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Marine News

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ON THE COVER

Markey Machinery Asymmetrical Render/Recover (ARR) technology is today the choice of many offshore and ship assist workboat professionals. Tried and tested in the harshest of conditions, the innovative equipment improves safety and operational efficiencies. The story begins on page 46.

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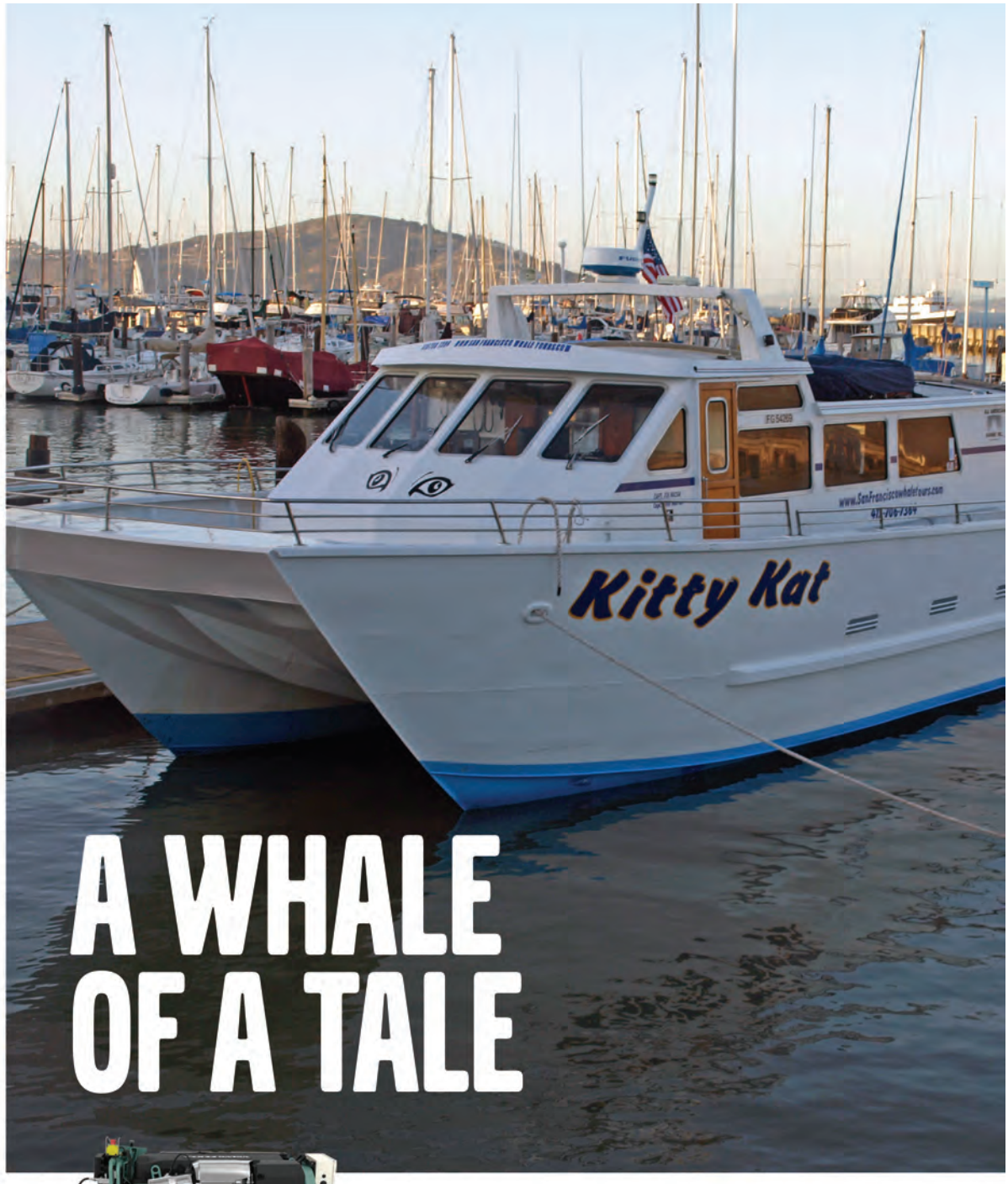

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The third quarter of this year brings a mixed bag for the offshore energy support sector, one thirsting for any glimmer of good news. While the price of crude has, to some extent, rebounded, it also hovers in a place where what happens next is anything but certain. Where onshore shale operators have found ways to make money, adjusting to price fluctuations, the same cannot be automatically said for an overbuilt marine sector. This month, our market snapshot, courtesy of VesselsValue.com, provides a sobering look at offshore utilization rates, here and overseas.

One thing is for sure: when the downturn does subside, U.S. operators will rebound with the youngest fleet seen in decades, they will go back to work in a friendlier regulatory climate, and with more areas of the offshore shelf open to bidding. That's not to say it will be any less safe, when they do. New organizations such as the Offshore Service Vessel Dynamic Positioning Authority (OSVDPA) haven't missed a beat during the downturn, and today, the New Orleans-based DPO certification body seeks to improve the safety of dynamic positioning operations by providing a pathway to training and certification for all of those who use dynamic positioning. Turn the page to find out why it might be a good bet for you and your mariners.

Separately, inland markets are facing their own challenges; some rooted in regulatory changes and still others, emanating from potential new markets and opportunities. For example, the port of New Orleans is actively facilitating increased container volumes from blue water traffic, but at the same time, making innovative efforts to move those boxes more efficiently to the inland hinterlands. Their nascent container-on-barge service, as described by Tom Ewing and starting on page 41, has seen its share of successes, but also faces its own list of challenges.

Also on the inland waterways, Campbell Transportation Company CEO Peter Stephaich this month weighs in on a raft of issues confronting today's inland operators. From business decisions to market conditions and regulatory issues, he touches on them all, as eloquently as anyone before him has ever done within our pages.

As we alluded to earlier in this note, the regulatory machine can and does drive what happens in the commercial sector, with the caveat that one would hope the former does not drive the latter aspect of the waterfront right out of business. Case in point; the State of California is now advocating a 'zero emissions' policy for the ports of Los Angeles and Long Beach, to be achieved by the year 2030 and at a local cost which some estimate to exceed $16 billion. Who will pay for it? To be determined. But, that's a blue water problem, right? Not really.

This month, we outline the full breadth of the myriad regulations that are impacting your bottom line. The list is long. Inland, offshore and on the coast, close attention to these matters is just as important as how much you got paid to move cargo.

Joseph Keefe, Editor, keefe@marinelink.com

Vigor was honored to build Savage Marine's new ATB tank barge, the most significant refrigerated liquefied gas carrier to be built in America in decades. The ATB will transport raw materials for The Mosaic Company, the world's leading integrated producer and marketer of concentrated phosphate and potash.

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The Economic Contribution of the U.S. Tugboat, Towboat, and Barge Industry

Developed through a cooperative agreement between the U.S. DOT's Maritime Administration and the American Waterways Operators (AWO), PricewaterhouseCoopers LLP in May delivered the latest summary for the U.S. inland transportation industry. The caveat that it analyzes 2014 data, especially as we are already more than halfway to 2018, cannot be ignored. Nevertheless, the 109-page document brings out some important points and calls attention to the critical role played by this industry. **One would hope that this document finds its way onto the desk of every lawmaker in Washington.** That's why AWO spent money on it. At last count – ***2014, to be precise*** – the tugboat, towboat, and barge industry, by-the-numbers, looked something like this:

5,476: US-flag tugboats and towboats

31,000: total barges

763: millions of tons of cargo moved on the nation's waterways each year

15.9: billions of dollars in revenues generated annually by the US tugboat, towboat, and barge industry

50,480: number of directly employed workers

4.7: billions of dollars in compensation paid out to those workers

93,835: average income per inland worker in U.S. dollars

251,070: number of indirect and induced jobs attributable to this sector

9.0: billions in dollars contributed to the U.S. gross domestic product (GDP)

2.2: billions of dollars invested in property, plant, and equipment, including vessel purchases

61: millions of tons of capacity in the US barge fleet

83.8: percent of all domestic waterborne commerce carried by barges

The nation's towboat industry is a critical linchpin in the domestic economy. According to PWC, and counting direct, indirect, and induced impacts, the US tugboat, towboat, and barge industry's total impact on labor income was $19.4 billion and its impact on U.S. GDP was a whopping $33.8 billion in 2014. Nationwide, the tugboat, towboat, and barge industry paid or collected nearly $1.2 billion in federal, state, and local taxes. The industry indirectly supported an additional $4.1 billion in taxes.

Beyond the money, the US towboat, and barge industry provides a number of other important benefits. For example, the industry provides an efficient, low-cost method for transporting a broad range of commodities. Barge transport tends to be more fuel efficient and have a lower environmental footprint. Barge traffic is able to move large volumes of cargo over long distances. A typical 15-barge tow can haul approximately 26,250 tons of cargo. To move the same amount of cargo would require 216 rail cars or 1,050 tractor trailers. Barge traffic saves between $12.0 and $12.5 billion in transportation costs, in turn translating into lower costs for consumers. In 2009, inland towing was able to move one ton of freight 647 miles on a single gallon of fuel, compared to 477 miles for freight railroads and just 145 miles for freight trucks. As a result of better fuel efficiency and lower energy intensities, studies show that barge transport has lower greenhouse gas emissions than other forms of freight transportation.

Petroleum represents the largest single commodity shipped by barge, amounting to 279 million tons or 35.5 percent of the total volume of cargo moved by barge in 2014, with coal in second place with 125 million tons shipped (16 percent). And yet, that doesn't tell the whole story on coal because 2017 represents a somewhat of a renaissance, rebounding nicely on the strength of strong exports. In fact, if the totals for the first seven months of 2017 holds up on an annualized basis, U.S. coal exports will reach 89 million tons this year, well in excess the 65 million tons recorded in 2016 and the 75 million in the previous year. Sure, these are temporary gains fed by a casualty in Australia and China's insatiable demand, but good news nevertheless for inland operators. After all, that coal has to get to the blue water port somehow. Barges were and are a big part of that equation. You won't find that in the AWO report.

Barge transport's ability to move large volumes of cargo over long distances is unmatched in the domestic intermodal equation. A single dry cargo barge can haul 1,750 tons of cargo, the same amount of cargo as 16 bulk rail cars or 70 tractor trailers. Similarly, in order to move 27,500 barrels of liquid cargo it would take 144 tanker trucks or 46 rail cars, compared to a single barge. To haul the same amount of dry cargo as a 15-barge tow would

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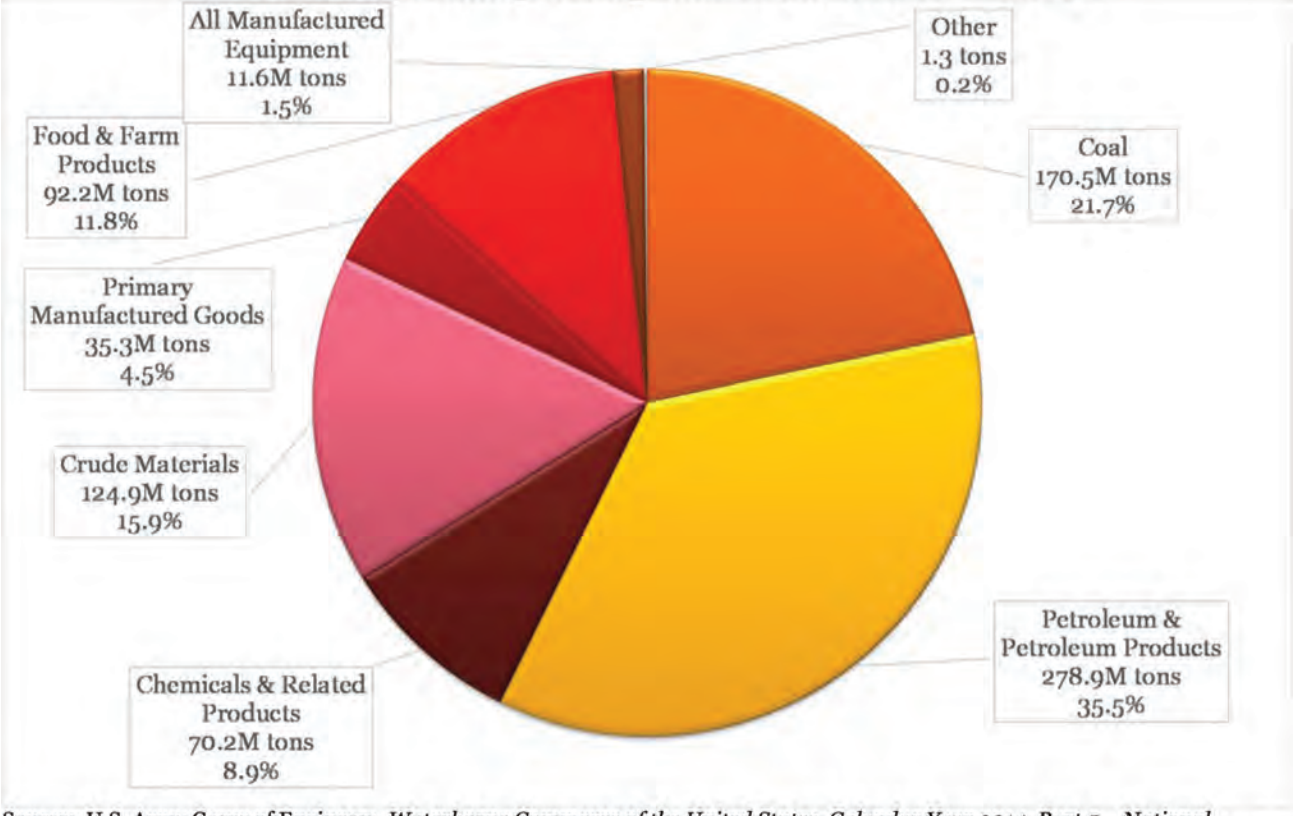
require 216 rail cars or 1,050 tractor trailers. The report says it well: ***if all cargo transported by barge in 2014 had to be moved by rail it would require 7.1 million rail cars. If this volume had to be moved by truck, it would require 31.4 million tractor trailers, adding an additional burden to the already congested highway system.***

And, speaking of congested highway systems, in 2012, the most recent year for which data is available (how sad it that?), the amount of energy required to move one ton of freight one mile, was lowest for waterborne freight and highest for trucks. Over the 10-year period from 2002 to 2012, energy efficiency increased in waterborne freight, but decreased for truck freight transportation. As EPA Tier requirements for marine engines tighten, the industry's stack emissions – like its long term oil pollution footprint, continue to shrink appreciably.

The size of the US-flagged fleet declined by 950 vessels (2.3 percent) between 2005 and 2014. Tugboats and towboats increased by 3.5 percent and the number of tank barges increased by 17.3 percent (718 vessels). As blue water Jones Act tonnage continues to wane, the nation's brown water fleets have firmly established themselves as the backbone of the U.S. Jones Act fleet. That might be the real bottom line. In 2014, 66 new or rebuilt tugboats and towboats were added to the fleet, along with 656 new or rebuilt barges. Industry placed orders with US shipyards for 24 new tugboats and towboats and 10 new oceangoing barges in 2014. The irony of that good news in terms of all those added barge hulls is that those robust newbuild numbers contributed to last year's anemic freight rates despite near record bulk totals on the rivers. Campbell Transportation's Peter Stephaich says it best when he insists, "We either need more tons to move or we need to shrink the barge fleet. Preferably both." Amen.

Figure II-6 – Domestic Barge Traffic by Commodity Group, 2014
[Millions of Short Tons and Percentage of Total]

Total Barge Tonnage: 784.9 million short tons in 2014



Source: U.S. Army Corps of Engineers, *Waterborne Commerce of the United States, Calendar Year 2014, Part 5 – National Summaries*, Table 2-3.

Access the full report at: *www.americanwaterways.com*

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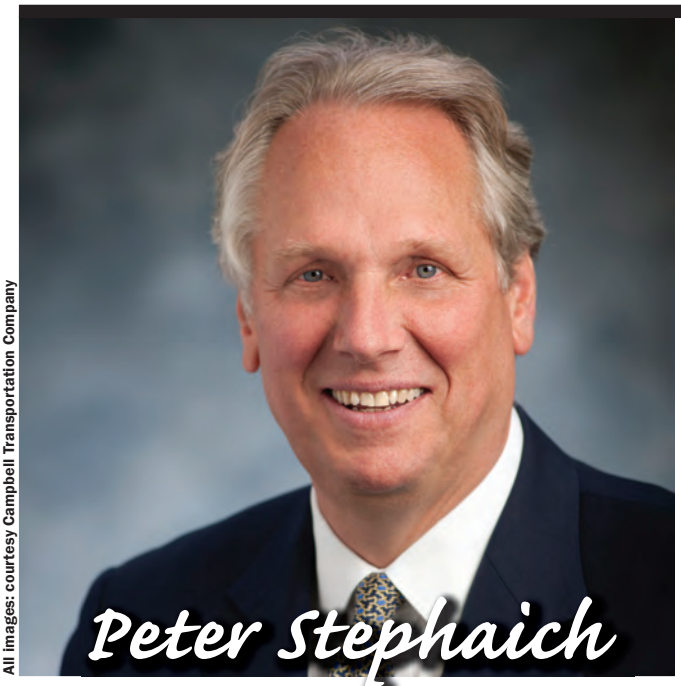

All images: courtesy Campbell Transportation Company

Chairman & CEO, Campbell Transportation Company

Peter H. Stephaich is Chairman and CEO of Blue Danube Incorporated and Campbell Transportation Company. Peter is also on the Board of Directors of Blue Danube, a position that he has held since 1982. If today he isn't the most familiar name on the domestic waterfront, then perhaps, he should be. Serving the barge industry for over 30 years in a number of key roles, he also counts among his many qualifications his tenure(s) as Past Chairman and Past Treasurer of the American Waterways Operators (AWO), Past Chairman and Trustee of the National Waterways Foundation, Vice Chairman and Executive Committee of Waterways Council (WCI) and as Commissioner and Vice Chairman of the Port of Pittsburgh Commission.

