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Volume 31 • Number 1

Marine News

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Passenger Vessels & Ferries

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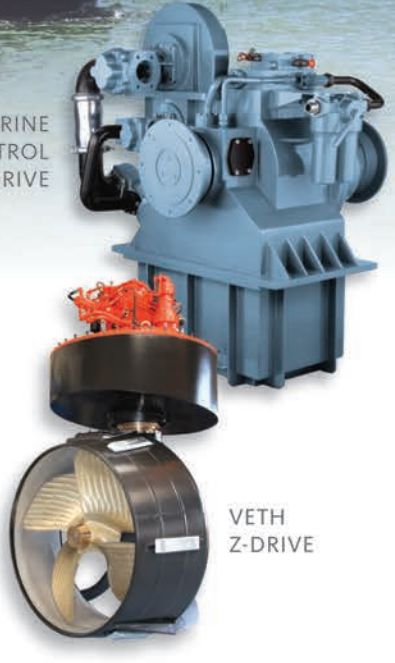

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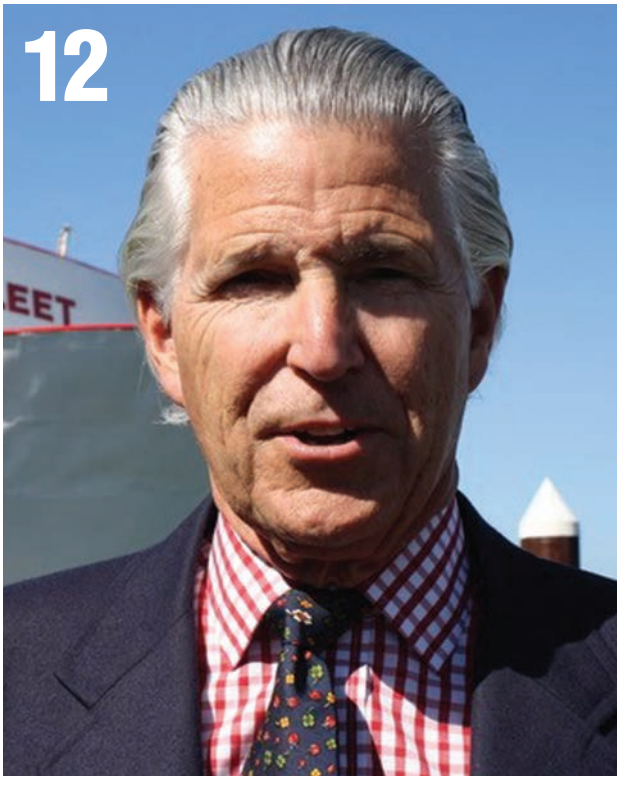

U.S. Coast Guard photo by Paige Hause

ON THE COVER

The passenger vessel industry is decidedly upbeat, with most ferry operators in the developed world reporting year-on-year traffic growth and, in many cases, record passenger and vehicle volumes.

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EDITOR'S NOTE

Faithful readers of this publication will have read in December's editor's note that longtime *Marine News* editor Joseph Keefe is now settling into well-deserved retirement. Those familiar with Joe's work know that his successor has big shoes to fill.

Luckily for me, Joe has been a generous teacher during our time together at New Wave Media, from my first days as an intern in 2013, through my tenure as an editor for *MarineLink.com* and then as managing editor of *Offshore Engineer*. I speak for everyone at this 80-year-old publishing house when I say Joe has been a diligent editor and astute industry commentator, an invaluable asset to our team and an absolute joy to work with. We wish him all the best.

As the new editor of *Marine News*, I look forward to picking up where Joe left off, and I'm already hard at work to maintain the high level of feature writing and expert analysis you've come to expect, kicking off with this edition's INSIGHTS interview with Red and White Fleet chairman, Tom Escher, starting on page 6. When it comes to maritime's green evolution, many merely talk the talk, but Escher stands firm among those who are walking the walk.

Also in this issue, our annual passenger vessel edition, regular *Marine News* contributors Tom Ewing and Barry Parker weigh in on this industry's most crucial topic, with feature stories on safety that begin on pages 24 and 28 respectively. This subject is, and always will be, top priority for all serving this industry. But achieving safety, and the regulations that surround this mandate, are not always as simple as the endeavor itself.

And *luckily for you*, Joe delivered a couple of articles for this edition before starting his next chapter on January 1. I consider the stories starting on pages 34 and 42 – along with his long list of story leads and words of wisdom – to be his farewell gift.

No doubt you'll see Joe's influence in the issues to come. And who knows? You may even see a few changes.

Eric Haun, Editor, haun@marinelink.com

Resources

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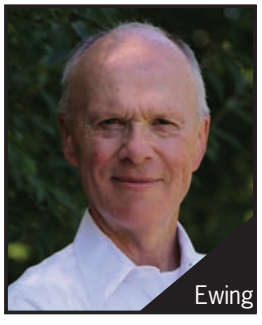
Corrigan

A Canadian former energy industry executive, **Mike Corrigan** joined Interferry in 2017 after 14 years in leadership positions at BC Ferries, where he became president and CEO in 2012.


Ewing

Tom Ewing is a freelance writer specializing in energy and environmental issues. He contributes regularly to this magazine.


Keefe

Joseph Keefe, recently retired, was the longtime editor of *Marine News* and *Maritime Logistics Professional* magazines. He is a 1980 (Deck) graduate of the Massachusetts Maritime Academy.


Lawler

Bob Lawler is currently General Manger for Boston Duck Tours in Boston. He has served as 2018 PVA Vice President, 2017 PVA Secretary-Treasurer, as a member of the PVA Board of Directors and was Chairman of PVA Safety and Security Committee from 2014 to 2016.


O'Neill

Randy O'Neill is Senior Vice President with Lancer Insurance Company and has been Manager of its MOPS Marine License Insurance division since 1984. Over the past 30 years, O'Neill has spoken and written on many occasions on the importance of USCG license protection. He is a regular contributor to *Marine News* magazine.


Parker

Barry Parker of bdp1 Consulting Ltd provides strategic and tactical support, including analytics and communications, to businesses across the maritime spectrum.


Reichardt

Klaus Reichardt is CEO and founder of Waterless Co, Inc, Vista, Calif. Reichardt founded the company in 1991 with the goal of establishing a new market segment in the plumbing fixture industry with water efficiency in mind. Reichardt is a frequent writer and presenter, discussing water conservation issues.

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USCG-PVA Quality Partnership Annual Report (2015-2018)

The latest report that documents the state of the U.S. flag, inspected passenger vessel fleet, as well as information concerning marine casualties and inspections involving U.S. Inspected Passenger Vessels, is out. This report, covering calendar years 2016-2018, follows a similar report issued last year (2015-2017). Both sets of data were developed from information contained in the U.S. Coast Guard Marine Information for Safety and Law Enforcement (MISLE) database.

These reports represent a worthwhile and cooperative effort between the nation's primary marine safety regulators and the self-described unified voice of the small, domestic passenger vessel sector, the Passenger Vessel Association (PVA). Beyond this, the standardized manner in which the data is presented provides a very good tool for comparing year-on-year performance, where a particular sector (and sub-sector) might be improving – and where it is not. Without a doubt, the domestic passenger vessel sector is one of the most heavily regulated in the U.S. flag fleet, and for very good reason. There are millions of lives at stake.

For those that don't already know, the passenger vessel sector is subdivided into three categories; namely, Subchapter H (vessels of 100 gross tons or greater that carry passengers); K (vessels of less than 100 gross tons that carry more than 149 passengers, or have overnight accommodations for more than 49 passengers); and T (vessels of less than 100 gross tons that carry more than six passengers but less than 150 passengers, or have overnight accommodations for 49 or less passengers).

According to the 2018 count, 6,635 inspected passenger vessels are recorded in the Coast Guard database; an increase of 256 since the last report. Some of that increase involves slight changes in how the data is being compiled, but it is also true that the passenger vessel industry has experienced a two-year boom of robust newbuilding and fleet renewal. And, a newer fleet should translate into a safer fleet. ***But, does it? You decide.***

Inspected passenger vessels are further classified by the USCG into as many as 20 different categories, illustrating well the diversity and vast differences in the nation's domestic flee of passenger vessels. From commuter ferries to amphibious vessels, perhaps no other sector has as many variables in terms of business model, hull type and operational purpose. That translates into a difficult set of rules for regulators to master, arguably as tricky as the new subchapter M towboat rules.

Marine Casualties Involving Fatalities: From 2016 through 2018, the Coast Guard received reports of 110 fatalities onboard U.S. flag inspected passenger vessels. That's down a bit from that which was reported for the period 2015 through 2017 (118 fatalities). Over a four year period, that's an average of less than 30 fatalities annually for an industry that transports tens of millions of passengers every year.

Even one fatality is, of course, too many. Further illustrating the safety efforts of industry, the Coast Guard also says that just 21 of the 110 fatalities that occurred in the period from 2016 to 2018 were "vessel-related." That's a term was developed by the Coast Guard and PVA staff so that non-accidental incidents and events occurring off the vessel would be excluded from the data analysis (i.e. murder, suicide, medical condition, and diving-related deaths).

During the period 2016-2018, the majority of "vessel-related fatalities" occurred during just one incident; the tragic 2018 sinking of the amphibious passenger vessel Stretch Duck 07, which claimed the lives of 17 passengers. Moreover, that also means that just three vessel-related fatalities occurred during the three-year period stretching from 2015 through 2017. **Table 4** shows types of accidents which led to fatalities during the period 2016-2018.

Changes in accounting methods over the past three years have elevated the number of reportable casualties. But even then, a clearly declining trend in reportable casualties despite that more stringent method of accounting for this data has occurred. That's a good thing: *The number of active vessels is up, while the number of reportable casualties and fatalities have both begun to fall; albeit very slowly.*

Inspected passenger vessels were involved in 2,459 reportable marine casualties from 2015 through 2018. Of those, less than 24% were classified as "Serious Marine Incidents" (SMI). The most common initiating event recorded for passenger vessel SMIs were "Personnel Casualty" (71.3%).

According to the report, most marine casualties are described as a series of events: a mechanical failure, followed by a loss of propulsion, grounding, and ending with a discharge of oil. In this example, the mechanical failure is the initiating event. The two most common initiating events recorded for passenger vessel marine casualties were "Material Failure/Malfunction" (36.1%) and "Personnel Casualty - Injury" (21.7%).

Defining [?] Safety / Vessel Numbers, Inspections and Deficiencies: The majority of the passenger vessel inspections and deficiencies issued of course involved T-boats due to the size of that fleet. As expected, the rough percentages of numbers of inspection, hulls and deficiencies closely corre-

spond to one another, although not necessarily in a strictly linear manner. So, what can we take from all of this? Encouragingly, and over a four year period (2015-2018) the numbers of both reportable casualties (–8.5%) and USCG deficiencies issued (–6.6%) are both heading in the right direction, although – arguably and in an age of the much-ballyhooed 'safety management system' – not fast enough.

Current Inspected Passenger Vessel Population

Vessel Type	2017	2018	Change
subH	156	142	(-) 14
subK	416	426	(+) 10
subT	5729	5813	(+) 84
Total Active	6291	6381	(+) 90
TOTALS	6379	6635	(+) 256

(*) domestic U.S. flag only

Table 4 – Fatalities Involving Passenger Vessels (2016-2018)

Accident Type / Subchapter Category	H	K	T	TOTAL
Assault, Homicide, Suicide, or Self-Inflicted Injury	2			**2**
Diseases- General			7	**7**
Existing Medical Condition Event	5	2	38	**45**
Overexertion Injury- Existing medical condition			4	**4**
Contact Injury- Crushed between objects			1	**1**
Contact Injury- Fall into water	1		2	**3**
Contact Injury- Fall onto surface			1	**1**
Noncontact Injury- Asphyxiation			21	**21**
Noncontact Injury- Diving			16	**16**
Noncontact Injury- Other	1	1	1	**3**
Other Injury Type			2	**2**
Unknown Injury Type			5	**5**
Total Fatalities	**9**	**3**	**98**	**110**

Distribution of Inspections, Deficiencies, Casualties & Fatalities by Subchapter class (% / 4-year trend)

Subchapter Type	PCT of Fleet (Active boats)	PCT of Total Casualties	PCT of Total Fatalities	PCT of Total Inspections	PCT of Total Deficiencies
T Boats	91%	67%	89%	83%	85%
K boats	7%	13%	3%	9%	10%
H boats	2%	21%	8%	8%	5%

Reportable Marine Casualties Involving Passenger Vessels (2015-to-2018)

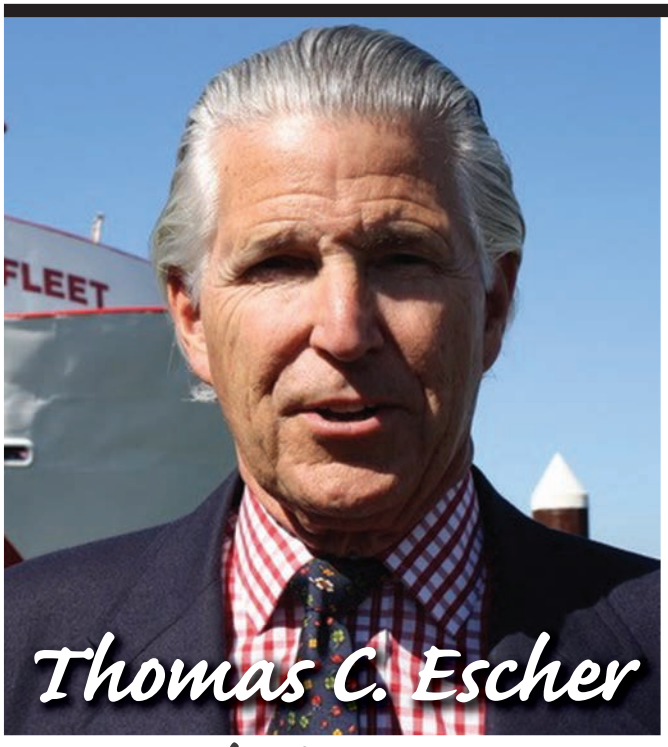
Inspection Subchapter	2015	2016	2017	2018	Totals	4-Year AVG
H Boats	156	121	104	131	512	128
Non-SMI	150	69	60	84	282	71
SMI	6	52	44	47	149	37
K Boats	95	81	72	60	308	77
Non-SMI	93	61	51	47	252	63
SMI	2	20	21	13	56	14
T Boats	393	421	427	398	1639	410
Non-SMI	376	303	301	282	1262	316
SMI	17	118	126	116	377	94
TOTAL	644	623	603	589	2459	**615**

(*) SMI: Serious Marine casualty

Vessel USCG Inspections & Deficiencies (2015-2018)

Calendar Year	Inspections Performed	Inspections w/Deficiencies	PCT Inspections w/Deficiencies	Deficiencies Issued (TOTAL)
H-Boats				
2015	1,170	384	32.8%	1,199
2016	972	340	35.0%	920
2017	851	306	36.0%	942
2018	922	406	44.0%	1,272
K-Boats				
2015	1,404	468	33.3%	1,965
2016	1,232	394	32.0%	1,598
2017	985	465	47.2%	1,621
2018	1,188	622	52.4%	2,014
T-Boats				
2015	11,262	4,213	37.4%	15,712
2016	10,674	3,896	36.5%	15,086
2017	9,791	4,003	40.9%	14,949
2018	10,242	4,243	41.4%	14,343

See the latest full report by clicking:
http://img.marinelink.com/pdf/USCG-PVA-Annual-Report-2016-2018.pdf



Thomas C. Escher

Chairman, Red and White Fleet

In 1960, Tom Escher, the grandson of the founder and now the current owner, started working as a sweeper and a mechanics helper on the Red and White vessels. In 1997, Escher purchased the Red and White Fleet, becoming the third generation of the family to own and operate the business. In September 2018, Red and White Fleet welcomed Enhydra, the newest and largest addition to the fleet. Enhydra is the first 600-passenger hybrid-drive vessel operating in the United States. Escher will be building more zero pollution passenger vessels.

Red and White is a family-owned company, with roots stretching back to the original Crowley Bay area businesses. Give us a quick description of your firm's history – from inception to present day.

The firm was founded by my grandfather, Tom Crowley, in 1892. In time, it grew to become an international transport company with the name of Crowley Maritime Corporation. In 1997, I purchased the Red and White Fleet (RWF). Hence, my first cousin, Tom Crowley, Jr, is running Crowley and I am running Red and White Fleet. Today, the only financial differences between the two companies are the zeros.

