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Marine News

SEPTEMBER 2016

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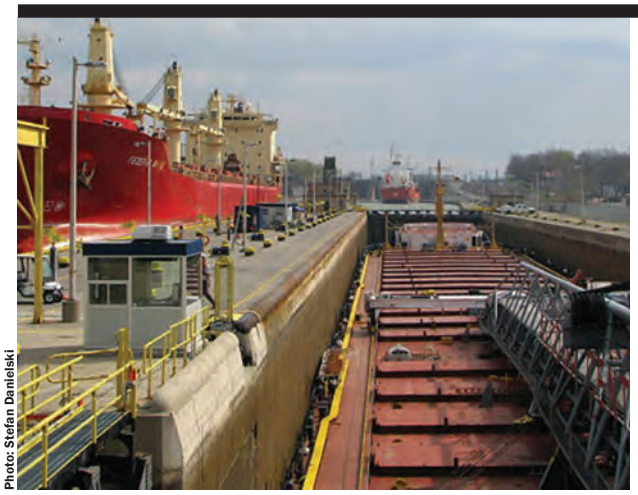

Photo: Stefan Danielski

Photo: Cheryl Gosson

Features

ON THE COVER

This year finds offshore services firms, much like the equipment they operate using sophisticated dynamic positioning (DP) equipment, navigating carefully and in close quarters, in equally uncertain financial and political waters.

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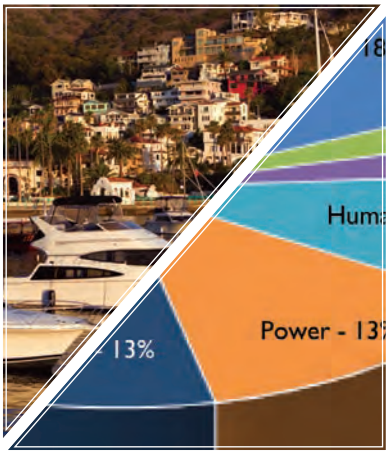

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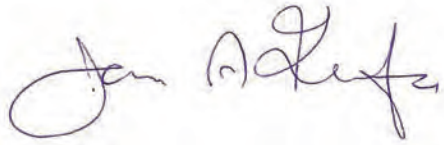
You might think that given the current climate in the oil patch, especially when talking about the Gulf of Mexico or the Arctic, it would be impossible to put together meaningful copy for a 64-page folio. But, you'd be wrong. That doesn't mean that I didn't have dig extra hard for a relevant thread. I did. That's because there's just no way to sugarcoat the recent 18-month rough stretch endured by the offshore energy support sector. All that said; we go to press this month as the Baker Hughes rig count rose for the sixth straight week. That's better than a $20 barrel of oil, right?

When it comes to 'all things offshore energy,' one doesn't have to look very far to find the definitive voice for the domestic offshore industry. Aaron Smith, our c-suite *INSIGHTS* feature for this month, wears both of the two most visible leadership hats on the Gulf Coast today. As Executive Director of the fledgling – but already widely respected – Offshore Supply Vessel Dynamic Positioning Authority (OSVDPA) and President of that longstanding voice of the domestic offshore industry, the Offshore Marine Services Association (OMSA), no one else arguably has a better feel for the mood in this sector today. That interview starts on page 12.

Before that happens, though, this month's *BY THE NUMBERS* primer takes an in-depth look at safety; specifically as safety is impacted by the high-tech world of dynamic positioning (DP) for offshore support vessels. The dialogue is taken in part from the International Marine Contractor's Association's (IMCA) annual compilation of DP Incidents (for the year 2014, released in June 2016). It is a fascinating (and sobering) look at just what can go wrong. Beyond that, it also reminds us that even when profits go south, attention to safety can be a profit center, not just a line item expense.

The offshore world isn't the only place where safety is King. The U.S. Coast Guard reminded everyone of that subtle nuance this past summer when it finally, at long last, released the so-called Subchapter M towboat rules. The new rule, at first glance, really isn't going tax anyone. With so many allowances, grandfathered equipment and a softer-than-expected tightening of the rules, many operators are likely breathing a sigh of relief. That doesn't mean that you shouldn't get started right away. You should. In this edition, not one, but two expert industry stakeholders weigh in and lead you through the new matrix.