Stephaich and his firm, Campbell Transportation Company, own and operate boats, hopper barges, and jumbo barges on the Upper Ohio River. The company specializes in servicing industrial customers on multi-year barge transportation agreements. It moves primarily coal to utility and steel industries. No small outfit, Campbell Transportation Company has approximately 500 employees, owns and operates 50 boats, 1,100 barges and four shipyards. It would be an understatement to say that Peter brings a unique perspective to the inland river business. That's because, and prior to arriving on the domestic waterfront, Stephaich lived in Europe and New York City where he worked for various financial institutions, including Lazard Frères, and Bankers Trust Company. At Bankers Trust, Mr. Stephaich concentrated on international financial advisory work, mostly in the transportation and aerospace industries. A native of New York City, he earned his bachelor's degree from Middlebury College and his MBA, with a major in finance, from New York University. While he speaks five languages, he is particularly fluent in 'river' talk. This month, he weighs in on all things *'inland.'*

Give us your assessment of today's market conditions on U.S. inland waters, especially in the areas that Campbell operates.

Campbell Transportation Company, Inc. (CTC) is an integrated marine services provider that operates primarily on the Ohio River. These markets are currently depressed due to the reduction of utility coal demand and the over building of the open hopper fleet. There are about 2,000 excess barges in the system and it will take 3 – 5 years for demand and supply to come into equilibrium as long as the industry greatly reduces the number of new barge construction.

What is the most important issue facing inland operators today? Is that issue the same for industry as it is for Campbell's position?

From our perspective, the reduction of demand for our services, and the conditions of our inland waterways infrastructure are the two issues that are tied for first place.

What will it take for freight rates to improve on the inland rivers?

Economics 101, demand and supply. We either need more tons to move or we need to shrink the barge fleet. Preferably both.

You've just completed a fairly significant acquisition and resultant increase in your fleet numbers. Do you see more consolidation ahead, as operators struggle to get the rates they need to keep quality equipment and mariners on the water?

More consolidation is inevitable. Campbell has tried to be a consolidator over the past 5 years. We have not built any new open hopper or covered barges and have grown our fleet by acquiring around 150 used hoppers barges, prior to our recent acquisition.

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Your acquisition of ACBL tonnage and assets comes at an interesting time. On one hand, the market in certain sectors is hurting and on the other hand, a down market can sometimes be a place where savvy stakeholders can increase their portfolios at a discounted price. Tell us what you can about Campbell's latest, exciting transaction?

A transaction requires a buyer and a seller, which typically have different outlooks on the market. We basically purchased ACBL's coal business on the Ohio River. We believe that coal tonnages will continue to be challenged but also believe that a number of the coal plants that we service will continue to operate for many years to come. This is a very good strategic as well as operating fit for CTC. Both sets of traffic patterns integrate very well together. We all understand that the markets will not allow for rate increases so the only way to reduce our unit costs is by improving our operations via increased density and frequency.

Incorporating quality tonnage – especially from an operator like ACBL – is a positive event. At the same time, it creates challenges as you try to meld one quality / operating system into another. Both will have their strong areas. What will be your formula in this regard?

As part of our traction, we have added a number of quality customers and plants to our portfolio. In terms of the integration, we already have switched over these new customers to our existing CTC operating systems. Fortunately, CTC has invested in new logistics and accounting systems over the past five years that makes this type of acquisition much easier to integrate. The integration has gone very well.

You also only just recently agreed to a contract with Inland Marine Services to provide what they characterize as "turnkey services." What do those turnkey services entail and why is that important to Campbell? In other words, where does IMS bring value to your operations?

One of our challenges was to crew a number of additional boats all on June 30th. This involved having qualified crews ready to go all on the same day. We turned to Inland who has demonstrated safe and efficient operations and that can fulfill our Sub M and TMSA 2 safety requirements. Inland did a fine job crewing these additional boats for us.

Subchapter M is here and it is impacting the inland waterfront like nothing that came before it. You are a past officer of the AWO and as such, Campbell is likely ahead of the curve when it comes to future Sub M compliance through its past RCP efforts. The question: will Sub M be largely a 'non-event' for your tonnage and mariners or will there be certain things that you'll need to do different?

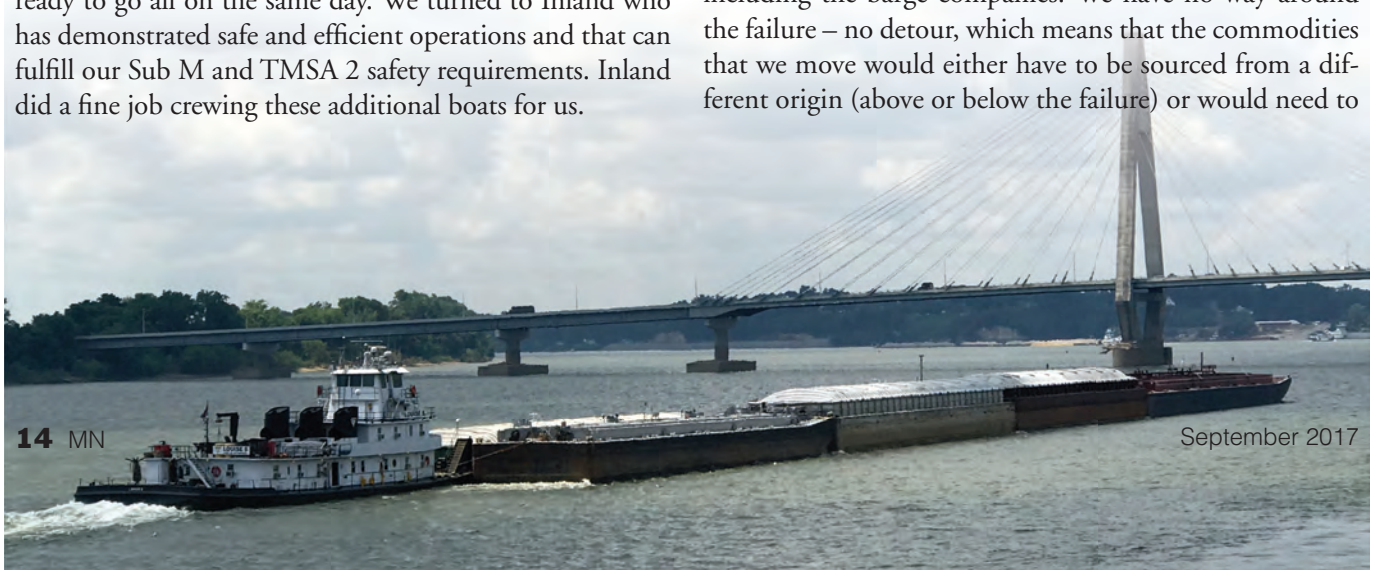
Our mariners are constantly undergoing some type of training. Our vessels and systems are in very good condition as it relates to Sub M. CTC also tows liquid barges on the Ohio River for many customers. These customers require a higher level of compliance than Sub M. The four vessels that we purchased as part of our acquisition as well as the sister ship that we acquired a few months prior are all in excellent shape and meet all the Sub M requirements.

Inland operators depend heavily on the maintenance of inland waterways. In today's situation, many stakeholders agree that this is not being done fast enough, nor is it keeping pace with failing infrastructure that is well past its intended life span. Your past role with WCI positions you well to speak about solutions. What are your thoughts?

Even though WCI has been successful in securing record funding for our locks and dams, the physical condition of the system continues to deteriorate. We need both increased funding levels (above the record numbers that we are expecting for FY2018) and improved project execution.

Regarding inland infrastructure – failure is not an option, is it? So much depends on it – your business as well as the supply chain itself. What would be the consequences of a major lock failure on our primary tributaries?

Depending on the location and the duration of a catastrophic failure at one of the locks and dams, we could be either more or less affected. If one of the primary inland navigations structures would fail for an extended period of time, the impact would be devastating to the supply chain, including the barge companies. We have no way around the failure – no detour, which means that the commodities that we move would either have to be sourced from a different origin (above or below the failure) or would need to



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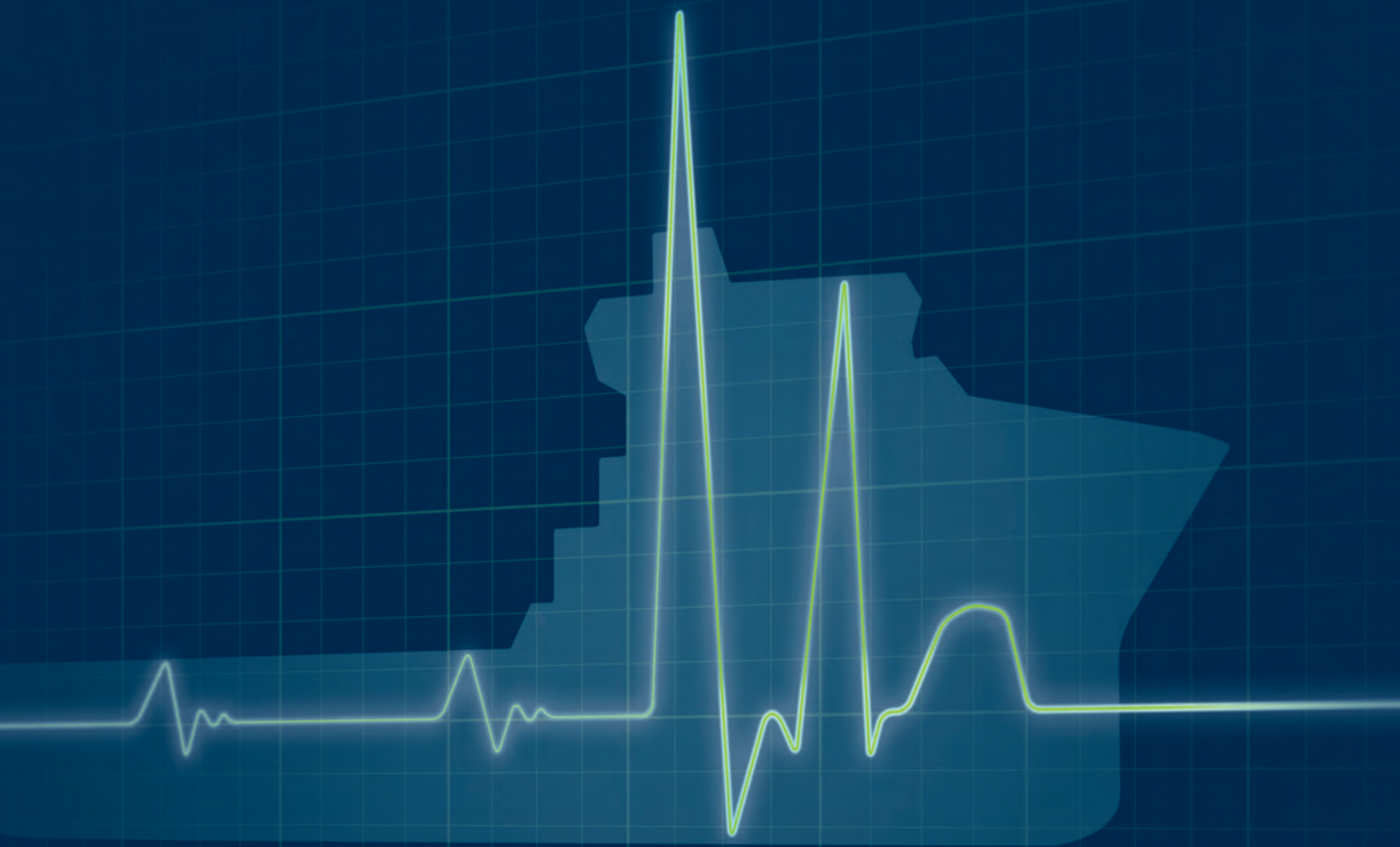

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be moved by alternative mode of transportation, at a much higher cost. Additionally, if there were a loss of the pool, there would be a significant impact to the local economies on both sides of the lock. These impacts could be shortage of municipal water, disruption of industrial water intakes, environmental issues, etc.

Yours is a PA-based firm, no doubt you are familiar with the Port of Pittsburgh's 'wireless waterway.' What is its current state, what is its future and more specifically, how does Campbell deal with 'comms' between the boats and office? Is SatCom a viable (and/or affordable) option for today's river operators? Is it necessary? What is "enough?"

As Vice Chair of the Port of Pittsburgh Commission (PPC), I am very familiar with the "wireless waterway." Originally, the project was make available high capacity broad band that would serve as a platform for all types of applications. The PPC conducted "test beds" with many of the local technology companies. Tests were all positive and well received. The challenge was to create a sustainable economic model to pay for the network. One of the goals of the network was security related, linking cameras along the rivers. This part of the network was spun off to local law enforcement agencies and continues to operate. The non-security, commercial applications were discontinued due to lack of funding.

Outline to the extent that you can, the Campbell business strategy going forward? Could you anticipate the possibility of another acquisition?

We have a formal strategic planning process at CTC. In order to continue to grow our business, we decided five years ago to diversify away from utility coal, our largest market segment. We converted coal barges to grain barges, we developed a third party towing business that runs between Pittsburgh and Cairo, IL, we entered the liquids towing business for a number of the liquid carriers, we purchased a shipyard that specializes in tank barge support services and we expanded geographically. In other words, we did many things as part of our diversification strategy. The recent ACBL opportunity presented itself and we decided to go forward based on previous comments. The four 3,000hp boats that we purchased from ACBL and the sister ship that we purchased a few months prior, will all be 'SIRED' and be available to move liquid barges on the Ohio River. This fits well into our long term. We are open to further acquisitions if the right opportunity presents itself.

Coal has seen a bit of a rebound in the past year, in part due to the problems in Australia, in part due to (perhaps) a softening policy shift in Washington. That said; does coal have a future, and if so, how long will it last? And, once (and if) it is done – at some future point – how do transportation stakeholders wean themselves from that source of income and move onto others? Are you doing that now?

One of the reasons for the 2017 small rebound in coal is because 2016 was such a poor year due to cheap gas prices, a warm winter and high coal inventories at the power plants. We expect coal volumes to continue to decrease with the announced plant closures. We expect that as long as gas prices stay at $3.00/MMbtu or above, that we will see coal volumes stabilize for the foreseeable future. We need to wean ourselves off this by shrinking the fleet and by developing new petrochemical manufacturing markets in the Marcellus / Utica fields which happen to be on the Upper Ohio river.

Midwest refinery construction perhaps bodes well for tank barge operators. Give us a breakdown of what you operate in terms of closed, open, hopper and tank barges. Do you see that mix changing in the near or long term?

Our current barge fleet, including our recent acquisition, is (owned/leased/managed) includes 70 Stumbo barges, 987 Jumbo opens, 77 Jumbo covered, all adding up to 1,134 total barges. Our current towboat fleet, including our recent acquisition, is (owned/chartered/managed) is approximately 50 (approximately) depending on chartered boats. We currently have the correct mix of boats and barges to service our customers. Should our customer requirements change, we will need to adjust our fleet accordingly.

What keeps you up at night when it comes to operating your considerable assets?

The 0300 phone call on a Sunday morning. The news is never good.

Finally, you bring considerable financial experience – some of it from other sectors – to your current role. So, here's the question: what can the inland marine transportation industry learn from other industries that can improve its lot in today's business climate?

We are in a long term capital intensive business. Our customer base (mainly the larger public ones) is constantly looking to save short term supply chain dollars. At the same time, we are so anxious for business that we have a habit of cutting our rates to the bone. This aggressive pricing it makes it very difficult to justify replacing older assets. This will eventually shrink the boat/barge fleet, but the process will be very slow and painful, especially for the higher cost operators.

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The American Society of Civil Engineers:

Not Just a Tough Grader.

By James A. Kearns

Kearns

Within the U.S. inland waterways industry, any mention of the American Society of Civil Engineers (ASCE) will almost certainly be in reference to the "Infrastructure Report Card" that ASCE prepares and issues every four years, describing the condition and performance of America's infrastructure in 16 categories: aviation, bridges, dams, drinking water, energy, hazardous waste, inland waterways, levees, ports, public parks, rail, roads, schools, solid waste, transit, and waste water. It is a major effort, with many ASCE members investing a great deal of time and hard work in collecting and analyzing data and then putting it all together in a format that is both informative and easily understandable. The end results are presented in the form of letter grades as on a familiar school report card.