Give us a 'by the numbers' insight on Red and White.

We have a total of four vessels in our fleet. Less than 1 million passengers embark on our cruises annually.

You are known for being passionate about the environment. And, you have made no secret of the fact that you want to build new vessels with zero environmental signatures. Where are you on that journey?

Our goal – which we will achieve – is to be operating zero pollution vessels. As of today, we are failing in our environmental goals because our entire fleet is not yet zero pollution. It is difficult and/or impossible for me to say 'The Red and White Fleet is an environmentally sensitive and we operate cleaner vessels.' Many stakeholders use the environmental discussion as a marketing ploy to show that they are cleaner or an environmentally sensitive business. In truth, a business is either 'zero pollution' or is not 'zero pollution.'

You are a member of the PVA's GreenWaters Program. Your firm boasts a long history of environmental commitment – beyond simple propulsion itself – in your daily operations. It sounds good, but what does that really entail?

We support the PVA's GreenWater Program as it is a very good industry program. It is relatively easy to achieve many of these goals but RWF is still not zero pollution, so the Red and White Fleet still has a long way to go on its journey to become zero pollution.

Do you employ a so-called 'safety management system?'

Yes. We have an in-house safety management system (SMS) that has taken its roots and structure from many other SMS programs.

Red and White is an early adopter of alternative fuels, among other things. Which alternative fuels do you now employ and which ones are being investigated?

Since we are a small company, it is difficult for us to spend big dollars on exploring the many potential fuels in the world. We are looking are looking at electric, hydrogen, etc. However, I am hopeful that in the near future, there will be a significant discovery for a new, different zero pollution power system for ships.

The Golden State wants all ports to be 'carbon neutral' by 2030. Red and White is on its way to doing just that, but of course it comes at a cost. How do you manage to stay competitive?

It is very difficult. Yes, there is a dollar cost, but let's not forget the human health cost. We believe that RWF offers

the best sightseeing and vessel operation on San Francisco Bay. At the same time, if the consumer wants another type of service; then that is their choice.

Can a firm go green for the right reasons and fatten the bottom line at the same time?

Bottom line is important. Humans are important. Business continuity is important. These differences must work together or there will be larger global problems.

What do your vessels run on now?

We have been operating on 100% renewable diesel produced by Neste MY, and we are getting good results.

Your Enhydra is certainly not an average tour vessel. Can you share the main challenges in its construction, how has the vessel performed post-delivery and 'lessons-learned' to date?

First, we had simply great vessel performance, great support from All American Marine and great support from BAE. This vessel involves very different operations for the captains, and additional training was necessary as we rolled out this new technology. For example, silent operations involve the master to look at the monitors and not listen to the diesel engines. Almost instant throttle response times, require a gentle touch with controls. Additional training was also required for our maintenance teams, who, to their ultimate credit, were very quick to catch on. Today, everyone notices and comments on the cleanliness of the engine spaces, which still shine like the day we took delivery of the vessel. In terms of service, passengers now recognize no diesel odors, no exhaust, a quiet operational ride, no soot on the vessel, and many other related improvements.

Red and White Fleet's lithium ion battery hybrid vessel brought 20% fuel efficiencies over conventional diesel engine propulsion systems. You've said you can and intend to do better. Are we there yet?

We are performing with 35% efficiencies over conventional diesel – the 20% was the original goal; 35% is our actual results.

Red and White intends to eventually bring the first hydrogen fuel cell powered vessel into service in the San Francisco Bay Area. When will that happen and how will you pay for it?

We are presently working with another company and the California Air Resources Board (CARB) to build a high-speed hydrogen fuel cell ferry to operate on San Francisco Bay. This vessel, named the Water Go Round, will show the maritime industry that hydrogen fuel cell vessels are a reality and zero pollutes here today. I suggest you go to Sandia National Lab's website as they have completed a feasibility study on both electric and hydrogen fuel cell

Credit: Red and White Fleet

vessels, including large containerships. There is very good information in that Sandia study.

The U.S. Department of Transportation insists that it focuses on rebuilding, repairing and revitalizing our transportation infrastructure. Yet, there are many U.S. flag operators – specifically those in the passenger vessel game – at an enormous disadvantage because today's interpretation of the MARAD Capital Construction Program (CCF) excludes these operators from all the benefits of this well-intentioned program. Why is this happening?

Let's be truthful: the CCF is an exclusive club mainly intended for large deep-sea vessel operators and, of course, others who have the lobbying dollars to control the decision makers. MARAD's website insists, "… we work hard to maintain the overall health of the U.S. Merchant Marine." If that is true, then why does MARAD not support all U.S. flag vessels in utilizing the CCF? H. Clayton Cook (a recognized and well known CCF expert) and I are willing to meet with MARAD (again) at any time to shift the CCF from an 'exclusive club' to a CCF open to all U.S. flag operators. Industry knows that this will create new shipyard jobs, add more U.S. flag vessels and build a stronger merchant marine. Sadly, RWF does not have any lobbying dollars to pressure MARAD, so the CCF remains and exclusive club mainly for large deep-sea vessel operators. If any of your readers interested in a more inclusive CCF and building a stronger U.S. Merchant Marine, please have them contact me.

This year, the U.S. EPA proposed to delay implementation of Tier 4 marine diesel engines "in certain high-speed commercial vessels." What are your immediate thoughts on this proposal?

If you are a global engine manufacturer, why would your company decide to make/modify engines to meet tier 4 engine requirements as needed by CARB? Actually, it is probably less expensive for engine manufacturers to drag their feet and spend lobbying dollars for one state and delay the implementation of the rules. Again, are we back to touting simply 'cleaner solutions' to keep the public happy, or should we proceed with a zero pollution goal? EPA's latest proposal therefore casts doubt whether federal decision makers honestly care about pollution or are merely providing lip service.

Supposedly, and for boat-builders, Tier 4 engine size and weight present challenges. Do these challenges warrant further delay? Do these challenges impact your firm's operations?

It is the job of boat-builders and naval architects to "fig-

Credit: All American Marine

ure it out." Alternatively, they can go out of business while someone else will.

The Maine Lobstermen's Association supports EPA's proposed delay, saying "the current Tier 4 marine diesel engine emission standard is a mismatch for the Maine lobster fleet." But, what about ferries and passenger vessels; does the same hold true?

The mission of EPA is to protect human health and the environment. Many businesses and citizens respect and admire the EPA. However, in many cases, as soon as the implementation of proposed standards has an effect on a business or individual, then there is a need to 'kick the can down the road.' In this specific case, some of the reasoning presented to the EPA seems to be that the technology is 'simply not available or feasible,' or perhaps the time-tested excuse of 'the decade-old assumption of how the market would respond has proven to be incorrect.' And, of course, who could forget, 'it is a question of whether there are likely to be enough sales to justify the manufacture's investment, etc.' As a vessel owner and operator, many of the EPA actions have a financial impact on businesses and I accept this additional cost because I am extremely concerned about human health and the environment. As I understand it, the EPA is responsible to lead the way and the public is relying on the EPA to do their job. We therefore urge the EPA not to amend the proposed standards as there is no more room to 'kick the can down the road.'

For operators in small bays and fixed routes, DEF for SCR Tier 4 implementation is not a problem. The supply chain can be set in quite easily. Towboat operators on the rivers say that's not the case. In these remote areas, sometimes there is no (DEF) distribution network. Can this problem be overcome in the short term to avoid pushing the environmental concerns 'can' down the road?

Stop. Please stop: companies must stop providing lip service for 'cleaner' operations and then be bold enough to make changes to zero pollution operations. In other words, spend your lobbying dollars on zero pollution engines.

Fishing for Trouble

Radar Confusion & Speed Cited in Ferry Grounding

By Randy O'Neill

O'Neill

While the perennial issue of commercial vessel and recreational boat collisions, near misses and allisions with navigational aids are certainly nothing new, in much of the navigable waters of the United States they are typically associated with the warmer weather of late spring, summer and early fall when privately-owned boats abound on the nation's lakes, rivers, bays and sounds.

But even after the cabin cruisers, sailboats, jet skis, kayaks, canoes and paddleboards are stowed away for the season, those unfortunate encounters between working vessels and private watercraft continue to occur, albeit with less frequency, in the warmer climes of the country.

And with the national surge in popular interest in ferry commuting, natural sightseeing cruises, dinner boats and maritime tours, many more passengers of these vessels are taking advantage of these maritime-related activities…and are being exposed to the unique risks associated with same.

Confusing Radar Targets

Such was the case in late fall with dozens of passengers traveling on a commuter ferry through the narrow straits from a seaside town to a bustling terminal near a downtown business district in the Pacific Northwest.

Visibility in the morning fog was about a quarter mile as the ferry captain navigated his way through a familiar island chain steaming towards the main channel which would put him on track for an on-time arrival at the city dock. Once in the main channel, the captain reached and maintained a speed of about 25 knots. All of the vessel's navigational and mechanical equipment was operating properly and the master, alone in his pilothouse, had engaged his running lights and activated the vessel's automatic fog signal.

As the ferry drew closer to its destination, it entered a well-traveled channel and the captain decided to position his vessel closer to the green side of the narrow channel to avoid the always present recreational fishing boats located both ahead and on the periphery of the main channel. All

Credit: AdobeStock © Rachael

was proceeding normally until the ferry was exiting past the last pair of buoys in the narrow channel and the captain began turning the vessel to port while maintaining his speed of just under 25 knots to approach the next familiar green can buoy. Visibility was still limited to about 1,500 feet, so the captain was navigating by radar and observed the green can buoy, appearing as a single target on radar, ahead and to his portside.

Suddenly, as the ferry proceeded further, the 'buoy target' split into two distinct targets. One radar target was clearly the green can buoy and the other appeared to be an unknown vessel moving to the northeast. From his familiarity with this section of his route, the ferry captain assumed the unknown target was a recreational fishing boat moving its position away from the navigational buoy to a safer location.

Since he could not turn to starboard without colliding with the crossing boat, he reduced speed, turned to port and very soon thereafter ran aground on submerged rocks outside of the marked channel. The vessel was grounded high and dry approximately 350 feet from the rugged shoreline. Making contact with the rocks while still moving at about eight knots impacted the ferry's fiberglass hull, damaging its first watertight compartment. The captain did not observe any water entering the vessel and deduced that the ferry was not flooding and in danger of listing or sinking. Because of the location where the vessel sustained damage, no oil product pollution was triggered by the grounding. A subsequent survey estimated the hull damage in the $50,000 range.

Passengers Sustain Injuries

More troubling in the wake of the unexpected and somewhat violent grounding, were the reports of several passenger injuries resulting from the impact with the underwater rocks. Several passengers were ejected from their seats with two suffering facial lacerations and others complaining about neck and back pain. While none of those injured required hospitalization, several were either treated at the scene or when they were shuttled back to the city dock or at nearby urgent care facilities

Meanwhile back in the pilothouse, the shaken captain secured the vessel as best as possible and checked on the condition of his passengers and crew. He then contacted his company which immediately reported the incident to the local Coast Guard office and dispatched a relief vessel. The captain then called his USCG license insurer to report the claim, and was promptly assigned a maritime attorney who called him on his cell less than 15 minutes later to prepare him for his initial USCG post-casualty interview. That initial interview, conducted onboard the disabled ferry, went as well as could be expected, focusing primarily on the actions taken by the captain immediately prior to the grounding.

Later that week, the captain, accompanied by his license defense attorney, attended a second more formal interview at the Marine Safety Office and the red flags started flying. The lead Investigation Officer (IO) expressed serious concerns with several aspects of the captain's story, and was particularly troubled by the ferry's speed of close to 25 knots in limited visibility and the lack of communication attempts with the unknown fishing vessel when it was seen changing positions and posing a collision threat.

These concerns prompted the Coast Guard to present the licensed master with a settlement offer mandating a six-month license suspension, requiring the captain to surrender his license for two months, enroll in and successfully complete an approved bridge management course in that time period and return to work for a probationary period of four months which, if completed without any further incidents, his license would be returned to him.

Fully understanding that the settlement proposal was the Coast Guard's final and best offer to resolve the matter before it brought negligence charges and set an Administrative Law court date (coupled with the mostly negative press generated by the accident's resulting passenger injuries), the master and his defense attorney reluctantly decided to take the known penalty in hand rather than take their chances for a better outcome before an Administrative Law Judge (ALJ).

It was a bitter pill to swallow for the affected ferry captain, but not an unusual outcome in today's highly-charged enforcement atmosphere which stresses full accountability (and consequences) for professional mariners' decisions and actions…particularly when their 'fragile cargo' is local commuters.

Randy O'Neill *is Senior Vice President with Lancer Insurance Company and has been Manager of its MOPS Marine License Insurance division since 1984. Over the past 29 years, Mr. O'Neill has spoken and written on many occasions on the importance of USCG license protection. He is a regular contributor to* ***MarineNews*** *magazine and the opinions expressed in this article are his alone. He can reached at:* ***roneill@lancerinsurance.com***

An Ever-vigilant Focus on Safety

By Bob Lawler


Lawler

When I came into office as the Passenger Vessel Association's President for 2019 last January, I announced two strategic goals for our industry: to enhance safety and foster the professional growth of our next generation of leaders. I am proud to announce we have undertaken major initiatives and made progress on each. These goals match my lifelong professional commitment to safety as well as aligning with PVA's true north: a responsibility to be ever vigilant and proactive in addressing safety.

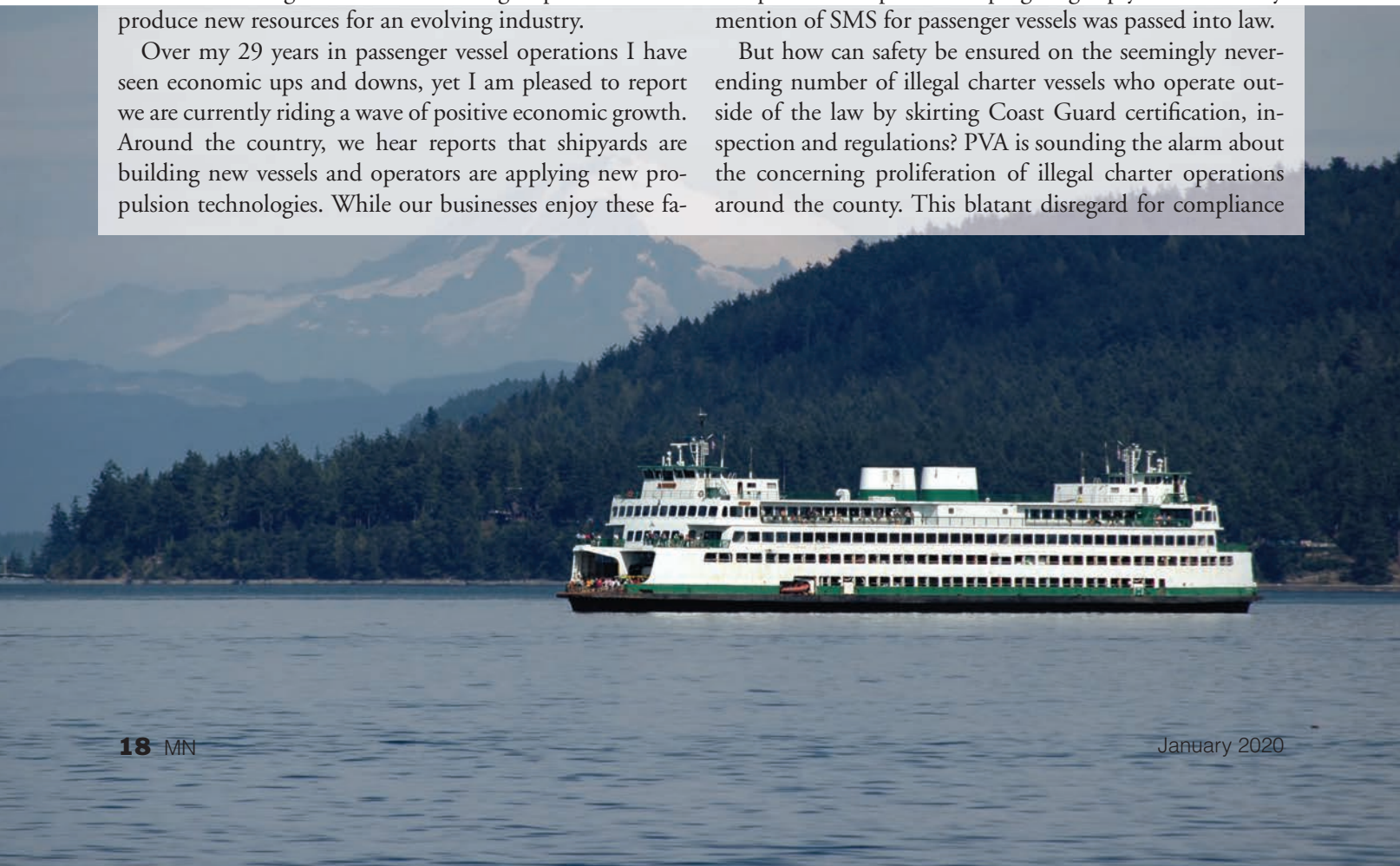
I have been a longtime member of PVA and served in its leadership for years. I am particularly proud of my work on the Safety and Security Committee. Serving as the former chair of this committee, I worked with its members to create practical tools to promote safety to the industry nationwide. While on the committee, I spearheaded efforts to study slips, trips and falls on vessels through a chartered working group with the Coast Guard, where we produced resources to mitigate these risks. This group continues to produce new resources for an evolving industry.