Last but certainly not least, I typically like to have a shortsea shipping angle in every edition. I don't always succeed. This edition however presented an easy target in the new, innovative and efficient freight service now in place between the Catalina Islands and San Pedro, California. Utilizing cutting edge equipment and leveraging one of the best known names in the West Coast workboat game (Harley Marine), and Greg and Tim Bombard of LA-based Catalina Express have assembled an enviable business model on the left coast. In the pages that follow, you'll find out how and why.



Joseph Keefe, Editor, keefe@marinelink.com

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IMCA's 2014 DP Incident Report (June 2016)

It seems only appropriate, in this our offshore annual edition, and with OSVDPA Executive Director Aaron Smith providing expert commentary and analysis in our ***INSIGHTS*** feature for this month (page 12), that we provide coverage of the International Marine Contractors Association report on a full year of Dynamic Positioning (DP) Incident Summary. That's because even when times are slow in the oil patch – *and the rig counts in the U.S. Gulf have thankfully been on the uptick for six straight weeks as we go to press* – it is also true that safety can't take a backseat just because profits aren't what we would like them to be. Arguably, that makes this report even that much more important.

IMCA, for readers who don't know, is the international association representing offshore, marine and underwater engineering companies, publishes some 200 guidance documents, safety promotional materials, timely information notes and safety flashes. Its members benefit from a core focus on safety, the environment, competence and training, lifting and rigging and four technical divisions – Diving, Marine, Remote Systems & ROV, and Offshore Survey; plus five active geographic sections encompassing the globe. **In other words:** ***all things every offshore stakeholder should care about.***

This report on **2014 DP Incidents** (the most recent year for which data has been compiled) has been prepared internally, and continues to maintain a high degree of confidentiality and security within the DP incident reporting scheme. IMCA's aim here is to develop an improved reporting scheme and a more meaningful analysis and feedback. This year, the comments, initiating event and causes have been incorporated into a spreadsheet for easy comparison. This enables vessels to readily compare actual events with the situation onboard their DP vessel. Readers can link to the spreadsheet by clicking the link at the end of this feature. *The spreadsheet invites input from key DP personnel to consider whether the recorded events of 2014 could potentially affect their own vessel by asking the following questions 'Could this happen on your vessel?';* ***'What, if any, additional safe guards need to be taken?'; 'Is this covered in the vessel FMEA?'*** (FMEA = Failure modes & effects analysis).

For the year 2014, a total of 71 reports were received from members' and others' operating DP vessels. Nevertheless, IMCA is aware that incidents are still occurring and not being reported. Those 71 reports, submitted by 54 vessels, provided an average of 1.31 reports per vessel. Drilling down, one vessel reported six incidents, four reported three incidents, two reported two incidents and forty-two reported only one incident. For the purposes of this report, the following definitions (and event totals) apply:

#	Type Event	Description
32	Incident	Loss of automatic DP control, loss of position or any other incident which has resulted in or should have resulted in a 'Red Alert' status.
25	Undesired Event	Loss of position keeping stability or other event which is unexpected/uncontrolled and has resulted in or should have resulted in a 'Yellow Alert' status.
14	Downtime	Position keeping issue which would not warrant a 'Red' or 'Yellow' alert, but where loss of confidence in the DP resulted in stand-down from operational status for investigation, rectification, trials.

As in previous years neither the type of vessel activity, DP class, nor geographical locations have been analyzed. IMCA reasons that DP classes and geographic location give an unrepresentative view of the distribution of incidents amongst vessel types, DP class and geographic location and this could lead to erroneous assumptions being made based upon this data.

A secondary cause was identified in 23 of the reports and it should be noted that seven of these (30%) were attributed to human error and six (26%) attributed to electrical failings. The largest percentage as the main cause for incidents for 2014 was thruster/propulsion; this was the same in 2012 and 2013. In 2014, computer was the second most common cause followed by power and references as the third most common causes. Following these as the main cause are human error, external factors and environment. There were no recorded main causes attributed to electrical failings.

Thruster/propulsion issues proved to be the main cause for dynamic positioning (DP) incidents in 2014 accounting for 36% of such events; followed by computer issues at 18% and power and references both at 13%. Following these as the main cause are human error (10%); external factors (3%) and environment (also at 3%). There were no recorded main causes attributed to electrical failings.

