


Bramson

than 20 years of experience working in the transportation and logistics industry, most recently serving as the Director of BCO Sales for Direct Chassis-Link. A graduate of Georgia Southern University, Wheldon also holds a Master of Business Administration from the University of Phoenix.

DeVilbiss Joins Glosten

Glosten announced the hiring of **David DeVilbiss** for the Marine Construction group as a Senior Marine Consultant. Formerly Vice President of Marine Casualty & Emergency Response at Global Diving & Salvage, DeVilbiss oversaw all marine casualty and emergency response operations throughout all operating regions. DeVilbiss attended Le Tourneau University (Mechanical Engineering), the Divers Institute of Technology (Commercial Diver), and Lloyds Maritime Academy (Salvage Law and Practice). He has authored and co-authored several published papers including submissions to Chalmers University and the American Petroleum Institute.

DOT Secretary Chao to Receive AOTOS Award

The United Seamen's Service has announced that U.S. Secretary of Transportation, The Honorable **Elaine L. Chao**, will receive the 2019 Admiral of the Ocean Sea Award based on her career-long commitment to the maritime industry. The other, previously announced recipients are **James Given**, President of the Seafarers International Union of Canada; **Anil Mathur**, President and CEO of Alaska Tanker Corp.; and **Joseph Pyne**, Chairman of the Board of the Kirby Corporation. The award will be presented at the 50th annual AOTOS gala at the Sheraton New York Times Square Hotel, New York City, on November 1, 2019.

Coast Guard Presents Public Service Award to Mariner Advocate

Rear Adm. **Steven Andersen**, the Coast Guard's Judge Advocate General and Chief Counsel, presented Mr. **Douglas Stevenson** with a Meritorious Public Service Award, to honor his outstanding contributions to the United States Coast Guard and to all the mariners who make their living at sea. Anderson presented the award on behalf of Coast Guard Commandant Adm. Karl Schultz in conjunction with the Seamen's Church 42nd Annual Silver Bell Forum. As the Director, Center for Seafarers' Rights at the Seamen's Church Institute (SCI) from 1990 to 2019, Stevenson was at the forefront of the fight to protect seafarers' rights. He labored tirelessly to ensure the safety and well-being of all mariners and he was instrumental in the creation of the Maritime Labor Convention of 2006, an important international agreement that established regulations to protect seafarers around the world.

ABS Appoints Global Head of Cyber Security

ABS has appointed well-known cyber expert **Ian Bramson** as its Global Head of Cyber Security. A recognized leader with a strong track record of success in cyber security, Bramson has been solving cyber security challenges for more than 20 years. He is a recognized and respected thought leader, market developer and change expert that brings solid and effective strategies to meet these challenges.

Clark Named Deputy Director of the Alabama State Port Authority

James K. Lyons, director and chief executive officer of the Alabama State Port Authority has named **Richard T. Clark** as deputy director for the Port Authority. Clark, with over 30 years of maritime industry experience, began his career at Cooper T. Smith in New Orleans before joining Puerto Rico Marine Management. He leaves his position having most recently served as interim chief operating officer GT USA Wilmington and U.S. manager of operations at GT USA, LLC. He is a business management graduate of Trinity Southern University.

Sea Machines Expands Sales Force

Sea Machines Robotics has hired **Frank Relou** to lead its European sales efforts. In his new role as European business development manager, Relou will lead the transformation of Europe's commercial fleets with technology that empowers operators with enhanced on-water productivity and job predictability. He also will support the


Clark


Relou


Hendricks


Shirai

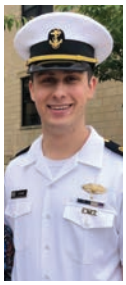
company's advanced situational awareness technology trials currently being piloted on an A.P. Moller-Maersk container ship that calls regularly in Rotterdam. His career began in 1991 as shipbuilder at Shipyard Grave BV, of The Netherlands. From there, he held roles of increasing responsibility at George Kniest Boat Equipment; Simrad; Navionics; New Madera RIBs B.V.; and Survitec Group.