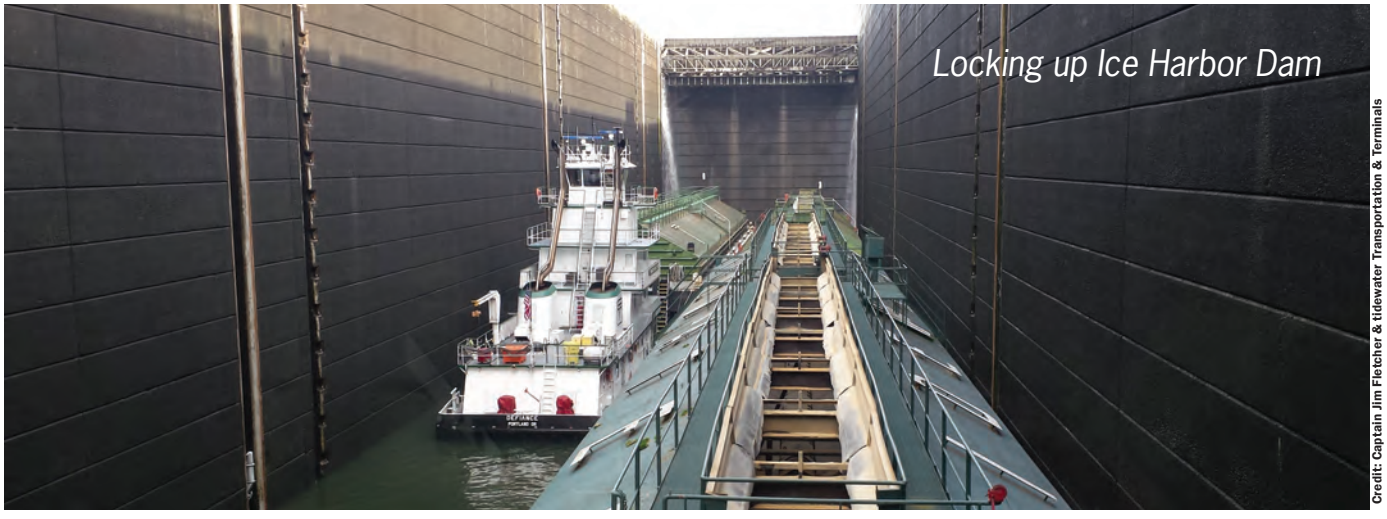
Inland Report Card

It has typically not been a pretty picture, and this year's Report Card was no exception. Most infrastructure categories in this year's Report Card received grades of D or D+. A few categories received grades of C+. The nation's rail infrastructure was at the head of the class with a grade of B. ASCE is not at much risk of being accused of grade inflation.

The inland waterways infrastructure was among those categories receiving a grade of D. Sadly, this was actually good news, since the last Report Card four years ago gave the inland waterways infrastructure a grade of D–. The low grade given to the inland waterways infrastructure in the ASCE Report Card is based primarily on the aging and unreliable system of locks and dams on the inland waterways and on the need for increased and more consistent funding to rehabilitate existing locks and dams and to construct new and larger locks to handle modern tow sizes. The low grade in the ASCE Report Card, and the factors on which it is based, is frequently cited in testimony before Congress, on editorial pages, in the trade press, and in presentations by industry members to anyone who will listen, as evidence of the urgent need for more attention and funding to be given to the inland waterways infrastructure.

More than Grades:

But ASCE is a society of engineers, and engineers are not content to simply point out a problem and then wait for others to do something about it. Their DNA requires that, when faced with a problem, they will attempt to solve it. While the gloomy conclusions of the ASCE Report Card are well known, what is not nearly so well known is what ASCE is doing to address the problems. With regard to the nation's waterways, in 2000 ASCE created the Coasts, Oceans, Ports, and Rivers Institute (COPRI). As stated on its website, COPRI serves both its membership and society at large "by uniting the disciplines working to sustainably develop, protect and restore coasts, oceans, ports, waterways, rivers and wetlands; integrating the key stakeholders into decision making processes; advancing technological



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state of art and practice; and influencing public policy."

This lofty goal is implemented on a practical level by several committees within COPRI, one of which is the Waterways Committee, which in turn has a Subcommittee dedicated to *"Alternative Financing for Waterways Infrastructure."* The Subcommittee's operating premise is that it is not realistic to rely solely on Congress for the funds necessary to raise the inland waterways infrastructure to a grade higher than D. The Subcommittee has been active, therefore, in exploring and advocating for alternative sources of funding.

Among those initiatives have been several workshops conducted throughout the country during 2015 and 2016. The author spoke at one of these workshops in St. Paul, Minnesota in September 2016, at which there were more than 90 attendees, representing the engineering and construction industry, the U.S. Army Corps of Engineers, waterway operators and users, financial institutions, concessionaires, Congressional staff, port authorities, and other stakeholders. A follow-up workshop was held in April of this year in Oakland, California.

After the St. Paul workshop, Roundtables on Alternative Financing were held in October and December 2016, organized by the Ash Center for Democratic Governance and Innovation at the Harvard University John F. Kennedy School of Management, in partnership with the Army Corps of Engineers and other federal agencies. Several members of the COPRI Subcommittee took part in these Roundtables. From these Roundtables, the Ash Center issued a report in January of this year, *"Tapping Private Financing and Delivery to Modernize America's Federal Water Resources."*

ASCE in Action

In June of this year, the COPRI Subcommittee organized a separate meeting with staff of the Army Corps of Engineers at its headquarters. The goals of this meeting were, first, to identify the specific statutory provisions that the Corps views as limiting its ability to use alternative approaches to financing improvements to the inland waterways infrastructure and, second, to explore with the Corps the statutory authorizations that would give the Corps more flexibility in this regard. This initiative was undertaken to take advantage of the bipartisan support that development of the nation's water resources continues to enjoy within Congress, as evidenced by the passage of the Water Resources Reform and Development Act of 2014 and the Water Resources Development Act of 2016 included in the Water Infrastructure Improvements for the Nation (WIIN) Act. The passage of these two Acts offers hope that there will continue to be Congressional action to address the needs of waterways infrastructure every two years, with corresponding opportunities to facilitate the use of alternative financing approaches to meet those needs.

The COPRI Subcommittee's work in exploring alternative financing of waterways infrastructure through its own workshops, through the participation of its members in the Roundtables organized by the Ash Center, and through other efforts of its members, has culminated in a report prepared by a COPRI Task Committee published earlier this year, *"Alternative Financing and Delivery of Waterways Infrastructure"* (www.asce.org/uploadedFiles/News_Articles/alt_finance_report_final.pdf). The Task Committee was originally established by COPRI in 2015 to evaluate the public-private partnership authorization included in the Water Resources Reform and Development Act of 2014. The scope of the final report, however, is much broader: it examines the use of alternative financing generally in support of water resources within the context of the civil works program of the Army Corps of Engineers. The report contains specific and detailed recommendations to enable the use of alternative financing methods to address the infrastructure needs highlighted in the ASCE Infrastructure Report Card. Key constraints are identified, and then specific legislative, regulatory, or administrative solutions to these constraints are offered. Precedents in support of these proposed solutions are provided, where available. To adopt a waterways metaphor, there are obstacles in the channel to be sure, but the COPRI report is a useful guide for removing them or navigating around them.

Although ASCE is most often identified only with the low grade given in its Infrastructure Report when the needs of the inland waterways infrastructure are being discussed, it would be a disservice to the society and to the solution-minded engineers who are its members to overlook the many contributions that they are making – with far less fanfare – to meeting those needs.

BRYAN CAVE

James A. Kearns *has represented owners, operators, financial institutions and end users for more than 30 years in the purchase, construction and financing of vessels engaged in both foreign and coastwise trades of the United States. Kearns has earned an LL.M. (in Taxation) from New York University, J.D. cum laude from the University of Notre Dame, and a B.S.E.E., summa cum laude from the University of Notre Dame.*

Why I Became a Member of the OSVDPA

A new voice for today's workboat professional emerges.

By Capt. Robert "Bobby" Moyer

Moyer

As the captain of an OSV, I've spent a great deal of my life waiting. Waiting at the dock, at anchor, at the 500. Wherever one could wait, I have waited there. I can wait with the best of them. Now, just out of habit, I'll wait when doing so is not required or helpful.

Because of this waiting I, like most mariners, can gripe with the best of them. I also excel at grumbling, grousing, and my bellyaching is hard to beat. I guess mariners develop this skill while we wait (or maybe because we wait). During many parts of our job there is little to do but complain to those around us. And by "around" I mean nearby, within radio range, or (now) online.

But as much as I hate to say it, as good as us mariners are at griping, we are bad at doing anything with our complaints. How many of us have submitted a comment about a Coast Guard regulation, written a letter to our Congressman, or participated in developing the guidance published by industry bodies?

Many of my fellow mariners will say that they don't air their grievances in these circles because they don't think that anyone will listen. While I disagree, I honestly understand why many feel that way. There are not many avenues in our industry that are designed to receive input directly from the mariners.

But, I have found a body that has created just such a system. Last year, I became a member of the Offshore Service Vessel Dynamic Positioning Authority (OSVDPA). The OSVDPA offers individual membership to DPOs, DP instructors, and other dynamic positioning professionals. For the OSVDPA, membership is separate from their DPO certification program or their accreditation of training providers; you don't need to be an OSVDPA DPO to become a member.

Instead, OSVDPA membership is part of the management of the organization. It exists as a way for the organization to receive input from dynamic positioning users. Said another way, they created the membership program to hear and address our gripes.

The best part of being a member in the OSVDPA is that, every year, members are allowed to elect one of their own to the OSVDPA Technical Advisory Council (or TAC). The TAC is the body of industry professionals that makes recommendations to the OSVDPA Board on issues dealing with executing and updating the OSVDPA's certification scheme.

The TAC is populated by safety, operations, and HR personnel from vessel operators; DP instructors from training providers; and other shore-based DP experts. It

**all images courtesy Captain Robert Moyer*

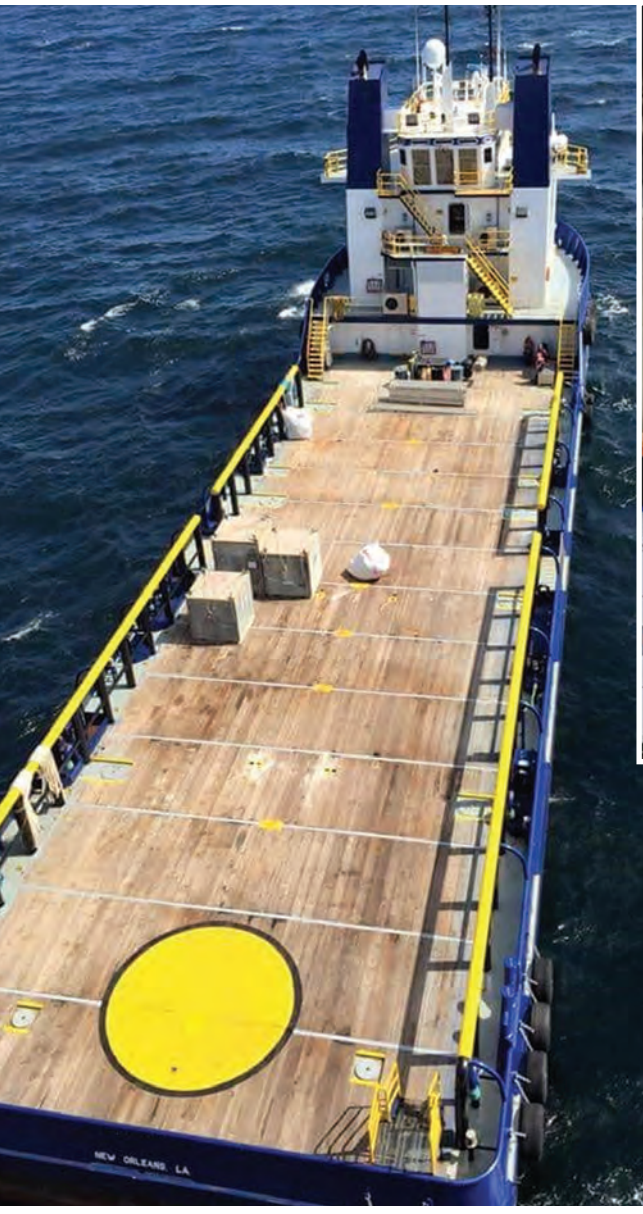
counts among its members, representatives from the International Marine Contractors Association (IMCA) and the Marine Technology Society's DP Committee. These men are DP professionals; many of them are former DPOs themselves. However, none of them sail currently so they do not have firsthand experience in how DP operations are currently being conducted in real-world environments.

The TAC and the OSVDPA understands the necessity of such input. It ensures a relevant and practical certification system. Thus, the TAC looks to the membership to provide guidance on questions of how certain operations are conducted or how OSVDPA documents or instructions will be interpreted by mariners.

I was fortunate enough to be elected as this year's membership representative to the TAC. It is an honor for me to be chosen by my peers from across the fleet to represent their interests on this body. During my tenure on this body, we have debated practical assessment scenarios, new multiple-choice questions for the Induction Course, and changes to the OSVDPA DPO certification system.

In these discussions – some of which I called into from on board my vessel – I was able to apply my everyday experiences as boat captain to help the OSVDPA ensure that their program provides a suitable training system for these mariners.

For example, the OSVDPA assessment system is built around the use of scenarios. Scenarios are pre-printed assessments that attempt to mirror real-world DP operations. Each scenario describes an operation that is being conducted, what happens during this operation, and the 45 items the assessor measures to determine if the DPO passed or failed the assessment.



The OSVDPA is attempting to create enough scenarios, whereby every workboat-based DPO will be able to choose a scenario that resembles operations they regularly conduct.

In this effort, I was able make suggestions to improve the realism of the scenario. It is my hope that this input helped the OSVDPA create scenarios that were more true-to-life, thereby helping to ensure that the next generation of DPOs will be better trained and highly competent.

Many times, I agreed with the views of the other TAC members. At other times, I objected to parts of scenarios as not being realistic enough and have urged the OSVDPA to adopt more assessment scenarios for DP-1 vessels, as many

of the OSVDPA's current scenarios are not applicable to the operations of this type of vessels. There have certainly been times – at least one time in every meeting – that the position I advocated for was not adopted; but I always have felt that my gripes are being heard and considered. And when my views were not adopted, I have always been given a reason that my position was not adopted.

Later this year, I will stand for re-election to the TAC – I am allowed to serve one more term before being term limited – and I hope that I my fellow members continue to put their faith in me. Part of the reason I want to continue on the TAC is that I have some things that I want to push the OSVDPA to implement.

Specifically, I want to help the OSVDPA develop better examples of how OSVDPA logbooks should be completed. The OSVPDA's logbooks have a different look than the industry standard. I like the book, but if you don't know how to use it, it can appear daunting. Thus, the OSVDPA needs better examples to show how it should be completed. Also, because DPOs shouldn't have to have to be lawyers just to pass the Phase 1 exam, I want to help write multiple choice questions that don't read like the Magna Carta.

However, if I am not re-elected, I will continue my membership in the OSVDPA because of the other benefits provided by membership. For example, the OSVDPA will poll members periodically to see what sorts of assessment scenarios it should develop. Additionally, OSVDPA members receive first notification when the OSVDPA makes changes or additions to its program. Finally, every year the OSVDPA Board of Directors holds a conference for all members. This is a great opportunity to talk to some of the leaders in our industry and get their perspective as to where not only the OSVDPA is going but where the entire offshore energy industry is going.

But the final reason that I'll keep my membership, might be the best reason. Being a member of the OSVDPA gives me a way to do something about my complaints. After all and since I have some good gripes, it would be a shame not to share them. I hope you'll join me and become a member.

***Capt. Robert (Bobby) Moyer** has been a certified dynamic positioning operator (DPO) since 2004 and currently holds an OSVDPA Class A DPO Certificate, Nautical Institute Unlimited DPO Certificate, and is also an OSVDPA Qualified on Board Assessor (QOBA). Moyer has been serving aboard DP-2 classed vessels in the U.S. Gulf of Mexico since 2003 without incident and continues to be a strong voice for the mariner community.*

Inland Marine Insurance Markets:

Assuring Property and Goods Move Forward.

By Michael Perrotti

Perrotti

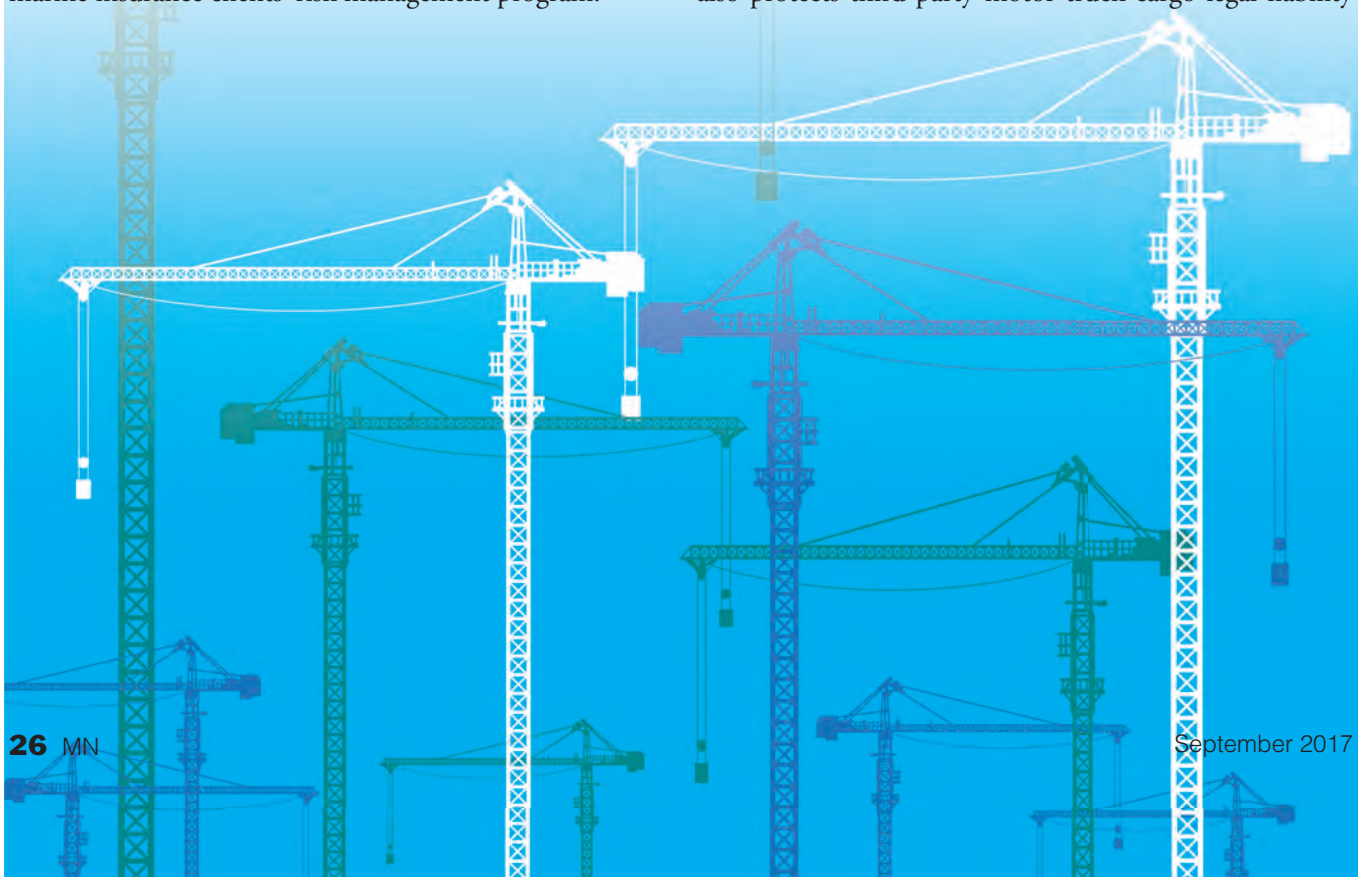
Though water covers more than 70 percent of the Earth's surface, businesses engaged in marine shipping operations and logistics, and other businesses that manufacture and ship product still have a lot of ground to cover getting their various goods to their final destinations. The ocean marine insurance market, the oldest insurance market in the world, was initially developed to protect these goods while crossing the ocean's open waters, later to morph into a product to protect all international transportation regardless of mode. In some instances, once the shipments hit land, the ocean coverage would stop, and, at least for imports into the United States, the Inland Marine insurance market would extend the transit protection.