"These types of report are about learning from experience, so it makes sound sense to encourage anyone looking at them to consider how they, and their vessel, could be affected," explains Richard Benzie. "Preparation of the 2015 reports is already underway. We encourage all who experience incidents or events to report them to incidentsreports@imca-int.com; they will be made anonymous and approved by the originating organization prior to distribution. Help us to help others learn from your experience."

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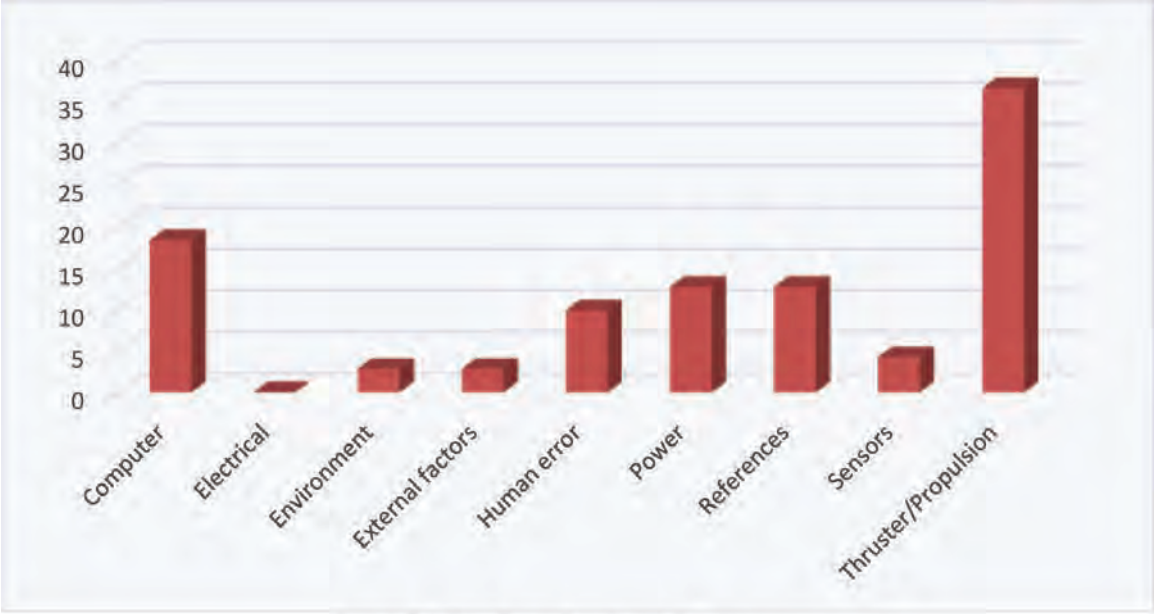

Figure 2 – Number of incidents by main cause

Figure 2 identifies the number of incidents by the nine main causes.

