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Volume 30 • Number 12

Marine News

DECEMBER 2019

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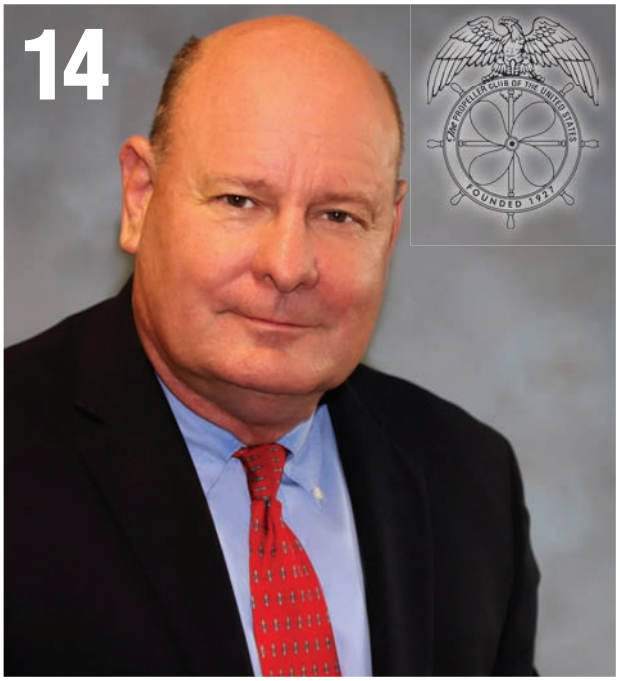
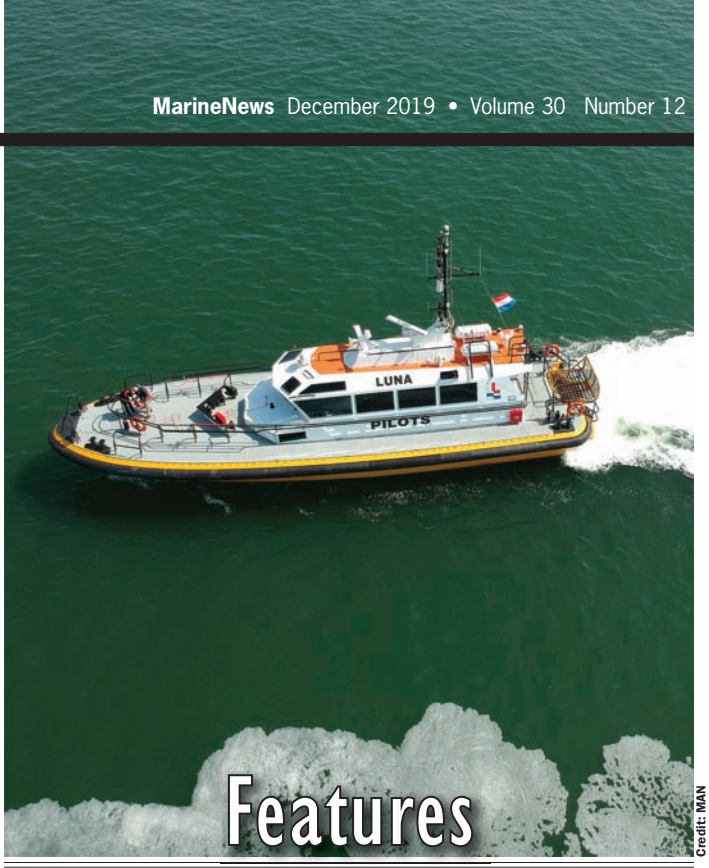


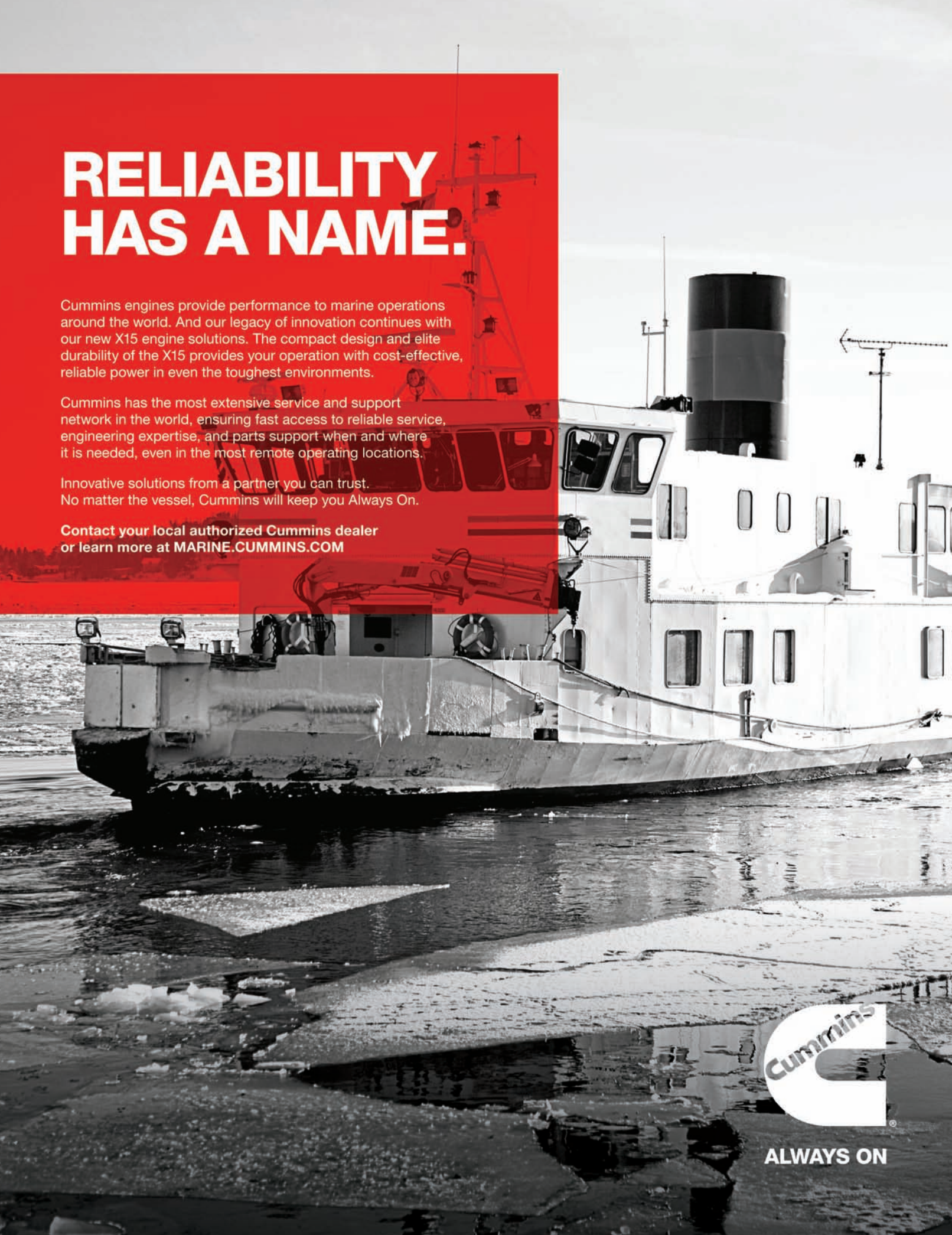


Credit: MAN

ON THE COVER

In October, All American Marine (AAM) announced the completion of construction for an aluminum research and survey vessel built for Duke University. The hydrofoil-assisted catamaran represents a cleverly designed arrangement from Teknicraft Design. The vessel, of course, is one our Top 10 Workboats of 2019.

Image credit: All American Marine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All stats from 01/23/2019

In September, *MarineNews* Editor Joe Keefe visited Namibia. While there, he climbed the world's highest freestanding sand dune.

PHOTO CREDIT: Debbie Keefe

A well-worn adage says that *'when one door closes; another usually opens.'* Trite as that may be, it is also true. Ten years ago the door opened up for me here at New Wave Media, and the 10 years that immediately followed have been the most satisfying and rewarding of my 40-year professional career. All that said; the New Year brings with it a sea change at ***MarineNews***. I will step down and retire on December 31st. Longtime *New Wave* editor and maritime journalist Eric Haun will become Editor in Chief. For my part, I can't think of a better choice.

The end of 2019 also brings with it the promise of a better New Year, not because we want it that way, but because (at least from my seat) many important business indicators are flashing *'GO'* on the domestic waterfront. As my time in the editor's chair winds down, this is a good time to stop and thank both Associate Publisher Greg Trauthwein and Publisher John O'Malley for the opportunities that I've been afforded here at ***MarineNews***, our other print titles and myriad e-platforms. It would be easy at a time like this to get soupy about a lot of things, but all worthwhile endeavors boil down to team efforts. Our work here at ***MarineNews*** was no different. I will miss that collaboration desperately.

The core team here remains in place, augmented by a strong incoming leader.

I've known and worked with Eric Haun for almost six years. He brings a savvy understanding of the rapidly evolving digital aspect of journalism and the energy that I can't match in the coming years. Importantly, his work product reflects journalistic integrity that, while in short supply in many other b-to-b shops, has always been the hallmark of what we strive to provide every day. That's one thing that will not change. This edition highlights not only the best newbuild vessels and products for the past twelve months, but also the top ten maritime stories of the year. That's because the unmatched 'b-to-b' delivery of ***MarineNews*** is inextricably entwined with the hard hitting news that ultimately impacts your bottom line. Within this edition, we celebrate the best of 2019. At the same time, we acknowledge that today's headlines and business analysis are every bit as important to your future bottom line. You'll continue to get both as we move ahead.

Here, and in more than a few other billets spanning the past four decades, I flatter myself that I've had a positive impact on our success at ***MarineNews***. As loyal readers and supporters of this quality brand, you've got the exact same opportunity. Eric looks forward to showing you the way. As that proverbial door opens for him and closes gently behind me, you can find me climbing the next hill in search of new opportunities of my own.

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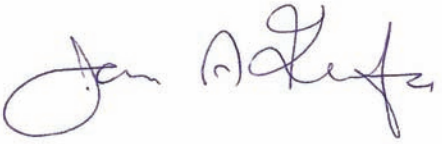

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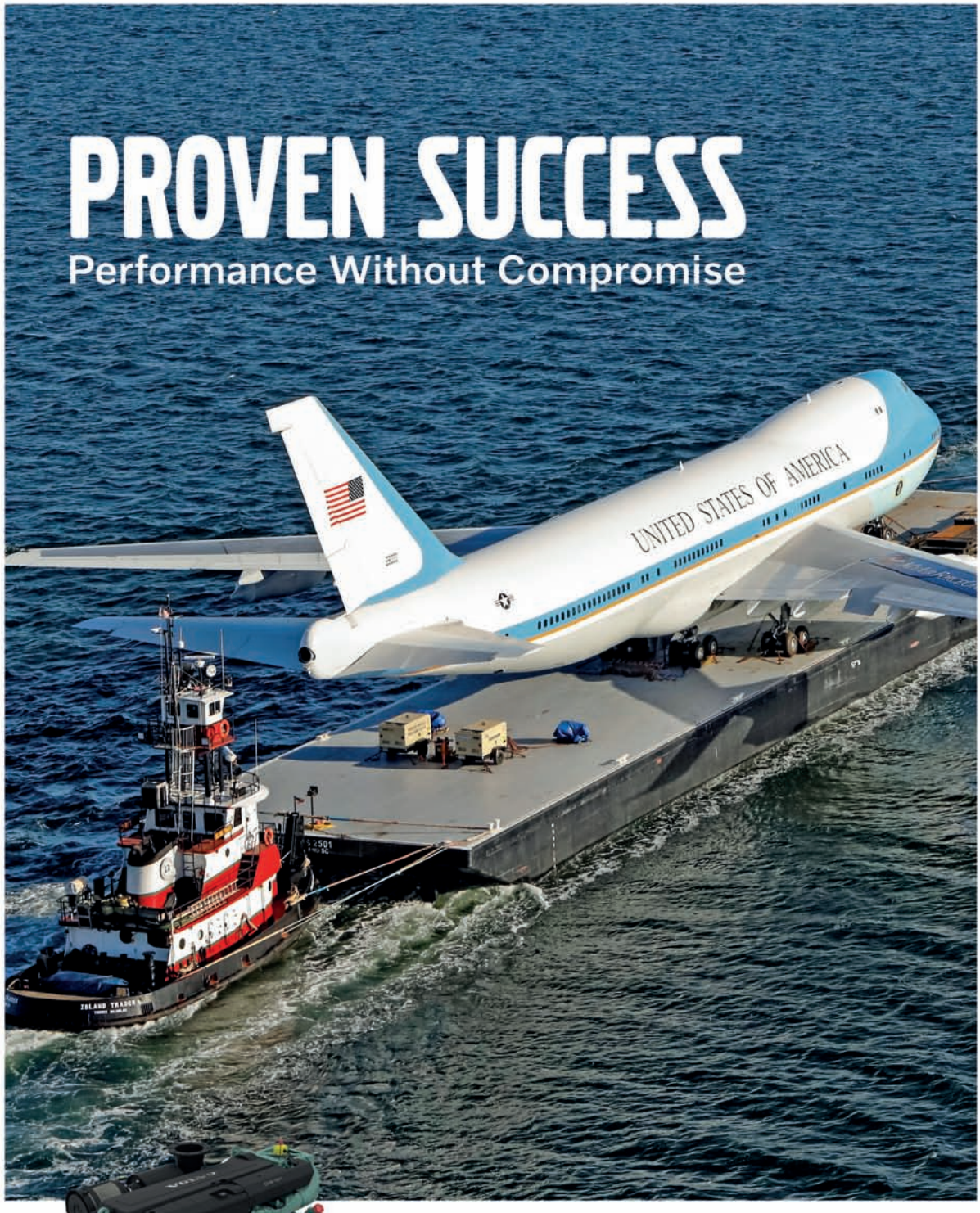

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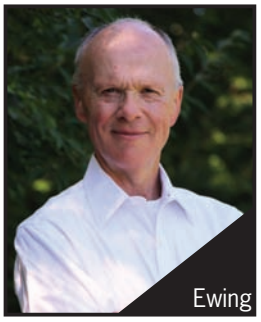
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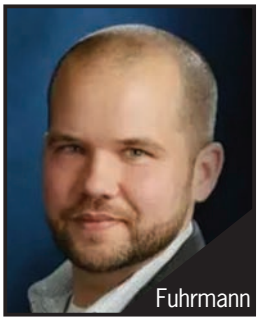
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At Last Count: a Changing U.S. Mariner Demographic

It has been a while (November 2017 to be exact) since we last took a look at the U.S. mariner population, its make-up and tried to make some sense of it all. And, since it's my last whack at this regular ***MarineNews*** feature, **By the Numbers** (one which I invented some 9+ years ago and the one monthly task that I will miss dearly), I decided to have some fun. With updates from both Marad and the U.S. Coast Guard at my fingertips, let's dig in!

Way back in 2015, a surge in license-track students at the nation's six state maritime academies (SMA) had matched the Jones Act blue water recapitalization effort then underway. Ships were being churned out, mariner demand was high, and salaries had spiked. Good times, right? By 2017, the deep draft employment situation had slowed. Today, the blue water employment situation continues to worsen while at the same time, the external threats to national security have arguably heightened. And, while Marad Chief Buzby continues to fret about the availability of deep draft licensed mariners, there is at least some good news to share.

The last three years as a collective statement from the nation's maritime academies have also brought the three most robust graduating classes since ***MarineNews*** began to compile this data. Averaging almost 1,100 unlimited licenses per year, fresh, shiny faced young officers are pouring into the marine workplace. The percentage of each class that opts for the license track option is also up, but at second glance, it can be seen that TAMUG is no longer showing total graduates; only licensed graduates. What's up with that? Hence, that number is probably static. Even that likely unrepresentative short term number didn't move the 11-year average needle very much. Nevertheless, and over the course of the last 11 years, more than 10,000 domestic unlimited license mariners have been produced. That's ***a lot*** of mariners for a couple of hundred merchant ships employing reduced manning protocols.

In the bad news department *(it's always something)*, it turns out that ADM Buzby's concerns are well founded. In 2017, the U.S. Coast Guard advised that 30,377 licensed unlimited tonnage mariners were available in the manpower pool. Fast forward to November 2019, that number – despite the record breaking maritime academy output – had declined to 25,611; a drop of almost 15%. And if that weren't alarming enough, the total mariner pool, looking back to 2011 where it peaked, is now down to 206,845 souls; a plunge of 11,030 mariners, or 5%.

But wait: *there's more!* It's also true that there is virtually nowhere for these new mariners to ship out (blue water style) as the U.S. flag deep draft fleet numbers remain static or decline slightly. Separately, the number of Coast Guard-issued unlimited tickets in 'Continuity' status (inactive and in need of training or recertification to renew) has climbed to an all-time high of 18,639, while countless others (myself included) have finally let the credentials lapse completely. *What's a mother to do?*

The obvious answer involves, at least in part, an effort to encourage and recruit more people to look at the waterfront as a career. Some of that involves bringing that awareness down to the secondary schools and beyond into the elementary school classrooms. Various stakeholders have recently done admirably in that regard. Maritime Education Pioneer (Captain) Art Sulzer immediately comes to mind. Bravo Zulu, Art.

Another avenue involves the recruitment of women into what has historically been (and still is) a male-dominated workplace. And, since it's the ***Year of the Woman*** on the waterfront (yes, I think I read that somewhere), I took a hard look at it. Actually, that journey began long ago, and I suppose its most conspicuous watershed moment was in the summer of 1974, when 14 women entered the U.S. Merchant Marine Academy at Kings Point. Another might be graduation day for the class of 1980 at the Massachusetts Maritime Academy, which was the last all male maritime academy graduating class in the United States. I can speak authoritatively about it since I walked across the stage on that muggy early summer day. Never fear, though; in the summer of 1977, six women found themselves unhappily doing pushups in the gym parking lot in Buzzards Bay, forever changing the landscape of the school. Some of these graduated in 1981.

So, you ask, how are we doing in the interim in changing that metric? Not too good, actually. Only 237 (11%) of the collective graduating classes of all maritime academies for the years 2017 and 2018 were female. Kings Point – it is a federal school, after all, with heavy pressure from Washington – fares the best, with just under 20% of their graduates being female. Of the state maritime academies (and counting ONLY licensed mariner graduates as a percentage of the totals), Maine clocks in at dead last, with women representing just 4.4% of its output.

As a matter of fair disclosure, the women's numbers for the preceding nine years on my chart weren't immediately available, and I was too lazy to dig them up. Seriously; in

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45 years, we (collectively) haven't come very far.

Actually, we have bigger problems: The number of privately owned/operated U.S. flag blue water hulls plunged to 181 hulls with only 99 of those, Jones Act eligible. Hence, a nation whose U.S. merchant fleet consists of about 40,000 vessels, 99.5% of which can be considered brown water, no longer needs a robust supply of unlimited tonnage/horsepower licensed mariners. Or, do we? For my part, and as editor of ***MarineNews***, I tell people all the time that the heart of the U.S. Merchant marine and its fleet today rests firmly within its brown water sector. That's true today and it will still be true ten years from now. And, no; all the efforts to mandate the building of horribly overpriced LNG carriers won't change that.

At the Massachusetts Maritime Academy, efforts have long been underway to adjust the school's course line for future mariner education. Two years ago, fully one-third of all deck graduates left Buzzards Bay with tug endorsements, and all deck license candidates (with a nod to brown water opportunities) were required to take three credit hours of diesel engine curriculum. And, it wasn't too long ago that the Military Sealift Command (MSC) offered employment to as much as 25% of MMA's graduating class. No more. Only a handful of cadets were interviewed and offered employment in 2015. The class of 2016 attracted no MSC employment offers. I don't have the 2017 or 2018 numbers. Surely they can't be much better. And, after all, Kings Point graduates need something to do.

Because about 60 ships remain in a reserve operating status (ROS), Marad remains rightfully and deeply concerned about the nation's ability to staff those vessels. In September, there was a fairly quiet (but significant) call up for drills. I only knew about it because a source sent me an E-mail. His kids got pinged. No idea how it turned out. Two years ago, Marad said there wasn't enough manpower to float a credible sealift response to a conflict for more than three months. Today, that situation has likely worsened. And, that estimate is arguably Marad's most compelling reason to keep the U.S. Merchant Marine Academy open, despite the well documented spate of self-inflicted wounds at Kings Point. To be fair, ADM Buzby has done a remarkable job in righting the ship there. It was a 'train wreck' *(only insiders would know what that metaphor means)* before he stepped in.

Moreover, the problem may not be whether there are enough mariners, but instead, whether enough with proper qualifications exist to competently man available tonnage. Gone are the days when deck officers could walk down the gangway of a boxship and directly onto a tanker. The advent of STCW ended all of that. From the engine side of the equation, almost one-half of ROS ships are steamships, an engineering discipline in short supply in the motorship era. Unfortunately, the steepest drop in available unlimited mariners, according to the U.S. Coast Guard, is within the ranks of licensed unlimited horsepower engineers, where numbers have dropped to their lowest levels since 2004. Unlike the mainstream media, I don't make these numbers up; I just report them.

Just 15 years ago, some SMA's teetering on the brink of extinction reinvented themselves and today, thrive bigger and more diverse than ever. That's a good thing. But, is what they look like today going to be the right platform to produce of the mariners needed tomorrow? It all depends on who you talk to.