Today's marine insurance clients have considerable amount of business "on land" too. Inland Marine coverage is often as integral a part of their insurance portfolio as ocean marine coverage. And, as many companies have plans to expand their facilities, operations or services, Inland Marine coverage will likely play an even bigger role in marine insurance clients' risk management program.

Understanding Inland Marine Insurance

The term "Inland Marine" is unique to the United States and is defined as an instrumentality of transportation or communication in an effort to distinguish what was eligible to be written outside of the standard filed property market. However, Inland Marine exposures are not unique to the United States and are written all over the world under the general marine classification. It is helpful to think of "Marine" or "Inland Marine" insurance as property coverage for property that is not permanently fixed in one place. If the property being insured is mobile in nature, and non-waterborne, whether it's a crane, a piece of mobile medical equipment, a computer server or an oil painting in a museum, it's an Inland Marine insurance exposure. Inland Marine insurance can also be extended to cover property possessing characteristics of constant change in exposure or valuation such as buildings in the course of construction or builders risks.

Today, Inland Marine includes many more types of insurance coverage than one might imagine. In addition to first party transit (owners interest), builders' risk/course of construction, fine arts, computers, contractors equipment and mobile medical equipment, Inland Marine insurance also protects third party motor truck cargo legal liability



"… Few would argue that there has been an increase in construction activities at many US ports and terminals as they prepare to handle larger vessels. This means that construction equipment and goods will continue to be on the move. Increased spending on construction also affects the transportation side of the Inland Marine business as goods and equipment need to be moved to the job site."

(trucker's liability for cargo), warehouseman's and logistics third party legal liability, communications towers, and essentially any type of property that's not fixed to a location.

Ocean Marine insurance primarily includes protection for the hull of vessels; international cargo; the liability associated with operating a vessel, wharf or shipbuilding facility, and legal liability for any negligence by the shipper, international carrier, stevedore or wharfingers operating the marine terminal.

Bustling Activity

About 60 percent of the inland marine insurance market in the United States consists of construction and transportation risks. Both categories are highly dependent upon the economy. When the economy does well, Inland Marine insurance is in high demand.

According to the 2017 Dodge Construction Outlook report, US construction starts were predicted to advance 5% to $713 billion. Commercial building is also on the rise, increasing 6% on top of the 12% gain for 2016. Plus, more funding support is expected from federal, state and local bond measures for infrastructure spending. More growth is also expected in the amusement category (convention centers) and transportation area, particularly terminals. Few would argue that there has been an increase in construction activities at many US ports and terminals as they prepare to handle larger vessels. This means that construction equipment and goods will continue to be on the move. Increased spending on construction also affects the transportation side of the Inland Marine business as goods and equipment need to be moved to the job site.

According to the American Transportation Association, more than 70% of all freight tonnage is moved on trucks in the US. Trucks also transported 58.3% of goods traded internationally between the US and Canada and 70.9 % of goods traded between the US and Mexico in 2015. The expectation is that there will be about 8% growth in the trucking sector in 2017 and another 5-6% growth from now until 2020.

Emerging Challenges

Because the definition of what's eligible to be covered by Inland Marine insurance is broad, newly emerging exposures tend to trickle to the Inland Marine insurance

sector. For example, coverage for commercial drones and even pet insurance have made their way to the Inland Marine insurance space.

The lower regulatory environment allows the marine and Inland Marine underwriters to be creative to tailor products to the changing needs and exposures in the market. Expanded versions of older products or combined integrated products are appearing daily to help US businesses manage emerging risks. One example is the logistics and supply chain exposures of storing, handling, pick and pack, and transporting goods to meet the needs of the internet buying population. Supply chains can be complicated, involving many exposures that once had to be pieced together with the danger of gaps in coverage. Until recently, Inland Marine insurance products have not kept pace with the need to address logistics company's risk management needs.

Carriers like XL Catlin are focused on addressing these risks with new, more comprehensive Inland Marine coverages for logistics risks. The new coverages enable companies to insure risks related to processing, packaging, consolidation, inventory control, transportation, warehousing and data management, more efficiently and effectively using one insurance policy form. XL Catlin's Logistics Services Coverage Solutions, for instance, is designed for sophisticated and complex logistics companies and provides customized Inland Marine insurance coverage for all phases of supply chain management including almost all commodity types.

Current Market Conditions

Current Inland Marine rates are stable and projected to remain flat through 2020. The Inland Marine marketplace is competitive. Less regulatory environment, ease of entry, and historic profitability of Inland marine insurance entices new insurance companies to enter the market every year, resulting in ample capacity. The supply of capacity of course will continue to contribute to competitive pricing.

While there is no shortage of Inland Marine insurers, capacity, products or services, the trick is to find the right insurer, one equipped with knowledgeable qualified underwriting expertise and superb claims handling services.

Mike Perrotti, *CPCU, AMIM is SVP, Inland Marine practice leader for XL Catlin. XL Catlin insurance companies offer property, casualty, professional, financial lines and specialty insurance products globally.*

Can Employers Ask About Prescription Drug Use?

On the waterfront, it all depends.

By Mark Meeker

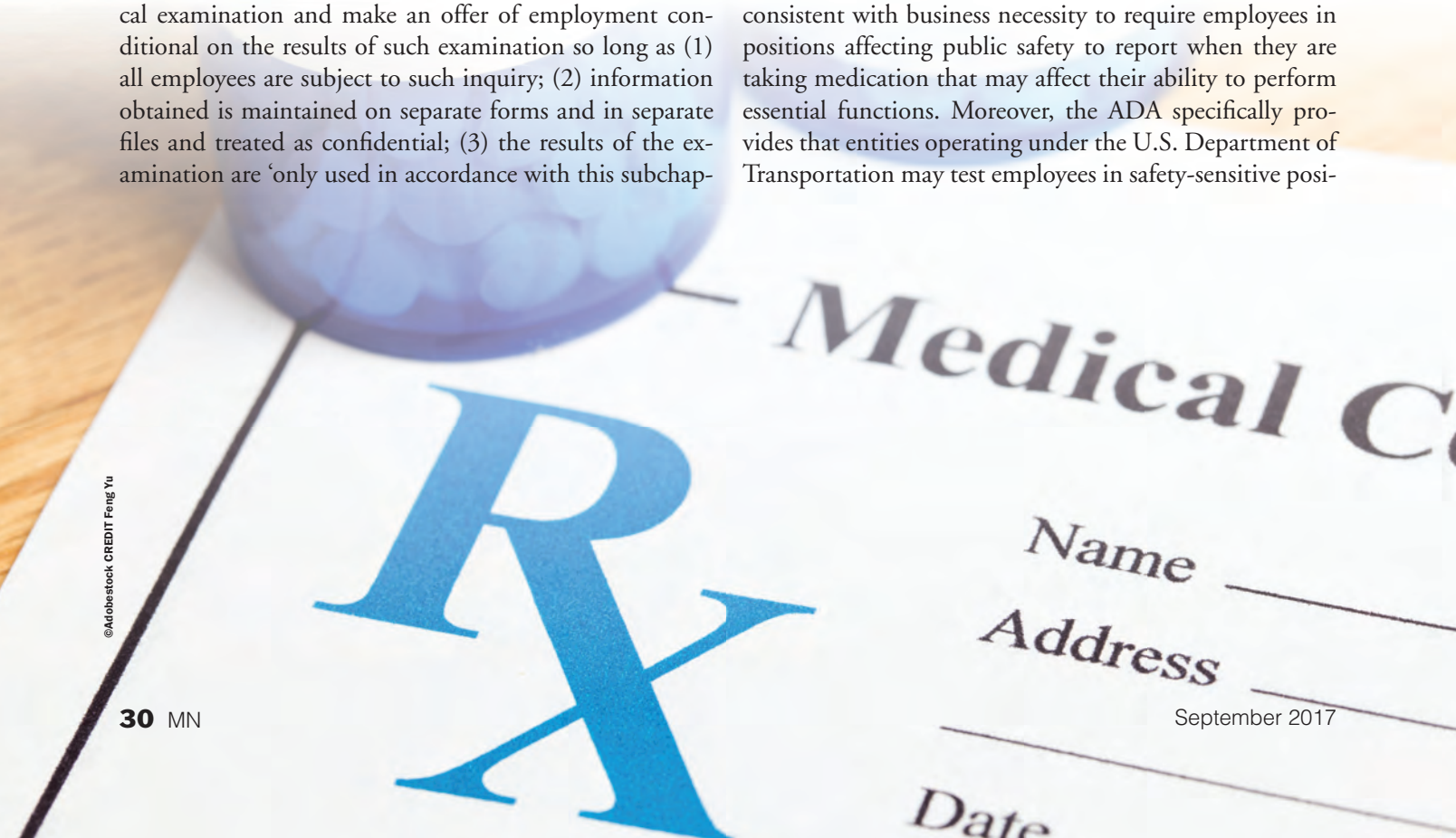
Meeker

It is well established that workplace safety and productivity can be compromised, not just by the use of illicit substances and alcohol, but also by the use of prescription drugs. Federal law, however, imposes limits on employer inquiries in this area both with respect to the affected job classifications and the scope of the inquiry.

Generally, an employer may not ask *all* employees what prescription medications they are taking because such an inquiry is not job-related and consistent with business necessity, according to Enforcement Guidance from the U.S. Equal Employment Opportunities Commission (EEOC). Nor may employers ask applicants about their lawful drug use if doing so is likely to reveal information about a disability. By contrast, however, after an offer has been extended but before employment has begun, "the employer may require a medical examination and make an offer of employment conditional on the results of such examination so long as (1) all employees are subject to such inquiry; (2) information obtained is maintained on separate forms and in separate files and treated as confidential; (3) the results of the examination are 'only used in accordance with this subchapter.' *[42 U.S.C.] § 12112(d)(3)." Connolly v. First Personal Bank, 623 F. Supp. 2d 928, 931 (N.D. III 2008).*

The Americans with Disabilities Act of 1990 (ADA) protects employees against being asked whether they are taking prescription drugs or medications, or about illnesses, mental conditions, or other current or past impairments. All current employees, not just those with disabilities, are shielded to some extent by the ADA's requirement that employers' limit disability-related inquiries and medical examinations to those that are "job-related and consistent with business necessity." A disability-related inquiry is one that is likely to disclose information about a disability, including current or past prescription drug use or monitoring that use.

An inquiry is considered "job-related and consistent with business necessity" if the employer reasonably believes, based on objective evidence, that a medical condition will impair an employee's ability to perform essential job functions or cause an employee to pose a direct threat. In limited circumstances, however, it is job-related and consistent with business necessity to require employees in positions affecting public safety to report when they are taking medication that may affect their ability to perform essential functions. Moreover, the ADA specifically provides that entities operating under the U.S. Department of Transportation may test employees in safety-sensitive posi-



"… the ADA specifically provides that entities operating under the U.S. Department of Transportation may test employees in safety-sensitive positions for illegal use of drugs and remove from duty those who test positive. Such testing frequently discloses the unauthorized use of prescription drugs."

tions for illegal use of drugs and remove from duty those who test positive. (§ 12101 et seq.) Such testing frequently discloses the unauthorized use of prescription drugs.

Thus, a maritime employer could require safety-sensitive personnel to report when they are taking medications that may affect their ability to perform essential job functions. Other medications, however, should be considered outside the scope of such an inquiry. Also, according to EEOC guidance, it would be unlawful to require administrative employees to report their medication use because any impaired ability or inability to perform essential job functions on their part would be unlikely to pose a direct threat.

Similarly, specific restrictions apply to the questions that employers may ask of prospective employees as well as those who have been offered a job. For instance, an employer may not deny employment to an individual based on the results of a lawful medical examination or inquiry unless it reveals an impairment that would preclude him or her from performing the essential functions of that job. *Holiday v. City of Chattanooga., 206 F.3d 637 (6th Cir. 2000).* Also, a drug test prior to a job offer may not be administered for the stated purpose of detecting illicit drug use when, in fact, employment decisions are impacted by the employer's discovery of legitimate prescription drug use. Connolly, 623 F. Supp. 2d at 930.

Even without a disability, an individual subjected to an unlawful inquiry or medical examination can succeed with a claim under the ADA. *Pennsylvania State Troopers Association v. Miller, 621 F. Supp. 2d 246, 252 (M.D. Pa. 2008).* Similarly, the court in *Griffin v. Steeltek, Inc., 160 F.3d 593-94 (10th Cir. 1998)*, found that a rejected applicant may seek damages under § 12112(d)(2)(A) if that rejection was based on information from an illegal pre-offer inquiry or medical examination, regardless of whether it reveals a disability.

Narrowly focused inquiries regarding employee prescription drug use may play a significant role in enhancing workplace safety. Nevertheless, maritime employers should give careful consideration to the nature of an employee's position and the scope of substances to be addressed before proceeding with these inquiries.

Mark Meeker *serves as Assistant General Counsel for American Maritime Safety, Inc., where he provides legal guidance to over 400 member companies regarding compliance with federal regulations impacting the maritime industry. He also conducts nationwide, on-site training classes for drug and alcohol testing as well as sexual harassment. Mark received his Juris Doctor from Pace Law School where he graduated cum laude and now serves as the President of the Pace Law School Alumni Association.*

ESG Sees Green With its Tier IV Thunderbolt Design

Eastern Shipbuilding's forward-thinking inland towboat design now features CAT Tier 4 propulsion and aftertreatment.

By Joseph Keefe

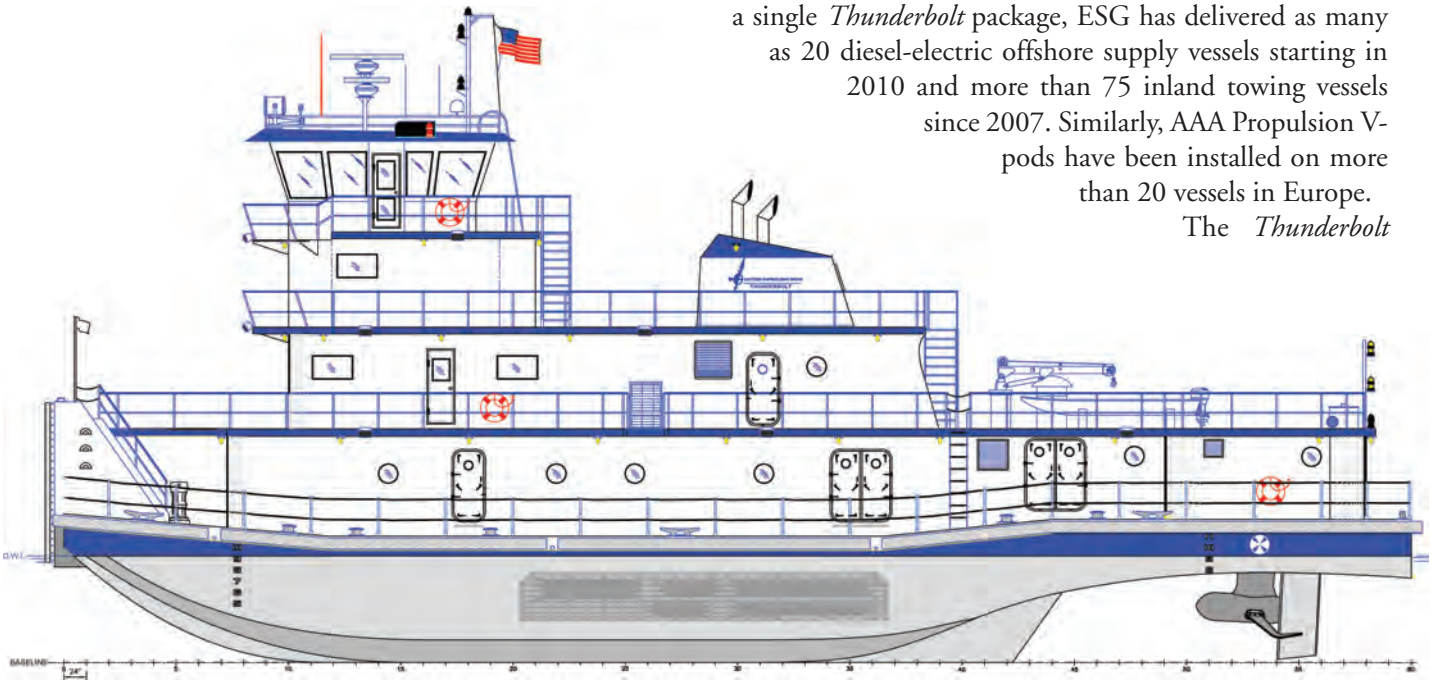
When Eastern Shipbuilding Group (ESG) introduced its cutting edge 4,000 hp *Thunderbolt* inland towboat designed around twin azimuthing AAA Propulsion electric V-Pod propulsion and diesel-electric technology back in 2015, the approach was collaborative, with input from operators, naval architects (Gilbert Associates, Inc. (GAI)) and propulsion OEM's. In selecting the podded propulsion system for inclusion on the design, Eastern met with two inland owner/operators that had Z-Drive towboats, and others that didn't. Starting as far back as 2013, listening to each and noting their concerns, it was decided that the V-Pod was the best solution.