Over my 29 years in passenger vessel operations I have seen economic ups and downs, yet I am pleased to report we are currently riding a wave of positive economic growth. Around the country, we hear reports that shipyards are building new vessels and operators are applying new propulsion technologies. While our businesses enjoy these favorable conditions and our outlook remains positive, we also keep focus on our responsibility to operate safely.

In light of the casualties in Missouri involving Stretch Duck 7 and in California aboard the dive boat Conception, PVA is encouraging its members to intensify efforts in the safety arena. While these vessels are not typical of the type of operations conducted by most PVA members, it is nonetheless prudent for all to revisit safety topics, drills and exercises in the quest for continuous improvement. Congress has proposed several bills in response to these accidents and we are currently analyzing these bills.

PVA has always had its roots in safety. For years we have created tools to elevate safety including recently developing a comprehensive online crew training program. PVA is expanding the topics covered in these training resources to keep pace with the needs of our members. PVA also created its own Safety Management System (SMS), what we fondly call Flagship. This voluntary program is specifically tailored for domestic passenger vessels, can be used by companies of any size and is formally recognized by the Coast Guard as meeting the functional elements of a SMS. PVA took this proactive step in developing Flagship years before any mention of SMS for passenger vessels was passed into law.

But how can safety be ensured on the seemingly never-ending number of illegal charter vessels who operate outside of the law by skirting Coast Guard certification, inspection and regulations? PVA is sounding the alarm about the concerning proliferation of illegal charter operations around the county. This blatant disregard for compliance



with minimum requirements poses a major threat to public safety. We appreciate that the Coast Guard has stepped-up its enforcement efforts and we urge them to keep the pressure on by issuing fines and prosecuting illegal charter operators.

Our efforts to promote safety also hinge on our strong relationship with the Coast Guard. Coast Guard inspectors regularly visit and inspect our vessels and having their direct involvement is essential to successfully promoting safety. An engaged, well-trained, and adequately funded Coast Guard Marine Safety Mission is vital.

Recently, PVA's Vice President, Colleen Stephens, of Stan Stephens Glacier & Wildlife Cruises in Valdez, Alaska, testified before Congress on behalf of PVA. In her statement, she urged Congress to fully fund the Coast Guard's Marine Safety Mission and ensure that this function is well-maintained. Additionally, Stephens urged Congress to evaluate the implementation of the Coast Guard's action plan entitled Enhancing the Coast Guard's Marine Safety Program, which was issued in 2007 to address Congress' concerns surrounding the Agency's deteriorating safety inspection functions. PVA also advocated that inspections of passenger vessels remain entirely within the Coast Guard and not handed off to third parties, as has been done for other segments of the maritime industry. We believe that Coast Guard safety personnel have a greater level of expertise and intimate knowledge of our vessels and the routes on which we operate than do third-party organizations. Keeping direct Coast Guard inspection of our vessels and providing them with the resources they need is the best way to promote safety.

My other goal for the year, of building-up our next generation of leaders, goes hand-in-hand with safety. Prioritizing safety is a part of company culture and we want our teams to be well supported in all areas of professional development. In January 2019, PVA launched the Emerging Leaders Committee with the mission to support the growing community of individuals transitioning into leadership roles in their companies. This group encourages professional growth through seminars, resources and online forums. This year's PVA Annual Convention at MariTends 2020 in Tampa, Fla., February 3-6, will feature a host of sessions specifically tailored to the needs of our emerging leaders.

I am encouraged by this highly engaged group of individuals; they are already guiding PVA's future by highlighting emergent issues of importance to the passenger vessel industry. The emerging leaders that we foster today will be the PVA presidents of tomorrow, and I am excited for the bright future ahead for our industry.

***Bob Lawler** is currently General Manger for Boston Duck Tours in Boston. Boston Duck Tours operates 28 amphibious vehicles carrying more than 600,000 passenger each year. Lawler began his career in the maritime industry in 1990 as a deckhand with Bay State Cruise Company in Boston. After graduating from Marquette University in Milwaukee, Wisc. in 1993, he obtained his 100-ton Master's license and worked as a full time Captain for Entertainment Cruises over the next 11 years in Boston, Chicago and Seattle before returning home to Boston where he worked as General Manager and VP of Marine Operations for a fleet or 38 vessels in 6 ports until 2017. The company's brands include Spirit Cruises, Odyssey, Bateaux New York, Elite Private Yachts, Mystic Blue Cruises, Seadog and Potomac Riverboat Company. Lawler has served as 2018 PVA Vice President, 2017 PVA Secretary-Treasurer, as a member of the PVA Board of Directors and was Chairman of PVA Safety and Security Committee from 2014 to 2016.*

Ferry Industry Sets Pace on Critical Solutions

Interferry CEO Mike Corrigan describes a distinctly upbeat period in the worldwide ferry community – and explains how the global trade association plans to take its support to far-reaching new levels.

Corrigan

There are times when the phrase "there are three kinds of lies: lies, damned lies and statistics" seems all too true, but here's an honest number for you – ferries carry a global total of more than 2 billion passengers a year, which is almost on a par with airlines.

Hard to believe? Not for those of us in the industry, but almost certainly for many citizens and politicians. We need to raise even more awareness among consumers and policy makers of what ferry services bring to the table as leading drivers of safe, cost effective and eco-friendly travel and trade. Now Interferry is poised to do just that with the launch of its 2020-22 Strategic Plan, a quantum leap of faith drawn up in top level liaison with members.

For all its apparent size, the ferry sector represents at most only 5% of overall world shipping, so a united front is essential in order to punch above its weight in an era of relentless competitive and regulatory challenges. The Stronger Together strategy adopted after I joined Interferry in April 2017 is amplified in our new three-year plan, which focuses on several key areas:

- Promoting the highest standards of safety,

Most ferry operators in the developed world are reporting year-on-year traffic growth and, in many cases, record passenger and vehicle volumes.

Credit: AdobeStock © Igor Strukov

security and environmental sustainability
- Providing leadership in formulating regulatory policy
- Showcasing the reliability, efficiency and attractiveness of ferry transport
- Promoting the industry's economic and social value
- Expanding membership to countries currently under-represented

These objectives maintain and extend Interferry's decades-long development, which has evolved from U.S.-based networking origins in 1976 to an established role as the worldwide voice of the ferry community – exemplified by consultative status at the International Maritime Organization (IMO). Our vision for taking the industry's profile still higher is ambitious but entirely realistic, because it builds on the evidence of hugely encouraging advances in both developed and developing nations.

I truly believe that the industry has rarely if ever been in such good health. Most operators in the developed world are reporting year-on-year traffic growth and, in many cases, record passenger and vehicle volumes. They have turned challenges such as fixed links and low-cost airlines into opportunities by raising their game on the shipboard experience and their landside minibreak and vacation programs.

Meanwhile aggressive fleet expansion projects are underway to address not only rising demand but also the financial and environmental need for ultra-efficient vessel performance. From North America to Asia, Australia and Europe, orders for new ferries are resurgent among operators of all sizes.

Alternatives to fossil fuels have become a recurring feature of the newbuild designs. Climate change – now redefined as the climate emergency – has sparked a growing tide of regulatory compulsion to slash maritime air emissions. In the quest for zero emissions, the ferry sector leads the shipping industry in implementing the likes of battery and hydrogen power, as well as 'cold ironing' equipment that allows shoreside electricity supply to vessels at berth.

Case studies at Interferry's 44th annual conference in London last October underlined the sector's dedication to finding cutting-edge fuel solutions. Norled, a Norwegian operator recognized for pacemaking fleet electrification, announced 'the next industry game-changer' with its plan to introduce a hydrogen-fueled ferry in 2021. As the company explained: "The green shift is already there for short routes but not for longer distances. We think liquid hydrogen from clean sources such as wind, water or solar power will be the way."

Another presentation featured the hydrogen-powered HySeas III ferry project, where Interferry is a partner in a

consortium sponsored by the European Union (EU). Delegates heard that the drive train was being prepared for assembly and testing on land within months.

Such leadership was notably acknowledged by keynote speaker Guy Platten, secretary general of the International Chamber of Shipping (ICS). Praising ferries for being 'at the bow wave of the latest propulsion revolution', he asserted: "You are the pioneers in the shipping industry and will light the path. What you do now, the industry will follow. We want to learn from you in order to take the whole industry forward." By a happy coincidence, there was a telling echo of our own strategic objectives when he concluded: "You can't do it alone. Ferry operators are more exposed to public perception on emissions. You need the support of consumers, policy makers and financiers – reaching beyond your own community to make sure of an equitable and affordable transition."

My positive outlook on the state of the industry has also been shaped by a growing determination among developing nations to implement a much-needed enhancement of safety measures on their domestic ferry operations. In a major breakthrough last June, the IMO's Maritime Safety Committee agreed to upgrade their hitherto advisory input and will now work to develop model regulations. Interferry backed the formal proposal from China in a move that marked our many years of lobbying and cooperation on the issue at the IMO.

In March and May last year, a team from Interferry's purpose-formed FERRYSAFE project went to the Philippines to research how the nation's safety record – previously worst in the world – had come into line with the global average over the past decade. The week-long visits to Manila and ferry capital Cebu covered 66 stakeholder interviews, seven ferry crossings, shipyard visits and meetings with the maritime, port and Coast Guard authorities – all with the aim of producing a 'lessons learned' document that can assist the IMO and other developing nations.

In November we reported on the project at the third annual ASEAN (Association of Southeast Asian Nations) ferry safety forum. The event in China was attended by more than 100 participants from 20 countries. Favorable feedback on our presentation prompted a number of invitations from delegates for Interferry to visit their operations and to hold our annual conference in the region in the next few years. It is extremely encouraging that our networking, aid and lobbying mission is becoming so well recognized and respected in the Asia Pacific region, and this will only be enhanced by our participation and sponsorship at the IMO ferry safety conference scheduled for Bangkok in March.

Interferry's current membership – more than 260 ferry operators and suppliers in 40 countries – is predominantly based in North America, Europe and Australia. Reaching out to developing nations is a core objective of our Stronger Together strategy and, as in other areas of our activity, will maximize the potential for supporting their safety initiatives.

Safety and environmental issues have long been at the heart of our work, not least because regulatory proposals can inadvertently penalize the particular requirements of ferry design and operation. Interferry's established reputation among the relevant authorities is key to the success of its interventions, which support the general objectives but argue for sector-specific amendments. A typical example came last June when the IMO safety committee agreed draft guidelines on ro-pax fire safety; we promptly lobbied for more discussion to prevent unproven construction recommendations.

Interferry has since become one of 27 research and industry partners in an initiative dubbed LASHFIRE - Legislative Assessment for Safety Hazards of Fire and Innovations in the Ro-Ro Ship Environment. This four-year EU-funded project aims to identify innovative additional measures enabling regulatory development and industry uptake. Our main role is to organize an advisory group of up to ten operators who will provide ongoing input.

As ever, we are also heavily involved with issues regarding environmental regulation. Last May the IMO Marine Environmental Protection Committee (MEPC) proposed potential short-term greenhouse gas (GHG) measures including stricter requirements on the Energy Efficiency Design Index, shaft power and speed. The committee also set a 2021 deadline to harmonize rules for discharge water from exhaust gas scrubbers. In November we attended the intersessional GHG meeting armed with ferry-appropriate proposals prepared by our specially formed working group. Ahead of the next MEPC session (March 30-April 3), we are now preparing a submission to ensure that any retroactive requirements are best designed to deliver a fair and meaningful improvement without penalizing early movers.

On every front, the next few years will surely test the validity of our Stronger Together strategy like never before, but I have no doubt that our combined efforts will continue to reap crucial benefits both for the industry and society as a whole.

A Canadian former energy industry executive, ***Mike Corrigan*** *joined Interferry in 2017 after 14 years in leadership positions at BC Ferries - one of the world's largest ferry operators – where he became president and CEO in 2012.*

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Vessel Safety:

Credit: U.S. Coast Guard photo by Lora Ratliff

House Subcommittee Seeks Faster Implementation

By Tom Ewing

In November the U.S. House of Representatives' Transportation & Infrastructure Committee, Coast Guard and Maritime Transportation Subcommittee held a hearing on "Commercial and Passenger Vessel Safety: Challenges and Opportunities." Testimony covered a range of issues, from recent tragedies such as the Conception dive-boat disaster to antiquated maritime laws.

HEARING WITNESS LIST

- Rear Admiral Richard V. Timme, Assistant Commandant for Prevention Policy, United States Coast Guard
- The Honorable Richard Balzano, Deputy Administrator, United States Maritime Administration
- Brian Curtis, Director, Office of Marine Safety, National Transportation Safety Board (NTSB)
- Vice Admiral Brian Salerno, USCG, Ret., Senior Vice President, Maritime Policy, Cruise Lines International Association
- Adam W. Moilanen, Vice President of Health, Safety, Quality & Environment, American Bureau of Shipping, Testimony
- Aaron Smith, President and Chief Executive Officer, Offshore Marine Service Association
- Colleen Stephens, Vice President, Passenger Vessel Association
- Paul Sterbcow, President, Louisiana Association for Justice

Since the hearing, new safety legislation was introduced on December 12. Calif. Senator Diane Feinstein and Rep. Salud Carbajal, from California's 24th District, the location of the recent Conception dive boat disaster, submitted bills "to require the Secretary of the department in which the Coast Guard is operating to prescribe additional regulations to secure the safety of individuals and property on board certain small passenger vessels" (S. 3042 and HR 5413).

Passenger safety was a headline issue in November when inspectors with Coast Guard Sector New York determined that 23 New York Waterway ferries had damage or discrepancies significant enough to warrant suspension of service, including structural damage affecting watertight integrity. Most ferries were returned to service by December 17.

During the Subcommittee hearing, maritime disasters and official agency follow up received priority attention. Representatives pointedly commented that most of the time that meant no follow up.

The September 2 Conception disaster, which killed 34 people off the coast of Santa Barbara, was a top issue. It was cited both as a singular tragedy and as one more sad example in a long line of maritime disasters despite years of Congressional efforts at prevention, at safety.

Rep. Carbajal asked Coast Guard Rear Admiral Richard V. Timme why the Conception was operating under outdated safety regulations. He charged the Coast Guard with a "record of inaction," adding:

"I am particularly concerned by the fact that the NTSB has continuously—for many years—advocated for the Coast Guard to implement procedures for conducting regular inspections, reporting maintenance needs for all of a boat's system and crew training. Yet the Coast Guard has ignored many of these recommendations.

"What actions has the Coast Guard taken to make sure

those recommendations are implemented, and why have they not been implemented to date?

"Over the years we've seen tragedy after tragedy after tragedy happen. Why—why—do we need to wait until another tragedy to change our current safety rules?"

Timme said the Coast Guard is looking "forward to a full and complete report from the Marine Board of Investigation," due in 2020. Timme said the Coast Guard does work side-by-side with NTSB. But the Coast Guard, he told Carbajal and the Subcommittee, has to take a recommendation and move it into a "different framework," a different context that includes rulemaking, workforce "and the ecosystem it would go into." He added that the Coast Guard, in response to the Conception tragedy, has "chartered a team," separate from the Marine Board's work, to investigate the entire class of Conception-type vessels. This report will follow a 30-day "inspection campaign" of those vessels. It will recommend changes, including a re-look at past NTSB recommendations.

The references to NTSB recommendations was a sore point for the Subcommittee. Members expressed frustration with delays – measured sometimes in decades – between post-accident safety recommendations and actual implementation, or not.