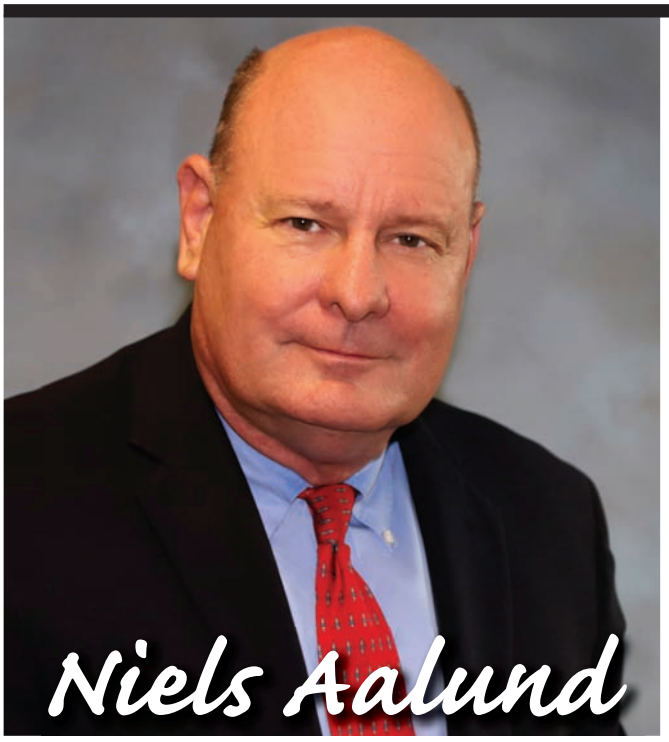
Sept. 2017 Blue Water U.S. Flag Count (1000 GT)	
Total Ships	181
Jones Act Eligible	99
Non-Jones Act Eligible	82

2019 U.S. Mariner Count	2001	2004	2005	2006	2011	2017	2019 (*)
Total Population	193,000	204,835	208,003	209,800	217,875	208,925	**206,845**
Ratings (MMC/MMD)	73,000	66,870	67,637	65,900	123,742	138,891	**57,169**
Licensed Mariners	85,000	95,789	99,023	102,100	145,292	147,937	**150,302**
Continuity Status	***	***	***	***	7,133	15,331	**18,639**
Unlimited Deck License	8,721	9,178	9,171	9,200	11,524	13,271	**14,390**
Unlimited Eng. License	9,680	10,500	11,925	11,500	13,271	17,106	**11,221**

Source: U.S. Coast Guard / (***) denotes data not then available.
(*) current U.S.numbers via USCG November 2019.

SMA & Kings Point Graduates and Licenses: trends & data at a glance ...

		CMA	Maine	Mass.	Michigan	SUNY	Texas	USMMA	All	PCT. Lic.
2008	Graduates	131	169	214	30	268	263	211	1286	
	Licensed	97	86	112	30	137	42	211	715	56
	Non-Lic.	34	83	102	0	131	221	0	571	
2009	Graduates	159	152	257	19	306	250	196	1339	
	Licensed	102	102	122	19	172	40	196	753	56
	Non-Lic.	57	50	135	0	134	210	0	586	
2010	Graduates	157	182	252	21	266	274	201	1353	
	Licensed	101	125	122	21	144	55	201	769	57
	Non-Lic.	56	57	130	0	122	219	0	584	
2011	Graduates	169	210	267	30	300	261	205	1442	
	Licensed	119	136	108	29	165	65	205	827	57
	Non-Lic.	50	74	159	1	135	196	0	615	
2012	Graduates	171	156	292	27	390	328	219	1583	
	Licensed	113	93	126	25	229	56	219	861	54
	Non-Lic.	58	63	166	2	161	272	0	722	
2013	Graduates	161	132	325	41	396	337	201	1593	
	Licensed	113	73	125	41	243	63	201	859	54
	Non-Lic.	48	59	200	0	153	274	0	734	
2014	Graduates	195	188	338	42	384	353	217	1,717	
	Licensed	134	117	121	42	241	79	217	951	55
	Non-Lic.	61	71	217	0	143	274	0	766	
2015	Graduates	186	229	324	44	405	411	224	1,823	
	Licensed	114	148	120	43	253	87	224	989	54
	Non-Lic.	72	81	204	1	152	324	0	834	
2016	Graduates	225	251	341	37	409	439	225	1,927	
	Licensed	122	172	169	37	287	101	225	1,113	58
	Non-Lic.	103	79	172	0	122	338	0	814	
2017	Graduates	224	244	343	47	442	103 (*)	174	1,577	
	Licensed	142	128	190	47	282	103	174	1,066	68
	Non-Lic.	82	116	153	0	160	0	0	511	
2018	Graduates	240	246	339	33	494	136 (*)	198	1,686	
	Licensed	124	142	178	33	289	136	198	1,100	65
	Non-Lic.	116	104	161	0	205	0	0	586	
TOTALS	Graduates	2,018	2,159	3,292	371	4,060	3,155	2,257	17,326	
	Licensed	1,281	1,322	1,493	367	2,277	827	2,257	10,003	
	Non-Lic.	737	837	1,799	4	1,783	2,328	0	7,327	



President, International Propeller Club

Niels Aalund was elected President of the International Propeller Club at their 93rd International Convention and Conference. The prominent maritime industry stakeholder will serve a two-year term, commencing from October 17th. Aalund, a well-known maritime subject matter expert and executive, also serves as an Officer and as Senior Vice President of the West Gulf Maritime Association (WGMA). WGMA communicates and coordinates with various governmental entities throughout the West Gulf, providing a forum for discussions and exchange of information between member companies.

As WGMA's most visible and active advocate, Aalund provides maritime industry liaison every day, advocating on behalf of member companies with local, state and federal agencies. Throughout his career, Aalund has provided leadership for a variety of maritime related positions. He has extensive strategic planning experience in both operations and commercial maritime activities, including but not limited to management positions overseeing liner, break-bulk and stevedoring groups. Those skills and attributes will serve him and his new constituents well, as he embarks on his latest professional journey.

Beyond his already impressive responsibilities, Aalund additionally serves on 14 regional and/or national committees and boards, including such groups as Director at Large, Houston Ship Channel Security District, Lone Star Harbor Safety Committee, Area Maritime Security council (AMSC), South East Texas Waterways Advisory Committee (SETWAC) , Corpus Christi Harbor Safety Committee (STWAC), National Association Maritime Organizations (NAMO), Propeller Club International Governing Board, North American Marine Environment Protection Association (NAMEPA), the University of Houston, College of Technology Dean Advisory Board, and he has been recognized as Distinguished Alumni, University of Houston – College of Technology.

A Houston native, Aalund is a graduate of the University of Houston. An active public speaker at industry programs, Aalund now leads The Propeller Club, a group originally conceived in 1922 and today, serves as an international business network dedicated to the promotion of the maritime industry, commerce and global trade. *Listen in this month as Aalund sets the organization's course for the coming year, and beyond.*

Congratulations on your election as President of the Propeller Club. Tell us about the organization and its many missions.

The International Propeller Club of the United States (IPCUS) was started in 1927 to promote the maritime industry both on a national and international basis. We are a grass-roots organization whose members work in both

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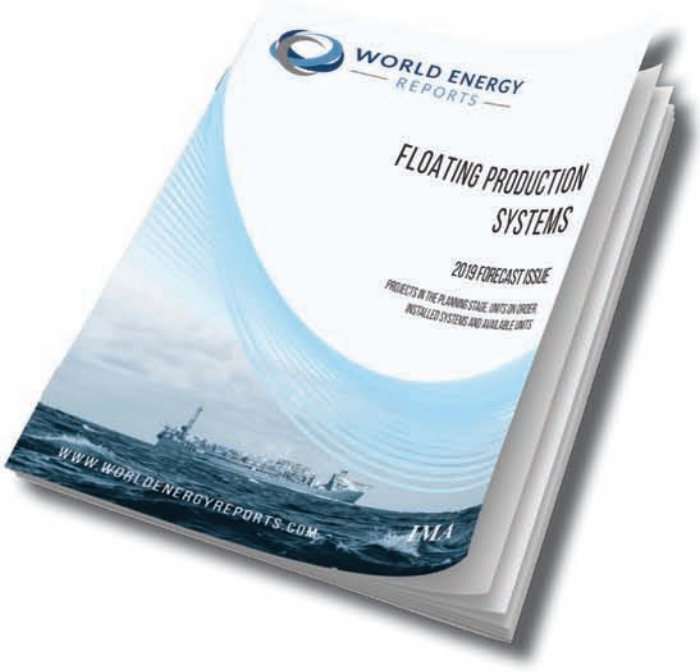

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the brown-water and blue-water sectors for vessel owners, shipyards, transportation intermediaries, ports, and virtually all segments of the maritime community.

As you take the helm at the Propeller Club, if you had to choose just one thing that you absolutely must accomplish in the next two years, then what would that be and why?

We have begun developing a strategic plan for the IPCUS that will lay out a vision and course for the clubs, both at the international level and the local level, for the next decade to meet the continuing needs of the maritime industry.

How does the Propeller Club accomplish its missions of advocacy? Tell us about how you, as the Propeller Club's most visible leader, can be most effective in your new role over the coming two years.

At the International Club level, we are developing strategic partnerships with other trade associations to advocate for the maritime industry. Because the Propeller Club is a grass roots organization, our members provide advocacy for the maritime industry at their local clubs by welcoming government and industry leaders to their events to discuss with them the international, national, and local needs of the industry.

Give us a sense of the Propeller Club's membership size, number of branches and national (and global) reach?

The Propeller Club has approximately 6,000 members world-wide. These members join local clubs. There are 41 in the United States and 30 around the globe. We are growing each year and recently added clubs such as Brownsville, Anchorage, and Casablanca.

Inasmuch as the U.S.-flag merchant fleet today is largely brown water-centric – about 39,500 out of 40,000 hulls – what can the Propeller Club do to enhance this sector's viability?

Most people think of the brown-water fleet as the inland and close-offshore industry. This includes most of the towing vessel fleet and the offshore supply vessel fleet. The IPCUS has local clubs throughout our inland waterway and Gulf of Mexico regions – such as Evansville, Louisville, Paducah, Mobile, New Orleans, and Galveston. These Clubs advocate for the inland towing industry on a local and State basis. In addition, the International offices support efforts in Washington that are critical to this segment of our membership – such as locks and dams, dredging, and the Jones Act.

The Jones Act, of course, is always a hot potato, but it significance as it approaches its 100th anniversary, is particularly noteworthy. Every day, opponents (try to) chip away at the Act's fundamentals. So, where does the Propeller Club fit into that discussion, and how will you be involved in the debate?

The United States has had laws restricting entry into our coastwise trade for over 200 years.

Credit: ABB

At least 91 countries, covering 80% of the world's coastline, have cabotage laws to promote their domestic maritime industry including France, Greece, and the United States. The International Propeller Club and our local clubs in these countries support all of these initiatives. The Propeller Club will continue to advocate for the U.S. cabotage laws which are a critical component to the U.S. maritime industry and industrial base. America's domestic fleet, supported by the Jones Act, helps ensure U.S. sealift capability and helps provide the trained mariners needed to defend our nation. The Jones Act is consistently supported by defense leaders, including the U.S. Coast Guard and the U.S. Transportation Command, and is an integral part of our country's national defense apparatus.

The recent news about the Harbor Maintenance Tax and the mandate to fully utilize its receipts for its intended purpose was a welcome milestone. Tell us about the Propeller Club's position on this important issue and where you got involved.

Shippers of good imported through U.S. ports pay a user fee to fund the maintenance and deepening of U.S. ports. However, due to budgetary restrictions, Congress has been unable to appropriate all the funds collected by the Harbor Maintenance Tax to dredge our nation's harbors. There is currently over $9.3 Billion in the Harbor Maintenance Trust Fund that has not been spent. Meanwhile, ships are getting larger and require deeper and wider channels to safely navigate. IPCUS supports H.R. 2440, the Full Utilization of the Harbor Maintenance Trust Fund Act, authored by Congressman Peter DeFazio (D-OR) that will allow $34 Billion to be spent over the next decade to improve our nation's ports.

Give us a sense of the state of the domestic waterfront – shipbuilding, waterways, ports, operators, etc. – today, and where we need to make the most dramatic improvements.

Approximately 90% of the world's trade moves by water. The United States is the largest trading country in the world. Therefore, the demands on our maritime infrastructure keep growing. In the past decade, the carrying capacity of container ships has increased from approximately 6,000 TEUs to nearly 24,000 TEUs. Ports in the United States need to be deepened, terminal cranes increased in size, and intermodal connections improved to meet these demands. Without the strategic investments in the maritime transportation system the cargoes will not move, economies will stagnate, and cargo will clog our ports.

Domestic shipbuilding and ship repair industries generate more than 110,000 jobs in all 50 states today. What's your assessment of the condition of that industry today and what can the Propeller club and its many stakeholders do to strengthen it?

On the commercial vessel side, thousands of towing vessels, barges, commercial fishing vessels, offshore supply vessels are built and repaired each year in U.S. shipyards. On the U.S. Navy side of the market, our shipyards need a steady stream of work to meet our national security needs and provide a predictable annual funding so they can invest in state-of-the art facilities and workforce development. The International Propeller Club supports all of these initiatives. We are also reaching out to schools and the next generation of workers by developing educational curriculum to help high school students understand the career opportunities that are available to them in the maritime industry including the shipbuilding and ship repair industry. To date, Congress has appropriated $600 million to build two National Security Multi-Mission Vessels (NSMVs) which will be used as training ships for our maritime academies. An additional $300 million is in the pipeline for this fiscal year. The goal is to build five NMSVs for the state maritime academies and the Merchant Marine Academy. This is a significant shipbuilding program that will benefit U.S. shipyards as well as providing our academies with state-of-the art ships to train our mariners for years to come. The International Propeller Club strongly supports this program.

The Propeller Club has urged the Federal government to "eliminate regulations that impede the utilization of U.S.-flag commercial vessels and to ensure that the U.S. tax code and other statutes encourage rather than discourage the movement of cargo along our coasts and along our waterways by U.S. vessels." Are we talking about the Harbor Maintenance Tax for shortsea cargoes?

The Harbor Maintenance Tax (HMT) creates a difficult barrier to overcome when it is applied to domestic shipping. The HMT is paid by the shippers – not the vessel owners. Because domestic cargoes do not have to clear customs, in many cases, there is not even a method to collect the HMT from the shippers. Imagine a vessel with 1,000 boxes shipped by United Parcel Services (UPS) in a single truck – how would you ever collect a tax on each of those boxes if the truck were on a short sea ferry. It's easier for a shipper to send this cargo by truck over the congested highway where they don't need to worry about

the expense or hassle of paying the HMT. Cargoes transported on U.S.-flag carriers serving Alaska, Hawaii, and Puerto Rico do not have to pay the HMT and neither should cargoes served by Short Sea Transportation.

Many stakeholders tend to focus on the blue water aspect of the Jones Act, but the threat to the inland and workboat sectors is just as great. Would you agree?

There are over 20,000 self-propelled U.S.-flag vessels that operate in our domestic fleet. In addition, there are over 31,000 barges that operate on our rivers. IPCUS supports each country's right to enact cabotage laws to promote their domestic maritime industries. Cabotage laws are not unique to the maritime industry. The United States does not allow a German air carrier to transport passengers from New York to Los Angeles. Why would we allow a foreign water carrier to go from Paducah to New Orleans? Allowing subsidized foreign-flag carriers to operate in our inland and workboat markets would be devastating to U.S. companies that have spent billions of dollars based on the laws that existed when they made those investments. I don't think that the Federal Government is prepared to compensate these companies and the vessel's mortgage holders for the economic loss they would experience if foreign-flag vessels were allowed in our coastwise trade.

The Propeller Club recognizes the economic importance of the U.S. maritime sector to the United States. Unfortunately, that awareness doesn't always make its way to the general public, or for that matter, inside the beltway. What can we collectively do to spread the good news?

You are correct – the maritime industry is largely invisible to the public. Those that directly use the maritime transportation system – such as farmers and manufacturers – understand the importance of the maritime industry to their business. However, the average consumer does not know that ships transported the television that they watch and much of the food that they eat. The maritime industry needs to carry out a social media campaign to educate the public about benefits they receive every day from the maritime transportation system and why they should support investments in our maritime infrastructure.

The Propeller Club urges a renewed and expanded use of Title XI to achieve the original objectives intended by Congress, namely to assist operators to obtain the financing necessary for the construction and reconstruction of vessels in the United States. But, the program isn't exactly vibrant today. Give us a sense of what needs to be done to revive it and The Propeller Club's role in that effort.

The Federal Ship Financing Program, commonly called the Title XI loan guarantee program, allows the Federal Government to issue a guarantee on the mortgage of a ship built in a U.S. shipyard. Since this program was enacted in 1936, the Federal Government has issued thousands of loan-guarantees – with relatively few defaults. This program has successfully created jobs in U.S. shipyards and aboard U.S.-flag vessels. There is currently $35 million available to pay for the default risk for new loan guarantees. This means that the Maritime Administration could issue approximately $300 million in loan guarantees to build U.S.-flag ships in U.S. shipyards. The Congress needs to appropriate additional funds and the Maritime Administration needs to issue more guarantees with reasonable financing terms.

A 2007 Act gave MARAD the authority to add U.S. citizen shipyards and operators in the SST/AMH coastal and inland waterways trades as Capital Construction Fund (CCF) Program "qualified vessel" participants. Why can't a pure passenger service operator – entities that form a large portion of our U.S. flag fleet – utilize the CCF for similar purposes? Does the Propeller Club get involved in this discussion? What's your organization's position?

The Capital Construction Fund (CCF) program was started to help vessel owners accumulate capital to build ships in U.S. shipyards. It operates much like an Individual Retirement Account (IRA) – but in this case the vessel owner may deposit pretax money into an account and then make a qualified withdrawal to build a build a vessel in a U.S. shipyard. Today, there are over 739 U.S.-flag vessels ferries that transport over 200 million people annually. Many cities are attempting to expand ferry systems to help alleviate congestion on the highway and decrease air pollution. The Propeller Club supports expansion of the CCF program to include passenger vessels such as ferries to help cities achieve these goals.

The Propeller club advocates for the maintenance of a robust United States-flag dredging industry that is sufficiently-sized to ensure deep water access for all vessels in large and smaller ports alike. Most stakeholders would agree that this industry does a good job,

to the extent that funding is available to them. Would you agree?

The U.S. dredging industry is a vital component of the maritime industry that responsible for helping meet the needs of commerce and national security. Without this industry our ports and waterways would quickly fill with silt. Naval ships would be unable to operate out of many of our strategic seaports. Waterborne commerce would quickly come to a halt. The U.S. dredging fleet is comprised of more 50 companies operating more than 400 dredges. The dredging capacity of this fleet has recently increased by 34% with the addition of new hopper dredges. In addition, the industry will build additional dredges when the Federal Government increases the long-term funding for dredging projects.

The Propeller Club supports the Federal and State Maritime Academies in many ways. Tell us about these efforts; how they come about, and their ultimate impact on these important schools.

The International Propeller Club has a Student Port at each of these Academies. Our local clubs often work with the Student Clubs on programs to help these students begin to develop a professional network with others in the maritime industry. The IPCUS just changed our bylaws to allow graduates of these schools to have a free one-year membership in the Propeller Club to aid in their continued professional development. We are committed to promoting maritime education and training. Therefore, the International Propeller Club, through our local clubs, award tens of thousands of dollars in scholarships to students attending these academies each year.

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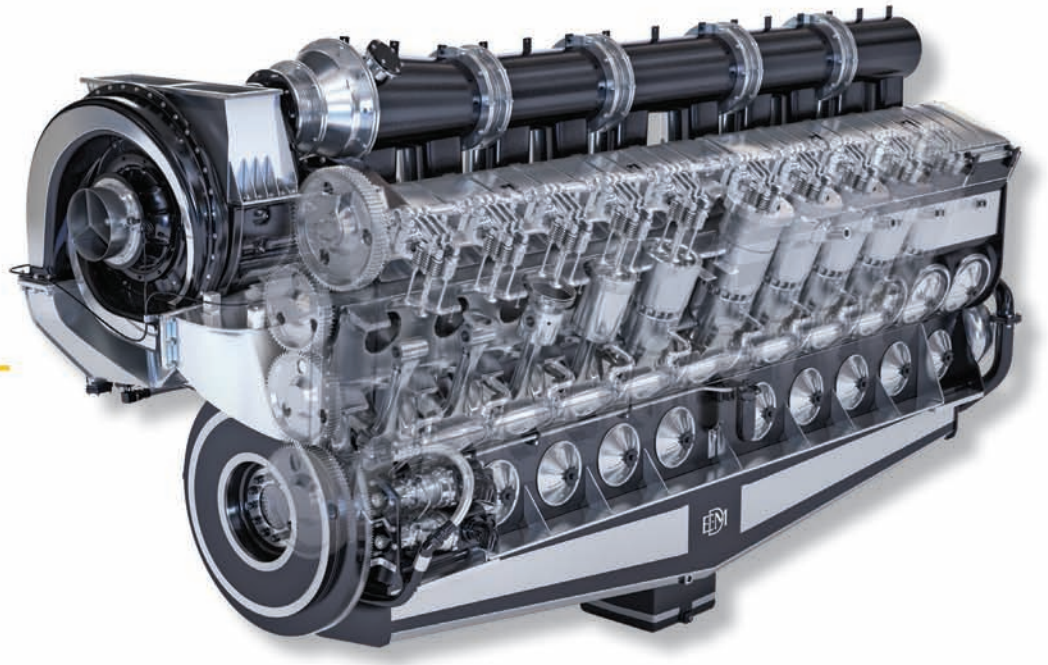

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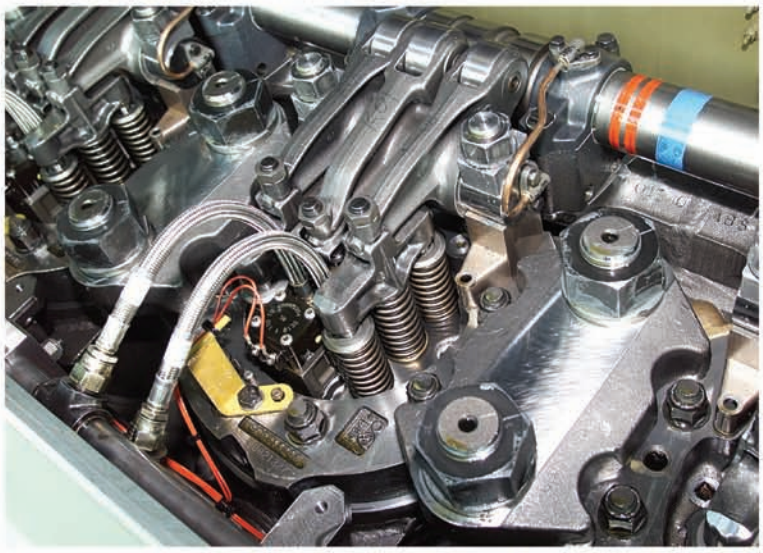

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What good Boats Can Do

(Much) more than offshore energy support.