Because the *Thunderbolt* will typically operate in shallow, sometimes turbid, debris filled water, ESG designed underwater protection in the form of a pipe guard protection system for each V-Pod. These pipe guards protect the vessel from side bank impacts when turning in rivers and canals and stern impact protection when backing down. And, while those pods are an important part of the vessel's design package, the new EPA Tier 4-compliant CAT engines now baked into the concept design make for an irresistible combination when it comes to operators looking for their next newbuild package.

Futuristic Vision Includes Tier 4

ESG coined the *Thunderbolt* as a "vision of the future for the U.S. inland waterways." Now, with CAT's proprietary Selective Catalytic Reduction (SCR) aftertreatment solution built into the design, few could argue that the powerful offering doesn't provide everything one could ask for in a robust, river-tough hull. This isn't Eastern's first rodeo in the inland waters game. And, while they have yet to sell a single *Thunderbolt* package, ESG has delivered as many as 20 diesel-electric offshore supply vessels starting in 2010 and more than 75 inland towing vessels since 2007. Similarly, AAA Propulsion V-pods have been installed on more than 20 vessels in Europe.

The *Thunderbolt*



design joins Eastern's history of building reliable vessels and is now integrating its Tiger Shark Class diesel-electric technology into a refined, environmentally friendly, highly maneuverable Inland Towboat design. The *Thunderbolt* has been designed using ABS Class Rules for Building and Classing Steel Vessels for Service on Rivers and Intracoastal Waterways-2014. It is also designed to the Proposed U.S. Coast Guard 46CFR (Sub-Chapter M) Towing Vessel Rules and IEEE 45 2002 Standards. When it came to selecting the right propulsion specialist to bring *Thunderbolt* into EPA Tier 4 compliance, ESG turned to Richard Tremayne, the Marine Business Manager for Thompson Power Systems, Inc.

Why CAT?

Tremayne told ***MarineNews*** in July, "Eastern and Thompson Tractor have a close working relationship. Eastern chose CAT and Thompson because they like that the units are designed for longevity and convenience to the operator, they're competitively priced, and they're well supported by Thompson and the rest of the CAT dealer network no matter where the vessels travel." That kind of flexibility was important to ESG from the start, especially since the shipyard had no way of knowing where the first customer would come from. CAT's wide network of service providers solved that potential issue from the outset.

Tier 4 engine arrangements on the water are a new concept, but CAT boasts deep roots in the Tier 4 markets. Tremayne explains, "Tier 4 came to our land-based and vehicle-based customers before it came to our marine world, so there are many CAT Tier 4 engines operating across the United States. These marine designs are an adaptation of those predecessors, tailored to suit this market's needs." Robustly marinized for the marine markets, CAT's Tier 4 solutions have already been proven in demanding industrial markets everywhere.

In a nutshell, CAT's package of components was designed to work proactively together in order to control each engine's performance and emissions. The design allows the engines to keep performing even if the aftertreatment fails for some reason. Beyond this, CAT created this newest tier-compliant package to use less fuel than previous tier engines, enough to more than offset the cost of the aftertreatment's urea.

According to Steve Berthold, ESG's Vice President of Sales & Marketing, ESG has had Tier 4 in mind since the very beginning, when the design project with John Gilbert and Associates kicked off. That's because, with tier 4 coming, the last thing ESG wanted was major design or space issues down the road. Berthold adds, "The EPA Tier 4 requirement is now upon us and the design has evolved as planned. We actually started working on the specific Tier 4 design and engineering change effort in March of this year."

There are many ways to get to the Promised Land when it comes to engines and tier 4. In this case, the decision came down to the fact that the CAT package is designed from the beginning so that all components are optimized to work with each other component. More importantly, it is a turn-key tier solution which is EPA and class society certified before it leaves the factory. Tremayne explains, "Our customers aren't burdened by field emissions certifications or any other special submittals or testing to certify the CAT packages." That's not to say that price and life cycle economy weren't also important variables. They were.

Why SCR?

ESG could have gone with a number of solutions – including the new EGR solutions notably offered by GE Ma-

"The EPA Tier 4 requirement is now upon us and the design has evolved as planned. We actually started working on the specific Tier 4 design and engineering change effort in March of this year."

– Steve Berthold, ESG's Vice President of Sales & Marketing

rine. But, the strong relationship with CAT and Thompson – spanning over 20 years – won the day. Berthold adds, "Caterpillar only offers after treatment with SCR for the C32 Tier 4 engine." Moreover, and while some operators might worry about fitting all that equipment associated with SCR into the engine space, Tremayne says that the engine's size is non-issue. "The CEM is about the size of the engine, but flatter. Eastern fit it in the upper engine room. Some yards have fit it into the lower engine room overhead, above the engines," he explained, adding, "The dosing cabinet is about the size of a portable welder. One of the architects' challenges has been designing the urea storage tank into vessels, but they've all managed."

All improvements come with a price, and the necessary move to Tier 4 was no different. ESG's Berthold explained that for this Inland Towboat, the Cat C32 940eKW Tier 4 engines with all CAT Tier 4 after treatment accessories, including engineering, materials and man-hours for all systems, the modifications increased the vessel design cost by about USD $500,000. For owners who don't like that upfront cost, the good news is that fuel economy for the new propulsion arrangement is expected to improve significantly.

"In rough terms, fuel economy is expected to improve by about 9% in this application compared to our Tier 3 C32. CAT was able to optimize the engine design for use with the SCR (CAT Emissions Module, or CEM) so that the engine fuel consumption could replicate the lower figures of previous tier engines while relying on the CEM to clean the exhaust to today's requirements," said Tremayne, adding, "The CEM allowed CAT to dramatically improve fuel economy. Another noteworthy achievement of this design – it allows the same amount of exhaust system backpressure at the CEM outlet as was previously allowed at the engine outlet. This means that the exhaust silencer and piping can remain the same size as before."

SCR necessarily comes with the need for urea, but according to Tremayne, the annual cost for that urea depends on vessel load factor and operating hours each year. He continued, "CAT's closed-loop control system allows urea to be consumed at the most efficient rates, based on engine load. We calculate urea tank sizes at 5% of expected fuel usage as a rule of thumb." Hence, even with the urea cost

and consumption, fuel costs will actually go down, in certain cases. Amortizing the extra cost for those Tier 4 engines therefore becomes a little easier to swallow.

Finally, Thompson and CAT have been busy of late. Hence, ESG, when the keel of the first Thunderbolt gets laid, will hardly be alone as it becomes one of the early adopters of Tier 4 CAT SCR engine packages. That's because Thompson has 9 tugs currently under contract with Tier 4 engines. "It's such a new marine product that none of our projects has finished, so they aren't yet in operation," concedes Tremayne, adding quickly, "Of course, CAT engine designs are developed extensively in test cells, and every engine is test run at the factory, so we have no doubt they will perform as designed."

Taking Care of Business and the Crew

It is (arguably) unusual for a shipyard to come up with its own turnkey design, but inland 'teams' are now more common, as operators, shipyards and naval architects push the concept that all OEM equipment has to fit into a bigger package, instead of being procured in a stovepiped, standalone basis. That integrated power package also gets designed with an eye towards those who will someday have to leave the dock on board the Thunderbolt.

Eastern touts the boat as having 'reduced Noise and Vibrations' for what they characterize as "Remarkable Crew Comfort." Berthold explains, "We have included noise, vibration and structural fire protection measures into the design. For example, thermal insulation is installed throughout the superstructure – A-60 insulation to protect the crew from fire – but in particular, sound dampening materials and vibration treatments where it makes sense." The effort doesn't stop there, however. The (3) main generator skids are on isolation mounts along with the 90kW harbor generator which dampen engine vibration through the steel structure. The pod system itself also has a vibration isolation system.

Before and after Tier 4, Eastern Shipbuilding's *Thunderbolt* combines all the key hot button issues of any inland operator: Economy and Efficiency all packaged neatly onto an Emissions friendly hull. None of that comes at lightning speed for the conservative inland markets, but when it hits the water, it will be a 'bolt out the blue.'

New Orleans' Big Plans Showing Dividends

Credit: SEACOR

A Container-on-Barge service intended to be an integral part of the regional intermodal equation is gathering momentum – and customers.

By Tom Ewing

Quietly, the Port of New Orleans (NOLA) has marked some important accomplishments in the past two years, across multiple business sectors. For example, in April 2016, NOLA's Board dedicated a $25 million Mississippi River intermodal terminal, capable of handling 160,000 twenty-foot-equivalent (TEU) units per year by rail. CN Railroad signed a memorandum of understanding (MOU) a year earlier (2015), in June, to partner with NOLA to attract additional container traffic.

Last year, in June (2016), SEACOR AMH started regularly scheduled container-on-barge (COB) service between Baton Rouge, NOLA and Memphis. Note the "regularly scheduled" – not just one-time or on-again, off-again excursion service. True; the start-up was relatively small – five barges per week, from Baton Rouge to NOLA. Nevertheless, many people want – and expect – COB service to grow. In February, for example, NOLA's Board signed an MOU with the St. Louis Regional Freightway to expand trade and business relationships. The Freightway wants to "swiftly capitalize" on new container-on-barge services, established and ready to go in St. Louis ports.

State, Federal – and Commercial Support

US DOT's Maritime Administration (MARAD) has a steady, and active, interest in NOLA's projects. A MARAD TIGER (Transportation Investment Generating Economic Recovery) grant provided $16.7 million for NOLA's intermodal terminal. Last December, MARAD helped to

jump-start the COB service by providing a $1.75 million grant for specialized container loading equipment.

State and federal transportation officials, not just at NOLA, want to fully leverage all truck, rail, and maritime capabilities. Expanded COB operations make a port truly multimodal; after all, ports are inherently intermodal. COB offers far-reaching benefits, and not just on waterways. One policy goal is for a transparent market providing an apples-to-apples comparison of the costs associated with shipping by truck, rail and of course, via barge.

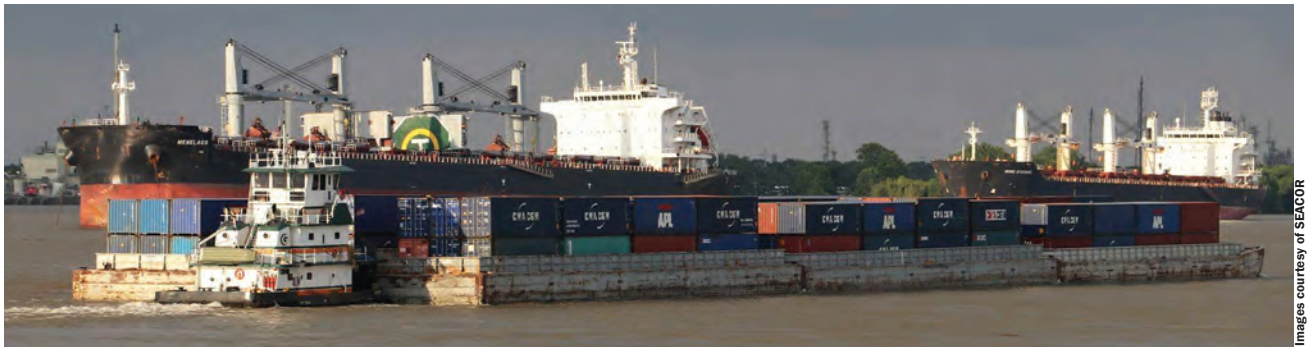
How freight moves has public policy implications. The US DOT calculates that the State of Louisiana saves $118 per round-trip when a 40-foot container travels by barge, not highway, between New Orleans and Baton Rouge. Or, put another way, Louisiana's taxpayers provide a $118 round-trip subsidy to the truckers. That's big money for state highway officials. If more freight shifted to the maritime sector, highways would function more like they are supposed to and less like parking lots.

NOLA: New Policies = New Business

NOLA's investments are driving new business. In addition to CN's MOU, Janine Mansour, NOLA's Commercial Director, said that all six first-class railroads have expressed interest in expanding links between NOLA and numerous inland cities, including Memphis, Chicago, Detroit, St. Louis, Dallas and Kansas City. (NOLA is the only US port served by all six first-class roads.) "Overall container volumes have grown significantly," Mansour said. "The Port now handles about 540,000 TEUs on an annual basis."

In February, French container transportation and shipping company CMA CGM started direct, all-water Asia container service. NOLA officials

> *Last year we were at half the volume we are right now. We were doing nothing going into Memphis. Now we have that backhaul and we expect it to grow. People hear about it and they see the service is coming right to where they can get their hands on it, and that it is fairly easy. They do not have to go through two to three different systems like it would if (the freight) was on the west coast or the east coast. That is appealing and our hope is that we can grab everything that wants the flexibility to carry a little bit more cargo. Port managers are looking closely at this now, now that the system has been working for over a year.*
>
> – Richard Teubner, SEACOR Vice President



Images courtesy of SEACOR

are shaking up old-school thinking. "We find shippers are east/west oriented when they think about how to get their cargo to and from the Midwest," Mansour said, "so we are taking a collaborative approach, working with ocean and rail partners to define the value of New Orleans as a gateway. We are only 12 hours to Memphis by rail, which is a lot more efficient and cost-effective than what other gateways offer."

In yet another change, NOLA officials want to place the New Orleans Public Belt Railroad under Port auspices, again, to maximize and synchronize assets. The Belt is a Class III switcher, a neutral carrier working with all six Class 1 roads. "This new rail plan will translate to a greater competitive advantage," Mansour commented. At the same time and as NOLA's mainline asset relationships come together, it is worth taking a closer look at SEACOR's container-on-barge service, which started June 1, 2016.

Inland Interest Expands

SEACOR started with resin shipments from regional petrochemical producers. Forty-foot containers from those production sources are aggregated at Baton Rouge. SEACOR loads on Thursdays. Travel time to NOLA is 12-18 hours. Containers are off-loaded on Friday and then reloaded for shipment to European and Asian markets.

The COB service averages between 5-6 barges per week, based on demand and facility production, explained Richard Teubner, SEACOR vice president. Each barge holds 48 empties, 36 loaded containers. Importantly, this is standard equipment, not equipment specifically designed or customized for COB operations.

Memphis' port is also involved. Empty containers from the Memphis region are aggregated at SEACOR's facility there. Once they have 48 containers, SEACOR moves the empties to Baton Rouge, for dispersal to resin producers. SEACOR commits 15 barges to this circular service and keeps another 10 on standby. Business is growing. "Last year we were at half the volume we are right now," Teubner said. Just as important, back-haul to Memphis is now productive, no longer running empty. Starting about five months ago, SEACOR began hauling tires and agricultural products from NOLA to Memphis, the leg of the trip to retrieve containers.

"We were doing nothing going into Memphis," Teubner commented. "Now we have that backhaul and we expect it to grow. People hear about it and they see the service is coming right to where they can get their hands on it, and that it is fairly easy. They do not have to go through

two to three different systems like it would if (the freight) was on the west coast or the east coast. That is appealing and our hope is that we can grab everything that wants the flexibility to carry a little bit more cargo. Port managers are looking closely at this now, now that the system has been working for over a year."

As noted above, St. Louis Regional Freightway officials are keeping a close eye on COB developments. St. Louis is the nation's third largest inland port, said Mary Lamie, Freightway's Executive Director. The Freightway works with 200 river terminals and three public ports, all with COB capabilities – docks, hardware, rail and cranes. "We're ready to go," Lamie commented, adding that Freightway officials view COB as critical for future freight volumes.

Still, Lamie knows that additional homework needs to be done before COB can scale up. Her advice: clearly identifying the commodities and products best suited for COB. The right shippers are needed; companies who can create the volumes necessary so that bulk costs, indeed, come down. Finally, Lamie said that demonstration projects are still needed to clearly show reliability, efficiency and decreased risk.

She said COB expansion depends on creating a network among inland ports. "One step we've taken is to find out if there are ways we can bundle containerized cargo as it heads to New Orleans, to build volume." Initial outreach involves Paducah, KY, and Louisville. MARAD is helping fund this work. Lamie's comments align with SEACOR's successful start.