Rep. Andre Carson (Ind.-7th) asked panelist Brian Curtis, Director, Office of Marine Safety, NTSB, about the Branson, Mo., DUKW boat tragedy. More specifically, Carson has sponsored a bill (HR 2799) requiring certain structural changes to DUKW boats. Nine Indiana residents died in the Bransom accident. Carson asked NTSB's Curtis to comment on the bill's proposals.

Curtis' answer: yes, the legislative recommendations would increase safety and passenger survivability. Indeed, Curtis referenced the bill as something of an "endorsement." After all, he added, the legislative ideas are very close to what NTSB proposed for DUKW boats – 20 years ago.

This concern with inaction, with lost time, was highlighted in opening remarks by Subcommittee Chair Sean Maloney (N.Y.-18th) who said he "shares the NTSB's concerns. The Coast Guard is making a critical mistake by not acting more assertively on (NTSB's) recommendations." Maloney was present for just part of the hearing. He did not indicate how the Subcommittee might establish a more aggressive Coast Guard-NTSB link or otherwise follow up after the hearing.

Vessel inspections were another priority focus. A big concern, of course, is who does the inspections – the Coast Guard or an approved third party, as is currently allowed with towing vessels. This impacts a more fundamental issue: Coast Guard resources, personnel and funding. Ranking Member Bob Gibbs (Ohio-7th) noted that since 2004 nearly 75,000 vessels have been brought under the CG's security domain but, he added, the agency "has received virtually no additional resources to carry out its work."

Colleen Stephens, Vice President of the Passenger Vessel Association, strongly emphasized PVA's support and, really, insistence for direct Coast Guard inspections, not third-party programs. Stephens described a long list of programmatic safety commitments undertaken by PVA membership. She described a safety management system called Flagship, developed expressly for passenger vessels. In 2017, the Coast Guard called Flagship a "remarkable achievement," meeting all of the requirements for an industry-led voluntary program.

But critically, and this is a core concern, Stephens said that "PVA's efforts to promote safety by passenger-carrying vessel operators depend heavily on an engaged, well-trained, and adequately-funded Coast Guard Marine Safety Mission." She said that direct Coast Guard contact is "essential and has

successfully promoted safety. It is imperative that the Coast Guard safety function be preserved" (emphasis added).

Bottom line for Stephens and PVA: Congress should not move to policies that would allow third-party passenger vessel inspections. She said that "PVA adamantly believes that this would be a mistaken policy," allowing a gap to develop in the CG's knowledge-base of the U.S. passenger fleet. Third-party organizations, Stephens writes, such as classification societies, don't have expertise regarding smaller passenger vessels operating on domestic routes. She testified: "The current commitment to direct Coast Guard inspection of domestic passenger vessels is the preferable policy and is the best way to promote safety."

Aaron C. Smith, President and CEO of the Offshore Marine Services Association (OMSA), stressed another way to home in on safety: through stronger and consistent Jones Act enforcement, the legal requirement that ships in American waters are American owned, American built and American crewed.

Smith said that Jones Act enforcement continues to slip because of a series of informal rulings, starting in 1976, by the U.S. Customs and Border Protection (CBP). These rulings have "allowed foreign vessels to do work the Jones Act reserves for U.S.-flagged vessels," Smith said, adding that these rulings benefit foreign companies, foreign ships, and foreign mariners to the detriment of U.S. mariners, shipyard works and U.S. taxpayers. "It also increases the number of vessels on our OCS (outer continental shelf) that comply with a lower safety standard," according to Smith.

As readers likely know, after 43 years, these CBP rulings have evolved into their own legal and regulatory subspecialty. The Subcommittee did not indicate how or whether it might follow up on these contentious – and complicated – issues.

The final panelist was Paul Sterbcow, President, Louisiana Association for Justice. Sterbcow is an attorney based in New Orleans, specializing in maritime liability. He is a co-leader in the liability trial arising out of the 2010 Deepwater Horizon explosion and oil spill.

Sterbcow said that to get to the real weakness in maritime safety Subcommittee members need to look deeper, and in a different direction, than just Agency oversight.

"My experience in the marine environment is that safety is a product of accountability, pure and simple," Sterbcow told the Subcommittee. Whether the focus is a $100 million drillship or a jet ski at the beach, "the goal must be to protect people and that goal is only reached by holding those responsible accountable," he said.

Sterbcow cited two federal laws and one policy which are particularly problematic:

- The Death on the High Seas Act (DOHSA);
- The Limitation of Liability Act (LOLA); and,
- Forced arbitration for cases falling within the Maritime Jurisdiction of the U.S.

Sterbcow explained that LOLA, passed in 1851, and largely unchanged since then, limits a vessel owner's liability to the value of the vessel and freight after an accident.

Credit: Santa Barbara Sheriff's Office

The diving boat Conception burns off the coast of Santa Cruz island on September 2, 2019.

He said that limit made sense in the mid-19th century when control of a ship was more art than science. Without such protections America's fledgling oceanic commerce would have withered.

Now, Sterbcow asserts, "encouragement of investment in shipbuilding should no longer be accomplished on the backs of victims of maritime torts." In the age of international corporate vessel ownership, marine insurance, contractual claim limitation and technology that provides ship owners the ability to retain complete operational control over vessels at sea, "it is patently unfair to penalize those injured and the families of those killed in shipboard catastrophes," Sterbcow testified.

Sterbcow placed the Conception disaster and the Branson, Mo. DUKW boat disaster within this limited liability context. With the Conception, he noted that three days after the accident, "while bodies were still being recovered by the Coast Guard," the owners filed a Petition for Exoneration and/or Limitation under LOLA in federal court in California, "to limit their exposure to the value of the vessel after the casualty, which is $0.00."

With the Branson tragedy Sterbcow said that excursion "should never have occurred as the duck boat owner had ample warnings of approaching severe weather." Sterbcow said the boat's owner was in direct and constant communication with the crew. Anyone with a cell phone could have obtained real time weather and lake conditions. "The fact is," Sterbcow concluded, "this disaster was easily foreseeable and readily preventable. Yet, the vessel owner has used LOLA to try to limit its liability to the families of seventeen drowned passengers to $0.00."

In follow up discussion, Rep. Carbajal stated that LOLA has outlived its purpose. He asked Sterbcow how federal laws might be changed. Sterbcow cited precedence when Congress, in 1996, carved out the DOSHA commercial aviation exception. This occurred after the TWA airline crash 12-miles off Long Island, killing a group of students. Before the change, parents could not proceed with recovery claims beyond funeral and burial expenses. "My suggestion is simple," Sterbcow said, "extend that exception to all disasters under DOSHA. There's no reason to treat a plane disaster different from a boat disaster. And after all, the vast majority of these cases involve vessels and not airplanes."

Carbajal thanked Sterbcow for that "thorough answer," (his emphasis). The hearing closed shortly after. As noted, no indications about follow up on these critical issues.

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

Vessel Inspections:

U.S. Coast Guard photo by Marine Safety Unit Lake Charles

It's All About Safety

By Barry Parker

With the announcements that New York Waterway, a ferry operator running 32 boats around New York and New Jersey waters, had been largely shut down by the U.S. Coast Guard just prior to Thanksgiving, 2019, the reactions ranged from surprise to outright shock. There was also a great deal of grumbling, as commuters, the major customer group, endured delays on New York Waterway's extensive network across the Hudson River, bringing New Jersey commuters into New York's business districts.

So, what happened? "Coast Guard Sector New York marine inspectors determined the 23 ferries had damage or discrepancies significant enough to warrant suspension of service," according to a statement from the U.S. Coast Guard (USCG). "Findings included inoperable fixed fire extinguishing systems and bilge alarms, expired lifesaving equipment and structural damage affecting watertight integrity."

By mid-December, most of the vessels have returned to service (only five remained out of service as of this writing). But, the Captain of the Port, Capt. Jason Tama, in a statement, noted, "In order to ensure continued compliance with safety standards, the Coast Guard will be indefinitely increasing inspections across the entire New York Waterway fleet...We will continue to work with New York Waterway to ensure sustained compliance with Coast Guard safety requirements. As part of this effort, we will be increasing both scheduled and unannounced inspections of their fleet moving forward."

"Proactive enforcement", a term borrowed from the worlds of police and keeping situations under control, can certainly be applied here. Indeed, the phrase found its way into remarks delivered by Tom Allegretti, the outgoing President and Chief Executive Officer of the American

Left image: *Cmdr. Daniel Cost, commanding officer of Marine Safety Unit Lake Charles, issues the area's first certificate of inspection for the new Subchapter M towing vessel regulations to the Devall family of Devall Towing and Boat Services on August 15, 2018 at Devall Fleeting Area in West Calcasieu Port in Sulphur, La.*
Right image: *Towing vessel Bridgett McAllister sits moored at the McAllister Towing Facility in Baltimore, Feb 4, 2019. All towing vessels over 26 feet in length are now required to be inspected by the Coast Guard — The Bridgett McAllister is the first vessel in Sector Maryland-National Capital Region's history to receive a Subchapter M towing vessel Certificate of Inspection.*

U.S. Coast Guard photo by Ronald Hodges

Waterway Operators (AWO), a trade association for the workboat and towing and barging sector.

Allegretti's remarks came in a speech at a late-September 2019 conference on Subchapter M, which provides a framework for safety management of towing vessels (rather than ferries). By all accounts, Subchapter M, which came into effect nearly two years ago, is still a work in progress – or "an unfinished journey" in Allegretti's words – and is being fine-tuned.

Under Subchapter M (found within 46 CFR), previously uninspected towing vessels are now subject to rigorous vessel inspections, whether by the Coast Guard or through third-party organizations (TPO, an integral part of the process). These TPOs include American Bureau of Shipping (ABS), which covers inland waterways and coastal ports, but also smaller outfits working regionally. When it comes to towing vessels, information about detentions is closely guarded, in contrast to the high-profile New York Waterway episode.

Passenger vessels are subject to more stringent standards than towing vessels. An ex-surveyor who is now with a TPO, Steve Lindholm, Consulting Engineer/ Naval Architect at EDT Forensic Engineering & Consulting, explained, "Many of the inspection requirements of

Subchapter M were modeled on the inspection requirements for cargo vessels – in so much as a towing vessel is not intended to carry passengers. Passenger vessel regulations – and the subsequent inspections – are a super-set of cargo vessel inspections, adding requirements to address the fire protection, alerting and orderly evacuation of the high-value cargo of human life." He said, "Subchapter M was modeled on elements taken from Subchapter I, the Responsible Carrier Program of the AWO, and the International Safe Management (ISM) Code from the International Maritime Organization (IMO)."

Nonetheless, there are some similarities in the regulatory frameworks for passenger vessels, such as those of New York Waterway, and the towboats subject to Subchapter M. Several years out, the same framework will apply across the board. Commander Jake Hobson, Chief of the Inspections Division at USCG Sector New York, told *Marine News*, "The inspection regime for Sub M (tow vessels) and other vessels including ferries will be the same after the four-year implementation of the Sub M program…So, in action once the four-year phase in is complete, the vessels will then be all inspected and will be in the same inspection regime (annual, five-year Certificates of Inspection (COI) and required dry-dock inspection regime)."

At the same conference where Allegretti spoke, a U.S. Coast Guard (USCG) presentation provided insights into deficiencies noted, and actual detentions, regarding inland towing vessels (ITV), detailing incidents reported during July through September, 2019. The presentation noted that 655 total deficiencies were issued to ITVs dur-

USCG marine inspectors at Marine Safety Unit Portland inspect a tug in Portland, Ore.

U.S. Coast Guard photo by Paige Hause

ing the three-month period, with the main categories being issues related to "main propulsion engine" (65 instances), propulsion and other machinery (35 instances) and structural conditions (33 instances). Farther down the list were firefighting equipment and appliances (18 deficiencies), other fire safety (also 18) and lifejacket issues (18).

Lindholm, based on the West Coast, had stressed that all his TPO work is confidential, but he did relay one rumor to *Marine News*, "The TPOs have heard of USCG enforcement of Subchapter M on at least one operator after a casualty who was subjected to a fleet-wide inspection of their towing vessels for Subchapter M compliance."

The USCG conference speech also detailed nine actual ITV detentions, all in the USCG District 8 (covering the inland river system and Gulf Intracoastal Waterway), during the three-month period. These included a response to a fatal man overboard event, several instances of oil leaks and oily bilges, as well as issues with fire extinguishers and firefighting equipment. In several of the cases, COIs were issued after boat operators corrected deficiencies flagged by the inspectors.

Though arrangement between the USCG and the outside inspectors are still being worked out, the TPOs are playing an important role; the nine detentions detailed above were ordered by both USCG and third-party inspectors. Lindholm pointed out, "If a vessel is inspected by the USCG and the operator does not have a Towing Safety Management System with a TPO, then the USCG may, depending on the severity of the infractions, expand their inspections to other vessels in the operator's fleet." The challenge, for both, is making a determi-

U.S. Coast Guard photo by Brian McCrum

nation as to whether the deficiency is a "one off" (likely specific to the vessel and its crew), or whether it's systemic, pointing to a failure in company management.

As Subchapter M moves toward the midpoint of its four-year break-in period, some modification is expected. Cdr. Hobson, in New York, noted that mid-course corrections may be expected, telling *Marine News*, the Coast Guard has been in regular talks with industry, and at headquarters levels with TPOs on course corrections. There are a few items that have been the result of much research and discussion and are being 'fine-tuned'. Some of these items remain to be worked through completely and consist of:

- Manning of the vessels in general
- Some lifesaving equipment differences of opinion (what is required on board during inspection)
- Equipment requirements such as long-range identification and tracking (LRIT)
- Manning specific to reductions in engineering staff for automation

Lindholm, from EDT Forensic Engineering, provided an example where a strict reading of the rules is being sensibly adapted to towing industry practices. He told *Marine News,* "One point of discussion between the TPOs and the USCG has been over the carriage of 'ballast' water in voids to adjust the trim of the towing vessel. In some operational scenarios, increasing the draft aft and/or forward assists in decreasing 'air draft' under bridges and provides better efficiency to the propellers." Yet operational considerations for inland towing do not comport with a precise reading of the rules. Lindholm explained further, "By definition, a 'void' space is a space which is not used for the carriage of fuel, lubricants, water, or equipment. It is 'void' of all means to transfer liquids. So, if water, fuel, or oil is found in these compartments, the conclusion could be that this liquid is from either an adjacent

A Vane Brothers tug and barge on the Long Island Sound.

Credit: Barry Parker

tank or from outside – either would warrant an inspection to determine the source and a potential limitation of movement, up to detention to port." He pointed out, "TPOs are working with the USCG on a reasonable interpretation of 'watertight integrity' to ensure that operators who routinely use void spaces as temporary ballast tanks are not penalized for an industry practice which actually promotes safe operation of towing vessels."

Whether the discussion turns to passengers, or to crew and cargo, safety is a paramount consideration for the USCG. Cdr. Hobson in New York told *Marine News*: "One thing you may hear of from industry as 'enforcement' or noncompliance is following a marine casualty. While we do not see this as enforcement, there have been cases that would result in a vessel being removed from service following a reportable marine casualty or other failure of the vessel that would present a potential hazard to the port or the crew. In these cases, we have intervened as we would in any other case (with any other vessel type) to ensure safe operation of the vessel for the crew and the port."