By Chad Fuhrmann

Fuhrmann

Stay in your lane. Ignoring such wisdom can result in catastrophe if you're drag racing and lead to general unpleasantness on bowling league nights. This same guidance in other circumstances, for example, can be toxic. It can inhibit innovation and, at the worst possible moment, prevent the sensible use of available resources to improve a bad situation.

In satisfying the demands of the offshore energy sector, the U.S. maritime industry has developed incredibly versatile tools. The vessels that make up the Jones Act qualified offshore energy and construction fleets are highly adaptable resources. They can serve a wide variety of functions outside of their everyday industrial missions. For this reason, it's time to remove unnecessary restrictions and allow these assets to respond to disasters with the full strength of their capabilities.

Lessons Learned

Imagine the positive impact that these available resources could exert, especially if allowed to respond to regional and global crises. Recent catastrophic events have provided means by which offshore energy vessels could demonstrate their capabilities in the face of disaster. Hurricanes *Maria* (2017) and *Dorian* (2019) revealed the known gaps in the nation's maritime response strategy, but likewise signaled opportunities for much-needed collaboration.

In the aftermath of these disasters, the offshore sector answered the call for assistance. U.S.-flagged OSVs, MPSVs, crewboats, and liftboats were capable of immediate response in support of humanitarian crises. In the case of *Maria*, however, some vessels were blocked by conflicting interpretations of regulations. Others were turned away as a result of response organizations' lack of understanding of a vessel's capabilities and legal operating requirements.

The Hurricane *Dorian* response demonstrated a marked improvement. Shortly after the disaster struck, the United States Coast Guard (USCG) reacted to industry demand, releasing guidance for vessels seeking to participate in relief operations (CG-CVC Policy Letter 19-03). The result was a much smoother process by which the industry understood what information was sought by the USCG in waivers and could submit the necessary requests accordingly. In short, industry knew what questions were being asked so they could respond with the correct answer and quickly respond to the storm-battered Bahamas.

Even as the after-effects of Dorian were still unfolding, the National Offshore Safety Advisory Committee (NOSAC) capped off a yearlong effort by approving the Final Report

Credit: OMSA

"... OMSA and its members have continued to engage the USCG and FEMA in discussions about the industry's capabilities and the Nation's response requirements. The impetus behind the effort was hurricane response, but the recommendations can improve the maritime response strategies for any crisis scenario. These methods are designed to work across agency and industry boundaries."

of the Restoration and Recovery Activities Subcommittee. Within its recommendations, the report represented a pioneering step in the application of versatile offshore assets for crisis response with the cr*eation of the* Response, Restoration, and Recovery Vessel ("Triple-R", or "TRV") endorsement. This endorsement and related capability matrix were recommended for integration into the USCG Marine Information for Safety and Law Enforcement (MISLE) system for cross referencing with the needs of the response organization.

This endorsement would be assigned based on USCG vetting of the disaster related activities of which a vessel is capable without significant changes to its design. Temporary in nature, the endorsement would supersede certain restrictions imposed by regulatory restrictions to allow vessels to respond to a disaster, but only within the scope of their capabilities. This would prevent vessel owners from needing to request a USCG waiver, thereby and all but eliminating any delays in a vessel's ability to respond.

The Offshore Marine Service Association (OMSA) and its members recognized the potential of the approach espoused within NOSAC's recommendations. As *Dorian* thrashed the Bahamas, the Association applied a version of the matrix capability assessment. OMSA was able to provide a database of over 50 immediately available assets to response organizations including the USCG and the Federal Emergency Management Agency (FEMA). This database demonstrated the multiple capabilities of marine assets that were instantly available for response operations.

Steward–Ships

Point A to B and back again. The transport of goods and services serves as the single industrial mission common to virtually all marine vessels.

What sets many vessels in the offshore energy and marine construction industries apart is that they are capable of so much more. During times of crisis, response organizations require multiple resources for myriad purposes, all of which U.S.-flagged vessels in the above-mentioned industries are proficient in providing.

Since the release of the NOSAC report, OMSA and its members have continued to engage the USCG and FEMA in discussions about the industry's capabilities and the Nation's response requirements. The impetus behind the effort was hurricane response, but the recommendations can improve the maritime response strategies for any crisis scenario. These methods are designed to work across agency and industry boundaries.

Do Not Stay in Your Lane!

The capabilities required in any disaster response involve fueling, lifting, transport, and firefighting. Or, in other words, the arguably perfect description of the daily activities of typical offshore energy or marine construction vessels. In fact, the utilitarian nature of a modern OSV, MPSV and/or crewboat allows it to execute several of these functions without deviating from its core design. Where changes are necessary, the modularity of such equipment as portable accommodation and industrial modules makes mission variations similarly easy. Any unique modifications required for communications, housing, and emergency power functions can be affected in little more time than would constitute a typical port stay.

This adaptability, in combination with the temporary reprieve from regulatory restrictions offered by the proposed TRV endorsement, can better position the industry to respond to crises. But nothing can progress without further cooperation from regulators. The Coast Guard initiated the NOSAC Task Statement in response to pressure from OMSA and Congressional leaders such as U.S. Senator Bill Cassidy (R-LA). However, there was also recognition of the need for response agencies to be more proactive in understanding the response capabilities already available.

Of course, an important part of the U.S. Coast Guard's myriad missions is to ensure maritime safety. Within that scope it must enforce regulations including those which may restrict the ability of certain vessels to respond to disasters. This mission, however, must be balanced with its vision of preparedness to serve and protect the Nation's citizens and interests. During a disaster, strict enforcement should not impede critical humanitarian objectives, particularly if thoroughly vetted, capable assets are available to assist.

Chad *is the Director of Regulatory Affairs for the Offshore Marine Service Association (OMSA). As a licensed Chief Engineer and subject matter expert, he has consulted with numerous organizations focusing on developing awareness of marine operations at the individual level and within organizations. Chad is active in various industry volunteer efforts including the National Offshore Safety Advisory Committee and the Marine Technology Society Dynamic Positioning Committee.*

The Good, Bad, and the Undeniably Ugly

By Jeff Vogel


Vogel

The end of 2019 promises to be a busy, and potentially discordant, legislative and regulatory period for the United States maritime industry as both Congress and the Executive Branch look to take decisive action, with both positive and negative potential impacts depending on your perspective. With appropriation and authorization bills still pending, and various open regulatory actions, there are significant opportunities for maritime stakeholders to influence policy outcomes.

Funding Fights Continue in Congress

On October 31, 2019, the Senate passed the Fiscal Year (FY) 2020 transportation spending bill, which contained a number of positive elements. For example, the bill would provide full authorized funding for the Maritime Security Program (MSP), seeking to ensure that all sixty (60) U.S.-flag vessels enrolled in the program receive their full stipend amount. The spending bill also contains an additional $300 million to fund the construction of the third National Security Multi-Mission Vessel (NSMV), which would replace the STATE OF MAINE as the Maine Maritime Academy's training vessel. The bill would also provide $20 million in funding for the Maritime Administration's (MARAD) Small Shipyard Grant Program.

While the news was positive for U.S.-flag operators and U.S. shipyards, the Senate bill received a less enthusiastic response from U.S. port stakeholders. While the House of Representatives' version of the spending bill, passed by the House in June 2019, contained $225 million for the Port Infrastructure Development Program and $15 million for the Short Sea Transportation Program (America's Marine Highways), the Senate version proposes only $91.6 million and $7 million, respectively, for the two programs. The American Association of Port Authorities (AAPA) expressed concern over the Senate reductions and will seek to support the House's funding levels when the bill goes to conference to resolve the differences between the House and Senate versions. However, another stop-gap spending bill may be necessary before these differences can be resolved. As this column was penned, the current Continuing Resolution is set to expire on November 21, 2019, creating the threat of yet another government shutdown.

Potential for New and Expanded Programs

The National Defense Authorization Act (NDAA) for FY 2020, which remains stalled in the Senate over partisan disagreement on the use of military funding for the border wall and other issues, nevertheless also contains a number of exciting possibilities for the U.S. maritime community. The bill would reauthorize the MSP, extending the program through FY 2035, and increasing the annual stipend to $5.3 million per vessel starting in FY 2022 (with additional escalators in FYs 2026, 2029, and 2032). The program's extension should be welcome news to operational planners at the U.S. Transportation Command (USTRANSCOM), which rely on the availability of the MSP fleet's sealift capacity and intermodal access to plan future operations.


Credit: AdobeStock © SunnyS

In addition, the NDAA for FY 2020 would establish two new programs modeled in part off of the MSP – the Tanker Security Program and the Cable

Security Program – which seek to grow the U.S.-flag fleet. The Tanker Security Program would establish a fleet of ten (10) active, commercially viable, militarily useful, privately owned product tankers to meet national defense and other security requirements. Similar to the MSP, in exchange for an annual stipend payment U.S.-flag tankers enrolled in the program would be required to (a) operate in U.S. foreign commerce, or mixed U.S. foreign commerce and domestic trade, and (b) enroll in an emergency preparedness agreement to provide vessel capacity, terminal facilities, and related services when required by USTRANSCOM. On November 1, 2019, in a potential sign of optimism for the bill, MARAD published a notice seeking public comment on its draft Voluntary Tanker Agreement, which would serve as the Tanker Security Program's emergency preparedness agreement.

In a similar manner, the Cable Security Program would seek to enroll two (2) U.S.-flag cable vessels to meet national security requirements. In exchange for a $5 million annual stipend, the vessels would be required to engage in "cable services" and would be enrolled in a contingency agreement to make the vessels and associated resources available to meet Department of Defense (DoD) needs. While both programs passed the House in July 2019, it is unclear how they will be treated in conferences with the Senate.

In a move welcomed by U.S.-flag vessel operators, the House-passed Coast Guard Authorization Act for 2019, directs the U.S. Comptroller General to conduct an audit regarding the enforcement of cargo preference laws. The audit would evaluate the compliance of civilian agencies under the Cargo Preference Act of 1954, the Export-Import Bank under Public Resolution 17, and DoD under the Cargo Preference Act of 1904, in addition to reviewing enforcement activities undertaken by MARAD. The report would also include recommendations on actions that should be taken to ensure full compliance with U.S. cargo preference laws and other measures that may compel government agencies, and their contractors, to use U.S.-flag vessels. If passed by the Senate, and implemented as envisioned, the audit would provide unprecedented clarity into the movement of government-impelled cargo. However, the audit would undoubtedly be a contentious undertaking for shipper agencies, which often have their own unique views of cargo preference requirements.

Regulatory Action Seek Operational Changes

Finally, two Executive Branch agencies are undertaking noteworthy rulemakings on which maritime stakeholders should keep a close eye. First, on October 23, 2019, U.S. Customs and Border Protection (CBP) again proposed significant revisions to its Jones Act letter rulings regarding the transportation of "vessel equipment" (which does not constitute "merchandise" and therefore falls outside of the Jones Act's requirements). Over the last forty years, CBP has taken an arguably expansive view of "vessel equipment" generally interpreting the term to include items that were necessary for the "mission of the vessel."

The proposed modification would limit "vessel equipment" to items which are "necessary and appropriate for the navigation, operation or maintenance of a vessel and for the comfort and safety of the persons on board." Examples of such equipment include "those items that aid in the installation, inspection, repair, maintenance, surveying, positioning, modification, construction, decommissioning, drilling, completion, workover, abandonment or similar activities or operations of wells, seafloor or subsea infrastructure, flowlines, and surface production facilities." CBP's notice emphasizes "that the fact that an item is returned to and departs with the vessel after an operation is completed, and is not left behind on the seabed, is a factor that weighs in favor of an item being classified as vessel equipment, but is not a determinative factor."

In addition to CBP's notice, on September 17, 2019, the Federal Maritime Commission (FMC) issued a proposed rule as a follow-up to the Commission's Fact Finding Investigation No. 28, regarding the conditions and practices relating to detention, demurrage, and free time. The proposed rule sets forth a list of factors the FMC would consider when determining whether the assessment of demurrage and detention is reasonable (and therefore lawful under the Shipping Act). The FMC's proposal has placed shippers and ocean transportation intermediaries in direct opposition to ocean carriers and marine terminal operators, as evidenced by comments submitted prior to the October 31, 2019, public comment deadline. The collective transportation community anxiously awaits the FMC's response to the submitted comments.

Thus, with funding and authorization fights continuing in Congress (under threat of government shutdown and a divisive impeachment process) and contentious regulatory actions affecting all corners of the marine transportation system, the final days of calendar year 2019 will likely have a lasting impact on the U.S. maritime industry.

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

Taming the Bull

The beneficial use of dredge material sets a record in FY 2019. And, we're just getting started. Funding will be the key.

By Sean Duffy

Duffy

In mid-November 2018, concerns began to rise about an unseasonably high river stages on the Upper Mississippi River Basin generated by significant precipitation events. As a navigation representative on the Lower Mississippi River, I have unfortunately learned that the river system is changing and that precipitation around the world has been increasing for decades. In late 2015, I had similar concerns but downplayed them because high river on the Mississippi River Ship Channel typically holds until March or so. Little did we know we were about to become part of history and that the earliest ever opening of the Bonnet Carré Spillway was just a few weeks away.

The 2016 opening of the Spillway on January 10, 2016 was a sign that our lives were changing although at the time many thought this to be just another anomaly, since then multiple records have been broken including the repeated operation of the Spillway as water management structure for flood control or more appropriately for flood management. No one controls the Mighty Mississippi, although there is an experienced team of subject matter experts that continually try. The truth is, it is kind of like managing a bull ride – hold on.

Uncharted Waters

Any one of the three Spillway openings since 2016 should be the proverbial wake-up call that we as a nation should focus on. That's because the Mississippi River Ship Channel connects more miles of navigable waterways than the rest of the world combined and carries an annual economic impact of nearly $750 billion and is directly linked to approximately 2.5 million jobs. The 2018 opening of the Bonnet Carré Spillway only lasted 23 days, but it did provide ample warning that these events are occurring more frequently. That event, however, will forever be tied to the record broken by the opening in back-to-back years with that of February 2019.

It was clear that few, if any stakeholders really understood that we were then in a flood fight for the ages. Then came the mind-numbing stage level rise that led to the second opening of 2019. The Great Flood of 2019 eclipsed stage level records across the majority of the Mississippi River Basin, especially below Cairo, IL. All but a handful of mainline river cities established record length of flood stages. Where records were not eclipsed, it was because of improvements made to the system including the addition of backwater storage added by the Flood Control Act of 1928.

The river stage at Baton Rouge was above flood stage for 211 days, shattering the previous record set during the 1927 Flood (135 days). The stage level at New Orleans was above 11 feet for 292 days even with the Bonnet Carré opened for 123 of them. The first opening lasted 44 days and the second opening (79 days) is the longest single opening of this critical flood control structure. A river stage of 10 feet and rising at New Orleans is also a safe approximation for when we need to dredge the revolving door to International Trade known as Southwest Pass. In spite of heroic efforts and a record level of Emergency and Supplemental Federal Funding draft restrictions were required in Southwest Pass for 205 days.

The impact of this collective event was catastrophic. Preliminary estimates from the U.S. Army Corps of Engineers say that the extended high river and historic flood event impacted $6-7B worth of cargo that would typically transit through the Mississippi River's Southwest Pass.

Digging Deep for Answers

Where did all the water come from? It starts with the wettest 12-month period since recordkeeping began in 1895. A NOAA report released in July 2019 documented that the rain – and plenty of it – that fell in June 2019 only added to a record-breaking 12 months of precipitation for the contiguous United States. Beyond this, wet conditions from July 2018 through June 2019 resulted in a new 12-month precipitation record in the U.S., with an average of 37.86 inches (7.90 inches above average).

All that said; 'if you have seen one flood, you have seen one flood.' Each has different impacts and recovery comes in all shapes of the mud puddles. Few can argue that our na-

tion's three greatest floods were along the Mississippi in 1927, 1973 and 2019. An important metric is related to the volume of water involved. By comparing 'acre feet' as a water-volume measuring stick, it can be seen that not only did The Great Flood of 2019 pass more water than the other two, but it did so by a considerable margin.

Rank	YEAR	acre feet
1	2019	910,000
2	1973	725,000
3	1927	700,000

Flooding along the Mississippi River has increased both in frequency and magnitude during the past three to five decades. During the 49-year period of 1970 to 2018, stages at Cairo, Illinois – the confluence of the Mississippi and Ohio Rivers – have exceeded major flood stage of 52.0 feet 16 times, as opposed to 13 times during the 72-year period of 1898 to 1969. Indeed, it has been well documented that total annual precipitation has been increasing, not only across the United States, but worldwide, over the past 100 years.

Always looking for the positives, the Ship Channel is at authorized channel dimensions and the beneficial use of dredged material will continue to add acreage and create New Louisiana on annual basis. Since cutterhead dredges were added to the toolbox for channel maintenance in Southwest Pass, approximately 9,500 acres of wetlands have been restored below Venice in the environmentally sensitive birds'-foot delta. This critical acreage helps protect the Ship Channel and restores migratory bird flyways and provides habitat for numerous other species.

This beneficial use of dredged material project – or Sediment Recycling – is the largest wetlands restoration project in the World, involving 132+ million cubic yards (mcy) of material used to restore almost 10,000 acres in a ten-year period.

In fact, the top three records for the beneficial use of dredged material were all set in the last four fiscal years. During FY2019 alone, 25.60 mcy of dredged material was utilized while dredging the channel and the Hopper Dredge Disposal Area. 2019 saw records broken for record high-water, record funding (thankfully) and record cubic yards dredged.

In order to complete the goals of Flood Control Act of 1928, approximately $5 Billion in funds are needed for water infrastructure repair and replacements, including adding backwater storage, repairing levees, stabilizing banks and repairs to the nation's aging system of locks and dams. No less important is the need to facilitate continually increasing international trade with deepening and maintenance activities.

The present stage at New Orleans is 10.93 feet and that, too, is unseasonably high, but the metrics are all rapidly changing. What constitutes an 'average year' is now a constantly moving target. The eyes of the world are intently focused on the Mississippi River. That's because much of our economic success as a nation depends on our collectively ability to keep 'the bull' between the levees.

Sean M. Duffy, Sr. *is the Executive Director of the Big River Coalition. The Big River Coalition is committed to protecting maritime commerce across the Mississippi River and Tributaries (MRT) and is at the forefront of efforts to deepen the Mississippi River Ship Channel to 50 feet. Other key missions include securing increased funding from the Harbor Maintenance Tax and the Inland Users Fuel Tax, and to increase the beneficial use of dredge material or "sediment recycling." Duffy also serves as EVP and Maritime Advocate for the New Orleans Steamship Association (Louisiana Maritime Association).*

Beware of the Nominal Entity

Make Sure That You Know Who You Are Really Contracting With.

By Larry DeMarcay

DeMarcay

A famous U.S. politician once insisted that "it takes a village to raise a child." That said; any marine operator will tell you that it takes an even larger village and a ridiculous number of contracts to operate a vessel, and even more to manage a fleet of vessels. To make our marine operations run, we have to agree to contracts that provide for the construction or charter of a vessel, staffing, vessel catering, communications, fuel, maintenance, provisions, software, inspections, etc. The list of potential subcontractors is voluminous and it is endless.

Contracts can range in scope from a one-hundred-page agreement that provides for every potential eventuality to a one- or two-page document that spells out the basic details of the agreement. Regardless of the size and scope of a document, the contents of the document are critical when a dispute arises.

Who EXACTLY is Your Contractor?

One of the often overlooked components of the contract is the actual name of the entity that you are contracting with. Using a made-up example to protect the identities of companies that use this structure, your company may be working with a large oil company that operates globally under the "Oil Co" brand. Oil Co is a huge company with global resources that any contractor would love to work with. However, when you are presented with a contract, the actual name of the contracting entity can look something like "Oil Co – US Gulf Operating, LLC." As you negotiate the terms of the agreement, you negotiate with the belief that you are negotiating with Oil Co and that Oil Co will be standing behind the agreement. This assumption is reasonable as you are dealing with representatives of the parent company while structuring the transaction. Because you are comfortable with Oil Co, you are willing to concede on a few provisions that you would normally lobby for, and you may be reluctant to ask any questions about the contracting entity.

However, it is very important to ask questions about the contracting entity and perform some research to determine the corporate status and solvency of the particular entity that you are contracting with. A determination that a corporate entity is a wholly owned subsidiary of the larger entity does not automatically provide you with a guarantee from the parent company.

We often see situations where a party contracts with a "nominal entity" that is related to a larger company. Unfortunately, if the relationship falls apart, the company that contracted with the nominal entity often finds out that the company does not have the resources required to perform pursuant to the terms of the contract or otherwise satisfy any judgment rendered against the entity.

This situation often arises in marine operations when a company places a single platform, terminal, dock, vessel, or group of vessels, into a specific corporate entity and operates that entity independently while maintaining an affiliation with the parent company. If your company contracts with the specific corporate entity, you will not be able to protect yourself by pursuing a claim against the parent company, which is often the only entity with resources to satisfy a judgment as your contract is with a different corporate entity.