Hendricks Reelected as Little Rock Port Authority Board Chair

The Little Rock Port Authority Board of Directors elected **Melissa Hendricks** as chair of the Board of Directors to a second term; her term will run from July 2019 through June 2020. Ms. Hendricks was first appointed to the Little Rock Port Authority in September 2011. During her time on the Little Rock Port Authority Board, Ms. Hendricks has served as treasurer, vice chairman and chair of the external affairs committee. Additionally, **Greg Joslinas** was named vice-chair and **Joe Baileyas** as treasurer.

Ecochlor Expands with Another Regional Office

Ecochlor announced that **Asao Shirai** will be leading the new office in Japan as Regional Business Development Manager. Mr. Shirai has a 35-year proven record of facilitating long-term business relationships with the most prestigious shipowners in Japan. Through his experience he has accu-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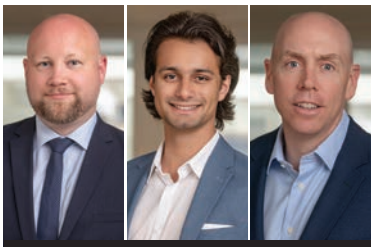

Dan-Bunkering

Christiansen Ekeli Sharkey


WEDA


Lefeber

mulated great respect from shipping executives at NYK Line, Mitsui OSK Lines, Kawasaki Kisen, JX Ocean, Kumiai Senpaku, Yamamaru Kisen – and he has built up a substantial network of leaders within the industry.

Crowley Honors USMMA Midshipman with Maritime Security Award

Crowley Maritime honored U.S. Merchant Marine Academy (USMMA) midshipman **Benjamin Starr** with the 2019 Crowley Maritime Security Enhancement Award. **Devon Pound**, representative, marine recruiting for Crowley, presented the award during the USMMA Awards Convocation. Starr, a native of Phoenix, Ariz., will graduate later this year with a degree in maritime logistics and security. Starr served aboard MSC's USNS Walter S. Diehl and the Matson-owned MV Manulani.

NSRP Elects New Officers to Executive Control Board (ECB)

Don Hamadyk, Director, Research and Development at Huntington Ingalls Industries' Newport News Shipbuilding division in Newport News, VA, has been elected as ECB chairman for a two-year term. Don earned his undergraduate and Master's degrees from Stevens Institute of Technology. Don succeeds **Tim Glinatsis**, Vice President, Engineering at General Dynamics Bath Iron Works in Bath, ME. **Tom Perrine**, Vice President of Engineering at Austal USA in Mobile, AL, has been elected to the ECB Vice Chair position. **Steve Davison**, Vice President, Operations Support at General Dynamics NASSCO in San Diego, CA, was elected ECB Treasurer.

New Appointments at Dan-Bunkering Stamford

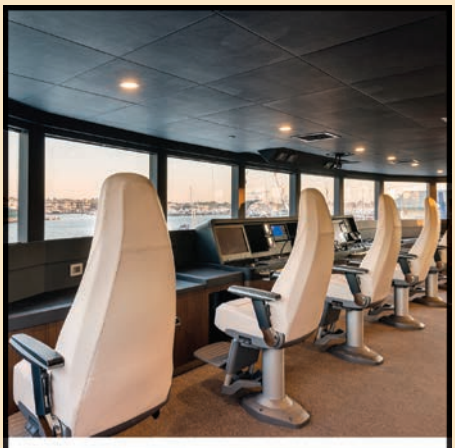
Dan-Bunkering (America) announced the relocation of two Bunker Traders, the employment of a Senior Purchaser, and a new office address. **Kasper Christiansen** has relocated to Dan-Bunkering in Stamford as of 1 May 2019. **Janek Ekeli**, originally from Norway, also relocated to Dan-Bunkering's Stamford office as of 1 May 2019 from Dubai. Janek joined Dan-Bunkering in 2017 and brought along a valuable shipping background from a large shipping company in Norway. **Matthew Sharkey** joined Dan-Bunkering's Stamford office as a Senior Purchaser on 1 April 2019. Matthew adds a wealth of industry experience from his employment in two large trading companies prior to joining the Dan-Bunkering Group.