Keys to Inland COB Success:

- *aggregating equipment and freight;*
- *identifying suitable COB cargo – for SEACOR,*
- *resins and tires;*
- *dependable, regular service – shippers can count on SEACOR's weekly transport;*
- *operational model that coordinates ports – NOLA, Baton Rouge and Memphis – for SEACOR.*

Last October, America's Central Port (ACP), in Granite City, IL, received a MARAD grant for an 18-month demonstration project providing shuttle service for agricultural customers moving containerized exports to access the Union Pacific and BNSF rail ramps. The shuttle service will operate on the Illinois and Mississippi Rivers between Channahon and Granite City, Ill., with an

option to extend container-on-barge service to the Gulf. Right now, that 'ag' freight moves by truck.

Dennis Wilmsmeyer is ACP's executive director. He said that grant details are still being finalized and the demo has not started yet. The project schedule, for example, is linked to grain cycles, not something easily changed. Wilmsmeyer expects a January/February start date. The goal: to demonstrate feasibility and to show that COB can save money. "One puzzle," Wilmsmeyer said, "is that since nobody moves (freight) this way, it's harder to get people to participate and to get cost estimates – that's been the challenge."

Wilmsmeyer said the COB project will help people compare freight prices and service. He predicted that COB "will upset habits, that COB will help people realize there are other ways to move products."

Two Steps Forward; One Back

For Wilmsmeyer, COB scale up is "still a little ahead of its time." MARAD's support is important, he added, for "trying to get demand started sooner than it might develop if the market just ran its own course." Wilmsmeyer noted that the railroads initially resisted containerized shipping.

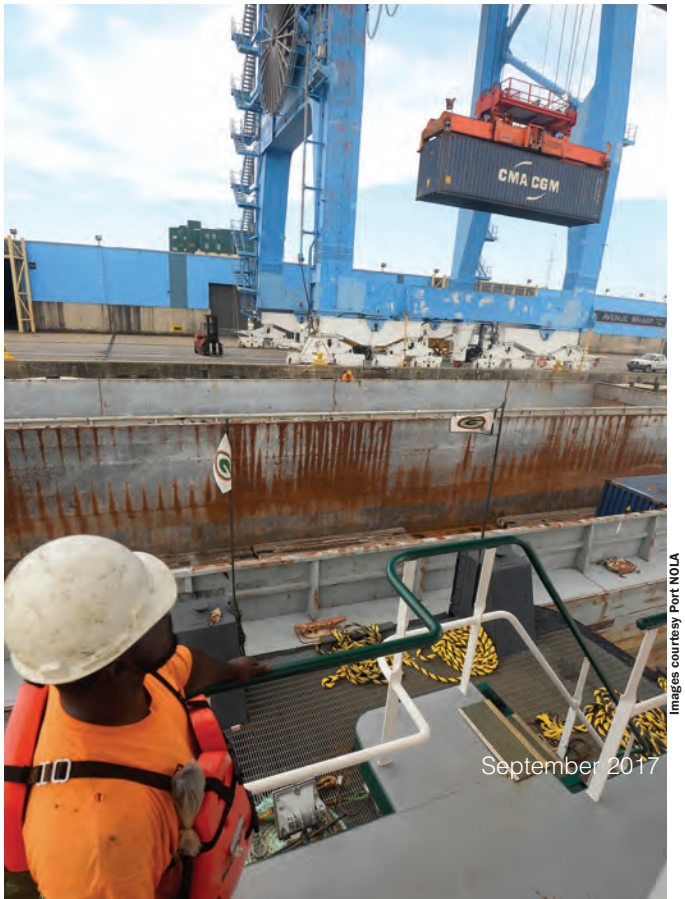
To be fair, one recent, unsuccessful COB project operated on the Tennessee-Tombigbee Waterway, in October, 2014. It lasted about six months. SEACOR operated that service, too, and the Tenn-Tom project presents the flip-side of SEACOR's NOLA success.

Rich Teubner was the Tenn-Tom manager. SEACOR couldn't aggregate enough volume in that waterway, Teubner said. The industrial base, the furniture industry, was relatively small, at least compared to the regional New Orleans market. Customers' demands were too variable, making aggregation unfeasible and the business could not reach a critical mass. Beyond this, there were vast differences in scale between New Orleans' export market and Tenn-Tom's. Nevertheless, Teubner added that SEACOR keeps its equipment at the ready. "If we can get the clients with the volumes, we would definitely start it again," Teubner said.

Some freight experts say it will eventually take new and specially designed equipment to move COB to the next level, that there are limits to a makeshift approach using existing equipment. New vessels, in particular, are needed. Missouri's DOT did an extensive COB freight study in 2013 which concluded that a long-term success strategy needs to include faster marine highway vessels and suggested that new vessel research might be the right focus among federal agencies.

Separately, US DOT projects that freight movements across all modes will grow by 42 percent by the year 2040. Container traffic will increase steadily. And, COB is one transport mode with plenty of room to expand. Lessons learned now will be very valuable; likely sooner, not later.

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



Images courtesy Port NOLA

Credit: AdobeStock, John Merlin

REGULATORY UPDATE:

A Top-Ten List of regulatory concerns is by no means all-inclusive, but it does bring to light the full weight of the regulatory hammer on the collective domestic commercial waterfront.

By Tom Ewing

"It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair, we had everything before us..." – A Tale of Two Cities, Charles Dickens, 1859.

Where business regulations are concerned – across all sectors, not just the maritime and port industries – today's regulatory environment recalls Dickens' famous reference to the human condition. (Today, however, we might revise: *"It was the age of foolishness, it was the age of Twitter."*) With apologies to Mr. Dickens.

Regarding the worst of times, that's surely an exaggerated phrase, but American businesses continue to operate within a labyrinthine and almost endless thicket of federal regulatory demands, commands, advisories, cross-references, deadlines, chapters, parts, sub-parts, addendums, footnotes, etc. All of this and at the Balkanized state and local levels, as well.

At the same time, and regarding the best of times, the new President and his team are making important moves to reform and revise federal regulations and the regulatory system. The President wants an updated regulatory structure that is less costly, efficient, modern in approach and references, and actually provides real-world benefits.

Numerous maritime issues, of course, are within this review. Maritime businesses are impacted by decisions and directives from multiple cabinet level agencies, from DOT and MARAD to the Department of Homeland Security and its U.S. Coast Guard, the Department of Commerce and NOAA, the Environmental Protection Agency (EPA) and the Department of Energy. This reform process is supposed to result in revisions that align with the concerns and suggestions of the regulated community, as well as the public at large.

Substantive reform is a gigantic task, pitting dragon-slayers against an immense blob, usually inert, but skilled at fighting back, frequently with many unexpected allies. Success requires focus and persistence, for years, not months. Hopefully, the executive branch – regardless of who is in charge – will keep its attention on this critical initiative.

The Top-Ten List

This month, we list ten regulatory issues confronting maritime businesses during the final quarter of 2017 and likely to continue into 2018. The list is developed from close review of federal rulemaking activities, discussions among MN's editors, maritime web pages and, importantly, interviews with Thomas Allegretti, President and CEO of the American Waterways Operators (AWO) and Ed-

ward Kelly, Executive Director, Maritime Association of the Port of New York/New Jersey. The (unprioritized) list looks something like this:

Subchapter M implementation	Jones Act
Ballast Water Treatment	TWIC
Dredging & Infrastructure	Air Emissions
Anchorages & Safety Zones	Offshore Energy
Local Zoning / Land use	State Regulations

A Closer Look:

Sub-M: The shorthand phrase referencing Subchapter M of the Code of Federal Regulations (CFR) dealing with towing vessels; more specifically, inspection, standards, and safety management. Final rule issued July, 2016. Existing vessels need to meet most requirements by July, 2018. New vessels (keel laid/major conversion after July 20, 2017) must meet all requirements and obtain a certificate of inspection before entering service. Sub M stems from legislation passed in 2004. The maritime community was active during regulatory development. In general, maritime experts are okay with the final rule. However, concerns remain about actually implementing Sub M's demands. AWO's Allegretti says the law's broad scope presents many difficulties, from personnel to equipment to operations. Kelly, with the Maritime Association, said implementation will be expensive and difficult. He said the Big Guys will be okay because they have money and technical know-how. Smaller operators could struggle, cutting corners or, worse, going out of business.

Ballast Water Treatment: Ballast regulations were to go live in 2017. In March, the Coast Guard updated the extension program for vessels not yet able to comply. But, those extensions will be increasingly difficult to obtain, especially since (as this magazine goes to press) five BWTS systems now have Coast Guard approval with a slew of other knowing at the door. Kelly said ballast regulations have been "limping and crawling" ahead for years, but, he added, "they still need balance." Allegretti remains concerned, noting that federal and state regulations – more than two dozen states regulate ballast water – remain a confusing, Balkanized and costly regulatory patchwork making compliance difficult. AWO wants a legislative fix, urging Congress to pass S. 168/HR 1154, the Commercial Vessel Incidental Discharge Act (CVIDA), in 2017. These bills establish a uniform federal regulatory framework for ballast water and other vessel discharges. AWO calls these bills "the U.S. maritime industry's highest legislative priority in 2017."

Jones Act / Coastwise Trade: This issue arose (again) in January. The Customs and Border Patrol (CPB) proposed changes to reverse then-current practices allowing non-US based vessels to transport cargo between US ports, or, put another way, the change would only allow U.S. based vessels to carry this cargo. This proposal stirred up some discussion. In May, CPB backpedaled; writing that based on "substantive comments" received "we conclude that the Agency's notice of proposed modification and revocation of the various ruling letters relating to the Jones Act should be reconsidered." That's where the matter dropped, and that's where it stands, without further development, one way or the other. But is the topic still active inside the secret walls? No answer on that from CPB staff. It would be an understatement to say that attacks on all aspects of the Jones Act – most recently from U.S. Senator John McCain – have become more numerous and robust in their application. Look for this to continue.

Transportation Worker Identification Credential (TWIC): TWIC was reformed in 2012. However, implementing regulations are incomplete. AWO reports that the Coast Guard is developing regulations for electronic TWIC readers to be installed on certain vessels and at certain marine transportation facilities. AWO writes: the "card readers add no security value on vessels with small crews, such as towing vessels." AWO supports the Coast Guard's proposal not to require

TWIC readers on vessels with 14 crewmembers or less.

Air Emissions & Miscellaneous: This is the basic, but expensive, stuff: air emissions from marine engines, including emissions that affect air quality compliance (ozone, particulates) in metropolitan areas and emissions that can present local health impacts in proximate neighborhoods. The Port of New York/New Jersey's Ed Kelly is concerned about new or revised regulations addressing marine mammals. He also says that animal avoidance and safety present difficult operational issues for vessels. Kelly hopes that a technological solution is on the horizon, one that advises captains that animals are close and that proceeding requires caution.

Dredging / Infrastructure: Ed Kelly said that federal officials are "under pressure" to shift resources from maintaining navigational channels, and that some could be abandoned. Kelly is concerned about "competing demands for rivers," that new demands from energy projects, for example, may restrict dredging and channel development. This is being played out now with the proposal in New York to allow a cable to be laid length-wise in the Hudson River from Albany to New York City. This could be a one-time allowance, or it could set a precedent.

Offshore Energy: In general, Kelly and Allegretti are supportive of offshore energy development. But that's not a blanket endorsement. Kelly referred to the Gulf of Mexico as a "slalom course" for captains because of energy infrastructure. Allegretti says navigation channels have to be considered and protected: "we can't lose them," he insists, adding that there is no magic wand with this issue, that each project will need thorough attention and analysis.

Anchorages & Safety Zones: The Coast Guard's 2016 proposal for new anchorage zones on the Hudson River is the poster-child case for this set of issues. The USCG received over 10,200 comment letters, 94% opposed the new zones. Ed Kelly views this huge push-back on what is largely a safety and security issue to be "problematic for future work." Next steps include a PAWSA – a "ports and waterways safety assessment." No progress since the Coast Guard suspended future rulemaking decisions regarding additional anchorages at the end of June. Watch for PAWSA news sometime this fall.

Local Zoning/Land Use: Not a federal issue but Ports in major metro areas are frequently the last large tracts of contiguous land with property that may be undeveloped or seemingly underutilized. Ed Kelly said that Port real estate is under pressure from competitive urban demands: "New condos, river view." For Kelly, those pricey offerings threaten the kind of footprint that Ports require to operate and thrive.

State activities: AWO has a significant list of issues in which states – Massachusetts, California and/or Washington to name just a few – are assuming dominant roles over federal authority. Discharge rules are one example. "There are too many standards," Allegretti says. "Mariners are unknowingly out of compliance somewhere, at some point." AWO asserts that the Coast Guard has primary authority for waterways oversight. A common set of regulations, he insists, is preferable to a patch-work of state regulations.

Looking Ahead

No one said it was going to be easy. That said; some of these issues – especially for our domestic workboat audience stretching over multiple sectors – are nothing short of daunting. And, to be sure, for every bullet point shown above, there is another issue lurking just behind it, awaiting the opportunity to emerge. Those readers in the passenger vessel business know exactly what I'm talking about. Stay tuned right here for future updates.

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

Offshore Outlook

Notwithstanding the recent surge in crude oil prices, it isn't lost on anyone that the offshore oil exploration business is, and has been for some time, in the doldrums. In the U.S. Gulf, that pain can be seen through Chapter 11 filings and the sobering specter of vessel after vessel rolling off the shipyard ways and directly into cold iron layup. And, it doesn't help that the shore-based shale drillers have not only found a way to drastically reduce their operating expenses, but also how to turn the valve off and on, seemingly at will, in response to market conditions. Industry consolidation, say some stakeholders – Harvey Gulf's Shane Guidry among them – will be the key to survival in the coming months and year.

Offshore Outlook

One way to gauge the real state of the market is to determine just how many vessels offshore service vessels are laid up and how many are on order – here and across the big pond. This month, VesselsValue (VV) shed some light on the real numbers. The news isn't all good.

According to VesselsValue, newbuilding orders for tanker and bulkers have increased during the first half of 2017. However, the overall number of orders placed has more than halved when compared to the same period in 2015. If you are operating in the depressed bulker sector, that's one way to eliminate the glut of tonnage. On the other hand, when comparing the 50 offshore vessels ordered in H1 2015 against the absence of ***any*** offshore orders placed during H1 2017, the situation in the offshore oil patch becomes only too obvious.

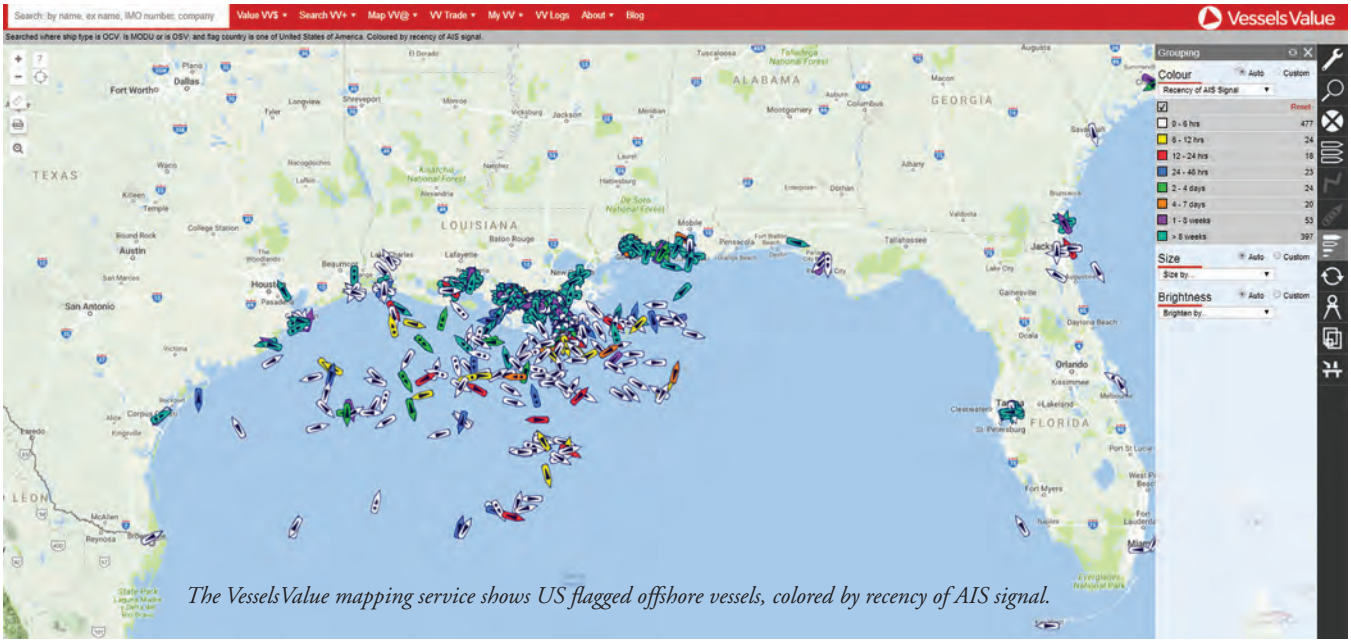
Separately, and looking at the global fleet of offshore vessels, VesselsValue reports that about 28% of this fleet is currently in layup. Using VesselsValue's Offshore mapping service [VV@], Senior Offshore Analyst Charlie Hockless put together a snapshot showing the percentage of the offshore fleet currently laid up. PSVs – or Petroleum Supply Vessels – top the list with 36% of their fleet currently laid up.