Garden Variety Mistakes – and Solutions

A real world example can be seen in a shipbuilding situation. Many vessel owners have longstanding relationships with specific shipyards that have built many vessels for them. Often the employees from the parent company will negotiate the agreement, provide for financing, coordinate the design of the vessel, manage the construction and make all equipment selections. However, the parent company may place the particular vessel into a corporate entity created solely to own the vessel. In the event that the parent company no longer wants to build the vessel, they can attempt to walk away from the project, forcing the shipyard to pursue a claim against the single-vessel corporate entity. Unfortunately, the corporate entity will have no assets except for the half built vessel that you have sitting in your shipyard.

A little planning can avoid this potential exposure by using the parent company as a guarantor, making sure that the entity is properly capitalized, insured or bonded, and making sure that the entity does not get too far behind making progress payments.

The easiest fix is to add the parent company as a party to the contract. Using our Oil Co example, the contracting parties could be listed in the agreement as "Oil Co – US Gulf Operating, LLC" and "Oil Co" hereinafter referred to as "Oil Co." Adding this type of language would obligate both entities to

the terms of the contract, providing you with an additional layer of protection.

If the company is not willing to add the parent company as a party to the agreement, you could add a provision where the parent company agrees to guarantee the contractual obligation in the event of a breach of contract by the subsidiary. If such a provision is added, a representative from the parent company must sign the agreement accepting such responsibility.

The risks of dealing with an 'assetless' corporate entity could be alleviated by adding contractual language that forces the corporate entity to procure adequate insurance or a bond that would cover the company's liabilities or guarantee the company's performance under the contract. Under this scenario, the insurer would be available to satisfy any liabilities that may arise or the bonding company could be called upon to guarantee the company's performance under the contract.

All is not lost if you have a claim against an assetless corporate entity. You can still pursue a claim against the parent company by attempting to pierce the parent company's corporate veil of protection. You can argue that your day-to-day dealings were with the parent company's employees, the parent company provided financing, the parent company supplied owner supplied equipment, etc. If you can paint a picture showing that the parent company was attempting to use the shell of an assetless corporate entity simply to protect itself from liability while failing to operate the entity as a separate corporate entity, you have a chance to make the parent company satisfy a claim.

Unfortunately, the need to pierce the corporate veil of a parent company complicates your litigation strategy making the pursuit of a claim against the parent company significantly more difficult, risky and expensive. Nevertheless, the risk of contracting with a separate corporate entity or subsidiary can be eliminated by spending a little time while negotiating the contract to make sure that the company has the resources needed to satisfy the obligations of the contract and that it is not simply a shell company that will leave you holding the bag if the relationship falls apart.

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**

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Investing in Safety for All the right Reasons

It's time to upgrade to a Marine Evacuation System.

Credit: CMLF

By Derek Robinson

As domestic traffic from coast-to-coast continues to worsen, ferry operators are seeing a steady growth in passenger demand. As passenger demand grows, so does the demand for efficiency and hybrid technology to be incorporated into fleets. But what innovations support a fleet's number one priority – safety? Will efficiency and the latest green technologies support these critically important vessels in an emergency situation? Is the crew aware of how much time they have to evacuate all passengers?

Traditional ferry evacuation systems require passengers to be loaded onto lifeboats on deck, with the boats then lowered into the water. Some other systems require passengers to jump from the deck into the water and swim to life rafts. All that said; it is difficult to imagine requiring elderly or disabled passengers to take this risk.

As fleet upgrades and maintenance budgets are determined for 2020, it's necessary to make a Marine Evacuation System (MES) a top priority for the year. MES systems have been supplied to over 750 vessels in use worldwide to a diverse customer base ranging from Navies, ferry operators, and cruise ships. In order to secure approval and installation of an MES unit, there is an extensive amount of data and planning required. Supporting that process and providing guidance on how to avoid some common missteps along the way, the Cape May-Lewes Ferry (CMLF) – at least on the domestic side of the equation – has been one of few early adopters of this important tool.

Notable MES Upgrades

In August 2019, the Cape May-Lewes Ferry (CMLF), owned and operated by the Delaware River and Bay Authority, completed the installation of a new MES aboard all three vessels in its fleet; namely, the MV Delaware, MV New Jersey, and MV Cape Henlopen. MES provides mass evacuation via inflatable life rafts and vertical chutes that are automatically deployed and inflated. The MES is intended to greatly increase evacuation capacity. In fact, no other single life-saving appliance has shown that it is capable of safely evacuating more than 790 people in less than 30 minutes.

MES is a welcome upgrade for CMLF that impacts the nearly one million passengers that this system transports across the Delaware Bay annually. CMLF has never had to evacuate a boat in a real emergency, but the financial commitment represented by this safety enhancing investment is ample proof that should such an unlikely event occur, these vessels will be more than ready. The new system, manufactured by Survitec, a proven worldwide provider of marine safety and survival equipment, makes the evacuation process faster and more efficient.

In a nutshell, passengers aboard the ferry go down an inflatable slide from the deck onto a large life raft already waiting on the water's surface below. CMLF is approved to evacuate up to 750 passengers within 30 minutes; however, with this new MES installation, virtually all of the vessel departures would be evacuated within 15 minutes.

CMLF isn't alone in making advancements to its MES. Another early adopter, the Steamship Authority in Fairhaven, Massachusetts upgraded its MES life raft evacuation system in 2007 and this equipment is fitted on board every one of the ferry service's larger boats. The new MES has the capability of evacuating 768 passengers in approximately 30 minutes, using triangular evacuation slides that connect to life rafts on the starboard and port sides of the ferries.

First Deployment for USCG approval Cape Henlopen [3/27/2018] at Cape May Terminal.

Changing the Tide

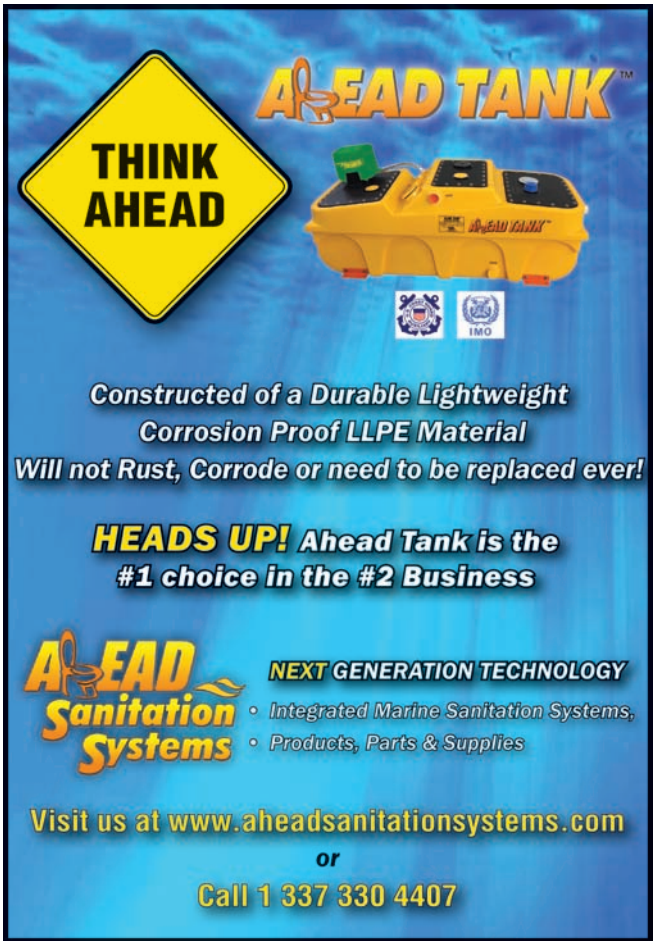
The MES system is not required by the United States Coast Guard, but is widely used on European ferries and ships. It's also no small investment: when all is said and done, MES was an $800,000 project for CMLF, including purchase and installation. The equipment notably has a 15 to 20 year life expectancy. The estimated annual recertification for MES units is roughly four times the cost to certify a fleet of Inflatable Buoyant Apparatus (IBA) liferafts, totaling near $160,000 with crane and shipping costs to the servicing facility.

Once installed, tested and trained, MES must be recertified annually. All marine personnel must be trained in abandon ship procedures and emergency evacuation drills must be held annually as part of in-house training initiatives. Additionally, practice units are a must-have in order to get additional crew exposure and to reduce the need to deploy more than one unit per year. This promotes training while increasing the lives of the actual units as the cold from CO2 weakens the material, reducing the lifespan of the slides and rafts.

It is important to note that servicing the system is no small undertaking. New to the United States markets, finding local servicing agents can be challenging, but as the systems become more common, that challenge will likely be a non-issue. In this case, the CMLF team coordinated with technicians from France, and one from Tahiti (who was in Cape May during a blizzard), to train the local servicing agent through three complete evolutions of installation, deployment, removal, recertification. In November, 2019, the local selected service station completed their final training evaluation.

For more than a century, ferries have relied on lifeboats or life rafts as their primary evacuation system. It's time to push the ferry industry forward and take it upon ourselves to improve the measures we take on a daily basis to ensure a safe journey for passengers. Not because it will be inexpensive or initially easy, but instead, because it's the right thing to do. That statement will truly hit home once your team pushes a button, slides down the unit into a waiting IBA that takes less time to deploy than an old life raft ever did.

***Derek Robinson** is a Port Captain with the Cape May-Lewes Ferry. Robinson, a lifelong resident of South Jersey, is a graduate of Maine Maritime Academy. Robinson holds an Unlimited Tonnage Inland Master USCG License with First Class Pilotage for the Southern Delaware Bay Region.*



Credit: MAN

NOx Control – *Should Certain Vessels Get a Break?*

When it comes to the EPA's recent proposed delay to implementation of Tier 4 marine diesel engines 'in certain high-speed commercial vessels,' where you stand probably depends on where you sit.

By Tom Ewing

On September 6, the U.S. Environmental Protection agency (EPA) proposed to delay implementation of Tier 4 marine diesel engines "in certain high-speed commercial vessels." Specifically; EPA mentions three kinds of vessels: lobster boats, pilot boats and a third, more open-ended reference to "other high-speed vessels," possibly including hovercraft. The proposal is limited to engines with rated power between 600 and 1400 kW, with one or two engines, and under 65 feet. EPA would also adjust Tier 4 certification requirements.

UNDER THE HOOD

EPA's proposal starts with a distinction between inspected (by the Coast Guard) and uninspected vessels. Inspected vessels include most freighters, workboats and passenger vessels and these are not part of the proposed delay. EPA writes that inspected vessels "operate low in the water and use very large propulsion engines that do not operate at high speeds." Furthermore, inspected vessels are typically custom-designed and built, which, for EPA, means that "vessel manufacturers can and have been able to accommodate new-tier propulsion and auxiliary engines in new vessels in a timely manner."

Uninspected vessels include recreational vessels, non-industrial fishing vessels, very small cargo vessels (less than 15 gross tons), and miscellaneous vessels such as pilot boats, and law-enforcement vessels. These are likely to be smaller, and operate at higher speeds, compared to inspected vessels. And, these smaller vessels start with a common, fixed design, EPA writes, making it harder to incorporate new engines.

EPA says the delay is warranted because of concerns that suitable Tier 4 engines, with tighter NOx control, are not

Image above:
View of the engine room of the Luna with the twin MAN D2862 12-cylinder engines, each rated 1,029 kW in terms of power at 2,100 rpm.

available for certain vessels with unique demands for speed and power. EPA writes that just one manufacturer has certified Tier 4 engines below 1400kW. But there are no Tier 4 engines, EPA asserts further, below 1400 kW with a power density greater than 35 kW/liter.

THE DEVIL IN THE DETAILS

Tier 4 phase-in started in 2014, and 2017 was the hammer-date for engines rated from 600 to 1400 kW. This phase-in was to give boat builders and manufacturers time for redesign and to certify compliance. For boat-builders, Tier 4 engine size and weight present challenges.

On the one hand, EPA's proposed delay is brief. An initial phase would set model year 2022 as the implementation deadline for most engines and installations. Model year 2024 would be a second phase deadline for narrower set of vessels that, EPA believes, "require additional lead time."

However, delay and phase-in get more complicated because EPA also proposes a waiver system beyond 2024, if Tier 4 challenges continue. EPA also seeks comments on whether it would just make more sense to extend the later phase-in all the way out to 2028.

For example, lobster boats exemplify the Tier 4 engine-vessel challenges. Prior to 2008, the boats stayed relatively close to shore. Now, they travel 40 miles to more distant lobster beds. This requires more cargo space and more speed to complete a day's work. Older, Tier 3 engines provide that power and speed.

New Tier 4 engines are bigger and new pollution hardware demands even more space. Hence, the EPA logic says that the Tier 4 engines don't fit in existing hull models. Plus, the additional heat generated by the Tier 4 after treatment is no small thing, something that operators say will require additional space to protect the live lobsters. Basic construction changes are needed but boat manufacturers, according to EPA, can't progress with substantive redesign until Tier 4s are available and tested. Hence, the proposal to allow more time, to allow new engines to get in synch with vessel demands.

INDUSTRY WEIGHS IN

As is customary with EPA's rulemaking, the Agency solicited public and industry comments. The deadline in this case was October 21. In addition, EPA held a public hearing on September 20 in Bath, ME.

The Maine Lobstermen's Association supports EPA's proposed delay. Patrice McCarron is MLA's Executive Director. McCarron writes that "the current Tier 4 marine diesel engine emission standard is a mismatch for the Maine lobster fleet." MLA supports a phase-in through 2024 for certain vessels. If issues remain unsettled MLA wants permission to keep operating Tier 3 engines after 2024.

Separately, many other workboat operators have Tier 4 concerns. Recall EPA's "inspected" and "uninspected" delineation. That's arbitrary, assert workboat operators, who insist, 'we're facing the same challenges trying to fit throaty power into small workspaces.' Likewise, Tier 4 has been an issue for American Waterways Operators (AWO) since 2017. A delay was highlighted in a letter to EPA in May 2017: "We are very concerned that, when an AWO member company needs to secure a Tier 4 engine of the correct size and horsepower, there may be none on the market, or the few that are may be very costly."

Regarding EPA's current proposal, Jennifer Carpenter, AWO's executive VP and COO, reiterates these concerns. Carpenter supports EPA's proposed delay. She writes that towing vessel manufacturers have not been able to accommodate Tier 4 engines and that AWO is not aware of any towing vessel built since 2017, or under construction, with Tier 4 engines less than 1,400 kW (1,877 hp).

At EPA's Bath hearing, workboat operators emphasized the mixed issues of power, performance and safety. Erwin Thompson, for example, with Houma,LA-based LeBeouf Brothers Towing, conveyed support for EPA's proposed delay, asking that it include workboats "operating marine diesel engines between 600-1,400 kW (805-1,877 hp)."

Regarding Tier 4 Engines and SCR & 'Fleeting boats':

"… we haven't done anything as far as being able to figure out how to fit it in the space that we have to operate in ... A lot of the areas that we operate in are so remote that there is no (DEF) distribution network."

– **David Sehrt**, Senior Vice President and Chief Engineering Officer for Ingram Barge Company

Thompson said compliant engines only became commercially available from one manufacturer in 2018, and a second in 2019. He noted initial problems with power loss, with Tier 3 engines on the Mississippi. "When you're pushing 8,000, 12,000 tons," Thompson said, "you're talking about a real critical issue. Northbound on the Mississippi, if you lose an engine, you lose control of your tow." With Tier 4 adoption, Thompson called for significant testing "before pushing a loaded tank barge full of gasoline, crude oil, or asphalt on our inland waterways."

David Sehrt, Senior Vice President and Chief Engineering Officer for Ingram Barge Company in Nashville, TN, reiterated Thompson's request for inclusion of inspected vessels, or at least workboats.

At EPA's hearing, Sehrt described Ingram's fleeting operations at the intersection of the Ohio and Mississippi Rivers, referring to this locale as a "parking lot" where space is critical for assembling tows. He told EPA that fleeting boats are designed to be as compact as possible, "like the switcher trains in the rail yard." Maneuverability is paramount, he said. Regarding the larger Tier 4 engines, he continued, "we haven't done anything as far as being able to figure out how to fit it in the space that we have to operate in."

Ingram estimates Tier 4 changes will increase the cost of new vessels by $800,000, about three times EPA's estimated market impact of $255,000. Sehrt focused on another concern. Tier 4s require the use of DEF – diesel exhaust fluid, a urea/water mix sprayed into the exhaust stream to breakdown NOx emissions. Sehrt said that absent demand, DEF isn't generally available throughout the inland river systems. "A lot of the areas that we operate in are so remote that there is no (DEF) distribution network," Sehrt said.

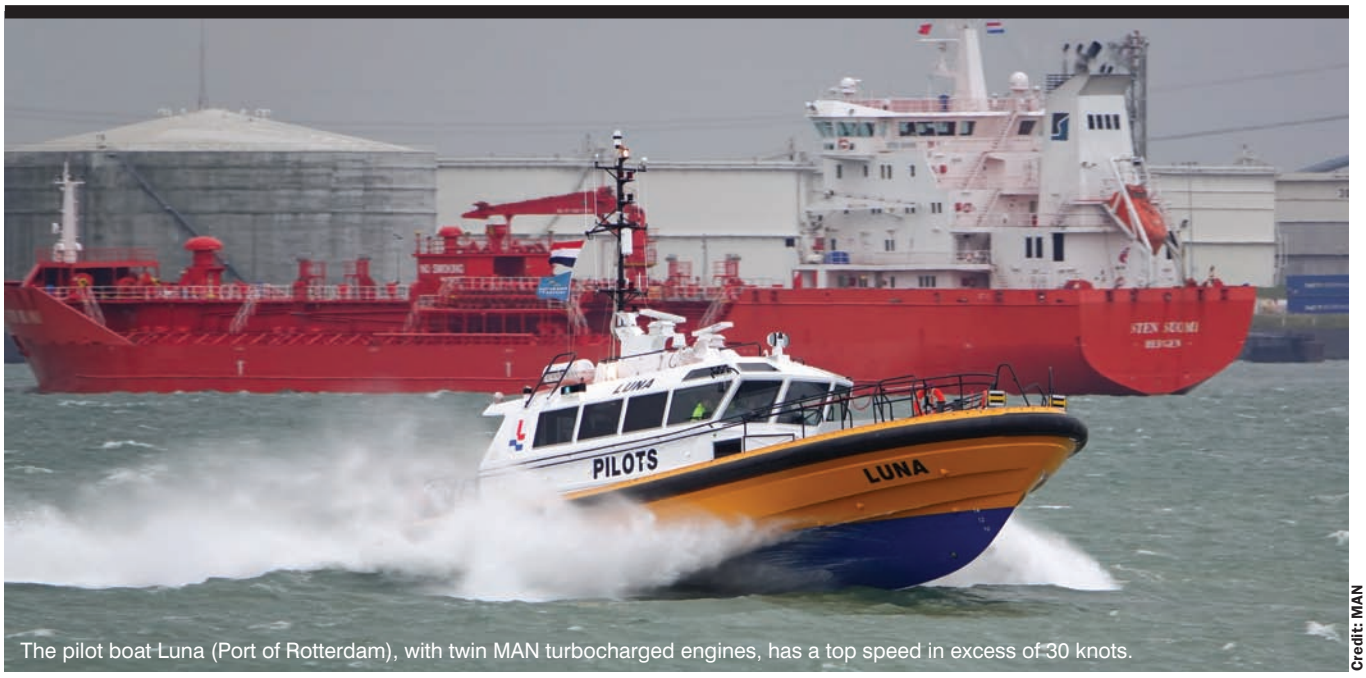
Also at the Bath hearing, Tj Tarabulski commented on behalf of the Engine Manufacturers Association, which includes 28 international engine companies which manufacture land-based and marine engines. Tarabulski said, in general, EMA agrees with the proposed implementation delay. However, EMA does not support additional extensions of the Tier 4 compliance date or any potential blanket extension to 2028.

Tarabulski noted that manufacturers have already expended significant resources on Tier 4 development. Too much of a delay could result in "stranded Tier 4 investments and disrupted Tier 4 product development plans," he said, adding that "any last-minute revisions should be targeted and limited." Regarding a possible waiver program, Tarabulski said EMA is opposed except "perhaps of one additional year on a case-by-case basis."

Otherwise, EMA wrote in comments sent after the hearing, "the additional waiver process could become the exception that swallows the rule, thereby disrupting manufacturers' long-planned and significantly-capitalized rollout of the Tier 4 standards."

READY OR NOT

The issue of stranded costs, of pulling the rug out from under responsible corporate investments, is a notion that hits at basic issues of equity and program credibility. After all, EPA's final Tier 4 rule was published in 2008. Tier 4 deadlines are not a surprise. From EPA's docket, it appears three compa-



The pilot boat Luna (Port of Rotterdam), with twin MAN turbocharged engines, has a top speed in excess of 30 knots.

Credit: MAN

nies are making Tier 4 engines now. MAN Truck & Bus SE, Cummins and Caterpillar. All are EMA members.

Unlike EMA's okay for a conditional and limited delay, MAN's comments to EPA, submitted by Werner Kübler, MAN's Vice President, Head of Application External Engines, are to the contrary: don't do it, a delay is not necessary, and it is unfair for businesses that have followed the rules. MAN has Tier 4 engines ready now, Kübler writes. For MAN, the Tier 4 regulations pushed the private sector towards environmentally compliant products. Environmental policy shouldn't change just because some companies struggled with those goals. MAN calls EPA's proposal "arbitrary and capricious."

Kübler writes that "MAN has certified engines available—as of September 3rd, 2019—in the required power range and power density for the respective marine applications referred to in EPA's notice." For EPA's review, this is new. The September proposal is based on information as of June, 2019.

Kübler disputes the contention that Tier 4 components can't fit into existing vessel designs. Kübler cites MAN's development of an "extremely compact solution with a high power-to-weight ratio and significant installation flexibility." That equipment is already out on the water.