Hamtez, Davis win Award at 2019 WEDA Dredging Summit

DSC Dredge, LLC sponsors the Western Dredging Association (WEDA) Best Paper Award at its annual conference. This year, with the theme "Why Dredging is Good", the selection committee named **Isaac Hamtez** and **Brian Davis** the 2019 winners at this year's conference. Isaac Hamtez is the Research Director with Mahan Rykiel Associates Inc. in Baltimore, MD and Brian Davis is a Professor of Cornell University. In the White Paper entitled "Geospatial Modeling and Suitability Analysis for Beneficial Use: An Integrated Approach", Hamtez and Davis outlined that with the increased global awareness of plastic debris in the aquatic environment, it is imperative to now consider "microplastic presence is relatively ubiquitous in the marine and freshwater environments and should be anticipated in dredging sediments."

Port of Everett Names Lefeber as Next CEO

The Port of Everett Commission unanimously voted to name the Port's Deputy Executive Director **Lisa Lefeber** the next CEO, effective October 16, 2019. Lefeber is the first female to be selected for this top leadership role in the Port's 100-year history. Prior to her role as Deputy Executive Director, Lefeber served as the Port's Chief of Policy and Communications, a position she held for more than 13 years. Lefeber has a Master's Degree in Public Administration from Seattle University and an undergraduate degree in Journalism from Western Washington University.



In-Mar Solutions: Alu Pilot Chairs & Deck Rails

In-Mar Solutions offers a complete line of Alu Design & Services Marine Pilot Chairs and Deck Rails. There is a standard line in addition to the option for custom designs to suit specific needs. Sleek, modern design and maximum utility and comfort are emphasized.

www.inmarsolutions.com

Successful USN Tests on Cox Powertrain's CXO300 Diesel Outboards

Cox Powertrain, the British developer and manufacturer of high-powered diesel outboards, is reporting the successful completion of the first round of in-field outboard validation tests by the US Navy. Following the trial of two CXO300s aboard a 9m RIB, when the engines achieved a cruise speed of 43 knots at 3,600 rpm, Naval Sea Systems Command (NAVSEA) testers expressed great enthusiasm and excitement about their performance.

www.coxmarine.com

Trelleborg's DynaMoor Improves Safety, Reduces Mooring Costs

Trelleborg's marine and infrastructure operation has launched DynaMoor, a safety focused dynamic mooring solution that actively maintains constant tension in mooring lines to dampen vessel movements, eliminating the effect that passing ships and long-period waves have on moored vessels. This means DynaMoor can increase port and terminal throughput by allowing operations to continue in a wider range of conditions, while improving safety and reducing operational costs.

www.trelleborg.com/en/marine-and-infrastructure

Nidec ASI Batteries Launched for Zero-Emission Vessels

Nidec ASI's first Nidec-brand battery system designed for large and medium-sized propulsion systems feature over 600 MWh of battery energy storage solutions (BESS). For the global marine sector, Nidec ASI's new customized electric on-board power generation systems completes its range of on-board energy storage products. Nidec's innovative batteries feature the "Single Large String", a large module, simpler to set up and better suited to large battery packs.

www.nidec-industrial.com

Reygar Enables Cost-Effective Vessel Monitoring

Vessel operators working in the Atlantic towage and CTV markets are taking advantage of new, cost-effective technologies, allowing a digital approach to workboat and fleet monitoring. Reygar, the firm behind the innovative advanced remote monitoring platform, BareFLEET, is seeing growing demand from US operators. The cost-effective platforms, integrated into existing vessel systems has removed the barrier for workboats looking to leverage the benefits of advanced monitoring.