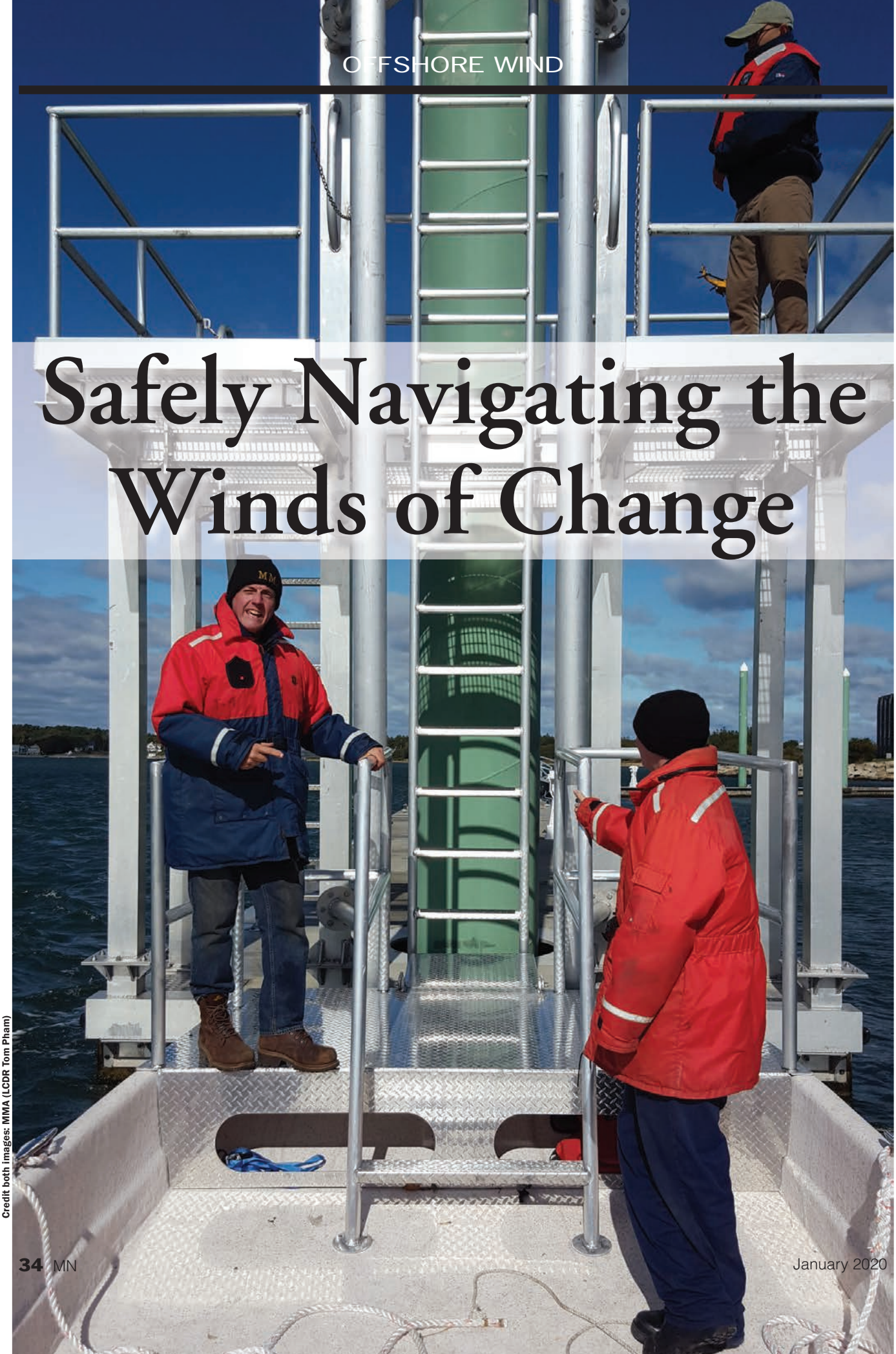
In this context, the New York Waterway episode, and the 655 towing vessel deficiencies noted earlier (and the nine actual detentions) can be seen as a very small price to pay for safety. The USCG is working with industry in a proactive way.

Cdr. Hobson said, "As for enforcement, Coast Guard Headquarters has prioritized outreach and discussion vs. an enforcement policy at this time. While this may change with new policy in the near future, here at Sector New York we have had several meetings with industry and other specific forums to reach out to the towing industry in an effort to encourage [Subchapter M] application submittals. The first year went fairly well, however we have noted a slowdown in the second year across the industry of vessel applications submitted to the Coast Guard, at least here in N.Y."

As the Subchapter M process enters its third year, the towing industry and regulators alike are benefitting from a "learning curve", which includes a familiarity with paperwork and inspection procedures. As routines become systematized, egregious deficiencies (of the type that would require a detention) will stand out, enabling quicker and effective regulation. Cdr. Hobson stressed, "We are always willing to work with industry; safety is paramount."

Barry Parker, *bdp1 Consulting Ltd provides strategic and tactical support, including analytics and communications, to businesses across the maritime spectrum. He freelances regularly for* Marine News.

Safely Navigating the Winds of Change



Credit both images: MMA (LCDR Tom Pham)

The first-in-the-nation offshore wind training facility will be located at the Massachusetts Maritime Academy.

By Joseph Keefe

In late October, with much fanfare, Massachusetts Governor Charlie Baker, Stephen Pike, CEO of the Massachusetts Clean Energy Center and many others joined officials from the Massachusetts Maritime Academy (MMA) to launch the first-in-the-nation offshore wind crew transfer training facility. The group of state and college representatives also officially christened a new training vessel. The event underscored the efforts at MMA to both support, but also take full advantage of what stakeholders believe is the advent of offshore wind here in the United States.

The training facility, which received a total of $1.73 million from the Administration and Massachusetts Clean Energy Center (MassCEC), will provide education, training and certification to thousands of residents, including Mass Maritime cadets, as well as skilled labor including electricians, pile drivers, divers and welders, enabling them to work in the emerging offshore wind industry. But, it is important to note that this isn't intended to be the traditional 'mariner' training that the storied Buzzards Bay campus has become known for. Instead, the fledgling effort is nod to the new skill sets and trades which will be need in the offshore energy sectors in the decades to come. Most of those workers won't be trained mariners.

For starters, the training facility represents an investment by the Commonwealth to grow a workforce for the offshore wind industry, which will support the construction and operation of Vineyard Wind's 800-megawatt project, which was selected by the Commonwealth's Electric District Companies in May 2018 under the state's first competitive procurement for offshore wind. Eventually, it hopes to support training for myriad projects from coast-to-coast.

The project, a partnership between Mass Maritime, state government and industry, heralds the first domestic training facility accredited to provide a full safety training program required for workers in offshore wind. The offshore wind training facility will provide critical infrastructure that will give both college students and adults seeking new careers the necessary skills and certification to work in the emerging industry.

In total, MMA received more than $1.73 million in grants from the Baker-Polito Administration and MassCEC to support the development of its first-in-the-nation facility and basic safety program. In a nutshell, the crew transfer training facility is a critical component of a comprehensive safety training program to be offered by Mass Maritime. The facility supports safety training for workers moving from relatively small crew transfer vessels to the fixed support structures of wind turbines in the open seas.

"The Massachusetts Maritime Academy has been educating mariners and energy engineers for more than a century, so we are best positioned to support this important initiative for the Commonwealth and the nation."

– Rear Admiral Francis X. McDonald, USMS, President of Massachusetts Maritime Academy

SAFETY FIRST

Initially, MMA will focus on Basic Safety Training for the offshore wind industry with a course comprised of five modules: First Aid, Manual Handling, Fire Awareness, Working at Heights, and Sea Survival. Some of the training will take place in MMA's newly constructed indoor climbing facility and on the Crew Transfer Training Facility located on the MMA's pier in Buzzard's Bay. Instructors will teach students how to safely transfer from the vessel to an offshore wind turbine. MMA partnered with the largest provider of GWO training in the world, Relyon Nutec, to help train MMA instructors to deliver these courses using GWO-approved and globally recognized curriculum.

The new jobs anticipated to support the offshore wind industry include a wide range of types, including engineers, trade workers, surveyors, scientists, technicians, managers, and seafarers. In fact, the role of the wind turbine technician has been one of the fastest growing occupations in the United States in recent years. All that said, as skilled as these personnel might be at their core missions, most know little to nothing about maritime protocols and safety. That's where MMA comes in.

DEVELOPING OFFSHORE WIND TRAINING AND SAFETY STANDARDS

As MMA becomes an early adopter of these emerging safety standards, the United States and a number of states, as well as offshore wind developers haven't been sitting on their hands, either.

The Offshore Wind Jobs and Opportunity Act (the Job Act), introduced this year and now pending in Congress would provide up to $25 million in federal grants to colleges, unions, and nonprofits to prepare "a new generation of offshore wind workers."

Separately, a number of states have also developed programs for offshore wind training and development programs. Massachusetts itself awarded $721,500 this year to six academic institutions to further offshore wind workforce training and development. For its part, MMA put the award towards funding construction of an offshore wind crew transfer training facility and establishing the GWO courses.

OFFSHORE WIND FARM TRAINING FOR SEAFARERS

The academy's newest training vessel is a basic twin engine Carolina skiff with some modifications to the bow to allow simulated approaches to an offshore wind turbine. In essence, it looks similar to what you might find on a crew transfer vessel, just on a smaller scale. In addition to that, and leveraging some of the funds received from the Clean Energy Center, MMA constructed an additional pier which will serve as additional infrastructure for the rapidly developing crew transfer training facility.

Credit: MMA (LCDR Tom Pham)

Captain Michael Burns, Director of MMA's Center for Maritime and Professional Training, explained, "That's an aluminum structure that sits out on the end of the pier – it's bolted to the pier – and it simulates the transition piece of an offshore wind turbine. In other words, there are heavy fender rails that the boat will push up against and then a recessed ladder that leads up to a platform about eight feet above the deck of the float. Students will practice and learn how to safely transfer to and from the vessel."

That part of the course involves "Sea Survival," and it's just one of five modules that make up basic safety training for the offshore wind industry. The Global Wind Organization (GWO) is the international organization that developed this curriculum. Many offshore wind companies now mandate use of training standards developed by GWO, which a non-profit founded by wind turbine manufacturers and operators. GWO training courses must be taught by GWO-certified training providers.

At Mass. Maritime, the maximum class size will be 12, and Burns says that the school hopes to train as many as 250 wind professionals annually. The entire basic safety program will span six days, involving

five modules and is intended to be about 80% practical training with the balance in a classroom. That, says Burns, lends itself well to the assessment-based training that the school already imbeds into its curriculum. And, while this training regimen has nothing formally to do with tradition IMO-mandated STCW training, there are parallels to STCW where the interests of maritime safety intersect with the rapidly emerging non-traditional work roles that offshore wind demands.

THE WINDS OF CHANGE

The U.S. Department of Energy estimates 43,000 new jobs will be created in the offshore wind market by 2030. The Massachusetts Clean Energy Center recently published an assessment of jobs and economic impacts associated with development of 1,600 megawatts in Massachusetts alone. That study estimated that over the next decade, offshore wind farms will create as many as 3,000 jobs and generate economic impact that could reach $2 billion regionally.

As the U.S. offshore wind industry grows, multiple projects are in the development stages off of the Atlantic coast. Eventually, the total megawatt capacity of U.S. offshore wind farms is anticipated to reach 22,000 by 2030 and 43,000 by 2050. But, not if there aren't sufficient numbers of trained personnel to make that happen.

Before any of it can come to fruition, ensuring a safe offshore workplace will be 'job one.' That's not a new idea, but for the thousands of previously land based personnel being mobilized to meet future offshore technical demands, it is critically important. Out in front of that effort, Mass Maritime is once again rising to the challenge.

"Massachusetts Maritime Academy has been educating mariners and energy engineers for more than a century, so we are best positioned to support this important initiative for the Commonwealth and the nation," said President of Massachusetts Maritime Academy Rear Admiral Francis X. McDonald, USMS.

The evolving role of the nation's maritime academies is destined to meet the changing realities of the domestic waterfront. For example, a 1970s era MMA graduate therefore might be surprised to learn what the academy has become, and all in just a few short decades. On the other hand, no one will be surprised to see what comes next. The changing offshore winds will see to that.

Water Audits at Sea

By Klaus Reichardt

On land, one of the most effective ways to reduce water consumption is to conduct a "water audit," which involves analyzing a building's water use, discovering where potential water savings are possible, and implementing a cost-effective plan to turn those possible water savings into reality.

Typically, a water audit involves:

- Identifying where water is brought into a facility (looking for leaks before water is delivered)
- Location of all water-using fixtures and systems as well as drainage systems
- Gathering two years of water utility bills, checking them, not necessarily for charges, but water usage to establish a benchmark
- Evaluating water use fluctuations; a spike could indicate a leak somewhere in the water infrastructure
- Conducting a walk-through of the entire building with plumbing plans in hand, if possible. The goal here is to locate all pipes, fixtures, and other water-delivering or water-removing systems in the facility
- Evaluating how and when vegetation is irrigated if the facility is landscaped
- Inspection of restroom fixtures; this is crucial because, in most facilities, this is where the most significant amounts of water are used (possible exception, if the facility is landscaped)

The goal of all these steps is to not only find leaks but to determine if water no longer needs to be used in a specific area of a facility; where water is being wasted; and in the case of restrooms, if new fixtures can be installed that use less water than those in use or use no water at all.

Water audits are not necessarily new. However, with drought and water shortages in so many parts of the world, as well as the increased cost of water around the globe, they are used far more frequently today than ever before.

Before going further, we should explain a term commonly used when discussing water audits and that is water "efficiency." This does not refer to water conservation, which is typically a short-term reduction in water consumption, for instance, during a drought. Instead, water efficiency refers

to a long-term reduction in water consumption.

If all goes well and the audit does uncover areas where water consumption can be reduced, this can prove to be a significant cost saving for the facility. Further, we should add there can be energy savings as well because it takes electricity to deliver water to and from a facility.

How About at Sea?

Realizing these possibilities, the question should be asked if maritime operators can also benefit by conducting a water audit on their vessels. And if they could, how? To answer this question, let's first look at why smaller maritime vessels such as ferries or small cruise ship would want to conduct a water audit. Among the reasons would be the following:

- ***Water is heavy.*** One gallon of water weighs just over eight pounds. If a small vessel carries 500 gallons of water, that water would weigh more than 4,000 pounds. This added weight means more fuel must be consumed by the boat for it to operate. If a water audit finds ways to reduce this amount, less fuel will be necessary.*
- ***Fuel cost savings.*** Less fuel means expenditures for fuel will be reduced.
- ***Water cost savings.*** There is no "average" cost for water in the U.S. and most parts of the world. On top of water charges, many localities will tack on taxes and fees. Needless to say, if the vessel does not need to purchase as much water, cost savings will materialize.
- ***Blackwater Pumping Costs.*** Blackwater usually refers to the collection of solid waste, which is pumped and collected into blackwater tanks. Less water used means less pumping when in harbor, the cost of which have steadily risen over the years.
- ***Sustainability.*** The entire cruise ship and shipping industry are looking for ways to become a much more sustainability focused. Reducing the amount of water necessary for operation, along with the amount of fuel needed for operation, addresses two key sustainability goals of the entire industry.
- ***Storage.*** Space is invariably at a premium on most smaller vessels. If less water is necessary, space can be freed up for other purposes.

Conducting an Onboard Water Audit

Many of the same steps mentioned earlier that are part of a water audit in a building would apply to a small vessel. For instance, leaks can be a big problem. This is because the high humidity can cause metal fittings to rust and weaken, resulting in leakage. This is also true in tanks where water is stored.

A "plumbing map" will also prove helpful in a small vessel water audit. Once again, knowing where all pipes, fixtures, water-delivering, and water removal outlets are located helps ensure the examination is conducted thoroughly.

When it comes to leakage, some of the items that should specifically be checked on a small vessel include the following:

- All water carrying piping materials, fittings, joints, and connections
- Drinking water fixtures
- Water pumps
- Air conditioning units

Beyond leakage, we must look to see if the water is being used in any areas of the vessel where it can be reduced or is no longer necessary. We referenced this earlier and it is surprisingly common to find this happening in industrial facilities. It may also be true on larger, older vessels.

We should also note that evaporation can also play a role in water waste. While this can vary due to the age of the vessel, humidity, air velocity, temperature, and other factors, it can and does happen. Taking steps to minimize or eliminate evaporation helps ensure water is used for its intended purposes and not lost to vapor.

Water Efficiency

We mentioned water efficiency earlier and indicated that this refers to long-term water reduction. Some of the steps that buildings take to ensure water efficiency can prove valuable to small vessels as well. For instance, HVAC systems are invariably checked. Most older systems allow too much water to evaporate in the cooling process. The same can be true of HVAC systems on ferries and smaller vessels.

Further, the kitchen and bathroom fixtures should all be examined. If faucets or showers are older or appear to be using large amounts of water, they do not need to be replaced. Very inexpensive aerators installed in faucets and shower heads can reduce water consumption by as much as 50%. Further, this can also reduce energy costs significantly because less water is needed for heating.

Toilets and urinals should also be checked. Smaller ships typically have both vacuum and gravity systems, using either fresh- or salt- water to remove waste. Because the vacuum on a vacuum system does all the work at remov-

ing waste, less water is used than with gravity systems.

However, if a vacuum system malfunctions, mechanical and maintenance problems can occur. Further, gravity systems powered by salt water may need to be hydro blasted to remove rust and encrustation stains, which can be costly. So, for both systems, if less water can be used, the benefits are manifold.

No-water or waterless urinals should also be considered. These urinals provide the following savings:

- No water is need for the urinal to operate, which can reduce installation costs.
- On land, these urinals can save up to 35,000 gallons of water per urinal per year
- Drain line encrustations are reduced and therefore maintenance costs.
- Less water use also means a more hygienic environment; bacteria and many pathogens require moisture in order to develop and grow

Benefits?