Mr. Hockless explains the definition of 'laid up' used in this context: "Estimating the number of vessels in lay-up is an imperfect science, however, using a big data approach VesselsValue can provide a valid estimation using the following methodology: VV observes the recency of a vessel's AIS signal and filters the data appropriately. Vessels that have not signaled for over a week are considered to be in lay-up."

The VesselsValue offshore database includes Offshore Support Vessels (PSV, AHTS, AHT, FSV, Ocean Going

TABLE 1 / Source: Vessels Value

U.S. Flag Offshore Fleet Vessel Type		Recency of AIS Signal: 8+ Weeks	1-8 Weeks	Total Laid Up	Total Live Fleet	PCT Fleet Laid Up
OSV	*PSV*	212	27	239	539	44%
	AHTS	36	5	41	74	55%
	AHT	12	2	14	52	27%
	FSV	72	9	81	162	50%
	Ocean Tug	17	5	22	104	21%
	ERRV	0	0	0	1	0%
OCV	*OCV*	48	5	53	179	30%
MODU	*Drill Ship*	0	0	0	0	n/a
	Semi- Submersible	0	0	0	0	n/a
	Jack-Up	0	0	0	11	0%
Grand Total		***397***	***53***	***450***	***1,122***	***40%***



The VesselsValue mapping service shows US flagged offshore vessels, colored by recency of AIS signal.

Tugs and ERRVs), Offshore Construction Vessels (Pipe layer, Cable Layer, Well Intervention, Dive Support Vessels, MPSV, Floatel, Accommodation Ship, Crane, Lift Boats, SOV, and Utility Vessels) and Mobile Offshore Drilling Units (Drillship, Semi submersible, Jack Ups).

Hockless continues, "This lay-up statistic spells danger for the future of the offshore market. Results can vary from market to market and depend on fleet structure by age, but rates will likely remain depressed for an extended period of time due to vessel reactivation. As rates recover, more vessels will be reactivated and will force rates back down due to oversupply. Other factors that will put further pressure on the market going forward include the bloated orderbook, and the fact that drillers have been able to increase operational efficiency during these leaner times. This results in vessel demand and vessel supply going in opposite directions."

Finally, we asked VesselsValue to break out the U.S. flag offshore fleet from the pack, to get a better look at it. And, the numbers here, as shown in table 1, are even worse than the global numbers.

VesselsValue.com provides instant, accurate and unbiased data that can be accessed from anywhere in the world, at any time. VV is used by the world's leading commercial and investment banks, private equity, investment and hedge funds, shipowners and operators, lawyers, accountants, brokers, underwriters and more. Four core modules VV$ (Value), VV+ (Search), VV@ (Mapping) and VV Trade give clients access to real time values, advanced database functionality, vessel tracking and vessel trade and ton mile demand information. VesselsValue covers the global fleet of Bulkers, Tankers, Containers, LPG, LNG, Small Tankers, Small Dry and Offshore. **www.vesselsvalue.com**

The Markey ARR Winch System

Tried and Tested in the Toughest Tug Challenges.

Credit: Scott deMers – Systems Interface/Markey

By Joseph Keefe

For more than 30 years, Markey Machinery has worked with the LNG and marine transportation Industries with the goal of developing winches designed to work under the most challenging conditions. The effort includes extensive design shop testing and actual commercial work, a combination that has ultimately produced an understanding of the operational issues facing terminal and tug operators.

The many milestones in the development of Markey's Asymmetrical Render/Recover (ARR) – technology by which hawser winches are able to maintain mean line pulls up to the bollard pull of the tug – came over a period of time that spans 25 years. The initial 20+ years of hawser winch design and Render/Recover development followed a traditional design path, influenced, in part, by market pressures. It was primarily due to the application of Class I and Class II winch designs on vessels operating in quiet-water locations that allowed this approach to be successful.

As the transportation of high-risk payloads encountered increasingly rough waters, it became routine to escort these ships for long distances during their journey to the terminal. While Class I and Class II winches continue to operate in areas that are not exposed, Class III ARR winches address the need to deal with harsh environmental conditions, while maintaining control of the line at all times. And, that's where Markey comes in.

Winch Development 101

The basic function of any hawser winch is to either pull in, or pay out a tether. Hawser winch tethers are typically composed of either steel wire rope, or fiber rope of natural or synthetic construction. The winch has a brake, which holds the drum, and any load attached to the end of the tether. Historically hawser winches use band brakes, which are by design an "on-off" brake. Any attempt to "slip" these brakes will result in sudden loosening or binding. The operator manually controls speed, direction of rotation, and brake set. Many of the Class 1 winches delivered

"Anecdotally, an argument can always be made that machines employing automatic controls are always safer for the simple reason that the processor is ever alert, never tires, and consistently responds in near real time according to a set of established operational criteria."

– John Davis, Markey Sales Engineer

by Markey over the past 100+ years fit this description.

While Class I winches work well in steady conditions of calm waters with light winds and currents, they are not suited for operation in highly dynamic wave conditions. A common application for a Class I winch would be harbor docking service in an interior waterway or basin. But, Class I winches pose operational challenges in dynamic situations, particularly in escort operations requiring frequent repositioning of the tug relative to the assisted vessel.

While skilled operators have over time developed ways to achieve an "active drum" on a Class I winch, at the same time, their ability to focus on maneuvering was limited, since considerable attention was required for winch operation. John Davis, Markey Sales Engineer explained, "Anecdotally, an argument can always be made that machines employing automatic controls are always safer for the simple reason that the processor is ever alert, never tires, and consistently responds in near real time according to a set of established operational criteria."

The Advent of Synthetic Rope

The introduction of synthetic ropes in the 1980s came with many advantages. Easier to handle, lighter, and nominally safer than wire rope, synthetic ropes also floated. Maintaining line tension suddenly became an important requirement as the danger of fouling the tug's propellers with a slack line became apparent. This led to the creation of technology to automatically render (pay out) and recover (haul in) line to maintain that tension while preventing 'slack line' conditions. The term 'Render/Recover' was soon thereafter coined, and Markey was at the heart of its development. As Markey looked into ways to integrate true Render/Recover functionality into hawser winches, they also knew that this new winch would need specific features, which would:

- *Provide full range controllable line pull in either direction (inhaul and payout).*
- *Allow for "instant" inhaul at full line pull and speed.*
- *Allow controllable relief path for hard rendering*

at up to three times flow rate.

- ***Simultaneously dump flow from the hydraulic pump.***
- ***Allow instant freewheel at high speeds using features of the motor.***

At the same time, rising energy costs, operational efficiency concerns, hydraulic noise and heat generation and customer worries about hydraulic oil spills spurred Markey to develop 'vector duty' electric motors coupled with AC variable frequency drives (VFD's) to power the next generation of hawser winches. In 2001, Markey delivered to Moran Towing Corporation the first version of an electrically driven hawser winch offering Render/Recover technology.

The 'Diane Moran' was a 5100 HP ASD Tug capable of 65 Tons bollard pull. The winch employed a 50 HP variable frequency drive controlling a vector-duty motor. Built for operation above deck, the winch allowed for winch drum freewheeling, for faster payout. The Render/Recover feature allowed the winch to automatically pay out (render) or haul in (recover) line to maintain a pre-set line tension. This allowed the winch to function automatically to maintain tension, thus keeping the line clear of the water during tug repositioning, while reducing subsequent snap loads that could part the line.

Next up for Markey was the creation of a winch that would allow operating in waves that caused significant tug movement. Maintaining a line tension setting regardless of such movement led to the development of the Markey ARR (Asymmetric Render/Recover) system. The Markey ARR requires more horsepower, which favored the electric solution. That's because the hydrodynamic performance of tugs in exposed sea states dictates that the amount of winch power required to mitigate wave motion does not have to be equal during line rendering and recovery. Utilizing a mathematical simulation with the winch dissipating more power in rendering than during recovery, it could achieve successful Render/Recover operation, in exposed conditions, thus allowing minimizing the motor horsepower.

A 250 HP unit went into operation in 2002 and two 100 HP units in 2006, which all performed well. Four more units went recently in operation, two 100 HP and two 200 hp. All of the foregoing units performed well in environments where waves of up to

Credit Michael Torres

Carnival Splendor arriving in San Diego with SMBC Monterrey in the lead

2 meters were present. Eventually, Markey was approached about equipment to accommodate 3 meter waves, in narrow waters, at the Energia Costa Azul LNG terminal off the Mexican West Coast. Four tugs, jointly owned and operated by Moran and its partner Grupo Boluda Maritime Corporation of Spain are based there to provide escort to incoming LNG carriers.

Markey asked Eagle Harbor Engineering to create a mathematical model of operating conditions that this application might pose. This model constituted the early beginnings of Markey's winch simulation technology. Offshore Research Ltd at the Ocean Engineering Centre in Vancouver, British Columbia, Canada subsequently conducted modeling of winch and vessel operation. The test parameters focused on a "worst case" scenario.

Each of the tugs is equipped with winches that have double "waterfall" drums, with 200 meters of 80 mm diameter high-performance synthetic rope on each drum. They are bow mounted on the compact, high powered twin screw Z-drive tugs, used to escort and berth LNG tankers in up to 3 meter swells. A 760 HP electric, AC variable frequency drive with closed loop tension control powers each. The winch can operate in dynamic seas up to 3 meters at full bollard pull. It utilizes a two-speed gear drive and dynamic water-cooled brakes below deck.

Testing Under Actual Conditions

Prior to beginning operations, crews were prepared through an extensive operational training program. Because the ARR system offered an entirely new concept in tug operation, the training covered the proper use of the Render/Recover system, including how best to set the tension and sensitivity adjustments. Each winch was subjected to a thorough systematic test program after installation on the tugs.

Although data collected during operation at or near full capacity is more desirable, verification of predicted model performance is possible even during routine outings. The results of a routine escort of an LNG tanker in August of 2010 provided an excellent example. In this case, the escort occurred during a period of 1.6 meter wave heights, the highest being 2 meters, with wind gusts of 9 to 13 knots headed NNW.

Winch instrumentation was collected and saved operational data, so that it would be available for later download via a cell network for evaluation. This was also the method used for subsequent troubleshooting. Service personnel in Seattle were able to download the system's alarm history remotely, which greatly expedited the resolution of incorrect drive settings.

Eventually, Markey engineers were aboard to witness the berthing of a large vessel in approximately 2.5 meters swell, with a 10-14 sec period, and light winds of 4-6 knots. The operation seemed surprisingly effortless, and the consensus afterwards was that this tug/winch combination, with four tugs available, was likely able to berth tankers in swell well over 3 meters. Since then, a later berthing in swells exceeding 3 meters confirmed that consensus.

Matching Data, Real Performance

According to Markey, matching winch performance to tug performance and the demands of a particular terminal is now achievable using the tools developed over the last several years. And, it turns out that American manufacturing, in this case, is quite competitive globally. A study done by Robert Allan Ltd evaluating components for a multi-tug contract concluded that "The vast majority of operators agree that the electric-driven Markey Render-Recover winch is the best winch technology on the market today. There is also a general perception that Markey winches are significantly more expensive than others on the market, however when one compares winches from various qualified sources according to a common detailed specification, then Markey proves to be extremely competitive on a world-scale."

Today's design methodology now includes mathematical modeling, to determine the most cost-effective and efficient solution to a specific terminals performance requirements. This methodology allows designers to predict and match winch performance to the environmental requirements prior to build and manufacture. Markey Machinery President Blaine Dempke added, "We validated the accuracy of the modeling calculations through testing, in actual operation and demonstrated an accurate correlation between the two."

Providing the exclamation point on that sort of claim, one of the four tugs, together with a conventional tug, towed a disabled cruise ship from its position off the Mexican Coast near Ensenada, to San Diego in November 2010. Some stakeholders said it could not be done. Dempke remarked, "We do not know whether it set a record for longest soft-line emergency tow, but it was a completely uneventful routine operation." Today, Markey's Asymmetrical Render/Recover (ARR) technology continues to provide operators with never before achieved margins of safety and performance. Already tried and tested under the toughest conditions, Markey's ARR is clearly ready for what comes next.

Allied Marine Crane

Web: www.alliedsystems.com/crane/
Contact E-mail: dan.lanxon@alliedsystems.com

For four decades, Allied Marine Crane has designed and manufactured the highest quality cranes, davits and handling systems for the commercial workboat, salvage, government, rescue boat launch/recovery, oceanographic research and offshore industries. Allied holds API certification to apply the Spec 2C monogram to products under the API Q1 quality system. Allied designs and manufactures to standards that include ABS, Lloyd's Register, DNV, USCG, SOLAS, IMO, ASME, CFR and CCS. Allied provides full lifecycle support from design, installation, training, maintenance, rebuilds, to complete overhaul.

Cranston Eagle Marine Off-Load Hooks

DELTA "T" SYSTEMS

Web: www.deltatsystems.com
Contact E-mail: info@deltatsystems.com

The Cranston Eagle line of marine off-load hooks are a favorite of commercial vessels around the world. Simple design complimented by all stainless steel construction provides robust, reliable marine service. The product line includes cable and boat mounted models, many of which carry USCG/SOLAS certifications. Load capacities range from two to twelve tons and all hook models prove their designs by undergoing a load test at six times their weight ratings. Service and load testing is performed in the U.S. by Delta T Systems.

ELEPHANT LIFTING PRODUCTS™

Web: www.elephantlifting.com
Contact E-mail: sales@elephantlifting.com

Elephant Lifting Products introduces the world's highest quality manufactured manual chain hoists, lever hoists, electric chain hoists, pneumatic hoists & winches, hydraulic hoists, specialty clamps, and trolleys. In addition to these products, we can offer the equipment with ATEX EX spark resistant ratings. Elephant Lifting Products is proud to be family owned and operated, with our stocking warehouse in Gonzales, Louisiana USA.

J·D·NEUHAUS

1745 engineered for extremes

Web: www.jdngroup.com
Contact E-mail: info@jdngroup.com

The Profi range of air hoists from J D Neuhaus are available in lift capacities from 250kg up to 100t. Ideal for use where safe lifting is a priority, these robust hoists offer a 100% duty rating with explosion protection as standard, suitable for tough industrial applications in hazardous areas and in continuous working processes. Insensitive to dust, humidity and temperatures ranging from -20°C up to +70°C, the hoists offer easy lube-free operation with various control systems available.

MARKEY™

Web: www.markeymachinery.com
Contact E-Mail: skreis@markeymachinery.com

Markey has focused on integrating high-efficiency AC electric variable frequency drive (VFD) technology into deck machinery for over two decades, particularly for applications requiring high-response active heave compensation and line control. Markey's Render/Recover and Asymmetric Render/Recover winches are considered the "Best Available Technology" for this application and are used worldwide.

NABRICO

Web: http://nabrico-marine.com
Contact E-mail: nabrico@trin.net

From the design of barge accessories and deck fittings to a day-to-day commitment to customer service, Nabrico is one of the most highly respected names in the water transportation industry. The company started building bridges in 1902 and developed its first piece of floating equipment for the U.S. Corps of Engineers in 1915. Today, Nabrico is a major supplier of marine deck hardware for river systems and the offshore industry around the world.

Web: www.SamsonRope.com
Contact E-mail: custserv@samsonrope.com

Samson recognizes that line selection is not an 'off-the-shelf' decision. Many factors should be considered, including intended use/application, surface preparation and potential for abrasion, rope design/construction, and inspection and retirement criteria. That's why Samson's team of experts is available to assist you, to ensure a comprehensive understanding of each consideration, and guarantee the appropriate care is given to your selection. Samson's aim is long service life and mitigation of unnecessary risk.

Web: www.scantrol.com
Contact E-mail: anette@scantrol.com

Scantrol Active Heave Compensation (AHC) is a control system for winches and cranes used for subsea operations. Designed to give precise control of load position for vessels in motion, the AHC can be adapted to different hydraulic and electric winches. The system makes it possible to work even in harsh sea conditions. Scantrol AHC can be delivered in different configurations, ranging from a basic system with a simple operator panel or radio control to an advanced system with multiple displays and data recorders.

Web: www.teuffelberger.com
Contact E-mail: Bill.shakespeare@teufelberger.com

Teufelberger delivers innovative premium-quality steel wire rope solutions meeting the high demands of maritime cargo transport. Joint development efforts with crane manufacturers, as well as close cooperation with our suppliers ensure that our products live up to your expectations. Intensive cooperation with long-term key customers is testament to our unwavering commitment to the needs of our users and partners. Safety and cost effectiveness have been top priorities at TEUFELBERGER for more than 200 years.

Metal Trades Delivers First Pushboat

Shipbuilder and Heavy Steel Fabricator Metal Trades announced the launch of its first new construction 50 foot shallow-draft, twin screw push-boat for Bald Head Island Limited, LLC. The tug named "Captain Cooper" was designed by the naval architecture firm, CT Marine, and was custom built by Metal Trades. The 50' x 24' with a 5.5' draft vessel is powered by John Deere 425 HP main engines and is equipped with dual 40kw Northern Lights Generators and Patterson Wire Winches. Its durability and seaworthiness is designed for pushing barges on inland and partially protected waterways.

ESG Delivers Four ABS Class Inland River Towboats

Eastern Shipbuilding Group recently delivered four (4) ABS Class Inland River Towboats IWL River. This series of CT Marine designed 134 foot ABS Classed Inland River Service Towboats are Triple Screw with Retractable Pilothouses. All four towboats were constructed, outfitted and delivered at Eastern's Allanton Facility. IWL River is one of Eastern's newest clients. These towboats will service the inland waterways of Latin America for Impala Terminals. Impala owns and operates a network of terminals that facilitate global trade flows, specializing in warehousing, multi-modal logistics and related port services for essential commodities worldwide.

Inland River Towboat Series at a glance ...