The Dutch Pilot Association, for example, installed two MAN D2862 LE469 engines in their pilot boat Luna in Rotterdam, the first time the selective catalytic reduction (SCR) system was tested at sea. This was for IMO Tier III compliance, due in 2021. The tougher IMO and EPA NOx standards are not apples-to-apples but the important point is that the Luna and these bigger engines perform as expected, even with additional demands for SCR hardware. Top speeds exceed 30 knots. In a press release MAN concedes that while its system is compact, installation was a challenge. "We are learning as we go along," MAN said.

MAN officials were asked about comments that Tier 4 engines have not been available in the quantities necessary for broad implementation. In other words, does limited supply justify delay?

Florian Schaffelhofer, a MAN press officer, wrote that Tier 4 high-speed engines, and parts as necessary, can be delivered within about 12 weeks, standard timing for MAN. Indeed, some engines are in stock at MAN's Florida facility. Hence, says MAN, Tier 4 lead times are no different from that experienced for Tier 3 orders.

For its part, and with the comment period now ended, EPA also did not respond to questions about when a decision to delay, or not, will be announced. It is an important issue. The VW settlement money and DERA grants give existing operators plenty of incentive – and much-needed cash – to upgrade legacy power plants. The only question left to answer is what exactly they will do, and why. 2020, therefore, promises to be an interesting year when it comes to workboats and marine propulsion.

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

The Top 10 Stories for 2019

Choosing the year's 'top stories' is always a difficult task. Many compelling story threads played out, each dramatically impacting the North American waterfront, and in particular, the workboat sector – each in their own unique way.

By Joseph Keefe

The Infrastructure Battle Continues

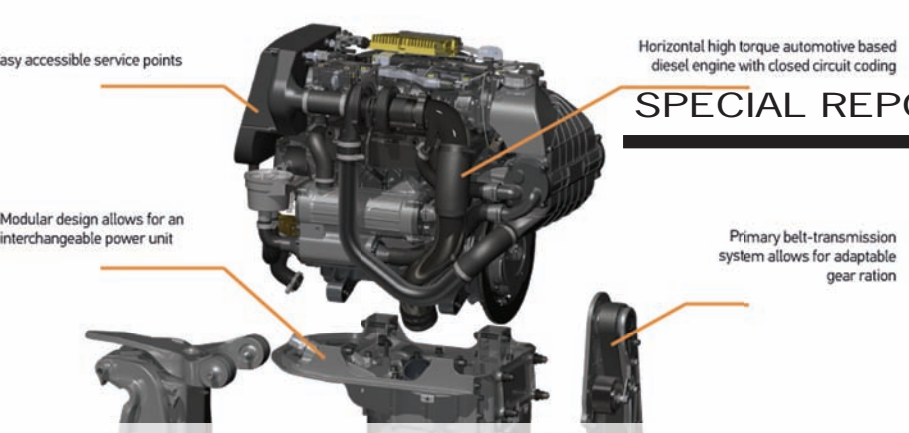
The EXECUTIVE SUMMARY H.R. 2396, the "Full Utilization of the Harbor Maintenance Trust Fund Act", will ensure that the Harbor Maintenance Trust Fund is used for its intended purpose – maintaining Federally-authorized harbors. The legislation would allow the U.S. Army Corps of Engineers (Corps) to dredge all Federal harbors to their constructed widths and depths. Unfortunately, Washington continues in chaos with another continuing resolution on the budget; the next one expires on December 20th. Conventional wisdom says that until the impeachment inquiry is completed, there will be no resolution of budget issues. Separately, the needs of the many, often relatively small, ports and terminals on the inland waterways continue to be overlooked. Presently there are only limited funding opportunities that make inland ports and infrastructure eligible for funding at all, and only a small amount of the programs typically fund port-type projects. Efforts are being made to address this imbalance.

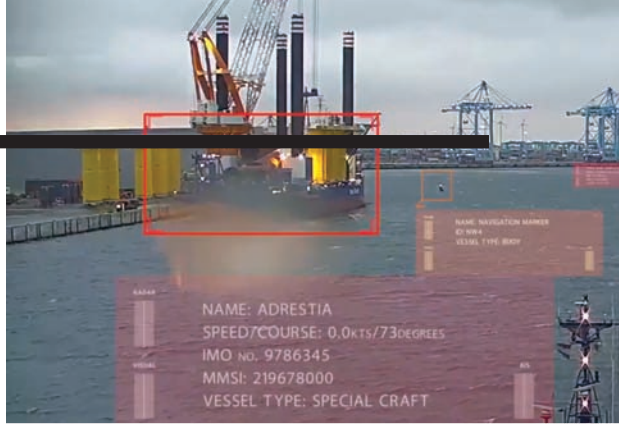
Subchapter M: One Year In

As the new Subchapter M towboat rule rolled out, it didn't take long to discover that the regulation wasn't perfect. In a nutshell, the U.S. Coast Guard does not have the manpower to add more than 5,000 vessels to its workload. The COI application process has been anything but smooth, and in many areas, fraught with delays. The Towing Safety Advisory Council (TSAC) – a committee that provides for the Federal government to seek the advice of citizens on a range of issues affecting its policies and programs – was set to take up a review, but the September meeting was cancelled, and reportedly, TSAC's charter wasn't renewed. Industry needs TSAC back. Ultimately, this helps everyone to figure out this new law. It took the Coast Guard four years after the NPRM came out to publish the final rule and it still isn't right. All that said; it is fair to ask, especially in the absence of TSAC, what happens now?

U.S. Coast Guard's Drug Testing Program

This year, the domestic waterfront got some less-than-happy news when the U.S. Coast Guard announced that the calendar year 2019 minimum random drug testing rate had been set at 50 percent of covered crewmembers. Nobody is happy about it, but in truth, the Coast Guard had little to say about the matter. 46 CFR part 16.230(f)(2) requires the Commandant to set the minimum random drug testing





rate at 50 percent when the positivity rate for drug use is greater than one percent. And, it is. Separately, it's been a few years since U.S. Coast Guard Chief Administrative Law Judge Walt Brudzinski penned an exhaustive study on the implications of drug and alcohol testing on board domestic passenger vessels and fishing vessels. That study sought to determine if random drug testing had any impact of post-accident 'positive' tests. It turns out that it does. That much was easy to see since one group of mariners (passenger vessels) participates in random testing programs and the other (fishing) does not. The Coast Guard is looking hard at changing that. But, only Congress can make that happen.

Electric / Hybrid propulsion for Workboats

Hybrid and EV propulsion will soon dominate transportation both ashore and at sea. Late last year, major engine manufacturers, shipbuilders, marine engineers and naval architects tilted their heads when the Enhydra, a 600 person Red & White fleet Hybrid tour boat and latest development of BAE HybriGen won industry accolades. This was developed by Tecknicraft Design with a BAE/Corvus/Cummins 160 kWh generator, control system and AC traction motor drive system. Separately, the nascent firm Harbor Harvest is already delivering local New England family farm products across Long Island Sound by refrigerated Hybrid Catamarans without emissions. Still another project, ABB's Maid of the Mist is truly revolutionary because the vessel will not be fitted with ANY engines – it is truly all electric and the fact the electricity comes from the local hydro dam means a true zero emission vessel. In addition to integrating the ship-to-shore battery charging connection, ABB will supply the Maid of the Mist newbuilding project with switchboards, drives, batteries, propulsion motors for both sets of stern and bow thrusters, and the integrated control system. On the inland side of the equation, ABB expects to see electric towboats (ETB) sailing in 2020.

The Diesel Outboard Arrives

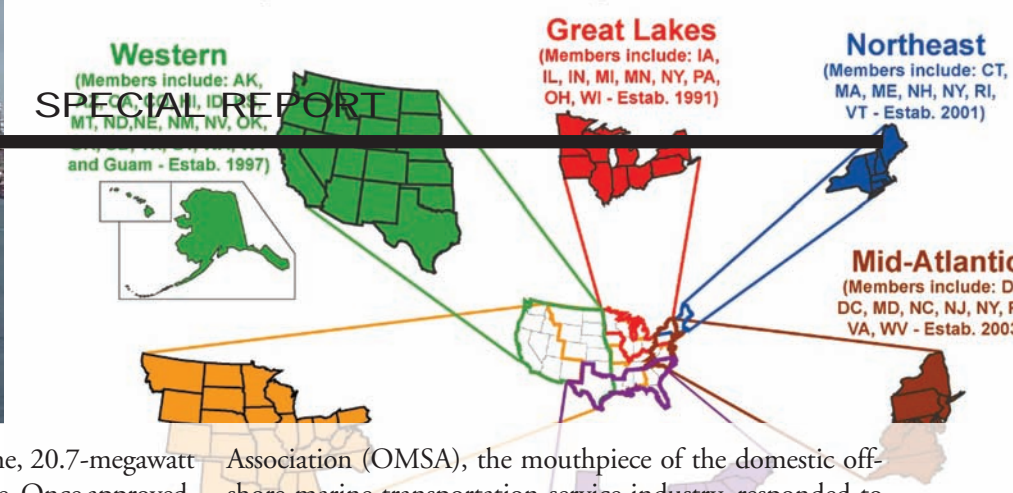
The diesel outboard is here, and it is making waves. For example, The OXE was recently approved by the U.S. Environmental Protection Agency as the first Tier 3 diesel outboard for commercial use. The OXE and its EPA Tier 3 emissions compliance will exceed all the criteria when applying for outboard grants. Separately, Cox Powertrain last year revealed the final concept of its diesel outboard engine, the CXO300. Cox originally developed the engine to allow Navies to comply with the NATO single fuel policy, however the firm has since shifted away from developing a purely military engine to an off the shelf commercial engine that met military requirements. Cox emphasizes durability, fuel performance and ease of service to appeal to the commercial applications. For military operations, of course, the appeal of diesel in terms of safety alone is a big step forward. Without a doubt, the diesel outboard is here to stay and there are many compelling reasons for commercial and military operators alike to consider this option.

Autonomy in High Gear

As the pace of change quickens, autonomous vessels are already providing service and value on the water. The leap in productivity, performance, and safety offered by these systems, moving marine operations up the ladder of modernity to reduce annual accident rates, both in commercial and recreational, improve on-time performance, and reduce operational expenses are all significant beneficiaries of this new trend. The single largest impediment is finding progressive operators that are willing to try new technology in an attempt to prove the value in their operations. Close behind is the fierce resistance being put up by maritime and longshore labor. But, autonomy and robotics arguably don't eliminate jobs; they act as a force multiplier while often increasing headcount. The nation has been investing in automation for about 75 years, yet today we have an unemployment rate of 3.7%. Marine automation isn't going to change that.

Offshore Wind: a Freshening Breeze?

Finally, starting with Dominion Energy's Coastal Virginia Offshore Wind Project, a joint venture with Danish wind developer Orsted is underway. Indeed, there is a lot of offshore wind energy in the developmental pipeline. It is also true that except for Block Island in Rhode Island, all the work on US offshore wind is still preliminary. That's not to say it isn't



happening. Icebreaker Wind is a six turbine, 20.7-megawatt offshore demonstration project in Lake Erie. Once approved, it will be the first freshwater project in North America. Construction is slated for 2022. The promise of offshore wind is still a work in progress. A big part of the domestic offshore wind discussion involves the Jones Act. U.S. offshore operators want to be a part of the promised coming boom and for U.S. boat builders, the coming boom can't come a minute too soon. But, when it comes to domestic offshore wind, getting these renewable energy projects done is often more difficult than getting permission to build a refinery. Opposition comes from many – sometimes surprising – quarters. Nevertheless, wind is coming. The only question is: when?

The Advent of VIDA

US ballast water regulations made a sharp turn last December. That's when President Trump signed the Frank LoBiondo Coast Guard Authorization Act of 2018. That legislation contained Title IX – the "Vessel Incidental Discharge Act (VIDA)," a welcome legislative goal among many maritime business trade groups who had long complained that US ballast water regs were such a confusing mix of directions and requirements that compliance was almost impossible. Until now, ballast water has been controlled on numerous regulatory fronts: through EPA's vessel general permits (VGP) and the Nonindigenous Aquatic Nuisance Prevention and Control Act and the National Invasive Species Act as well as other U.S. Coast Guard and clean water legislation provisions. Beyond this, almost twenty states further 'Balkanized' the critical issue by forming individual, sometimes obscure local statutes. Congress, with VIDA, ripped out this regulatory tangle. By 2022, at the latest, the VGP will be gone, as will aquatic nuisance and invasive species legislation. Instead of a permit, discharges will be controlled via regulations. VIDA allows states to participate in standards development, but keeps final decisions within EPA and the Coast Guard.

CBP's Proposed Rulings: Jones Act Implications

In late October, the U.S.-based Offshore Marine Services Association (OMSA), the mouthpiece of the domestic offshore marine transportation service industry, responded to proposed CBP Modifications to Jones Act rulings. This 10-year in the making process certainly is complicated – perhaps intentionally. And, as a result, as the New Year edges ever closer, OMSA is closely monitoring developments there. According to OMSA, CBP "unconventional process" would negatively impact full enforcement of the Jones Act. In a nutshell, the US Customs and Border Protection (CBP) proposes to modify and revoke various prior ruling letters relating to CBP's application of the Jones Act to the transportation of certain merchandise and equipment between coastwise points. OMSA President Aaron Smith insists, "We appreciate CBP has again confirmed that a number of previously issued letter rulings are not consistent with the Jones Act and must be revoked or modified. If CBP and DHS enforce the letter and spirit of this proposal, it will benefit U.S. mariners and the workers in U.S. shipyards. The Jones Act does not allow for the lateral movement of merchandise by foreign flagged ships and no amount of interpretive guidance changes that." Stay tuned: this one is far from over.

The Tragic Conception Fire & Sinking

On the morning of September 2, 2019, the 75-foot commercial diving vessel Conception, with 39 persons on board, caught fire while anchored in Platts Harbor, off Santa Cruz Island in California. The vessel burned to the waterline by morning and subsequently sank in about 60 feet of water. Thirty-three passengers and one crewmember died, making this the largest loss of life in a US marine casualty in decades. The tragic event reminds us that while most of the attention to passenger vessel safety is focused on the chronic failures that regularly occur in developing countries, these casualties can and do happen here, as well. The NTSB is the lead federal agency for this investigation. Investigators are scrutinizing the wreckage, as well as reviewing current regulations regarding vessels of this type, year of build, and operation; early warning and fire detection alarm systems; evacuation routes; training; and current company policies and procedures. Those investigations were still ongoing as this edition went to press.

The Best 10 of 2019

This month, ***MarineNews*** showcases the ten best of North America's 2019 workboat deliveries and designs. Domestic shipyard production – across a wide spectrum of missions, hull types, propulsion and design innovations – continued at a good clip in 2019. A decidedly robust commitment to continued environmental enhancements highlighted the unique approach to making those 'dull, dirty and dangerous' workboat tasks just a little bit easier.

As this year edges closer to its end, the domestic offshore energy support sector still struggles to recover from one of its worst turndowns since offshore energy was born. Conventional wisdom says that the long-awaited offshore wind boom is just over the horizon, but if so, it is taking its time getting here. Fortunately, other sectors have been happy to take the spotlight in its absence. And, despite any lagging momentum in the offshore sectors, the past 12 months yielded plenty in way of domestic production and designs.

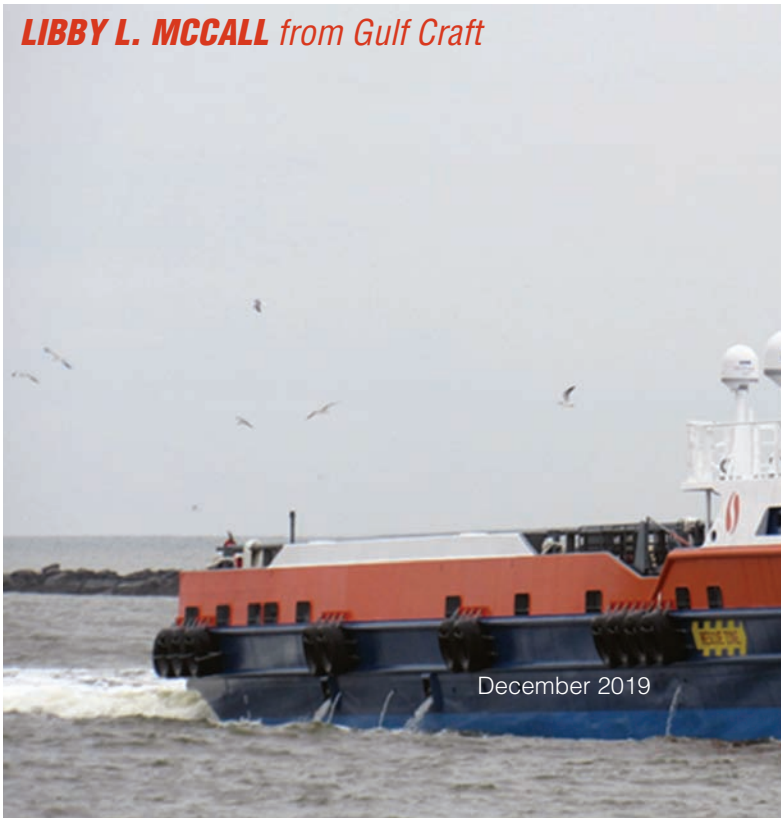
As always, and if a hull was delivered or a new design was introduced in 2019, then we took a look at it, with several areas as a focus for inclusion into this edition. The ten vessels included in this year's spotlight span the gamut of workboat functionality, environmental footprint and mission sets. These include ferries, tugboats, autonomous vessels, ATB's, hybrid and/or electric vessels, offshore energy/wind support craft, multi-mission & patrol boats, pilot boats, research vessels, and Great Lakes newbuilds. There was excitement in every one of those sectors.

Catering to myriad requirements and missions, North American builders, supported by forward-thinking operators and innovative naval architects, churned out a steady list of quality vessels and designs, each unique in its own way. The best of those designs and deliveries are chronicled below:

EV CAPTAIN BEN MOORE *from Derecktor*

Credit: Incat Crowther

LIBBY L. MCCALL *from Gulf Craft*



HYBRID ELECTRIC:
DERECKTOR LAUNCHES THIRD HYBRID CATAMARAN

The EV Captain Ben Moore a 19.2 meter Incat Crowther designed catamaran was delivered from Derecktor Shipyard in Mamaroneck, New York on September 3rd, 2019 and announced as the first U.S. built Hybrid cargo vessel. She is capable of lifting 20,000 pounds of cargo along with fifty passengers and was built to support regional farms and artisan manufacturers along the Long Island Sound between Connecticut and New York. As a commitment to environmental sustainability along the Connecticut coastline, owners Harbor Harvest worked with the Connecticut Port Authority and the State of Connecticut to develop new maritime-based trade routes to assist in congestion mitigation along several New York and Connecticut highways. The effort works towards establishing new regional transportation systems for local New England and New York family farms along with supporting local manufacturing in the area while reducing emissions. BAE Systems supplied its patented HybriGen power and propulsion system for Harbor Harvest. The company is a pioneer in electric propulsion with over 20 years of experience and is now bringing that proven technology to the water. The HybriGen system uses proven controls and components that pass certification requirements by the U.S. Coast Guard. It not only powers The Captain Ben Moore, but also helps it to save fuel, lower noise, and decrease vessel maintenance. As an electric-hybrid system, it also reduces carbon emissions to help Harbor Harvest be one of the most environmentally sustainable farm-to-market systems that is in operation today – all-important issues when trading in the gentrified areas the vessel will trade. Harbor Harvest is working towards expending the fleet with a second vessel with the intent to serve New York City, Hunts Point and the Mid Hudson Valley along the Hudson River.

OFFSHORE ENERGY / WIND:
SEACOR OFFSHORE SUPPORT VESSEL DELIVERED

Incat Crowther this year announced the delivery of the Libby L. McCall, the third vessel in a series of new class monohull Fast Support Vessels (FSV) for Seacor Marine. This vessel advances the traditional offshore support vessel model and offers a cost efficient, comfortable, flexible, and safe alternative to helicopter transportation. The vessel's passenger lounge features spacious reclining seating in privacy pods along with full internet connectivity, a well-equipped snack bar area and feature LED lighting. The vessel features redundancy to mitigate against down time or loss of functionality due to mechanical complications. The propulsion machinery drives Hamilton HT-810 waterjets through a cardan shafting system from Driveline Service of Portland. Electrical power is derived from three (3) Cummins QSM 11 generator sets, each producing 290ekW and offshore station-keeping and dockside maneuverability is enabled by three (3) Thrustmaster 30TT200 bow thrusters each outputting 200 hp. Station keeping is enhanced through a Kongsberg DP-21 system providing Class 2 capability. The vessel is certified by the USCG under Subchapters T, L and

Credit: Incat Crowther

Credit: RAL/MTU

RAPIDE 2800-G *from RAL & MTU*

www.marinelink.com

I and is Classed by ABS as a High-Speed Craft with DP-2 and Fire-Fighting Capability notations. Libby L. McCall was constructed by Gulf Craft in Franklin, LA.

TUGBOATS:

ROBERT ALLAN LTD., MTU TEAM UP ON LNG PUSHBOAT

Robert Allan Ltd. and MTU this year developed the first natural gas fueled shallow draft pushboat design – the RApide 2800-G pushboat. This challenging project is based upon the proven shallow draft RApide 2800-Z2 pushboat that currently operates on the Amazon River. The design was modified to suit a complete LNG propulsion system with two 746 kW MTU 8V4000M55R-N Tier III gas safe main engines. Additional to the engines, MTU also acts as the system integrator, which means that MTU will also provide the complete LNG tank system and an integrated ship monitoring, LNG control and safety systems. The project complies with the rules for the gas system hazardous zones of a compact 28 meter tug. To ensure redundancy there are two independent tank connection spaces attached to the LNG tank, one for each engine. Clean, efficient and well designed – Robert Allan delivers again.