www.reygar.co.uk

Hanseaticsoft's Mobile App for Vessel Management 'on the go'

Hanseaticsoft has launched a new app as an addition to its Cloud Fleet Manager (CFM Go) to make it easier and faster for customers to access data about their fleet from mobile phones. Using CFM Go, customers have all information from the Cloud Fleet Manager Portal at their fingertips including crew changes, off hires, disturbances, claims, bunkers and more. All information can be managed and accessed in real time.

www.hanseaticsoft.com

Chopper Pumps solve Drydocking Problems

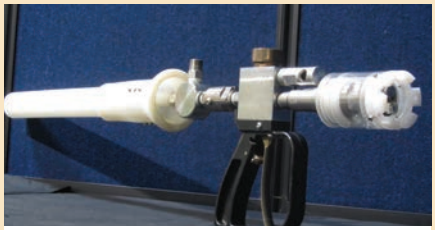
P&M Pump helps solve pumping problems occurring in drydocks. Where existing scavenge pumps struggle, progressing cavity pumps, specifically Vaughan Chopper Pumps with motors rated at 18.5kW at 1470 rpm, 415V/3ph/50Hz are self-priming and mounted complete with motors, including variable speed drive and capable of exceeding the original duty conditions. The control panel includes an ultrasonic level controller which monitors water levels in the dry dock sump.

www.pumpmix.co.uk

SPD-Smartglass Dimmable Windows for Passenger Vessels

Passengers marvel at magnificent seaside views, but can be uncomfortable with too much sunlight, glare and heat. Vision Systems' SPD-SmartGlass products are designed for the cruise industry to dramatically improve the passenger experience. At the touch of a button, the transparency level of windows, partitions, roofs, and other surfaces can be instantly and precisely changed, enabling management of light, glare and heat entering the interior.

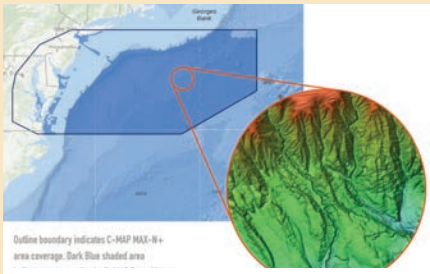
www.visionsystems.fr



Ship Propeller Cleaning with DYNAJETS Non-Abrasive Diver Tool

DYNAFLOW's underwater jet cleaning diver tool reduces propeller fouling removal maintenance time without being abrasive to propeller blades. The second generation Non-Abrasive Diver Tool (NADT) is small, lightweight, quieter than other water jet cleaners, and very efficient. The NADT uses advanced resonating and cavitating jet nozzles in a rotating head housed in a shroud that protects the surface being cleaned and reduces noise.

www.dynaflow-inc.com



C-MAP Reveal East Coast Charts Now Shipping

C-MAP Reveal charts for the East Coast offer all the navigation data and capability of a C-MAP MAX-N+ card, plus ultra high-resolution bathymetric (HRB) imagery of sea floors, including clear views of wrecks, isolated reefs and ledges between contour lines. The highly detailed C-MAP Reveal imagery replaces shaded-relief data in select areas with more accurate depth variations. C-MAP Reveal is available for Lowrance, Simrad or B&G chartplotters.

www.c-map.com

Victaulic Acquires Globe Fire Sprinkler

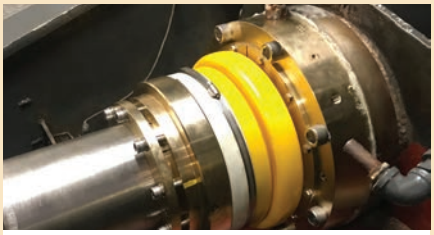
Victaulic has purchased Globe Fire Sprinkler. The combined firm has the resources and capabilities to bring exciting new solutions to the fire protection industry. This year Victaulic celebrates a century of innovation, 100 years since it was granted its industry patent for mechanical pipe joining solutions. Globe Fire Sprinkler is a fire sprinkler manufacturer with 105 years of continuous production of sprinklers and valves.