Class: ABS	Breadth: 42'	Operational Draft: 6'-0"	Engines: (3) ABS Caterpillar 3512C
Length (LOA): 134'-0"	Depth: 9'	Flag: Republic of Columbia	Gears: Reintjes

Pocket Tanker for Puget Sound

Designed by the Elliot Bay Design Group, the Global Provider is being built by Jesse Co Metal Fabrication and Machinery in Tacoma, WA. The tanker is scheduled for delivery later in 2017. The Global Provider will be less than 100 gross tons and so qualifies for a two-man daytboat operation around Seattle. It also has accommodation for four crew making longer runs practical. With a 10-foot draft on a 14-foot molded depth and a 32-foot beam, the Grade B product tanker is fully double-hulled. Fuel tanks located port and starboard of the engine room will carry a total of 8900 gallons. Additional trim tanks are located in the forepeak and the stern quarters. In the engine room, aft of the twelve separate cargo holds, a pair of Cummins QSK 19M Tier 3 diesels, each generating 660 HP at 1800 RPM will provide propulsive power. These two in-line six-cylinder engines will each turn into Twin Disc MGX=5202SC gears swinging 48-inch four-blade stainless steel props mounted on 4-inch by 17-foot shafts. A pair of Northern Lights generators will meet the boat's electrical and hydraulic power requirements. On deck, a Rapp Marine HP30 5F crane will handle the hoses for product being pumped by a six-inch Blackmer pumps.

Conrad Shipyard Mourns the Passing of Founder Parker Conrad

It is with deep sadness that Conrad Shipyard announces the death of its founder, John Parker Conrad, Sr. Surrounded by family and friends, Parker died peacefully on July 6th at his home in Morgan City. He was 101 years old. A shipbuilding pioneer and a legend along the Gulf of Mexico coast and beyond, Parker founded Conrad Industries in 1948. Conrad now has five shipyards along the Louisiana-Texas coast. From age 12 to age 17, Parker trained as a Christian Brother, which formed in him a deeply

rooted and lifelong commitment to others. He supported many charitable and community causes

in South Louisiana, and received numerous awards for his accomplishments and philanthropy.

Parker was a conservationist with a profound respect for the environment. Parker and Shirley were happily married for 64 years, until her death in 2006. Parker is survived by a son and daughter and many grandchildren and great grandchildren. Parker Conrad was a kind and gentle man, and with his wry smile, his charismatic personality and lively sense of humor, he will be sorely missed by the many thousands of lives he touched along the way.

Buzby

Candito

Buzby Confirmed as MARAD Administrator

The U.S. Senate has confirmed **Mark H. Buzby** as the new administrator of the Maritime Administration (MARAD). Buzby, who was nominated by President Donald Trump in June, is a U.S. Merchant Marine Academy (USMMA) alumnus and retired U.S. Navy admiral with a military career spanning over three decades at sea and ashore. He was most recently president and CEO of National Defense Transportation Association (NDTA).

Steve Candito named Ecochlor CEO

Ecochlor announced that **Charlie Miller** has retired as CEO with **Steve Candito** named as his successor. Prior to joining Ecochlor, Steve was Founder, President and CEO of Foresea Consulting where he provided various advisory services including strategic planning, regulatory compliance and crisis management to the maritime and environmental communities. Before Foresea, he was President and CEO of National Response Corporation (NRC). Steve was previously an attorney with Haight Gardner Poor & Havens from 1985 to 1993 and also served as a marine engineer aboard Exxon USA's domestic tanker fleet. He graduated from Hofstra University School of Law and the United States Merchant Marine Academy.

Crowley Announces Management Appointments

Crowley Maritime Corp. announced that company veteran **Susan "Suz" Michel** has been appointed vice president of human resources and learning. Michel joined Crowley in 2004 and most recently served as vice president of organizational development and change leadership. Michel has an undergraduate degree in education and a master's degree in industrial psychology. She received the company's highest honor, the Thomas Crowley Trophy, in 2008. Separately, Crowley also announced that **Daniel Vargas** has been appointed vice president of international business development to support the company's liner and logistics services groups. He will work closely with Crowley's new director of logistics in St. Maarten, **Jeffrey de la Combe,** to bring supply chain solutions for customers and their cargoes originating outside the United States. Vargas has more than a quarter century of sales and marketing experience. He is a graduate of Florida International University with a bachelor's degree in international business and marketing. De la Combe has more than 20 years of experience in the Caribbean trade lane, working in diverse aspects of the industry. De la Combe has a master's of business administration (MBA) degree in international business from Johnson and Wales University.

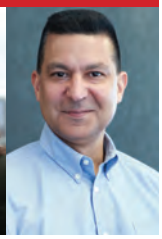
In another announcement, Crowley named **Paul S. Manzi** as vice president of safety, security, quality and environmental stewardship (SSQE). Manzi joined Crowley last year as director of health and safety, and has

Crowley Maritime Corp.


de la Combe


Manzi


Michel


Vargas


Garry


Corr


Hale

more than 36 years of experience in the maritime industry, serving as a navigational watch officer, and various positions of increasing responsibility in marine operations and corporate safety, health, and environmental compliance and stewardship as well as serving the industry on technical committees and in leadership roles in trade safety organizations. Manzi earned a master's degree in environmental management from the University of Houston and a bachelor of science degree in marine transportation and nautical science from the U.S. Merchant Marine Academy.

Garry Joins Bouchard as VP, Regulatory Compliance

Bouchard Transportation announced that **Shawn Garry** has joined the Company as VP of Regulatory Compliance and Inspections. Prior to Bouchard, Garry worked at the United States Coast Guard as an Engineer of the Watch Afloat, Senior Marine Inspector, and Marine Casualty Investigator. Garry will ensure that Bouchard meets SubChapter M requirements and will be the primary contact for Gulf Coast region internal and external vetting, SIRE, ABS, USCG and ISM.

VSY Makes Two C-Suite Announcements

Jim Corr joined VSY in January 2017 as a consultant, and in June 2017 was promoted to Vice President, Planning & Estimating. Jim's experience is criti-


Roberts


Rendall


Bering


Jung


Burleson

cal to VSY as it continues to deliver on its commitments to the Government of Canada as part of the National Shipbuilding Strategy (NSS). Jim brings over 37 years' experience in the shipbuilding industry and joined the company from General Dynamics BIW where he worked as the Senior Director and Vice President of Planning. **Brent Hale** has been named Chief Administrative Officer. He joined Seaspan in June 2015 as Vice President - Human Resources (HR). Brent completed a Bachelor of Commerce from the University of British Columbia in 1994. In 1996, he obtained a Master of Industrial Relations from Queen's University in Kingston, Ontario, and in 2004 he graduated from an Executive Leadership Program at Simon Fraser University.

New CCO at Foss Maritime

Will Roberts, formerly of Rolls-Royce, has joined Foss Maritime as Chief Commercial Officer. Roberts will advance Foss' global perspective on market opportunities and lead in the assessment and prioritization of geographic and operational market segments through marketing, sales and business development activities. Roberts began his career in the U.S. Navy as a qualified Deck and Engineering Officer onboard a fast attack submarine and graduated from the United States Naval Academy with a degree in Ocean Engineering. He holds a Masters of Engineering Management from Old Dominion University.

TSGI Welcomes Rendall

The Shearer Group, Inc. (TSGI) announced the addition of **Ryan Rendall** to its naval architecture, marine engineering & marine surveying team. Prior to joining TSGI, Ryan worked for Metal Shark Boats as a naval architect and marine engineer. He received a B.S. in Marine Engineering from Texas A&M University. Ryan is also a member of the American Society of Mechanical Engineers, SNAME, and the Marine Technology Society.

Bering Named VP, Marine Sales at Volvo Penta

Jens Bering has been named by Volvo Penta of the Americas as vice president, marine sales. Bering, who began his career with Volvo Penta in 1997 as an applications engineer and then product management executive, rose through the company and was named to head the product management department in 2013. Bering holds a Bachelor of Science degree from Aalborg Technical Institute.

Torqeedo Names Jung VP, Marketing

Torqeedo announced **Greg Jung** has been appointed vice president of marketing. Prior to joining Torqeedo, Jung was vice president of marketing for Civis Analytics of Chicago. Jung holds a Bachelor of Science degree in management from Purdue University, as well as a Masters of Business Administration with a concentration in organizational leadership from Butler University.

DWCPA has new Executive Director

The Detroit/Wayne County Port Authority (DWCPA) will have new leadership as **Kyle Burleson,** current deputy director at the DWCPA, steps in as the interim executive director until February 1, 2018, during which the DWCPA board of directors will conduct a search for a permanent executive director. Prior to joining the DWCPA, Burleson acted as the legislative director in the office of Congresswoman Candice. Burleson has a bachelor's degree in political science and history from the University of Michigan, and a doctorate in law from the University of Detroit.

Lumitec Appoints Lehman

Lumitec announced the appointment of **Alex Lehman** as Territory Sale Manager for the state of Florida. Alex brings to the role more than 10 years of sales experience in industries ranging from communications and data technology to real estate. Prior to joining Lumitec Alex held a Territory Sales Manager position at Professional Sales Agents and various sales roles at Equity Residential.

Asahi/America Names VP of Sales and Marketing

Asahi/America has named **John Romano** as Vice President of Sales and Marketing. Romano joined the Massachusetts-based manufacturer in June. He brings 29 years of experience to Asahi/America. He holds a degree in business management and has been


Lehman


Romano


Joumblat


Sima

an active member in a number of industry associations.

Port of Long Beach Commission Names Managing Director of Finance

The Long Beach Board of Harbor Commissioners has approved a new leader to head the Port of Long Beach's Finance and Administration Bureau. **Sam Joumblat**, the Chief Financial Officer of Total Transportation Services, is returning to the Port as Managing Director of Finance and Administration. The key financial position manages an annual budget of $750 million and this decade's $4 billion, 10-year capital improvement program. He holds a bachelor's degree in mechanical engineering and master's degrees in business administration, mechanical engineering and industrial engineering from the University of Southern California.

Sima Tapped to Lead MAN Service Support

Severin Sima has been named Head of Marine Service Support at MAN Engines, with responsibility for all aspects of After Sales support and service. He has been familiar with MAN Truck & Bus since 2011. As project manager for Customer Support Truck, Sima was responsible for After Sales for a variety of large companies and international key accounts, and was also in charge of a number of sales regions. Prior to this he spent ten years working in technical development at Audi.

Ecochlor BWTS Receives USCG Type Approval

Ecochlor's patented BWTS has received USCG Type Approval. Ecochlor uses a two-step process of filtration and chlorine dioxide (ClO2) treatment. It is effective on all aquatic invasive species regardless of water turbidity, salinity or temperature. Ecochlor's System provides operators with several unique features. One of these is low power consumption, and the other, a small footprint, which makes it extremely space efficient, especially for workboats.

www.ecochlor.com

Dellner's Lightweight Failsafe Brakes

Dellner Brakes' groundbreaking failsafe brakes combine power with modular, lightweight design at competitive prices. Precision engineered in Sweden, the new spring applied SKP failsafe brakes are designed to quickly stop rotary or linear motion in various applications such as cranes, winches, deck machinery and other machinery. An offshore version, with corrosion protection and hard wearing paint and pistons is specially designed to withstand harsh conditions.

www.dellner-dampers.se/industrial

Metal Shark's Swamp Shark Propulsion System

Metal Shark and Angelle Development have a new vessel propulsion system. The "Swamp Shark Drive" is specially engineered and built for operation in extreme shallow water, riverine, and mud flat environments. The durable system will safely and reliably propel a vessel through vegetation, mud, and debris-strewn waters. Swamp Shark Drives are available in a range of sizes to accommodate a variety of gas and diesel-powered boats.

www.metalsharkboats.com

TRUSTON
WWW.TRUSTON.US

Truston Achieves ISO 9001:2015 Certification

Truston's Quality Management System (QMS) has achieved ISO 9001:2015 with Design Standard, an internationally recognized standard of excellence. Truston is best known as a leader in Port Security Barriers (PSB) systems, which protect waterside assets such as naval vessels, bases, shipyards, LNG terminals, pipelines, oil rigs, nuclear facilities, and dams. PSBs are the only boat barrier system currently in use by the U.S. Navy.

www.truston.us

New J D Neuhaus Group Website

The J D Neuhaus Group (JDN) has improved their innovative website. It is more user-friendly, more informative and better structured, while being technically and graphically optimized, to represent state-of-the-art operation. The content to adapt automatically to the size of the screen being used, and the whole content can now also be viewed more efficiently on tablets and smartphones. Also new is the News Slider on the homepage.

www.jdngroup.com

SIMRAD A2004 Autopilot Controller

Simrad A2004, a dedicated autopilot controller designed to meet the needs of all workboats, is perfect for vessels that don't require SOLAS Heading Control Systems but do require an autopilot interface backed by Continuum software. The Simrad A2004 autopilot builds upon a proven user interface and keypad layout and includes updated features compatible with the latest generation of Simrad radar, sonar and ECDIS.

www.navico.com/commerical

GPLink, Wheelhouse Partner for Real-Time Diagnostics

gplink has partnered with Wheelhouse Technologies, creating a comprehensive perspective on vessel upkeep through seamless integration to the Wheelhouse marine maintenance system. With the reliability and breadth of information captured by the gplink system and the robust infrastructure of Wheelhouse's Marine Maintenance Systems, commercial fleets now have seamless access to the most comprehensive remote monitoring and tracking system available.

www.gplink.com

CAT Celebrates First North American Complete Tug Solution

Caterpillar is celebrating the first vessel in North America to feature a complete Cat Marine propulsion system with both Cat power and Cat azimuth drives. Owned by Seattle-based Harley Marine Services, this tug is equipped with two 3516C marine propulsion engines, each delivering 2675 hp (1995 kW) to a pair of MTA 524-T azimuth thrusters specifically designed for high performance tug applications.

www.cat.com

Torqeedo Brings New Battery Technology to Workboats

Torqeedo's battery technology available for boats by offering BMW i high-capacity batteries via a recently signed supplier agreement. Boats equipped with BMW i batteries are already in operation, including commercial marine applications, such as water taxis. The BMW i3 battery has been adapted to work flawlessly with Deep Blue, Torqeedo's most powerful solution for inboard, outboard and hybrid systems up to 160 HP.

www.torqeedo.com

Victor Plus Series Torch

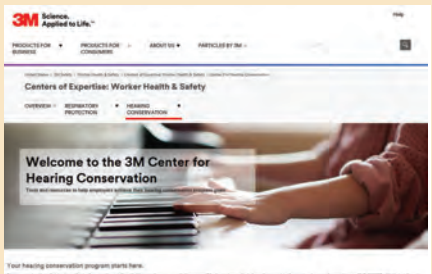
The Victor Plus Torch, a heavy-duty, high-capacity combination torch, features the new CA 2460+ cutting attachment and WH 315FC+ handle. The WH 315FC+ handle incorporates built-in flashback arrestors and reverse flow check valves, but enables higher gas flow capacity. The cutting attachment features a contoured cutting oxygen lever for better ergonomics. The torch head uses thicker brass to improve abrasion resistance. The new design simplifies repair and improves reliability.

www.esabna.com

Laborde's Vapor Power Heater Service

Laborde Products offers complete Vapor Heater service and support for the marine industry throughout the United States. This includes cook offs, USCG inspections, cleanings and repairs. Vapor Power's Hi-R-Temp thermal fluid heaters offer marine customers lower capital investment, a smaller, customizable foot print to save deck space, greater fuel economy, and quicker heat up times. Vapor Power heaters are ASME, ABS, and USCG approved.

www.labordeproducts.com



3M's Center for Hearing Conservation

3M Personal Safety Division has launched a new online resource, the 3M Center for Hearing Conservation. Safety managers can find articles and details about hearing loss prevention programs, as well as helpful videos, toolkits, and more. Created by 3M audiologists and occupational health and safety specialists, the 3M Center for Hearing Conservation can help companies to ensure that legal requirements are met and workers remain engaged.

www.3M.com

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Contact
Office Manager
Email: Lisa@federalpilots.com
Work Phone: (504) 456-0787
4500 York St., Suite #204 Metairie, Louisiana, 70001 United States

Skills:
• Previous experience operating 30-50ft crew boats are a plus.
• Mechanically inclined.

Description:
• Our Pilot Boat operation is to board and disembark our Pilots in the Mississippi River and Gulf of Mexico. At boarding, pilots must climb onto moving vessels via rope ladder leading up the hull from the deck of a pilot boat. This can be a dangerous undertaking, sometimes in rough sea conditions with both vessels pitching and rolling back and forth and the ladder swinging from the vessel.

Job Responsibilities:
• Safe and proficient operation of our Pilot Boats ranging in size from 30-50ft.
• All necessary preventative maintenance of our pilot boats and facilities.
• Minor repairs when applicable.
• Proper housekeeping of our pilot boats and facilities.

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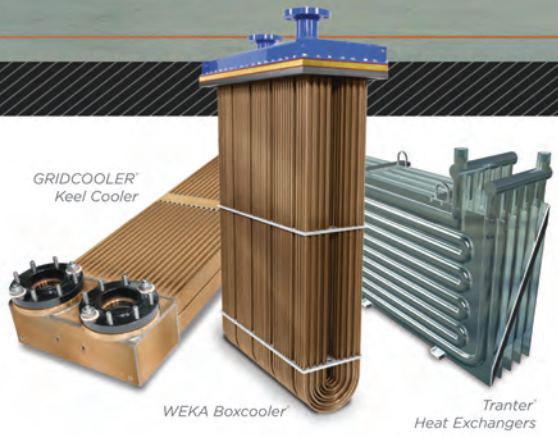

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