PILOT BOATS:

METAL SHARK'S PILOT BOAT FOR BRAZOS PILOTS

Louisiana-based shipbuilder Metal Shark has delivered a custom welded-aluminum pilot boat to the Brazos Pilots Association in Freeport, Texas. The new vessel, Brazos Pilot, is a Defiant-class monohull pilot boat both designed and built by Metal Shark at the company's Franklin, Louisiana shipyard. This new pilot boat is intended to replace the pilots' smaller, single-engine 40' pilot boat, improving safety for crews while enhancing service to operators and providing around-the-clock service at Port Freeport. A spacious, climate-controlled wheelhouse employs Metal Shark's signature "Pillarless Glass" for dramatically improved visibility, in a reverse-raked arrangement developed by Metal Shark specifically for pilots. Large overhead skylights provide upward visibility while approaching and operating alongside moving ships. Visibility is further augmented by the vessel's centerline helm position.

RESEARCH VESSEL:

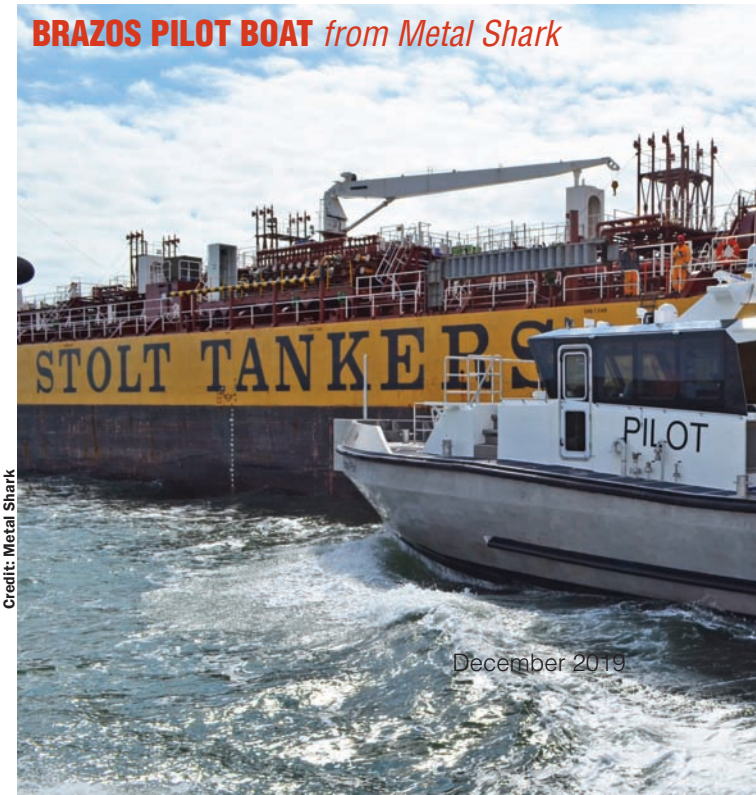
AAM LAUNCHES DUKE UNIVERSITY RV

All American Marine (AAM) completed construction and launched an innovative and modern aluminum research and survey vessel for Duke University. The Duke University Marine Lab (DUML) is a hydrofoil-assisted catamaran and is an exemplary arrangement from Teknicraft Design. AAM is the exclusive builder of Teknicraft Designs in North America. Based largely upon two successful Teknicraft Design vessels AAM built for NOAA, this patented hydrofoil-assisted hull design is proven to have industry-leading low-wake wash energy and fuel economy. The vessel was procured as part of an $11 million gift for the construction and operation of a new state-of-the-art research vessel that will expand teaching, research and outreach capabilities at the Marine Lab.

DUML RV *from All American Marine*

Credit: All American Marine

BRAZOS PILOT BOAT *from Metal Shark*



Credit: Metal Shark

FERRIES:
GLADDING-HEARN DELIVERS ANOTHER 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. Notably, the vessel features the designer's "S" bow hulls, which have proven to provide excellent seakeeping, directional stability and a high tolerance to shifts in trim and displacement. 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.

ATB:
RAL DESIGNED ATB PUSH TUG ISLAND RAIDER ENTERS SERVICE

Island Tug and Barge Ltd.'s new ATB push tug, the Island Raider, has entered service pushing the double hulled refined petroleum products barge, ITB Resolution. The Island Raider is the first of two, twin Z-drive, ATB push tugs for service on the West Coast of North America. Constructed at Island Tug's Annacis Island Shipyard on the Fraser River, the Island Raider is connected by an articulating pin system to the ITB Resolution which was retrofitted with pin ladders and stern extensions for connecting to the new tug. In this case, Island Tug had a well-defined statement of requirements for the tug and a clear vision of the desired layout and accordingly the design was developed in close collaboration with Island Tug. Partway through construction, Island Tug was acquired by Vancouver Washington based Tidewater Transportation and Terminals. The ATB connection pins are Art couple model FRC 35S designed for 3 meter significant wave height. The FRC pin system allows the tug to stay in the notch during all loading/offloading operations by allowing relative vertical movement of the tug and barge while still connected.

PATROL / MULTI-MISSION BOATS:
NEW RIBCRAFT FOR LOWELL POLICE

The Lowell (Massachusetts) Police Department recently took delivery of a new RIBCRAFT 5.85 for patrol and enforcement duties as well as search and rescue operations. Because RIBCRAFT worked with the department to build a boat that meets their diverse operational requirements, this boat does it all. 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

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JULIA LEIGH *from Gladding-Hearn*

Credit: Gladding-Hearn

can be easily operated, yet large enough to carry ample crew and gear and handle large seas. This 19' model is a favorite among municipal police departments for its versatility, durability, safety, and performance.

AUTONOMOUS:
ROLLS-ROYCE, FINFERRIES DEMONSTRATE FULLY AUTONOMOUS FERRY

Rolls-Royce and Finnish state-owned ferry operator Finferries have this year successfully demonstrated the world's first fully autonomous ferry in the archipelago south of the city of Turku, Finland. The car ferry Falco, used a combination of Rolls-Royce Ship Intelligence technologies to successfully navigate autonomously during its voyage between Parainen and Nauvo. The return journey was conducted under remote control. During the demonstration, the Falco conducted the voyage under fully autonomous control. The vessel detected objects utilizing sensor fusion and artificial intelligence and conducted collision avoidance. It also demonstrated automatic berthing with a recently developed autonomous navigation system. All this was achieved without any human intervention from the crew. The situational awareness picture is created by fusing sensor data and it is relayed to Finferries' remote operating centre on land, some 50 kilometers away in Turku city center. Here, a captain monitors the autonomous operations, and can take control of the vessel if necessary. The Falco is a 53.8 meter double-ended car ferry, which entered service with Finferries in 1993. It is equipped with twin azimuth thrusters from Rolls-Royce.

GREAT LAKES / DEEP DRAFT:
INTERLAKE, FINCANTIERI TO BUILD GREAT LAKES BULKER

A U.S.-flagged Great Lakes bulk carrier will be built for the first time in more than 35 years thanks to a his-

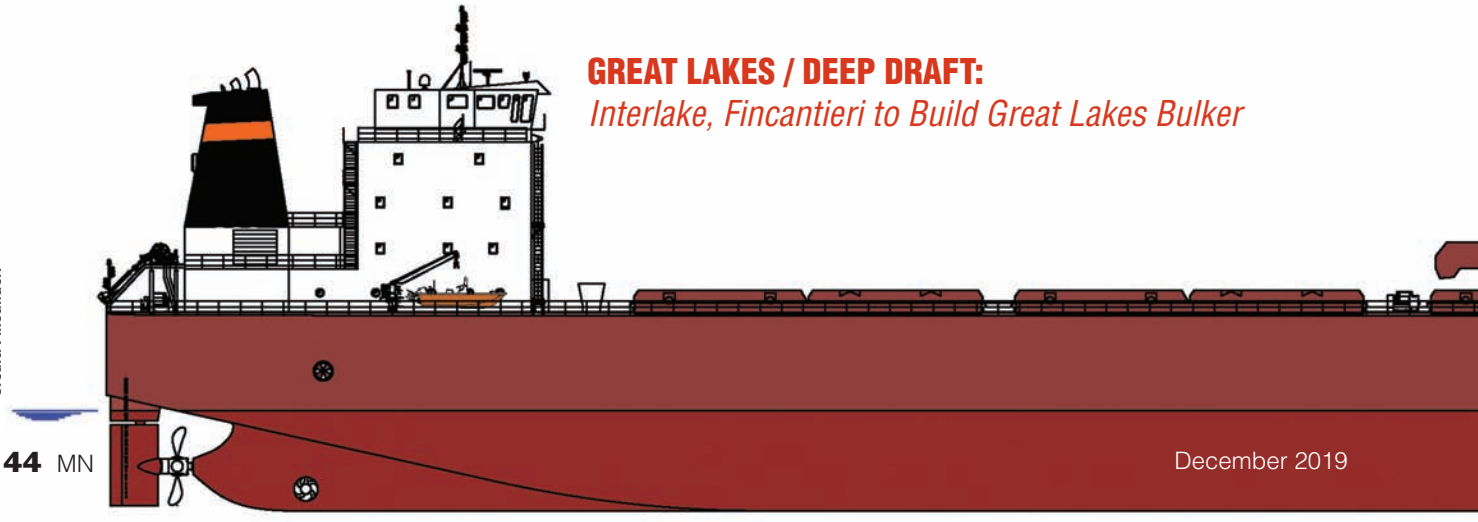
ISLAND RAIDER *from Island Tug*

Credit: Carolyn Matt, Island Tug

BRAZOS PILOT BOAT
from Metal Shark

Credit: Metal Shark

GREAT LAKES / DEEP DRAFT:
Interlake, Fincantieri to Build Great Lakes Bulker



Credit: Fincantieri

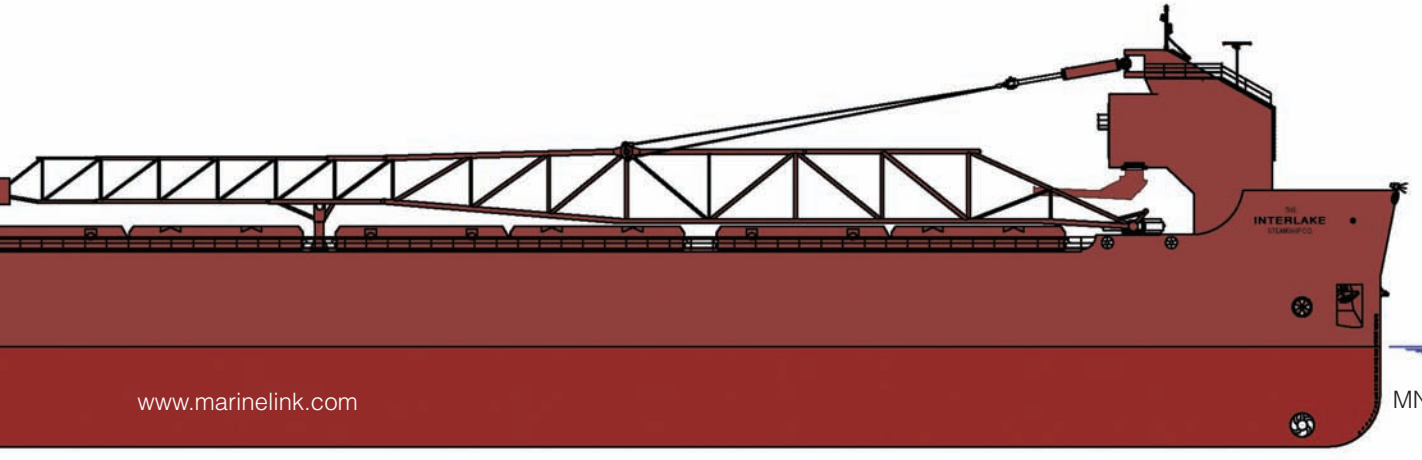
toric agreement signed this year between The Interlake Steamship Company and Fincantieri Bay Shipbuilding of Sturgeon Bay, Wisconsin. The new River-Class, self-unloading bulk carrier will be the first ship for U.S. Great Lakes service built on the Great Lakes since 1983. The Interlake Steamship Company is the largest privately held U.S.-flag fleet on the Great Lakes, with nine vessels carrying bulk cargoes. Fincantieri Bay Shipbuilding and The Interlake Steamship Company hosted a ceremonial first-cut-of-steel event late this year, celebrating the historic start of construction. 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.

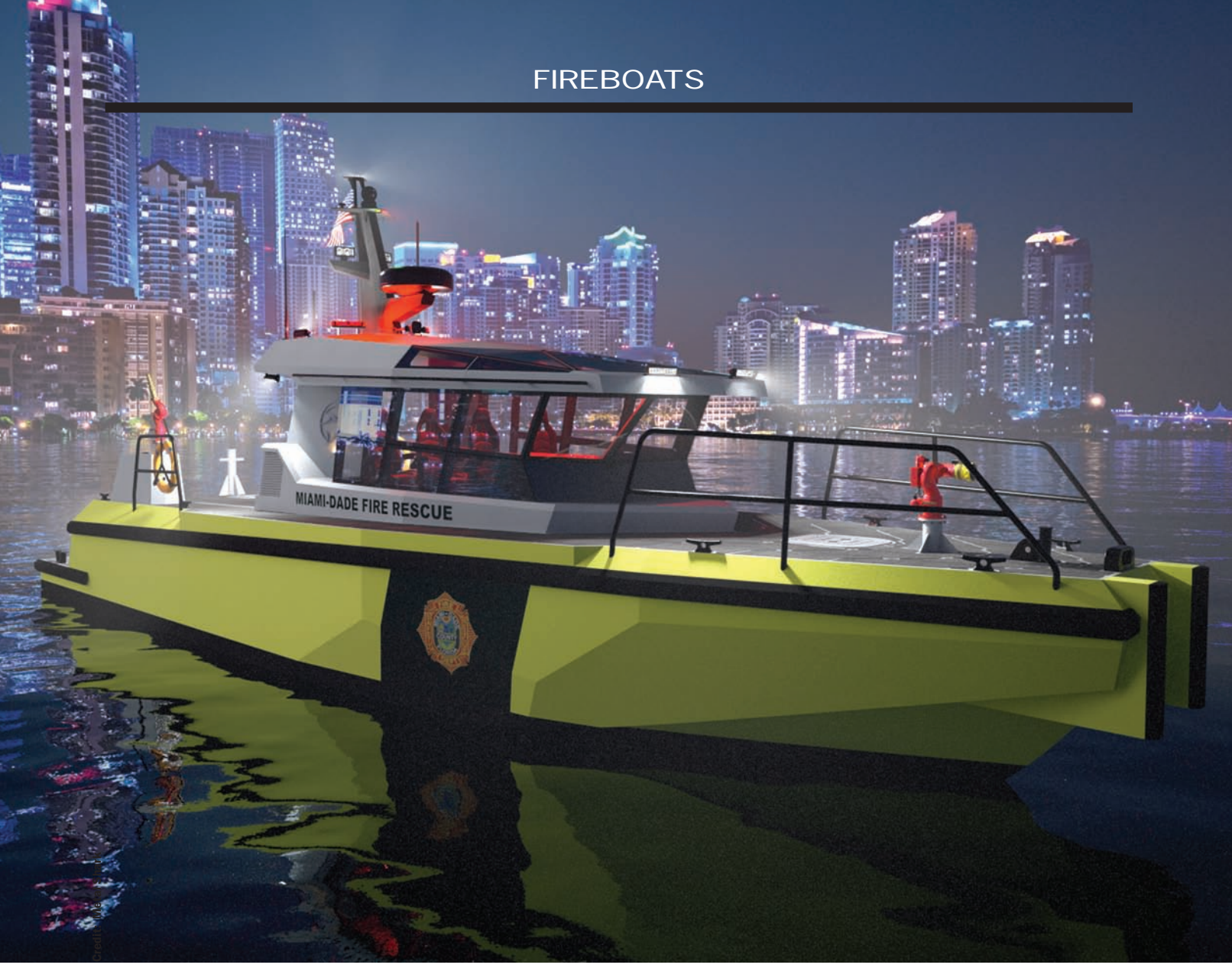
There are many notable features of this new design. This newest self-unloading bulk carrier has a unique cargo hold arrangement and cargo hatch covers designed for maximum cubic space and the ability to handle difficult cargoes. The vessel incorporates a flap rudder as well as bow and stern thrusters for high-level maneuverability. All aspects of the vessel have been looked at to ensure that it will have a low environmental impact to the Great Lakes and to those who work aboard. The hull has been optimized for efficiency and all systems have been designed to ensure low energy consumption.

For its electrical power requirements, the vessel is provided with one 940 kW ship service diesel generator, two 2500 kW shaft generators and one 274 kW emergency generator.

AUTONOMOUS FERRY *from Rolls-Royce & FinFerries*

Credit: Rolls-Royce





For Fireboats, *The Heat is On*

By Joseph Keefe

These days, cost-conscious municipalities across the fruited plain, from sea to shining sea, are ordering new waterborne assets to cover their many local responsibilities. When they do, they want 'more bang for their buck,' combining multiple missions – and the equipment that makes it all possible – onto one hull. That's a tall order on the typically compact patrol boat style hulls that tend to be big on performance, but short on space for equipment that can demand a significant physical footprint. One such shipbuilder stepping up to plate to deliver on a raft of promises is Gulf Coast-based Metal Shark. Significantly expanding its presence in the fireboat market with a diverse range of fireboats currently in production for multiple customers, the company recently has announced a contract for a custom "70 Defiant" fireboat to be built for Canaveral Fire Rescue in Cape Canaveral, Florida.

Metal Shark on the Move

The impressive new Canaveral fireboat is a 70' x 22' welded aluminum monohull pilothouse vessel designed by Metal Shark's in-house engineering team utilizing a time tested, military-proven hull form. The vessel features a specialized layout designed for firefighters and optimized to enhance the Port Canaveral-based Department's operational readiness across the full spectrum of response scenarios.

"The 70 Defiant is the result of the latest thinking in fireboat design and will provide a significant capability boost for Canaveral Fire," said Dean Jones, Metal Shark's vice president of sales for law enforcement, fire rescue, and specialty markets. "From the selection and integration of firefighting systems to the layout of the vessel's fire control center, operator input was vital and significantly influenced the vessel's configuration. Heavy emphasis was placed on accessibility and overall ease of use, and the result is a purpose-built fire fighting machine with next-level capabilities and a crew-friendly layout that firefighters will love."

U.S. municipalities and first responders increasingly want a versatile platform that can pack numerous missions into one hull. The folks at Port Canaveral are no different. To that end, this vessel's design incorporates a positive-pressure Chemical, Biological, Radiological, Nuclear, and high-yield Explosive (CBRNE) system to provide crew protection during disaster response scenarios. A complete suite of electronics including an M400XR FLIR thermal imaging system with fire fighting software will provide next-level situational awareness.

Client-driven firefighting particulars include twin Darley fire pumps rated at 3,000 GPM each feeding two 2,000 GPM remote operated bow monitors, a 5,000 GPM remote operated rooftop monitor, two 1,250 GPM manually operated aft deck monitors, two aft deck risers with dual 2.5" hand line connections, and dual 5" Storz hydrant outlets. The vessel is equipped with a 500-gallon foam tank with gravity fast feed capability and integrated Purple K system. Total expected flow rate is in excess of 8,500 GPM.

Metal Shark offers the 70 Defiant with a wide range of propulsion packages enabling the vessel to achieve top speeds of 45+ knots. Canaveral's vessel will be powered by quad 800-horsepower Man diesel engines mated to quad Hamilton water jets. This configuration will deliver a cruise speed in the 30-knot range and a top speed of 35 knots. The Canaveral order comes amid a significant expansion by Metal Shark into the U.S. fireboat market. In April, Metal Shark announced that it had been selected to build the next generation of fireboats for the Miami-Dade Fire Rescue department, with a multi-boat order for 50' Defiant-class pilothouse fireboats currently in production. Significantly, the new Miami-Dade fireboats are being built alongside a diverse assortment of custom fireboats for other operators including 27', 29', 32', and 38' pilothouse vessels as well as 23' and 26' center console vessels.

"Metal Shark is winning new fire rescue customers with a broad portfolio of fully custom fireboat platforms that allow firefighters to respond faster and do their jobs more safely," said Metal Shark's CEO Chris Allard. "We welcome all fire rescue agencies to see for themselves the many advantages our proven fireboats have to offer." Those advantages today are deep. With three fully self-contained shipbuilding facilities in Alabama and Louisiana USA plus a dedicated engineering facility in Croatia, Metal Shark's 500+ employees produce over 200 vessels annually. That said; they're not the only builders in this sector. Far from it.

Multiple Winners from Coast to Coast

Also this year, West coast-based Moose Boats this year was awarded a contract from the City of Rochester, New York Fire Department for the construction of the first M2-38 Fire Rescue Catamaran to be delivered to the Great Lakes. That win is especially sweet for Moose Boats, especially given that there were multiple bidding firms in closer proximity to this northern New York municipality. Twin Cummins 425hp turbo diesel propulsion engines, Twin Disc transmissions and Hamilton water-jets will power the M2-38 aluminum catamaran. Rochester Fire's new Moose Boat will be equipped with a fire pump system flowing over 1,500 gallons per minute of fire suppression water to cabin roof and cockpit mounted monitors while simultaneously maintaining full maneuverability from both propulsion engines and jets. Not everyone can boast those capabilities. Moreover, an integrated 5" diameter discharge will allow Rochester Fire to flow water to land based fire apparatus where hydrant systems are not present.