www.victaulic.com

Innovative New Line Launcher

IC Brindle & Co's ground-breaking new safety product is a Line Launcher by Kiwi Rescue Ltd. It can propel a high-vis safety line and flotation pod 80 meters with one powerful launch. Almost entirely reusable with replaceable CO2 cartridges, it can be used where combustible equipment is banned in hazardous environments. Designed for making a line connection between two parties, this includes STS transfer, man overboard and ocean lifesaving.

www.icbrindle.com



Thordon's Emergency Inflatable Seal Prevents Sinking

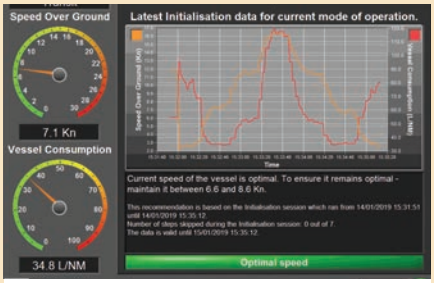
Activation of Thordon Bearings' revolutionary inflatable emergency seal recently prevented a 70-ft workboat from sinking. The crew of the 2002-built twin-screw workboat activated Thordon Bearing's TG100's secondary seal during operations in the lower Mississippi River, when the vessel suffered catastrophic tailshaft failure in shallow waters north of New Orleans, U.S.A. The incident resulted in one of the tailshafts being pulled clear of the gearbox and almost completely out of the boat.

www.thordonbearings.com

Nippon Paint's Ever Cool Coating

What industry needs is a darker coating that fails to absorb the heat: a coating like Nippon Paint Marine's Ever Cool. Introduced following extensive shipboard trials, Ever Cool is formulated to reduce the effect of the Sun's infrared rays. Requiring no special application tools or processes, Nippon Paint Marine uses advanced formulated reflective pigments to prevent surface temperature increases and lower heat transfer through steel plates.

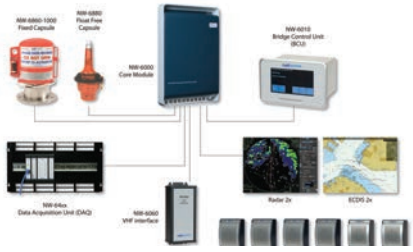
www.nipponpaint-marine.com



SCI: U.S. Agent for enginei EFMS Technology

Growing maritime sector use of electronic fuel management systems (EFMS) has prompted diesel power engineering specialist Royston to appoint a new US-based distributor for its advanced enginei technology. Standard Calibrations Inc. (SCI), a specialist measurement science company with extensive marine industry involvement, will now provide sales, installation and technical service support for the enginei EFMS across the USA.

www.enginei.co.uk



Orolia, Radio Holland Collaborate on Inland VDR Solution

Orolia's new partnership with Radio Holland involves a Voyage Data Recorder (VDR) specifically designed for inland shipping. This solution enhances safe navigation and provides tools for understanding the cause of incidents. Radio Holland will also be installing Orolia's Netwave VDR NW6000 series as its preferred global VDR solution. Orolia will utilize Radio Holland's global network as one of its globally preferred service partners.

www.oroliamaritime.com

Klüber Gear Oils Improve Gearbox Performance

Klüber Lubrication's new MRO gear oils are designed to optimize gearbox performance across many industries, and Klüber's American-made MRO gear oils include both mineral-based and synthetic PAO-based lubricants that benefit a wide range of applications. Intended for use in equipment with general industrial spur, bevel, hypoid and planetary gears subject to both normal and heavy loads, these oils protect equipment and prevent wear.

www.klueber.com

PYI's All 316 Stainless Marine Grade Hose Clamp

PYI's 316L stainless steel, non-perforated worm gear hose clamps are manufactured from 316L stainless steel; featuring a smooth inside surface, raised edge on the embossed heavy-duty band and a durable one-piece double locked screw cage. Designed to be gentle to most hose types and provide a long-lasting and stable clamping force for moderate pressure applications in marine environments, they come in a full range of sizes.