Hopefully, we have made the case for conducting a water audit for smaller vessels. The key benefits, along with water savings, are cost savings. With thin profit margins for some carriers, this can prove to be an essential factor and reason for conducting a water audit.

However, we cannot overlook the sustainability movement happening around the world. Just like every other industry, the shipping industry, even small ships, are going to be expected to do their part. Conducting a water audit and eliminating water waste will help accomplish this.

**This is a ballpark estimate. More than 260,000 gallons of water are used per day on a typical passenger cruise ship*

***Klaus Reichardt** is CEO and founder of Waterless Co, Inc, Vista, Calif. Reichardt founded the company in 1991 with the goal of establishing a new market segment in the plumbing fixture industry with water efficiency in mind. Reichardt is a frequent writer and presenter, discussing water conservation issues.*

Grain Monitoring System for Loaded Barges

Purpose-Built for storage challenges brought on by climate change and geopolitical tensions, TeleSense has introduced its cellular SensorSpear Monitors to protect post-harvest grain.

By Joseph Keefe

TeleSense, a post-harvest grain monitoring innovator, recently introduced a Cellular SensorSpear intended to give grain managers and barge operators an easy and reliable way to accurately monitor stored grain, ensuring grain quality while reducing spoilage and safety concerns.

Inserted into piles of stored grain, the Cellular SensorSpear sends temperature and moisture data to the cloud where TeleSense machine learning algorithms analyze the data and alert users to any anomalies and issues that may arise. To meet accessibility and scalability demands, the spear does not require a gateway, meshes with other spears, and comes with a rechargeable multi-year battery.

For domestic inland bulk grain stakeholders – shippers, operators and buyers alike – the new product and service comes at a time when local weather, difficult river conditions, delays brought on by aging lock failures and the geopolitical realities of an going trade war all combine to threaten the quality of stored and shipped grain products.

New Solutions for Old Challenges

"The Cellular SensorSpear is the most convenient and easy-to-use grain monitoring product on the market today. It takes 30 seconds to install, you don't need a user manual, and it can withstand temporary connectivity loss without losing any data," said Naeem Zafar, co-founder and CEO, TeleSense. He adds, "These features have been especially well received by barge operators as barges are now sitting on rivers for longer periods of time due to changing climate patterns and geopolitical issues. This spear takes monitoring and maintaining the quality of grain stored in piles and on barges to a new level."

Cellular SensorSpears can mesh together, which means

the spears communicate with each other, so that only one spear communicates with the cloud, thereby reducing data costs. Examining trends in the data and providing insight to anticipate storage issues, TeleSense machine learning algorithms provide users with the smart alerts they need to easily and effectively manage grain quality.

In a nutshell, the spear pairs with the TeleSense App, where users can adjust reporting frequency, see the current and historical trends of every sensor, and, more importantly, quickly view the health of an entire grain storage operation.

Like any other food product, grain will eventually rot and spoil if it's not stored properly. Currently, the grain supply chain experiences a lot of waste due to spoilage during storage and transport. The best way to reduce spoilage is to catch it early and take preventative measures. In order to catch it early, there needs to be a monitoring system in place to sense the spoilage. According to Naeem Zafar, up until now, there have been limited solutions for monitoring stored grains, and no one had found an easy and cost-effective way to monitor grain barges and grain piles. And, this is important for many reasons.

Zafar told *MarineNews*, "The grain industry is facing challenges on multiple fronts. This year, grain barges were stalled for weeks by flooding on the Mississippi river. Due to changing weather patterns from climate change, this challenge is expected to continue, or worsen. Compounding the issue, many of these barges were held even longer due to the trade dispute with China. Currently, these barges are not monitored. There is no way to know what is happening inside them, so there is no way to take action when a problem develops. Each of these barges contains

"The grain industry is facing challenges on multiple fronts. This year, grain barges were stalled for weeks by flooding on the Mississippi river … Compounding the issue, many of these barges were held even longer due to the trade dispute with China. There is no way to know what is happening inside them, so there is no way to take action when a problem develops. Each of these barges contains one million dollars worth of grain, so it's a big deal when one is lost due to spoilage."

– Naeem Zafar, TeleSense Co-Founder and CEO

one million dollars worth of grain, so it's a big deal when one is lost due to spoilage."

It should be no surprise that the longer grain is stored, the greater the risk of spoilage. Hence, the owner will want to sell it quickly; all other things being equal, such as current and future grain prices. Beyond this, the longer grain is stored, the more it will cost to maintain its quality through ventilation, heating, gassing and other procedures. For farmers and barge operators alike, being stuck with grain in long-term storage is not ideal, but is oftentimes inevitable.

Cold to Hot; Ventilate Not / Hot to Cold; Ventilate Bold

Conventional r's knowledge, when moving from one part of the world to another with any bulk cargo or hygroscopic sensitive goods, is rather simple. "Cold to hot; ventilate not. Hot to cold ventilate bold."

In a nutshell, this time-honored adage describes how to predict the problem of condensation just as well today, as it did 100 years ago. The Cellular SensorSpear monitors 'post-harvest' grain, enabling and providing the data and insight necessary to make good storage decisions that do protect the grain.

Grain produces heat during storage due to natural metabolic processes. When warm grain is stored against a barrier which is in contact with something cold, such as the hull of a vessel in contact with water, it produces condensation. Condensation produces areas of high moisture content, and high moisture levels create an inviting climate for mold, fungus, and insects – which all cause spoilage.

By installing TeleSense sensors in strategic areas of a mass of stored grain, grain managers can see the daily changes

Credit: AdobeStock © Merek

in the temperature and moisture of that grain. When grain begins to spoil, it will begin to heat up and develop areas of spoilage known as 'hotspots.' These areas can become so hot that they can actually ignite. Zafar adds, "By monitoring the behavior of the temperature and moisture levels we can help grain managers make informed decisions about when to ventilate, gas or mix their grain-actions which stop spoilage."

To meet accessibility and scalability demands, the spear does not require a gateway, meshes with other spears, and comes with a rechargeable multi-year battery. This means that the spear is designed to be simple to use and cost effective. It is an all-in-one unit which can be installed and working in under 30-seconds. As many as 20 spears can communicate together in a meshed network, via just one cellular data connection.

Time is Money

If time is money, then a barge load of grain exhibiting spoilage warning signals is a perfect example of when getting that grain to market quickly is job one. With multiple loaded barges in a fleet situation, barge loads can be prioritized with regard to the urgency to get one or more to market, sooner than another. All of this can be handled from afar, using technology that leverages the cloud. Hence, an idle loaded barge can be monitored from the office, miles away.

Pricing models for this new technology can vary. For example, currently there are options for both one time purchases as well as subscription/rental models. The Cellular SensorSpear and TeleSense App work together to provide grain handlers an innovative and functional way to monitor their grain. And, not a moment too late.

www.telesense.com

A fuel savings initiative spearheaded by American Commercial Barge Line (ACBL) and BAE Systems saw a 180-foot, high-horsepower river tug "hybridized" via the installation of BAE's HybriGen Power generator. The project, which was partially funding from the Maritime Administration under the Maritime Environmental and Technical Assistance Program, unlocked significant fuel savings, lowered maintenance costs and reduced emissions, as verified by an independent third-party study.

The 1998-built Christopher M. Parsonage typically runs in near-constant operation, moving barges up and down the Mississippi River, between Cairo, Ill. and New Orleans, with minimal stopping for barge pickup/delivery as well as maintenance. The push boat has a total power rating of 8,000 horsepower from a pair of electro-motive diesel (EMD) 16-cylinder 710G7B engines, each certified to EPA Tier 3 emissions standards. The vessel is also equipped with two John Deere generator sets, each capable producing 175 kilowatts for vessel hotel load.

In 2016, the vessel's starboard EMD main engine was upgraded with the HybriGen Power generator and associated equipment. Designed to reduce fuel consumption for hotel power generation in all operating conditions, the hybrid generator was connected to the main engine via a reduction gearbox and shaft arrangement and can be disengaged using its air clutch assembly. As the EMD engine is running, the hybrid generator creates electrical power for the hotel load. When the hybrid system is operating, both auxiliary generators are disconnected from the main switchboard and turned off.

Vessel Name	Christopher M. Parsonage
Build Date	1998
Vessel Upgrade Date	2016
Propulsion Engines	
Number of Engines	2
Model Year	2016
Manufacturer/Model	EMD 16-710G7B
Config/Number of Cylinders	Vee / 16 cylinders
Power Rating (ISO Continuous)	4,000 BHP @ 900 RPM
Emission Standard	EPA Tier 3
BAE HybriGen Power (mounted to Starboard EMD engine)	
Arrangement	Shaft-mounted via front engine flywheel and Reduction gearbox
Power Output	120 kW (idle) to 230 kW (full engine speed)
Auxiliary Generator Sets	
Number of Generator Sets	2
Model Year	2015
Manufacturer/Model	John Deere 6090AFM85
Config/Number of Cylinders	In-line / 6 cylinders
Power Rating (ISO Continuous)	298 BHP @ 1,800 RPM
Emission Standard	EPA Tier 3

Put to the test

Consulting firm M.J. Bradley & Associates (MJB&A), acting as an independent third-party, compared the Christopher M. Parsonage's "baseline" and "hybrid" fuel consumption while idle and in-use during normal operations up and down the Mississippi River over the course of several weeks in the summer of 2019.

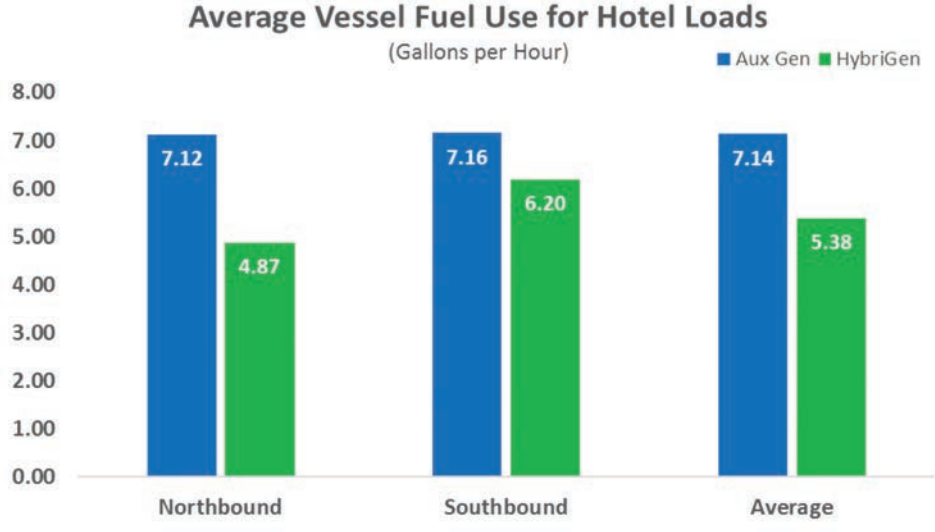
During baseline testing, the HybriGen system was unclutched and disconnected from the main switchboard, leaving both main engines and one auxiliary generator in operation. When studying the hybrid configuration, both main engines as well as the HybriGen system were active, and both auxiliary generator sets were disconnected from the main switchboard and turned off.

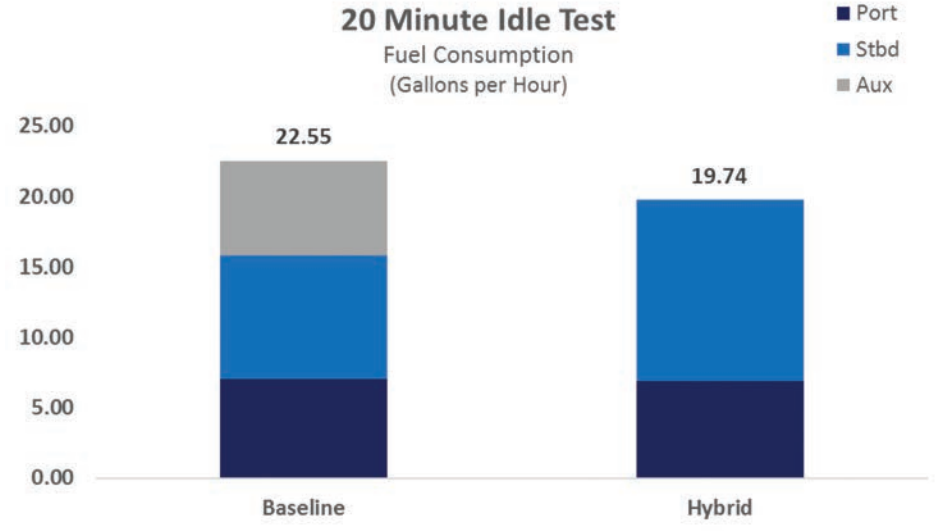
Under both configurations, fuel consumption of each engine was monitored and logged using fuel metering equipment, and the main propulsion engines were fitted with non-contact RPM sensors to independently monitor engine speed.

During idle testing, MJB&A found the HybriGen Power system yielded a savings of 2.81 gallons per hour (approximately 12.5% savings), when compared against both main engines and auxiliary generator set in the baseline condition.

While in use, the HybriGen Power system provided a fuel consumption benefit ranging from 13% to 32% for hotel power generation, MJB&A said. Over the entire test period, the hybrid system averaged a 25% decrease in fuel use for hotel load.

On average for a typical 13-day roundtrip, MJB&A estimates that the HybriGen Power system can save more than 570 gallons compared against the baseline auxiliary genset. Assuming the vessel makes 26 roundtrips per year, total annual fuel savings could be more than 14,800 gallons.





Cross-river Ferry for Kuching, Sarawak

So many cities are built on rivers for obvious reasons of transport up and down but also as ports for foreign trade. But not all of a port city's trade is up and down the river. People and vehicles must also cross the river. Bridges are great and most cities have one or more, but they are expensive and they lack flexibility.

In Kuching, Sarawak this cross-river traffic created the niche for a ferry. Located on the broad, flat, estuary lands of the Sarawak River the city's single bridge is some kilometers up from the sea. To meet the need for more river crossings, the Regal Ocean firm has had a fine new double ended car ferry built at the Kaibuok Shipyard in Sibu, Sarawak.

With two more ferries on order, the new boat begins a significant expansion for the firm. Designed by Waterline Tech Sdn Bhd. Of Kuching, the 42.7-meter-long ferry has both fore and aft hydraulic ramp doors that give a total overall length, with ramps, of 59.7 meters. The single lane loading ramps open to a broad deck with a capacity of about 38 average size cars or light trucks. Larger vehicles can also be carried. Shelter for walk-on passengers is provided in a side cabin for a total molded beam of 12.8 meters.

An elevated structure carries the full-visibility bridge that facilitates the ferry's travel in either direction to negate the need to turn when landing Propulsion for the ferry is provided by four Cummins KTA19M diesels each producing 500 horsepower at 1,800 rpm. Each engine turns 1,270 m/m diameter five-blade propeller with a 1680 m/m pitch. Each engine turns a 101-m/m-diameter shaft with a length of 4,565 m/m mounted on Hangzhou T300 gears with 6.032:1 reduction. This fore and aft propulsion system gives the, 1.7-meter draught, ferry an operating speed of ten knots.

The ferry will operate with a five-person crew for the five-kilometer crossing. A Cummins 4BTA3.9 G-powered 40 kW generator will provide auxiliary electrical power. This is the first of a three-ferry order. The other two boats will be similar but the owners have opted for the use of jet pumps rather than conventional propellers.

Volvo Penta Powers Hybrid Ferries

Norwegian yard GS Marine Production AS is building three hybrid and hybrid-ready ferries for operators such as Strandfaraskip Landsins and Norled AS, with the help of Brunvoll– a single-source supplier of propulsion, positioning and maneuvering systems – and Volvo Penta.

A ferry being built for Standfaraskip Landsins will reach speeds of 20 knots, powered by two of Volvo Penta's D13-700 IMO III engines (515kW power output at 2,250 rpm), coupled with a Brunvoll hybrid control system – allowing the vessel to run on the engines or electric alone, and even both in unison. The ferry will not be fitted with diesel gensets, as the engines will, through the electric motor connected to the gear, act as generator.