The City of Rochester, NY Fire Department (RFD) boat committee began researching potential boat builders and conceptualizing a fire rescue boat of approximately 40 feet to best suit their application on Lake Ontario in 2013. The RFD's Area of Responsibility includes the Genesee River, Great Lakes Shipping Channel, over 1,000 seasonal and transient boat slips, several private marinas and a commercial cement-shipping terminal. Monroe County in which the City of Rochester resides has the second largest number of boat registrations in the State of New York. Adding further to that, Rochester is located just a short

MOOSE BOATS

Credit: Moose Boats

LAKE ASSAULT BOATS

Credit: Lake Assault Boats

distance from an international border with Canada and it experiences some of the most extreme "Lake Effect" weather in the lower 48 States. ochester's list of potential response scenarios therefore becomes very long; including but not limited to open water fire suppression, search and rescue, multi-causality commercial airline accident, land-based disaster relief, CBRN response, patient treatment, helicopter extractions and more. Being that there is no such thing as a perfect boat, the committee set about contacting agencies utilizing Moose Boats and products other builders for comparison. Eventually, RFD's boat committee traveled to Sandwich, MA to see how their Moose Boats M2 Fire Rescue Catamaran performed in a wide range of scenarios including close quarters maneuvering, fire suppression and open-water sea keeping in the notably rough Cape Cod Ship Canal entrance. They returned from that trip pleasantly surprised with the versatility of the catamaran and had made the choice that the M2 Fire Rescue Catamaran was their preferable hull form and Moose Boats their builder of choice. Having been awarded a DASNY grant to purchase the Moose Boat, the RFD committee's work was about to come to fruition and they went about refining their specifications in 2018 prior to the early 2019 contract signing. RFD's five plus years of research will make their Moose Boat decisively outfitted very well suited to its environment and mission while being at the forefront of Moose Boats' constant cycle of innovation and evolution.

In the end, RFD came to know that their potential buy was not Moose's first rodeo in the world of fireboats. Far from it. In addition to the Sandwich, MA delivery, Moose also delivered another cold climate M2 Fire Rescue Boat to New Bedford, MA in 2016 with a single firefighting pump; engine derived air conditioning and cabin heat and heated windshield glass derived from high powered alternators and inverters thus eliminating the need for a generator. In 2018 Moose Boats delivered still another M2 Fire Rescue Catamaran to the City of Newport, RI.

The Best of the Rest

Further south, and proving once again that geographic separation is no impediment to winning a bid on value and price, Wisconsin-based Lake Assault Boats recently placed a fireboat into service with Georgia's Rabun County Fire Services on Lake Rabun, an 835-acre reservoir with 25 miles of shoreline. The new craft provides fire suppression and emergency response services. The craft can quickly transport water into a network of standpipes located along the shoreline to supply lake water for ground-based firefighting operations. Moreover, its deck-mounted monitor enables the craft to conduct direct fire attack. The fireboat is powered via twin 175 hp Mercury outboard engines, and features a 1,250-gpm fire pump driven by a marinized V-6 engine. The monitor has four discharge ports including one that feeds a 5-inch large diameter hose (LDH). Other features include a swing-out side dive door, and a Davit crane with two access points. The T-top pilothouse feature forward looking infrared (FLIR), sonar with side structure scan, chartplotter, and GPS.

Not to be outdone, SAFE Boats International (SAFE) has delivered boats 17, 18 and 19 to the marine division of the New York Fire Department, all during the month of August 2019. The three latest additions to the FDNY fleet are 33' full cabin boats, the most popular configuration because of the options it provides the crew in terms of

SAFE BOATS

Credit: SAFE Boats

DIVERSIFIED MARINE INC.

Credit: Jensen Maritime

maneuverability and operability. Vessels capable of fighting fires from the water is not a new concept; over the years SAFE has helped agencies around the country – and the world – add technology-forward options to their waterborne public safety operations. Separately, Jensen Maritime, Crowley Maritime Corp.'s Seattle-based naval architecture and marine engineering company, has provided the detailed design for Shaver Transportation Company's new, Z-drive tug – Samantha S. The multi-purpose tug was built at Diversified Marine Inc., in Portland, Ore., and is operating along the West Coast. The tug is ABS-classed and carries a FFV1 firefighting notation. The 112-foot by 44-foot tug has a 22-foot draft, was built for escort, ocean towing and ship assist, and has firefighting capabilities if needed. The tug features a raised pilot house and a squared forward end. The large, flat bow allows the tug to come up flat against the transom of ocean-going ships in the Columbia River. The tug is equipped with two wire winches forward, and six aft, for hard wiring to the stern of large ships for escort. Jensen's latest concept embodies the full idea of "multi-mission" capabilities, and this hull will serve its operators well, in any rolls.

Where's the Fire?

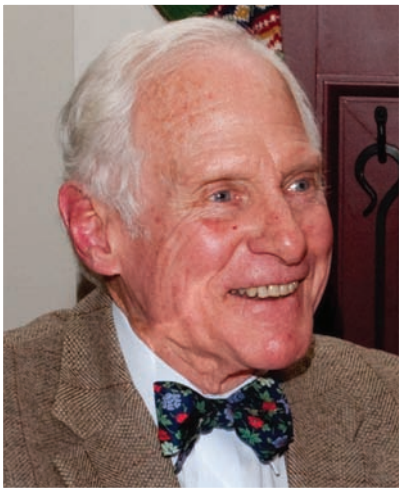
Any city, state or county that has a significant body of water to protect and patrol needs a fireboat. Some, if not all, need more capabilities than that. Fortunately, fireboats come in all shapes and sizes, hull forms and from myriad domestic sources; coast to coast. Today, they are being produced in quantity and quality, responding to the demands of an ever-increasing market sector. That's not going slow down anytime soon.

Moose Boats M2-38 Fire Rescue Catamaran	
LOA:	38'-10"
Propulsion:	(2) Cummins QSB6.7-425 mhp
Hull and Cabin:	Aluminum
Draft:	23"
Transmissions:	(2)Twin Disc MG5075S0
Speed (Cruise/Sprint):	28 /34 KT
Displacement:	21,000 lbs
Final Propulsion:	(2) Hamilton Jet HJ292
Fuel Capacity:	2 x 150 Gallons
Fire Pump:	Hale
Fire Pump Engagement:	Logan Clutch Corp.
Deck Hatches:	Freeman

Lake Assault Fireboat	
LOA:	26''
Engines:	(2) Mercury Outboards
Bow door:	63" hydraulic
Sonar:	FLIR
Monitor:	TFT hurricane
Builder:	Lake Assault

The Samantha S	
Main Engines:	(2) GE 12V250 EPA Tier IV
HP:	4,218 HP each
Fuel:	108,000 gallons
Berthing:	10 crew
Generators:	(2) EPA Tier III, JDPS 6090A
Escort Winch:	Rapp HA-149H-250
Fire Pump Plant:	CAT C32
Tow Winch:	Rapp double drum AHTW-75H-165
Deck Winch:	(8) Wintech 120t(SWL)
Bollard Pull:	~230,000 LB
Z-Drives:	(2) Rolls Royce 305, four-bladed
Firefighting Capacity:	12,000 gpm

Marine News	Edition	Market	Technical	Product	Reports	Event Distribution
JANUARY (Ad Close: Dec 16)	Passenger Vessels & Ferries	Training & Education	Batteries & Electric Propulsion	Water Treatment	SPECIAL REPORT: Ferry Report: state-of-the-industry REGIONAL FOCUS: U.S. Gulf Coast	PVA Maritrends: [Feb 3-6,Tampa, FL]
FEBRUARY (Ad Close: Jan 17)	Pushboats,Tugs & Assist Vessels	ATB Report	Hull, Deck & Tank Coatings	Cordage & Wire Rope	Special Supplement **Q1 Inland Waterways Market Report**	NACE Corrosion [Mar 15-19, Houston, TX]
MARCH (Ad Close: Feb 14)	Workboat Conversion & Repair	Green Fuels & Lubricants	Deck Machinery	Pumps, Pipe & Valves	SPECIAL REPORT: Workboat Engines and Emissions Compliance Technology	CMA Shipping: [Mar 31 - Apr 2 Stamford, CT] Clean Waterways: [Apr 7-9, Indianapolis, IN]
APRIL (Ad Close: Mar 16)	Autonomous Workboats	Shipbuilding Report	Desalination Systems	Radars/Electronics	SPECIAL REPORT: Fireboats & Spill Response technology	AWO Spring Meeting: [Apr 21-23, Washington, DC]
MAY (Ad Close: Apr 16)	Inland Waterways	Barges	Barge Material Handling Equipment	Thrusters & Z-Drive	Special Supplement **Q2 Inland Waterways Market Report**	OTC: [May 4-7, Houston, TX] IMX: [May 18-20, St. Louis, MO]
JUNE (Ad Close: May 15)	Combat & Patrol Craft Annual	Multi-Mission Workboats	Outboard Engines	Stabilizers & Trim Control	SPECIAL REPORT: Workboat Comms	Seawork: [Jun 9-11, Southampton, UK] MACC: [July 15-16, Baltimore, MD]
JULY (Ad Close: Jun 15)	Propulsion Technology	Workboat Engines	Hybrid Drives	Lubricants & Fuels	SPECIAL REPORT: Training & Retention	
AUGUST (Ad Close: Jul 17)	MN 100 Market Leaders	Workboat Builders	Marine Lighting	HVAC & Ventilation	Special Supplement **Q3 Inland Waterways Market Report**	SMM [Sep 8-11, Hamburg, Germany]
SEPTEMBER (Ad Close: Aug 14)	Offshore Annual	Workboat Conversions	Naval Architecture	Dynamic Positioning	SPECIAL REPORT: Offshore Wind REGIONAL FOCUS: U.S. East Coast	SNAME [Sep 29- Oct 3, Houston, TX]
OCTOBER (Ad Close: Sep 15)	Shipbuilding & Repair	Interior Outfitting	Coatings & Corrosion	Shafts, Seals & Bearings	SPECIAL REPORT: Filtration & Water Treatment	SHIPPINGInsight: [Oct 15-17, Stamford, CT] Commercial Marine EXPO: [Oct 23-24, Providence, RI]
NOVEMBER (Ad Close: Oct 16)	Workboat Annual	Outfitting Today's Workboat	Workboat Propulsion	Deck Machinery Winches and Cranes	Special Supplement **Q4 Inland Waterways Market Report**	Clean Gulf: [Oct 27-31, San Antonio, TX] Workboat Show: [Dec 2-4, New Orleans, LA]
DECEMBER (Ad Close: Nov 16)	Innovative Boats & Products	RIB's from Fire & Patrol to Escort Craft & Offshore Wind Support	Simulation & Training	Fire & Safety	SPECIAL REPORT: Top 10 Stories for 2020	

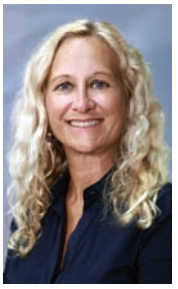


Fair Winds and following Seas for Dredging Pioneer William Gahagan

William G. Gahagan, P.E. passed away on November 14, 2019. He was 89 years old. A graduate of Yale University and the graduate engineering program at Stanford University, he served in the U.S. Marine Corps during the time between graduating from Yale and entering Stanford. A dedicated lifelong pioneer and leader in the dredging industry; he was an engineer by schooling and trade. Bill's family started Gahagan Overseas Construction Company (later the Gahagan Dredging Corporation), becoming a leading international dredging contractor from its origin in 1898. Gahagan Dredging developed and pioneered the use of spider barges and hydraulic unloaders and was known for innovations in equipment and dredging techniques for difficult projects. Bill became a consultant to Great Lakes Dredge & Dock in 1972. Within GBA and throughout the dredging industry, countless stakeholders benefited from Gahagan's unselfish sharing of knowledge – an inspiration to the best of the best.

Volvo Penta

Huibers **Bjuve**



Calhoun

Port of Oakland

Wan **Lytle**

Tomley

Changes to Volvo Penta Executive Group

After 26 years with Volvo and 7 as President of Volvo Penta Americas, **Ron Huibers** will retire from his current role and move to another role within Volvo Penta. Succeeding Ron will be **Martin Bjuve**, currently CFO and SVP Business Office Volvo Penta. The planned transition date will be January 1, 2020. Martin Bjuve has been with Volvo Penta for 17 years and is a member of the Volvo Penta Executive Group. As SVP & CFO, his responsibilities included overall strategy development, as well as process and IT. The recruitment of a new CFO and SVP, Business Office Volvo Penta is initiated and will be announced at a later stage.

WCI SVP Debra Calhoun Honored by NRHOF

Waterways Council, Inc. and its Senior Vice President, **Debra (Colbert) Calhoun**, were honored in November with National Rivers Hall of Fame (NRHOF) Achievement Awards. Helping move the needle at WCI and within the industry, Calhoun was also honored by the NRHOF for her nearly 25 years of serving as an effective voice on behalf of America's river transportation industry. In addition to her impact at WCI, Calhoun served a variety of maritime industry clients as the former President/CEO of Colbert Communications. She also served in public affairs and communications for the American Waterways Operators and today, serves as Secretary of the National Waterways Foundation.

Port of Oakland names Wan Executive Director

Danny Wan, who has been serving as the Port of Oakland's interim Executive Director since last summer, and was Port Attorney for six years before that, has been named permanent Port Executive Director. He replaces **Chris Lytle** who retired in July after six years at the helm in Oakland. From 1996 to 2000, Wan represented Oakland, Alameda and San Leandro on the EBMUD Board. He brings more than two decades of experience in public agency law, finance and environmental policy, community relations and strategic planning.

Harbor Commission Elevates Tomley to Top Environmental Role

The Long Beach Board of Harbor Commissioners has voted to promote **Heather Tomley** to Managing Director of Planning and Environmental Affairs for the Harbor Department. Tomley, with the Department since 2005, has served as the Acting Managing Director for the past 12 months while the Port conducted a nationwide search for candidates for the executive position. Tomley now leads the Port's Environmental Planning, Transportation Planning and Master Planning divisions. She earned her BS in Chemistry from California Polytechnic State University and her Mas-


Barrie



Massport
Meyran Wieland


Holvik


Fitzpatrick



McCarthy
Schmaltz Verble

ter of Science degree in Environmental Science from UNC Chapel Hill.

Kirby Names Beder as Director of the Board

Kirby Corporation today announced the appointment of **Tanya S. Beder** as a new member of the Kirby Board of Directors. Ms. Beder has an extensive background with professional, board, and academic experience and service. Beder is currently the Chairman and CEO of a firm she founded, SBCC Group, 'Strategy Building and Crisis Control', where she heads the global strategy, risk, fintech and asset management practices. She earned a BA in Mathematics and Philosophy from Yale University and an MBA from Harvard Business School.

Danfoss Appoints Barrie as Head of Sales Americas

Danfoss Drives has named **Ian Barrie** as its new Head of Sales for the Americas. In this position, Barrie will continue to build and develop regional sales channels and verticals for Danfoss Drives' business within North America and Latin America. Previously, Barrie was Head of Global Key Accounts for Danfoss Drives. In a 25-year history with Danfoss, he has held several regional and global positions in sales, marketing, and business development.

Massport Board Votes to Approve Port Director

The Massachusetts Port Authority (Massport) Board of Directors voted to make **Michael Meyran** the Authority's Port Director, overseeing all Maritime business areas. Meyran has been with Massport for more than a decade as a Deputy Port Director, and has been serving as Acting Port Director since **Lisa Wieland** took over as CEO in August. Before joining Massport, Mike served as Senior General Manager of Operations for APMT Corporate HQ and before that, as GM Operations at APM Terminals/ A.P. Moller-Maersk in Los Angeles and Long Beach, CA ports.

Holvik joins Thrustmaster as EVP

Thrustmaster of Texas, which acquired the ICON Dynamic Positioning business from Rolls Royce earlier this year, announced the addition of **Jon Holvik** to the Thrustmaster team as the Executive Vice President for Business Development of Dynamic Positioning Systems. Holvik brings with him over 30 years of experience in the DP field having worked with Kongsberg Maritime starting as a service engineer, eventually being promoted president of Kongsberg Maritime.

RAL's Harford receives Maritime Excellence Medal

Robert Allan Ltd. announced that **Ken Harford** (former President, Robert Allan Ltd.) was presented with the SS Beaver Medal for Maritime Excellence by the Maritime Museum of British Columbia in a ceremony held on November 8th, 2019. Joining Robert Allan Ltd. in 1988, Ken applied his mechanical engineering skills and experience to the arrangement and installation of the propulsion machinery and shafting systems on many vessels types, but particularly tugs. His work contributed to many of the unique and progressive aspects of the Robert Allan Ltd. tug designs that have received wide industry acceptance. Ken became President in 2008 when Robert Allan Ltd. transitioned to an employee-owned company. In January of 2015, Ken retired from his role as President, passing the helm to **Mike Fitzpatrick**, however he remains as an active Director of Robert Allan Ltd.

McCarthy Hires Two for Civil Marine Industrial Group

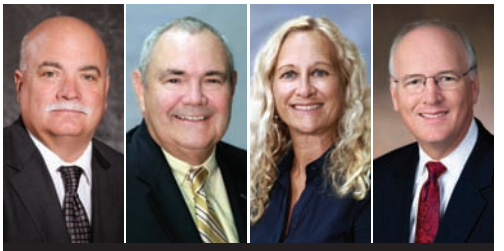
McCarthy Building Companies has hired **Jonathan Schmaltz** as Business Development Director for the Heavy Civil Marine Industrial Group. Schmaltz brings more than 14 years of heavy civil marine industrial construction experience to McCarthy, working in positions of increasing responsibility in locations including Georgia, Central Florida, Louisiana and the Texas Gulf Coast. He earned his BS in Construction Science from Texas A&M University. Separately, McCarthy Building Companies also hired **Condon Verble** as General Superintendent for the Heavy Civil Marine Industrial Group. Verble will be responsible for overall coordination, supervision and inspec-


HII

Harris, Petters, Beckstoffer


WCI

Stephaich Toohey Mecklenborg


National Waterways Foundation

Calhoun Toohey Calhoun Woodruff


Gaskill

tion of all field installations and will coordinate temporary jobsite facilities. Verble brings over 25 years of bridge, heavy civil and marine construction experience to McCarthy.

HII President and CEO honored by SNAME

Huntington Ingalls Industries announced that the Society of Naval Architects and Marine Engineers (SNAME) awarded HII President and CEO Mike Petters the 2019 Vice Admiral Emory S. "Jerry" Land Medal. Petters received the award during the Annual SNAME Banquet, where he and his wife, Nancy Briggs Petters, were keynote speakers. "Under Mike's leadership, HII's shipyards build and maintain the world's finest aircraft carriers and amphibious ships, and teamed with Electric Boat, deliver the world's most technically advanced submarines," said **Fred Harris**, 2012 Land Medal recipient and former president of General Dynamics NASSCO and Bath Iron Works.

WCI Elects 2020-22 Officers

At the WCI Annual Meeting/Board of Directors Meeting held in Pittsburgh, PA, the WCI Nominating Committee recommended and confirmed as WCI Officers, **Peter Stephaich**, Campbell Transportation Company as Chairman of the Board, **Mike Toohey**, WCI as President and CEO and **Dan Mecklenborg**, Ingram Barge Company, as General Counsel.

NWF Elects Trustees, Officers

At its November 2019 meeting in Pittsburgh, the National Waterways Foundation (NWF) elected 19 Trustees, as well as a new slate of Officers. NWF Officers elected for terms expiring in 2020 included **Rick Calhoun** (Chairman), **Mike Toohey** (President), **Deb Calhoun** (Secretary), **Cherrie Felder** (Vice Chairman) and **Matt Woodruff** as Treasurer.

TOTE Promotes Gaskill to VP Human Resources

TOTE, LLC has promoted **Karen Gaskill** to the position of vice president of human resources for three of TOTE's four operating companies, including TOTE Services, TOTE Maritime Puerto Rico and TOTE Resources. Gaskill most recently served as vice president of human resources for TOTE Maritime Puerto Rico. She joined TOTE in 2008 as manager of learning and development. She earned a BS in education from Indiana State University.

JAXPORT COO Earns Industry Certification

JAXPORT Chief Operating Officer **Frederick Wong Jr.** is one of eight graduates from the U.S. and Canada to earn the 2019 American Association of Port Authorities (AAPA) Professional Port Manager (PPM) certification. Wong is the second JAXPORT employee in the port's history to earn the industry certification. PPM is an internationally recognized, four-year program designed to shape the future of port leadership by providing high-level knowledge of all facets of port operations and management. Wong oversees JAXPORT's terminal operations, public safety and engineering departments.

ILTA Elects Middendorf as Chairman

The International Liquid Terminals Association has elected **Clifford R. "Kip" Middendorf** for a one-year term as the chairman of the board. Middendorf is vice president and managing director of Wolf Lakes Terminals, where he directs operations at the company's four terminals in Indiana and Wisconsin. He has worked at the company for 24 years, climbing to roles with increasing responsibility. He holds a bachelor's degree from Fort Lewis College.

U.S. DOT Secretary Chao among Those Honored at AOTOS Awards

Gratitude for the sacrifices made by the U.S. merchant mariners was the theme of the United Seamen's Service (USS) 2019 Admiral of the Ocean Sea Awards (AOTOS) presented at the 50th annual gala on November 1, 2019. The awards were presented before nearly 700 maritime leaders to The Honorable **Elaine L. Chao**, U.S. Secretary of Transportation; **James Given**, President of Seafarers International Union Canada; **Anil Mathur**, President and CEO of Alaska Tanker


Wong


Middendorf


Pyne, Chao, Mathur & Given


McIntyre

Company and **Joseph Pyne**, Chairman of the Board of the Kirby Corporation. In her speech, Chao said, "The U.S. Department of Transportation is working hard to strengthen the maritime industry. To that end, the Maritime Administration is seeing record funding of $682 million for fiscal year 2020." Proceeds from the AOTOS event benefit USS community services abroad for the U.S. merchant marine, seafarers of all nations, and U.S. government and military overseas.

SF Pilots Name McIntyre as Business Director

The San Francisco Bar Pilots announced that Capt. **Anne McIntyre** has joined the organization as Business Director. A former Columbia River Pilot and Oregon pilot commissioner, McIntyre comes to the Bar Pilots with a strong background in pilot association management and regulatory affairs. She began her career in 1988 as a deck officer graduate of the California Maritime Academy, and spent the first 8 years of her career with Chevron Shipping Co. Additionally, she was the first woman Columbia River Pilot.