www.pyiinc.com

ASSISTANT STOREKEEPER
Military Sealift Command
Salary: $33,295 Per Annum Full Time

Description:
Announcement #: 19-852-02EXOC Title, Series, Grade (Code) Assistant Storekeeper, WM 9994-15 (852) Base Salary: $33,295 Per Annum Type of Appointment: Excepted Service Career-Conditional Opening Date: February 11, 2019 Closing Date Open Continuously With Periodic Cutoffs Location: Military Sealift Command (MSC) Vessels Worldwide Who May Apply: All United States citizens and current Military Sealift Command Civil Service Mariner (CIVMAR) eligible to apply under the Veterans Employment Opportunities Act (VEOA). Active Duty Service Members (ADSMs) must submit a certification (i.e., statement of service) at the time of application which certifies that the service member is expected to be discharged or released from active duty service under honorable conditions not later than 120 days after the date the certification is submitted.

Duties: The Assistant Storekeeper is a Civil Service Mariner (CIVMAR) employed by the Navy to serve the Military Sealift Command (MSC) onboard naval auxiliaries and hybrid-manned warships worldwide, in peace and war. MSC exists to support the joint warfighter across the full spectrum of military operations. MSC provides on-time logistics, strategic sealift, as well as specialized missions anywhere in the world, in contested or uncontested environments.

The Assistant Storekeeper is responsible to the Supply Officer/Junior Supply Officer for performing Supply Department functions assigned in accordance with COMSCINST 3120 and 4000.2 series directives and Program Specific Directives. Follows procurement, receipt, storage, Quality Assurance (QA) and expenditure procedures for all types of material. This includes proper material identification, handling, inventory management, warehousing, packaging, and transportation.

Procures all shipboard requirements using Government/Commercial sources. Assists with configuration validations; processes and updates Allowance Change Requests (ACRs), Fleet COSAL Feedback Reports (FCFBRs) and Configuration Change Reports (CCRs) as directed. Assists with handling of Hazardous Material (HAZMAT) as directed. Also assists in the Supply Department requirement of monthly Financial Improvement and Audit Readiness (FIAR) inventories and their submission to Global Stock Control(GSC). Assists in the proper use of Supply automated programs.

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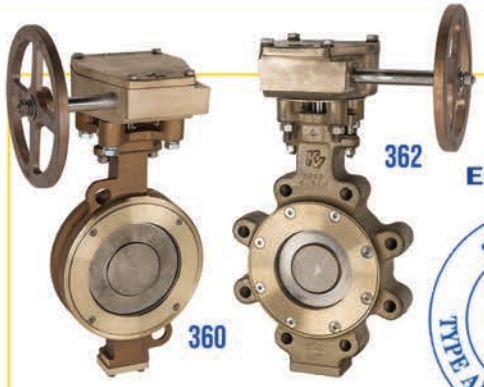

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Photo courtesy of Eastern Shipbuilding Group

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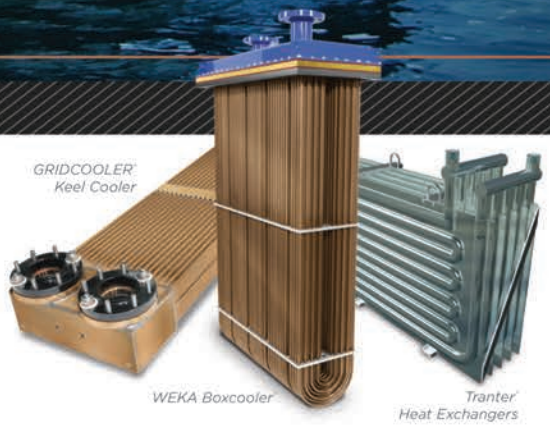

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