This isn't GS Marine's first time building a hybrid boat. In April 2019 the company delivered the first of two hybrid and hybrid-ready ferries to Norled AS, which has a 10-year contract to operate the Haugesund-Røvær-Feøy route. The Fjordled ferry is the first hybrid boat operating in Norway, and her sister vessel Fjordöy is set to join her later this year. These ferries are powered by two Volvo Penta D13 MH engines, both producing 441 kW at 1,900 rpm. The Fjordled ferry uses Volvo Penta IMO Tier III

emissions compliant engines and Selective Catalytic Reduction System. The boat has two electric motors, with power outputs of 85 kW at 2,100 rpm, that are mounted directly on gears. The battery pack consists of three strings with a total of 140 kWh capacity (110 kWh usable capacity). Large battery capacity means there is no need to use standard generators to provide electric energy, allowing an uninterrupted power supply to electric systems on board.

Armstrong to Build Hat Island Ferry

Boatbuilder Armstrong Marine USA has been selected to construct a custom passenger ferry for the community of Hat Island, Wash. The 49-passenger USCG Subchapter T vessel features a galley, head, Northern Lights 9kW generator, Garmin/NMEA electronics package, and PA system. Vessel completion is slated for Fall 2020.

The 45' x 18' 4" semi-displacement catamaran is designed with shaft & wheel propulsion powered by twin Cummins QSL9 405hp engines and SeaStar EPS electronic steering. A ZF CruiseCommand system provides superior vessel control from the raised pilothouse or second station forward. Two bow thrusters and aluminum push knees with rubber fendering ease repeated mooring.

Two passenger gates at the bow plus a side door aft expedite the boarding process. Additional exterior customizations include 12 deck tie-down points and an aluminum davit (500 lb. SWL) for cargo transport.

Inside the full width main cabin, cushioned bench seating accommodates passengers. Multiple lockers and overhead bins store luggage. The galley includes microwave and refrigerator along with additional storage shelving to ensure supplies are well stocked. Heat and A/C keep the cabin comfortable year-round. The head is accessed from the aft deck.

Hat Island is a small, private island community in Snohomish County, Wash. The island is nestled in Possession Sound between Everett, Whidbey, and Camano Islands and operates a weekly ferry schedule to and from the Port of Everett. It's residents' requirements are reflected in the ferry design which received widespread community approval.

Wight Shipyard Building Four Vessels for Malta

UK shipbuilder Wight Shipyard Co. secured an order for four passenger vessels from Malta tourism company Captain Morgan. The order consists of four newbuild vessels, two 20m and two 33m catamarans, all to be designed by One2Three Naval Architects.

"We have been working with One2Three to develop lighter, more fuel-efficient ferries with the subsequent reduction of fuel costs," said Peter Morton, CEO, Wight Shipyard. "We are also working to integrate the boarding design for the ancient wharves and docks of the towns of Malta."

The two newbuild 20m harbor waterbus vessels will replace a number of older vessels, which already service the harbor routes. They will be designed to service the low wharves at each harbor providing easy embarkation and debarkation for passengers while cruising around the harbor. These vessels will be of a similar design to Wight Shipyard's Loch Ness Jacobite Maverick 20m day cruise passenger catamaran, also designed by One2Three Naval Architects. The new 20m design is a slower harbor waterbus designed for going point to point around the main ports of the capital.

The two 33m medium speed vessels are a new design for Wight Shipyard, based on a commuter boat currently used

on Sydney harbor.

Wight Shipyard noted it has had success in the fast ferry sector since its inception, and this latest order will take the yard to 13 newbuilds in just over four years. Previous notable builds include the renovation of the historic motor yacht MY Shemara, Red Funnel's Red Jet 6 and 7, three MBNA Thames Clippers, the Jacobite Maverick in Scotland, the Twin City Liner commuter and sightseeing vessel on the River Danube, and most recently two fast ferries delivered this summer for Mexico's largest ferry operator Ultramar.

SCHOTTEL to Propel Hydrogen Ferry

Two new vessels for the Norwegian ferry operator Norled will be propelled by azimuth thrusters from SCHOTTEL. One of these LMG Marin designed vessels – currently under construction at Westcon Yards, Norway – will be the first ferry in the world to sail on liquid hydrogen.

Both newbuilds will be a hybrid mix of batteries and hydrogen fuel cells. The first project – the one using liquid hydrogen – will be split 50/50 between batteries and fuel cells. The second ferry will be powered by batteries only. Each of the new vessels will be driven by two SCHOTTEL Rudder EcoPellers type SRE 340 L FP with an input power of 960 kW each. With fixed pitch propellers and a propeller diameter of 2.10 m, the ferry will operate at a service speed of 12 knots.

The SRE meets Norled's requirements as it covers the power range from 500 to 5,000 kW and ensures high efficiency even at very low loads. It is an ecologically friendly propulsion system developed primarily for open seas and coastal operating conditions.

Thanks to its efficiency, the azimuth thruster also contributes to the ferries' low fuel consumption, resulting in low operating costs and reduced emissions. Beyond this, the SRE improves course-keeping stability and thus reduces steering angle corrections.

The LMG 80 ferries measure 82.40 meters in overall length and have a molded breadth of 17 meters. They will operate on the Hjelmeland – Skipavik – Nesvik route in Ryfylke, Rogaland County starting in the spring of 2021. The double-ended vessels will each have a capacity of 299 passengers and 80 cars.

Callan Marine Launches Dredger

Texas-based Callan Marine recently launched the newly-built cutter suction dredge General MacArthur at the C&C Marine and Repair shipyard in Belle Chasse, La.

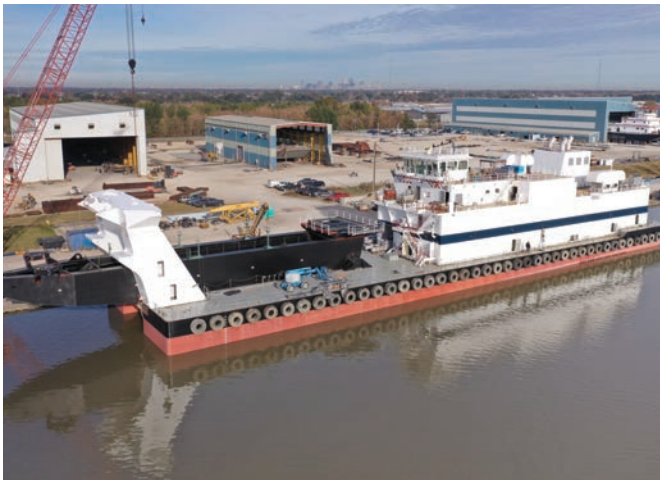
At 290 feet in length and with a 9-foot draft, the General MacArthur is one of the largest dredgers of its kind in the U.S. market. It has been dubbed an "industry game-changer", boasting 24,000 total installed horsepower. Powered by 3 Cat-MAK diesel engines, the dredge has a fuel capacity of over 300,000 gallons.

The hull was launched on November 6, 2019, and the dredge is anticipated to begin work in early 2020.

The 32" cutter dredge General MacArthur is designed to perform capital, maintenance and beneficial use dredging, such as marsh creation and beach renourishment. It boasts a dredging depth range of 90 feet, with an 800mm suction and discharge pipeline diameter.

The newbuild will have the capability to work on all U.S. coasts and waterways, as well as globally, Callan said.

In addition to powerful mechanical specifications, the General MacArthur is built with ample crew accommodations including a full galley, gym, TV/rec room, laundry facility, conference room, engineer's office, and captain/chief engineer staterooms in addition to 33 beds (all staterooms have private bathrooms).



"The General MacArthur is a true game-changer for the dredging industry," said Maxie McGuire, President of Callan Marine. "With its combined scope, power and accommodations, we will see project speed and quality increase at unprecedented rates."

The 32" General MacArthur joins the 18" General Pershing,the 16" General Patton and the 12" General Eisenhower in Callan Marine's dredge fleet.

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	

ABS Grants AIP for First Jones ACT SOV

ABS said it granted Approval in Principle (AIP) to VARD for its design of a Jones Act service operations vessel (SOV) to serve the nascent offshore wind market in the U.S.

The AIP addresses a customized version of VARD 4 07 US SOV design, with primary functions including accommodation, transferring technicians to installations as well as storing spare parts and tools.

According to Vard, the vessel is designed to be environmentally friendly with a focus on low fuel consumption and ease of construction. Vard said the design incorporates a state-of-the-art hull form designed for all weather conditions which, together with the specified propulsion configuration, offers economical steaming, enhanced seakeeping abilities, and excellent station keeping performance. The Vessel is optimized to reduce motions and accelerations in all degrees of freedom with the aim to increase operability and comfort.

The Vessel shall have the ABS Class notations +A1, OFFSHORE SUPPORT VESSEL (WIND-SC), +AMS, +ACCU, DPS-2, HAB(WB.)

Darren Truelock, Vice President, Vard Marine Houston, said, "We already have experience supporting yards worldwide to construct our offshore vessel designs, so it is with great enthusiasm that we now start on this exciting journey with ABS in the US."

Metal Shark Building US Navy Patrol Boats

Nearing the end of the operational test and evaluation trial period for the incoming U.S. Navy standardized "40 PB" patrol boat, Metal Shark said it will soon begin full-rate production soon to begin in Jeanerette, La., with initial plans to deliver one completed unit every four weeks.

Developed as the replacement for up to 160 patrol vessels deployed worldwide with Navy Expeditionary Combat Command's Coastal Riverine Forces (CRF), the new platform represents a radical departure from the more conventional boats now in use, the builder said. Designed to address the vulnerabilities of traditional patrol boats while expanding the mission role of the 40 PB platform, the 40 Defiant delivers increases in capabilities and firepower. A futuristic design featuring a chiseled and menacing profile and unique faceted hull satisfy the Navy's visual-deterrent requirements. As configured for the Navy, the vessel features six MK 16 weapons foundations plus a large forward foundation for stabilized, remote operated, optically guided MK 49 / MK 50 weapons systems.

Ballistic protection enables the 40 PB to sustain extended firefights, allowing crews to respond with overwhelming force to asymmetric threats such as swarm attacks while remaining secure and protected from hostile fire. The armored, climate-controlled pilothouse accommodates a crew of five in SHOXS 4800-series whole-body isolation

suspension seats, and features an advanced communications and sensor suite.

As configured for the Navy, the 40 Defiant is powered by twin Cummins QSB 6.7 diesel inboards, coupled via Twin Disc MG5065SC marine transmissions to Hamilton HTX30 water jets developed specifically for the Navy 40 PB program.

The vessel's mission-optimized hull form has been designed to achieve 40-knot sprint speeds while displaying superb dynamic stability across the full range of operating environments, while also delivering enhanced handling and greatly reduced operating cost at the 10-15 knot escort speeds where the vessel will spend the bulk of its operational life.

Susan Buchanan
(1952-2019)

Susan Grier Buchanan, an agricultural economist and award-winning journalist, died peacefully after a courageous battle with cancer in New Orleans on November 22, 2019, surrounded by her loving family. She was 67. After growing up in New Orleans, Susan pursued a BA at the University of Pennsylvania, followed by an MS in agricultural economics at Cornell University and the American University in Cairo. She worked as an economist for the US Department of Agriculture, and wrote a book on Egyptian wheat policy. Subsequently she spent many years as a commodities analyst for Knight Ridder and a senior reporter for Dow Jones newswires. Her articles appeared in The Wall Street Journal, Barron's, and other outlets. Following Hurricane Katrina, Susan made a permanent move back to her cherished Crescent City. A member of the Press Club of New Orleans and the Louisiana Press Association, she was a reliable, trusted and frequent contributor to *MarineNews* magazine, on a wide range of marine-related topics. We here at New Wave Media – like her family, colleagues and friends everywhere – mourn her passing and will miss her professionalism and advice.


Carpenter


Damen


Buese


Amin

AWO Promotes Carpenter

The American Waterways Operators executive vice President and chief operating officer Jennifer Carpenter has been promoted to succeed Tom Allegretti as the trade association's president and chief executive officer. Allegretti has agreed to stay on at AWO to help with the transition.

New CEO at Damen

Arnout Damen became CEO of Damen Shipyards Group, taking over for René Berkvens, who has been the CEO of Damen Shipyards Group for more than 13 years. Arnout Damen, a member of the group's Executive Board for nine years, will be succeed as Chief Commercial Officer by Jan-Wim Dekker.

Buese Named Campbell President

Campbell Transportation Company promoted Kyle Buese to the role of President. Buese has been the Executive Vice President of Campbell Transportation for the past year. He will replace Mike Monahan, who is retiring after eight years as Campbell President. Monahan will stay on as a member of the company's Board of Directors.

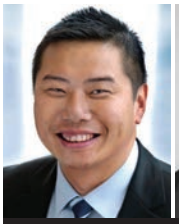
HII Promotes Amin

Huntington Ingalls Industries (HII) named Bharat Amin ¬executive vice president and chief information officer, responsible for establishing the company's information technology and digital strategic direction with a focus on cyber security capabilities. Amin joins the HII executive team after serving as vice president and CIO for Newport News Shipbuilding division since 2014. He has previously held various leadership positions at BAE Systems Inc., including vice president and CIO for BAE Systems' Land & Armaments sector.

New CEO at the Evac Group

Tapio Kolunsarka has been named CEO of Evac Group. He succeeds Tomi Gardemeister who has left his post as CEO and President to assume outside interests. Since 2016 Kolunsarka has been President & CEO of Ramirent, a publicly listed equipment rental and service company. Prior to Ramirent, Tapio worked at UPM-


Kolunsarka


Volvo Penta of the Americas


Gu Puscar


Hägg


Bean


Cox Powertrain

Kymmene, the largest pulp and paper business in Europe, in a number of different roles. From 2013 to 2016 he was Executive Vice President in charge of the global labelling material division UPM Raflatac.

Volvo Penta Promotes Gu and Puscar

Volvo Penta of the Americas has appointed Yichen Gu to Vice President of Parts and Accessories. Currently head of Volvo Penta's Dealer Business Management in Europe, Gu has held a variety of management roles over his 18 years with Volvo Group. He replaces David Kennedy who will retire after 25 years with Volvo Penta of the Americas. In addition, Marcelo Puscar has been promoted to Vice President of Marketing. He has served five years as Marketing Director for the region.

Hägg Named Steerprop CEO

Steerprop's Board of Directors has appointed Riku-Pekka Hägg as the new chief executive officer. As former Vice President of Ship Design at Wärtsilä, Hägg brings decades of maritime technology know-how, digital and strategic experience to Steerprop.

NC Ports Names New CCO

North Carolina Ports has appointed Hans Bean to succeed retiring chief commercial officer Greg Fennell. Bean brings more than 20 years maritime experience to the role, having most recently served as the Senior Vice President of Business Development for NC Ports. He joined the Ports Authority in November 2016 after serving as Senior Director, Commercial – Sales and Marketing for APM Terminals, North America. He also spent more than 10 years with Maersk Line.

Cox Powertrain Grows US Team

Cox Powertrain has revealed three key new appointments to support its US business and head up its sales and aftersales departments in this important market. Bruce Woodfin takes on the role of North America Account Manager and Bill Livingston will act as Aftersales Manager for the America's, while Steve Pitt becomes Global Aftersales and Warranty Manager, based at Cox's UK headquarters.

Phoenix Promotes Long

Phoenix International Holdings, Inc. announced that Matthew Long has been promoted to Corporate Vice

Capt. Dennis R. Sherwood *(1955-2019)*

On December 30, 2019, Sandy Hook Pilot Captain Dennis R. Sherwood was involved in an incident while boarding a container vessel inbound to the Port of New York & New Jersey. He sustained injuries after falling from an accommodation ladder and was evacuated to a local hospital where his injuries proved to be fatal. Prior to the incident, Captain Sherwood had been piloting vessels in and out of the Port of New York & New Jersey for over 35 years. The incident is being investigated by the United States Coast Guard. Captain Sherwood is survived by his wife Marianne Sherwood, daughter Kelly Sherwood (son-in-law Robert McBriar), son Dennis Sherwood (son-in-law Paul Caruso), son William Sherwood and daughter Alexis Sherwood.


Long


Wilgus


Pace


Allen

President. Long will retain his current duties as General Manager of Phoenix's Largo, Md. operations, and in his additional role as Corporate VP will assume responsibilities for company-wide financial forecasting, reporting and budgeting.

Wilgus Elected Partner

Maritime and international trade attorney Lauren B. Wilgus has been elected partner at law firm Blank Rome, effective January 1, 2020.

Lumitec Appoints Director of Sales

Lumitec has appointed Jeremy Pace as Director of Sales at the company's R&D/manufacturing headquarters in Delray Beach, Fla. Pace brings to the company over 18 years of experience in retail, lighting and manufacturing.