Hampton Roads Repair Company Expands Capabilities

East Coast Repair and Fabrication, a ship repair company rebranded simply as "ECR", is making moves to expand its Ship Repair capabilities. Since the Company's inception in 1999, it has focused primarily on building competence and capacity geared towards supporting the maintenance of the Navy's fleet. Last summer, ECR secured a facility in Newport News with the intention of offering its Ship Repair Services to a commercial segment of vessel owners and operators. Earlier this year, the company also acquired a small commercial ship repair company and machine shop in Jacksonville, Florida and establishing a Crane and Rigging company. The culmination of ECR's recent business development efforts have produced first ship repair contract award. US Marine Management will bring the USNS Bob Hope to ECR's facility for a 90 day period for steel repair work.

USMI, Brunswick MOU Press Release

United States Marine (USMI) and Brunswick Commercial and Government Products (BCGP) announced that they have entered into a Memorandum of Understanding to explore potential business opportunities. "This is an opportunity for both of us to work together to explore our core strengths and synergies to determine how we can provide unique craft to the military market with our combined expertise. Both company's strong ethical foundations and passion for unmatched performance have resulted in high customer satisfaction," said **Barry Dreyfus, Jr.,** USMI CEO.

Everett Ship Repair Offers Pacific Northwest Ship Repair

Everett Ship Repair, LLC (ESR) was established earlier this month by Ice Cap Holdings, the parent company of Ice Floe, LLC dba Nichols Brothers Boat Builders (NBBB). The expansion creates a diverse shipbuilding portfolio between the sister companies, offering NBBB's new build expertise and ESR's repair and service capabilities. Everett Ship Repair will focus on vessel repair, maintenance and conversion with key customers including commercial operators, government agencies and military vessels. The new ESR location address is 2730 Federal Avenue in Everett, Washington 98210. ESR is strategically located within Puget Sound, offering drydock and pier side services for vessels under 430 feet. NBBB will continue business as usual, supporting ESR as necessary.

Grain Export Operation Kicks off at VPA's RMT

A new, high-speed grain elevator at Richmond Marine Terminal (RMT) will expand access to world markets for Virginia farmers and drive grain exports through the marine terminal. Scoular, an Omaha-based exporter of grain and other food ingredients to international markets, opened its new grain elevator on Nov. 14. The operation replaces Scoular's older conveyor system. The key advantage of the new

ECR

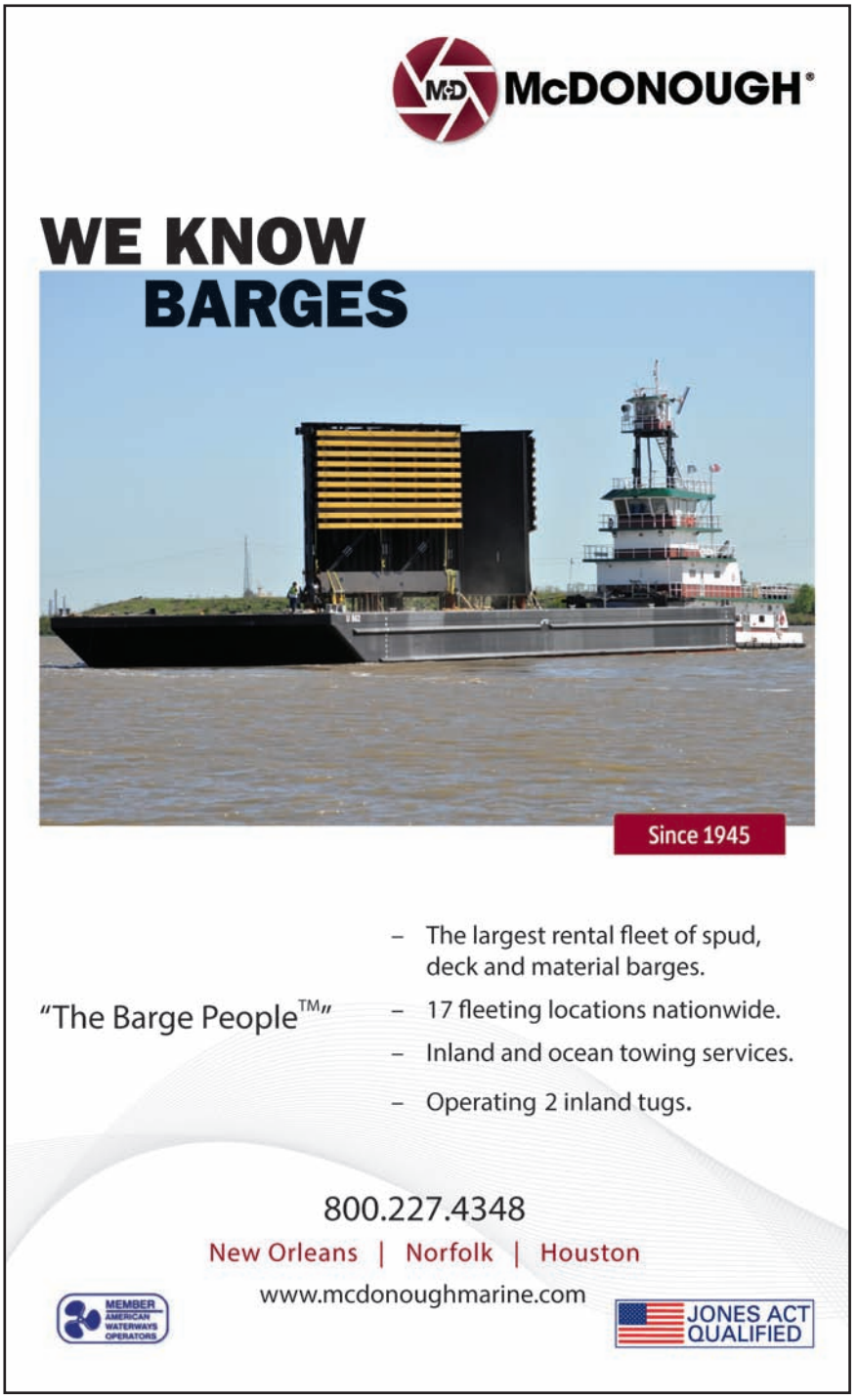
Everett Ship Repair

Reinhart

operation is efficiency: the elevators can unload 20,000 bushels – or 20 trucks – per hour, far eclipsing the previous capability of one truck per hour. "This project, combined with the investments we are making at Richmond Marine Terminal and the barge serving the terminal will provide farmers in Virginia even greater access to world markets," said **John F. Reinhart**, CEO and executive director of the Virginia Port Authority.

NUWC to collaborate with URI's Advanced Engineering Center

A quick tour through the University of Rhode Island's (URI) Fascitelli Center for Advanced Engineering makes it clear how the new Kingston campus 190,000-square-foot, $150-million facility is a win for the school, state of Rhode Island and the Naval Undersea Warfare Center (NUWC) Division Newport. The facility includes a designated area for the National Institute for Undersea Vehicle Technology, a Smart Grid Security Research Laboratory, robotics laboratories and workspaces for graduate students. As URI's largest and most innovative academic building, each of the five floors has centers focused on specific research themes: biomedical technology; robotics; water for the world; smart cities; materials, sensors and instrumentation; clean energy; nanotechnology and cybersecurity.



In-Mar Solutions: Wynn Marine Type C & Type D, Heavy Duty Straight Line Wipers

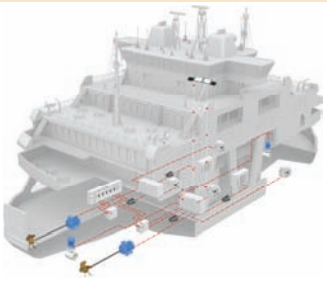
Wynn Type C (internal motor) and Type D (external motor) Straight Line Wipers offer the most advanced design of linear action window wiping systems for marine and other specialized applications. Optimum window coverage can be achieved and enhanced by utilizing a twin-bladed or dual-arm/blade design.

www.inmarsolutions.com

The Wayfinder

Phoenix Lighting's Wayfinder, a versatile walkway and accessway light is designed with custom optics and marine grade materials. UL, CE, and ABS certified, with the highest lumens/watt output in its class, Wayfinder delivers 1100 lumens with a powerful, compact light projecting wide beam angles, allowing fewer fixtures to cover more surface area. A built-in emergency battery backup option keeps fixtures illuminated for two hours during power interruptions.

www.phoenixlighting.com



ABB's Onboard Microgrid for Small Vessel Fuel Economy

ABB's compact DC-based power distribution system offers hybrid power efficiencies to smaller vessels. The new Onboard Microgrid is based on the ABB power distribution system Onboard DC Grid with the proven ability to enable up to 20% energy efficiency in larger vessels. The launch of the compact-size solution allows ABB to provide efficiencies for smaller, lower-power vessels, running on batteries, fuel cells, or as fuel cell/battery hybrids.

https://new.abb.com/marine-ports

Caterpillar Marine Develops EU Inland WW Solution

Caterpillar Marine announced the development of new technology solutions for European Union (EU) inland waterway (IWW) vessels. The new solutions are designed to comply with the next generation of regulatory emissions required for EU IWW applications and will be available starting in 2020 for various power ranges: for engines with less than 130 bkW, 130 to 300 bkW, and 300 to 1350 bkW.

www.cat.com/oilandgas

Cox Powertrain's successful CXO300 Diesel Outboard Testing

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

Damen's InvaSave Mobile BWT System

The InvaSave 300 IMO-certified system is an external ballast water treatment unit that uses mechanical filtration and ultraviolet radiation to eradicate invasive organisms from discharged ballast water, to IMO-D2 standards. InvaSave can also provide ballast water of the same quality to outbound vessels. It is packaged in a single, 40-foot container; ideal for placing on a barge, workboat or trailer for easy movement around a port.

www.damen.com

Dometic's Combined Cooling & Heating System

Dometic's VARCX/X30 Variable Capacity Chiller and Diesel Fired Heating System provides mariners alike with energy-efficient climate control under a wide range of conditions. This advanced marine climate control solution combines proven and energy-efficient VARCX variable capacity chilled-water cooling system with an innovative low emission diesel fired heating solution. The new X30 system is a 31,000 BTU system that has the ability to vary capacity down to 15,000 BTUs.

www.dometic.com

FLIR Introduces M300 Series Marine Cameras

FLIR Systems' M300 Series is a maritime thermal camera delivering advanced awareness-enhancing technologies, safer navigation, and seamless onboard integration. FLIR M300 Series cameras are designed for professional mariners and first responders who operate in harsh marine environments, facilitating safer navigation through improved image stabilization using an integrated attitude heading reference system (AHRS) sensor, providing captains with a steady view in rough seas.

www.flir.com/m300-series/

Furuno's 12KW Radar for Inland Waterways

Furuno has introduced a higher-powered FR1918VBB River Radar. With a 12kW output and all of the same critical features and functionality of its "little brother", the FR1918VBB will enhance the situational awareness of any river vessel. The FR1918VBB Radar uses a custom river mode with an ultra-short pulse length that provides navigators with superior bank, buoy and vessel detection.

www.furuno.com

Hempel's Hempaguard MaX Coating System

Hempel's new fouling defense system – Hempaguard MaX – provides vessels with a smoother hull. It reduces drag and results in significantly lower fuel requirements, and will deliver a guaranteed maximum speed loss of 1.2 percent over five years. Hempaguard MaX is applied in just three layers, meaning it can be applied more quickly, reducing time in dry dock by up to two days.

www.hempel.com

HOLDFAST – Engineered with One Key Goal in Mind: Grip

Holdfast utilizes HMPE and nylon fiber to deliver a lightweight, high-strength, floating line that will grip on H-bitts and capstans much better than traditional 100% HMPE lines. Holdfast is coated with TEUFELBERGER's proprietary abrasion resistant coating that is specially formulated to yield higher strength and more durable and water-resistant lines. Coatings are available in assorted colors.

www.teufelberger.com/en/holdfast.html

NAG Marine's TD-107s Oil Content monitor

The TD-107s is built on the highly successful fluorescence detection tech-nology of Turner Designs Hydrocarbon Instrument's TD-107. While the orig-inal TD-107 revolutionized the market with incredibly accurate bilge oil detection, TD-107s is smaller, lighter, offering modular remote detection cell that makes maintenance and exchange easy. Separate detection cell modules can be removed for calibration, cleaning, or repair.

www.nagmarine.com

MAN's IMO Tier III Engine for Workboats

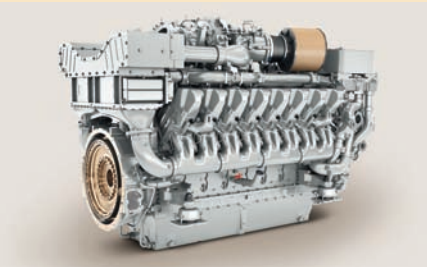
MAN Engines now offers a 12-cylinder, IMO Tier III emission standards engines for workboats, spanning a comprehensive power range from 551 to 1,213 kW. Immediately available, this is particularly relevant to customers in Canada and US East and West Coast ECA's, who are now subject to regulatory limits around 70% stricter than IMO Tier II. Modular EAT allows for a wide range of installation possibilities.

www.man-mec.com

Mercury Marine NVH Technical Center

Mercury Marine's state-of-the-art NVH (Noise, Vibration, Harshness) Technical Center gives the company the largest and most expansive testing facility in the marine industry. NVH is the engineering practice of studying noise, vibration and harshness characteristics; ensuring the quietest and most peaceful engine. The new technical center houses two marine-specific hemi-anechoic chambers, structural dynamic testing bays, listening rooms, offices and workspaces.

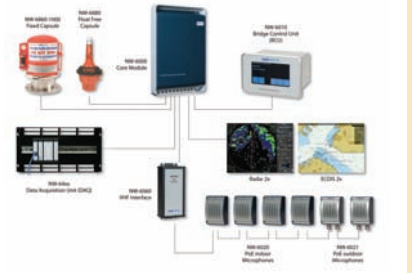
www.mercurymarine.com



MTU Engines Power New Foss Tugs

Pacific Power Group worked with Nichols Brothers to outfit the newest Foss Maritime tugs with MTU 16v4000M65L EPA Tier 4 diesel engines with Rolls-Royce US255 azimuth thrusters. The propulsion system includes an MTU Selective Catalytic Reduction (SCR) exhaust aftertreatment system. Additionally, the Z drive thrusters allow for 360-degree rotation, which provides the maneuverability required in ship assist and escort work.

www.pacificpowergroup.com



Orolia, Radio Holland Collaborate on Inland VDR Solution

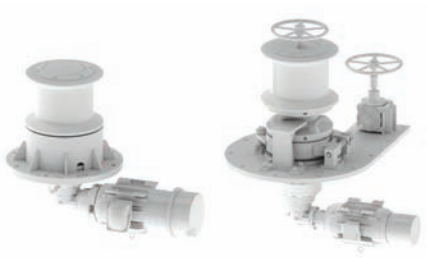
Orolia's new partnership with Radio Holland involves a Voyage Data Recorder (VDR) specifically designed for inland shipping. This solution enhances safe navigation and provides tools for understanding the cause of incidents. Radio Holland will also be installing Orolia's Netwave VDR NW6000 series as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

www.oroliamaritime.com

PPG's ASSET Integrity Management System

PPG's new Asset Integrity Management (PPG AIM) system is software-based asset management system that assists facility managers and maintenance engineers in scheduling, budgeting and optimizing the corrosion protection of metal structures, buildings and equipment under their care for up to 20 years in the future. The PPG AIM system is based on proprietary algorithms developed by PPG from NACE 509 and ISO 12944 corrosion-forecasting standards.

www.ppgpmc.com/aim



Schoellhorn-Albrecht Deck Machinery for Icebreaking Tug

Schoellhorn-Albrecht recently designed and manufactured a Vertical Anchor Windlass and Thru Deck Capstan for St. Lawrence Seaway's newest Ice Breaking Tug. Designed to ABS standards for a minimum design temperature of -25F°, the Thru-Deck Capstan features a Variable Frequency Drive (VFD) control package, a right angle drive gearbox, 20 HP marine duty motor and 18" diameter barrel. Both feature Nema 4 stainless steel enclosures.

www.schoellhorn-albrecht.com

Schottel's Shallow-Water Thruster SPJ 30

Schottel's new Pump Jet type SPJ 30 – a state-of-the-art shallow-water thruster – is suitable for a wide range of different vessel types, such as passenger vessels, ferries and work vessels. Available in the power class up to 150 kW, the azimuth thruster is characterized by optimal efficiency and gives the vessel maximum maneuverability. The thrust and propulsion efficiency have been further enhanced, particularly by means of CFD optimizations.

www.schottel.de

Shannon Reusable Insulation for Engine Efficiency

Shannon Enterprises' custom-designed insulation systems improve engine efficiency, safety and acoustics. For high-temperature applications such as engine manifolds, mufflers and exhaust piping, Shannon manufactures a custom fit reusable high-temperature thermal blanket, which, among other things, resists chemicals and weather and retains radiant heat up to 1,100 F (593 C). Shannon thermal blankets meet ASTM C335 requirements, and acoustic blankets pass ASTM-E1222 and ISO-15665 tests.

www.blanket-insulation.com

Signal Mate UL1104 Certified LED Navigation Lights

Signal Mate's US-made UL1104 modular navigation lights come with replaceable LED module & power supply that monitors light intensity. IMO MSC 253(83)4.3 and COLREGS compliant, it's approved for inspected vessels 20m and over (blue water, 50m and over). Available in 120 to 240 VAC, 12-32 VDC, or both, the double head has two power inputs for redundancy. Autonomous Double heads (one power input) alternate (2x lifespan) switch automatically to backup.

www.SignalMate.com

Survitec's Novel Evacuator Emergency Descent System

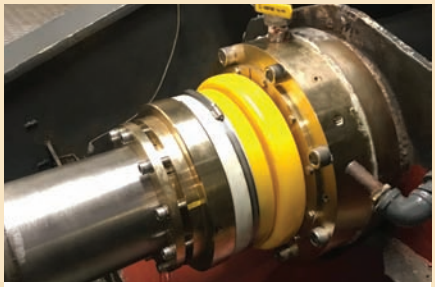
Survitec's new fire-proof emergency descent system is designed to evacuate people at altitudes of 6 to 300 meters. Fully mechanical, it does not require electricity or any other power, guaranteeing its operational reliability in all circumstances. The descent is fully automatic at a controlled speed of one meter per second. It is designed for use on wind turbines, offshore substations and harbor cranes.

www.survitecgroup.com

Svitzer's New Line Handling Technology

Svitzer has begun sea trials of a remotely operated line catching technology prototype. The new innovative mechanism could significantly improve safety standards and reduce risks for crews during the process of connecting with other vessels, one of the most critical elements of towage operations. Svitzer's line catcher is remotely and safely operated from the wheelhouse and catches and secures the connecting vessel's heaving line.

www.svitzer.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 Mississippi River when the vessel suffered catastrophic tailshaft failure in shallow waters. The incident resulted in one of the tailshafts being pulled clear of the gearbox and almost completely out of the boat.

www.thordonbearings.com

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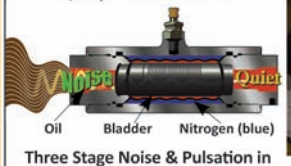

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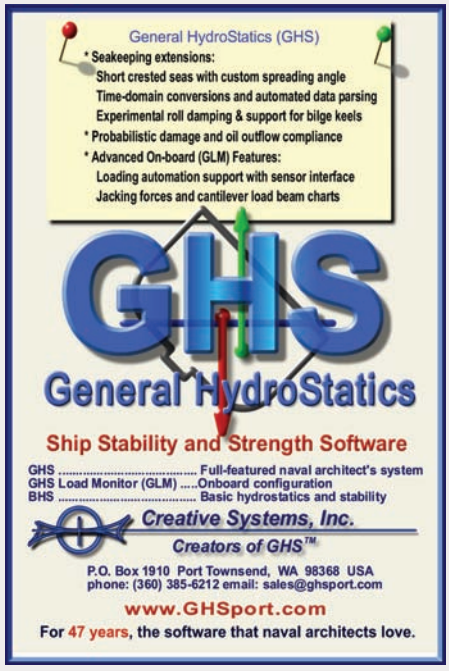

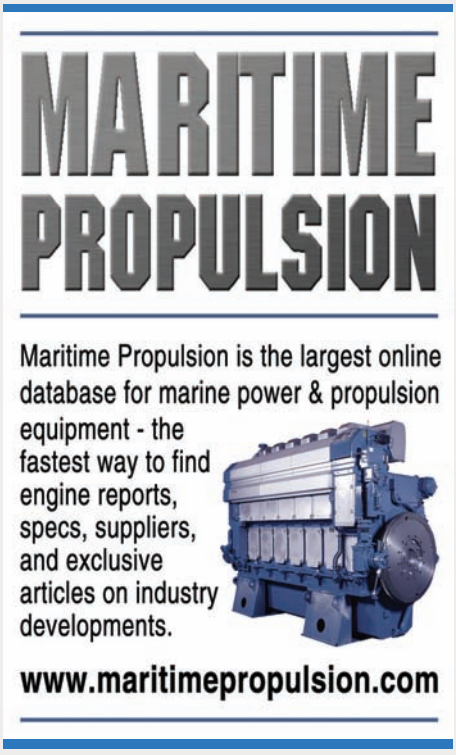

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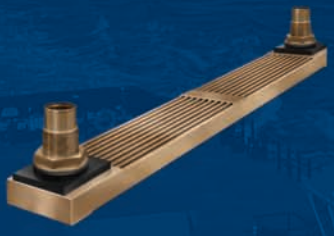

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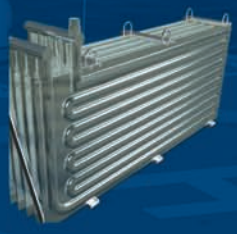

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