Starrett Appoints Metrology Systems VP

The L.S. Starrett Company has appointed David Allen as vice president, Starrett Metrology Systems. In this newly-created role, Allen will be responsible for the strategy, growth and profitability of the advanced metrology systems including Starrett Bytewise, Starrett Tru-Stone Technologies, Starrett-Kinemetric Systems, metrol-


Green


Falkner


Kennedy

Fenimore & Mayes

ogy software development, force measurement systems and Starrett Special Gage Department.

JAXPORT CEO Contract Extended

During the December meeting of the JAXPORT Board of Directors, the Board unanimously voted to extend CEO Eric Green's contract through fiscal year 2024. The new five-year contract is effective Oct. 1, 2019. Green has been with JAXPORT since 2005 and was named CEO in 2017.

Falkner Named GM, Lowe Boats

Lowe Boats named Greg Falkner as general manager effective immediately. Falkner joins Brunswick from Harley-Davidson where he worked in a variety of leadership positions since 2001.

Kennedy Elected AIWA Chairman

BoatUS Manager of Government Affairs David Kennedy was elected chairman of the Atlantic Intracoastal Waterway Association (AIWA) at the group's recent annual meeting.

Graham, Chapman Join NTSB Board

The National Transportation Safety Board is set to welcome aboard Michael Graham and Thomas Chapman as its newest board members, bringing the board to its full complement of five members for the first time since February 15, 2019. President Donald J. Trump nominated Graham and Chapman and the Senate voted to confirm them. Graham's term as a board member is through 2025, and Chapman's term runs through the end of 2023.

CII Honors Fenimore, Mayes

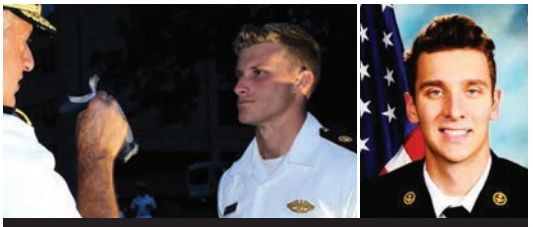
The Containerization & Intermodal Institute (CII) presented the 2019 Connie Award yesterday to Bruce A. Fenimore, Chief Executive Officer of Columbia Group, at its annual industry-wide luncheon. Sara Mayes, President and CEO of Gemini Shippers Group, was the recipient of the Lifetime Achievement Award. Fenimore is behind the growth and expansion of Columbia Group, which has earned a reputation as a leader in inland and feeder transport and equipment, primarily as it relates to expanding its US-flag barge fleet. Sara Mayes is an industry veteran with 50+ years in the business.

Crowley Awards Scholarships

Crowley Maritime Corp. presented 2019 Thomas B. Crowley Sr. Memorial Scholarships to two U.S. Merchant Marine Academy (USMMA) students at the Containerization and Intermodal Institute's Connie Awards luncheon in December. The scholarships were awarded to cadets William Quigley, from Trumbull, Conn., and William Scott, from Neptune Beach, Fla. Both are midshipman first class studying maritime logistics and security. Two other cadets – Midshipmen Carrson Pearce and Kevin Holmes – were also awarded scholarships but were serving at sea and unable to attend the industry luncheon.

Blount Boats Joins Green Marine

Blount Boats, Inc. becomes the eighth shipyard company to join Green Marine, a voluntary environmental program for North America's maritime industry. The Green Marine environmental certification program addresses key environmental issues through 12 performance indicators that include greenhouse gases, air emissions, spill prevention, waste management, environmental leadership, and community impacts – some applicable to shipping activities, others to landside operations.



U.S. Merchant Marine Academy

Scott Quigley

Blount

Guidry

Maritime Cyber Security Coalition Formed

The U.S. Coast Guard, along with members of the Area Maritime Security Committee (AMSC) for the Port of New York and New Jersey, have collaborated to enhance maritime cyber security and port resilience. Coalition member include representatives from Rutgers University, Stevens Institute and major segments of the maritime industry. The end result of their work is an agreement by all members of the AMSC to share cyber threat information and participate in routine cyber exercises. The plan also establishes a Cyber Advisory Committee, comprised of cyber and industry experts ready to assist in a cyber-incident response, and creates an awards program to recognize port partners who have taken proactive steps to make cybersecurity a top priority.

Volvo Penta Names Atlantic Detroit Diesel Allison as Marine Power Center

Volvo Penta of the Americas appointed Atlantic Detroit Diesel Allison (ADDA) as its 12th North American Authorized Power Center for the marine industry. ADDA is a division of Stewart & Stevenson, a Kirby Corporation. The organization will be responsible for sales and service of Volvo Penta marine diesel and gasoline propulsion systems in New York and northern New Jersey. ADDA will support Volvo Penta's dealers and customers in the region with rapid-response centers located in Lodi, Piscataway and Latham. The company will also serve as a resource for parts, service, warranty and training for Volvo Penta's dealer network across the territory.

Harvey CEO Acquires Harvey's Interest in QLNG

Shane Guidry, CEO of Harvey Gulf International Marine, has purchased Harvey's 30% ownership in Quality Liquefied Natural Gas Transport (QLNG). The CEO previously owned 70% of QLNG with Harvey and now controls 100%. Houston-based Q-LNG Transport is a provider of LNG transportation and vessel bunkering services in North America.

In-Mar Solutions: Alu Pilot Chairs & Deck Rails

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

www.inmarsolutions.com

MegaPress CuNi

Viega's MegaPress CuNi, a copper nickel press fitting system, designed to replace welding for applications on commercial ships, private yachts and offshore rigs, is now available in sizes of 2½" to 4". Using a single sealing element and single tool to install, MegaPress CuNi can make both wet and dry connections in seconds for a variety of applications including seawater cooling, fire mains, sprinkler systems, bilge lines, foam systems, ballast systems, compressed air, vacuum lines, hydraulic oils and others. It can be installed in previously welded systems and is compatible with off-the-shelf pipe, and the entire line is fully approved (ABS/USCG).

Thursters Condition Monitoring

ZF introduced an intelligent Condition Monitoring System for thrusters, equipped with various sensors and an intelligent electronic evaluation unit to measure vibrations which indicate the condition of the bearings and gears in the thruster's upper and lower gearbox. These results help operators identify early on which components need to be replaced or maintained, meaning repairs can be planned in advance and potential damage to components can be avoided. It also extends the service life of the monitored systems and components.

Shell LubeAnalyst

Aiming to digitalize its service offerings to customers, Shell Marine launched a new IT platform for its used oil analysis program Shell LubeAnalyst. The platform, also available in a mobile app version, replaces Shell Rapid Lubricant Analysis service and offers a simpler sample management process, which includes online sample registration and label printing that remove the need to complete sample labels manually. The intuitive customer portal features personalized dashboards, interactive charts and an easy-to-use oil analysis reporting format which allows vessel managers to oversee lubricant performance across their fleets. Registered owners have access to Shell Marine's complete library of recommendations covering all the key equipment and lubricant grades.

TracVision UHD7

KVH Industries introduced the TracVision UHD7, a high-performance 60 cm marine satellite TV antenna designed to provide vessel crews with access to ultra high-definition (UHD) and 4K programming from DIRECTV as well as regular HD programming from other leading satellite TV providers. Designed for ease of installation and use, TracVision UHD7 features two-cable installation, fast satellite acquisition speeds, and system control via the TracVision TV-Hub web interface or convenient TracVision app. For reliability in marine conditions, the antenna features multi-axis tracking and a rugged, lightweight design.

John Deere: New Engine Rating

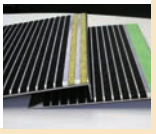
As needs within the maritime market evolve, John Deere Power Systems has expanded its portfolio with the launch of a new PowerTech 6090SFM85 rating for hybrid vessels with diesel power. The variable speed rating will be 325 hp at 2,000 rpm, will meet U.S. Environmental Protection Agency Marine Tier 3 and International Maritime Organization Tier 2 emissions standards, and will be certified to E3 propulsion test cycle for commercial applications used with variable pitch or electronically coupled propellers. The rating is suited for hybrid vessels that require a variable-speed generator drive engine to develop electrical power for any combination of electric propulsion, energy storage, hotel load and auxiliary electric loads.

TCL Series Lube Free Air Hoists

The new TCL Series lube free air hoists from Harrington Hoists operate without air supply lubrication, which leaves the surrounding environment free of oil mist from the air exhaust, and are recommended for the food, chemical or pharmaceutical industries. Available in ¼, ½ and 1 Ton capacities with either cord or pendant controls, the compact TCL Series hoists have an unlimited duty cycle for continuous operation and fast lifting capability. Standard features include heavy-duty disc motor brake system, a spring-loaded multi-vane motor design for fine feathering control, adjustable lifting and lowering speeds and an external speed adjustment screw that does not require tools to set specific speeds.

STAIRMASTER NITEGLOW

Wooster Products introduced STAIRMASTER NITEGLOW anti-slip safety renovation treads with photoluminescence, for exit path markings, safety egress systems, steps and leading edge of landings to help find pathways in the dark. Available in lengths to order to a maximum of 8', STAIRMASTER NITEGLOW features heat treated corrosion resistant aluminum substrate, a nearly diamond-hard aluminum oxide filler and bright, long lasting photoluminescent epoxy filler extending uniformly throughout the filler. Renovation safety tread is 9-inches wide, includes a mill finish extruded aluminum base, with a beveled edge, and countersunk holes as standard. STAIRMASTER NITEGLOW meets 2015 IFC code compliance.



Series E Interceptors

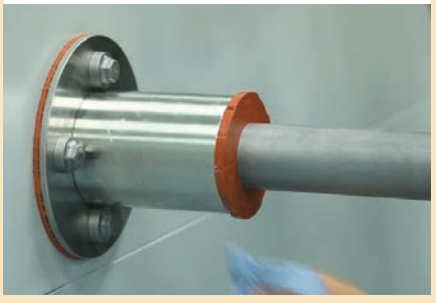
IMTRA expanded its Zipwake Dynamic Trim Control System offerings with the new Series E line of large fast-acting interceptors engineered for planing or semi-planing vessels between 40-100 feet. Series E includes three straight, three tunnel and two chine interceptors. When arranged to use the length of the stern for lift generation, the new interceptors are more efficient at creating lift compared to narrow-span trim tabs. Capable of rapid deployment, the Series E deploys at a speed of 1.6 inches per second (40 mm per second) for a total stroke of 2.4 inches (60 mm).

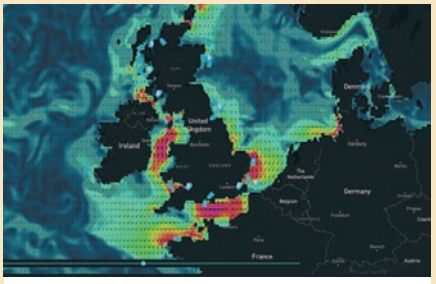
Premium Lifejackets

Survitec has reengineered its Premier lifejacket range, pushing safety and performance beyond the regulatory requirement with a minimum 150 Newton buoyancy – without increasing size. Buoyancy at the top of the lifejacket is increased and foam around the buckle was reshaped, also allowing more compact stacking and stowing. Ten stowed adult jackets take up 0.182m3 of space compared to the 0.300m3 area of 10 original, 2010-designed Premier jackets. The adult version of the jacket has packed dimensions of 440mm x 280mm x 146mm and is sized to fit a chest girth of 1,750mm. Crew and child versions are also available.

Sealing System

Beele Engineering has designed an assembly set that makes it possible to simply screw flange transit pipes in steel decks, floors, bulkheads and walls without the need for welding. The set consisting of pipe flanges, a horseshoe-shaped guide ring, NOFIRNO gaskets and BEBOLTITE fastening bolts is specifically designed for SLIPSIL and SLIPSIL XL-120 plugs with which the ultimate transit sleeve can quickly and effectively be installed with a fire-resistant and gas, smoke and watertight seal.





enginei Enhanced

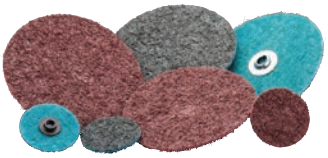
Royston's marine electronic fuel management system (EFMS), enginei, now incorporates specialist Tidetech global datasets in the form of detailed map overlays for more accurate vessel tracking and route planning. High resolution data on various environmental conditions – air temperature, cloud cover, sea currents, wind speed and direction, and wind conditions – is displayed on the web portal's map dashboard to help operators to maximize fuel management and emissions control through enhanced route planning.

KINETIX

CDG Coast Dynamics Group introduced KINETIX, a vessel and crew monitoring program for high-speed craft consisting of sensors that integrate with the vessel's shock-mitigation seating, while specialized software records data in a compact, marinized housing. A team of shock and vibration scientists then work directly with agencies to provide periodic reports based on the recorded data. Operators receive real-time crew shock exposure and incident alerts while underway, and fleet managers receive assessments detailing vessel impact history, crew exposure levels and suspension seat performance.

Telescopic Rescue Poles

Seeing the need for a swift and accurate recovery method should a person fall into the water, the team at Shamrock Quay in Southampton – part of MDL Marinas Group – acquired a Reach and Rescue telescopic rescue pole and body hook combination. The lightweight tool enables an individual to conduct a quick, directionally accurate rescue by retrieving a casualty from water without needing to get into the water themselves. The device was called into action almost immediately. Three lives have been saved at Shamrock Quay since the pole's installation, leading MDL Marinas Group Ltd. to equip every marina manager at each of its 20 marinas across the UK and Europe with the system.



Norton Rapid Prep XHD Coarse and Medium Discs

Saint-Gobain Abrasives offers new Norton Rapid Prep XHD Coarse and Medium Discs to solve users' most aggressive stock removal and blending challenges. The extra heavy-duty non-woven discs remove weld lines, weld splatter, weld discoloration and blend surfaces in a single step. Twelve sizes are offered in three non-woven types: quick change discs from 2" to 4" TR attachment, hook and loop discs in both 7/8" hole and no hole from 4-1/2" to 7" diameter, and speed change discs from 4-1/2" x 5/8"-11 Fastener to 7" x 7/8" Fastener. Both coarse and medium discs are stock items.

Hydro-blasters

Australian Pump's new Extreme series of 7,300 psi hydro-blasters are powered by Yanmar's TNV series with an integrated control panel that provides full engine protection including an hour meter, low oil and high water temperature. The whole pump system is driven through with a reduction belt drive for ease and convenience of adjustment and the engine runs at 2,400 rpms. A 60-liter stainless steel break tank with low water shutdown and 50-liter fuel tank is also installed. The unit can run continuously for up to 8 hours.

Fieldbus Couplers

WAGO's 750-363 EtherNet/IP Fieldbus Coupler is the latest Ethernet/IP Adapter coupler to join their I/O System. Its fast boot up time enables systems to get online quicker and firmware updates can be accessed using the Couplers' onboard Web-based management system. This new coupler can be paired with WAGO's 500+ I/O modules to meet the needs of any I/O application. The 750-363 supports a wide variety of protocols such as HTTP(S), BootP, DNS, SNMP, and FTP(S). Other features include dual Ethernet ports eliminating the need for switches or hubs, support of up to 250 I/O modules and add-on instructions to simplify the integration with Allen Bradley master controllers.

Engine Pumps

JMP Corporation has debuted three new replacement engine cooling pumps for Caterpillar engines, manufactured to ISO-9001 standards, for 100% drop-in compatibility. Engineered for improved, self-priming flow, their bodies are cast bronze with corrosion-resistant fittings, O-rings at the end covers instead of gaskets and marine-grade, non-magnetic shafts. The pumps feature JMP's flexible impellers. Tested and approved by the US Navy, they're made from a proprietary wax-infused blend that resists salt, oil, chemicals and extreme heat. JMP Marine JPR-CT3530 replaces Caterpillar engine cooling pumps 3N1888 and Jabsco 17360-1001; JPR-CT0440 replaces Caterpillar 4255412, Jabsco 29630-1201 and Perkins W100006; and JPR-CT3054 replaces Caterpillar 4255411, Jabsco 29630-1301S and Perkins W100000.

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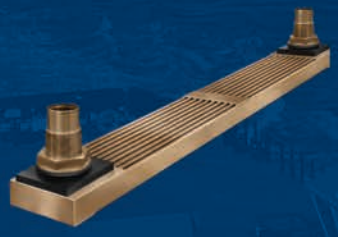

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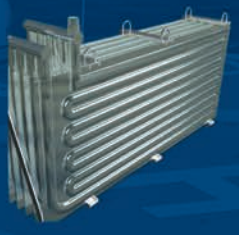

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