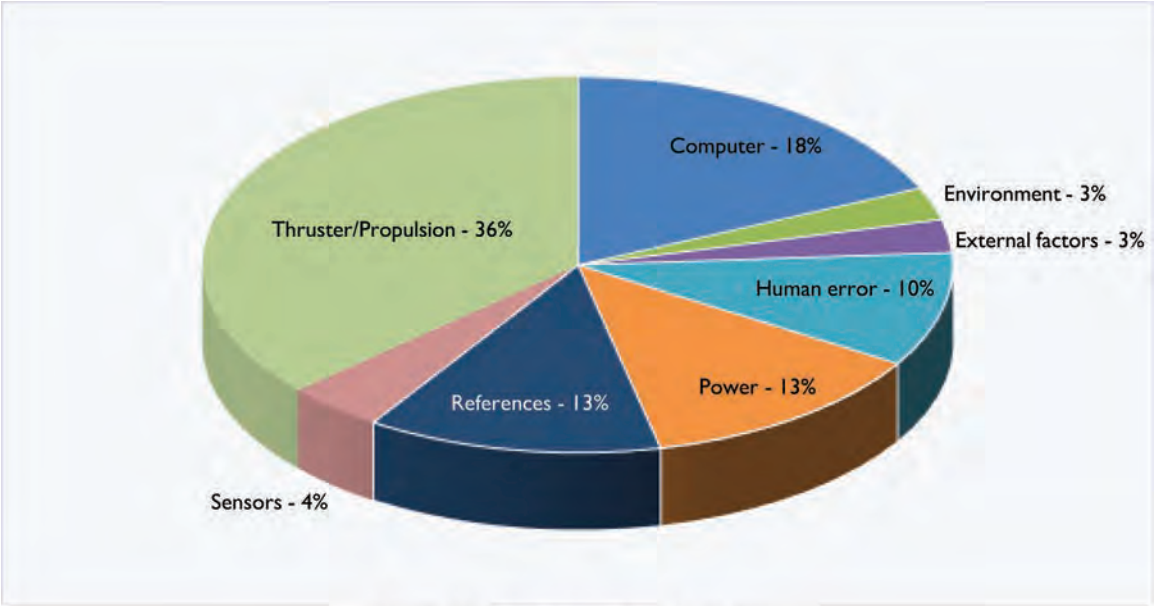

Figure 3 – Main cause – all incidents

The full IMCA report has been analyzed, made anonymous and can be freely downloaded here:
www.imca-int.com/media/252294/imcam231.pdf

For IMCA's 2014 DP Station Keeping Event, visit:
www.imca-int.com/media/237783/2014_dp_station_keeping_event_summary.xlsx

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President and CEO, Offshore Marine Service Association (OMSA)

Executive Director, OSVDPA

As the Executive Director for the Offshore Supply Vessel Dynamic Positioning Authority (OSVDPA), Aaron Smith is charged with managing the day-to-day operation of the Authority. Along with the OSVDPA Board of Directors and Technical Advisory Council (TAC), Aaron has helped to craft the Authority's dynamic positioning operator (DPO) certification program. This includes ensuring that the program is ultimately accepted by the offshore energy industry, and its many international and domestic counterparts.

Prior to joining OSVDPA, Aaron was the Deputy Chief of Staff and Legislative Director for Congressman Jeff Landry (LA-03). In this role, Aaron was responsible for developing strategies to turn the Congressman's vision into legislative victories. In addition to assisting with the Coast Guard and Maritime Transportation Act of 2012, Aaron also drafted and secured House-passage of legislation increasing Louisiana's share of offshore royalties and ensuring offshore wind farms must comply with the Jones Act. Prior to joining Congressman Landry's office, Aaron served in similar capacities for former Congressmen Kenny Hulshof (MO-09) and Henry Brown (SC-01) as well as current Congressman Aaron Schock (IL-18). Based in Metairie, Louisiana, he remains both geographically and strategically close to the constituency that he serves today.

Concurrent – but separate from his OSVDPA responsibilities – Smith also serves (since October of 2015) as President & CEO of the Offshore Marine Service Association (OMSA). The two roles complement one another, with similar and sometimes overlapping membership and stakeholders. Incorporated as a nonprofit, OSVDPA seeks to improve the safety of the maritime industry by improving the quality and quantity of certified DPOs. OMSA is the leading association of and spokesman for the offshore marine transportation service industry in the United States. OMSA proactively fosters, develops and promotes ideas that advance the common good and the interests of its members with governmental and regulatory bodies across the globe. Representing more than 225 member companies, including approximately 100 firms that own and operate marine service vessels, OMSA also seeks to encourage and advance the highest standards of safety and environmental protection among its member companies. Listen in this month as Aaron Smith zeroes in on the offshore sector and the issues important to those stakeholders. Arguably, no one else today is in better position to do so.

What's the number one thing on your plate when wearing the hat of OMSA's President? Why, and what are you doing about it?

Without question, the downturn in the market makes everything more difficult. It makes normally small issues seem like big challenges, and big challenges seem monumental. From the Jones Act to regulatory response, to state taxes, to even the administration of our association. Unfortunately, OMSA can't influence the price of oil, so we can't address this challenge, but we can help our members try to cope with its effects. Thus, things are business as usual; the great team at OMSA is striving to provide an increased service to our members during this trying time. We've added a new conference to our annual schedule; we created a new membership category, increased communication with our members, are becoming involved in new issues, and are watching every dollar we spend. As a result, OMSA will come out the other side of this downturn as a stronger organization.

Besides the elephant in the room that is the downturn in the energy markets, what else is occupying OMSA's time these days?

It's always surprising to see where the next challenge comes from. This year's surprise came from the Bureau of Ocean Energy Management (BOEM). As part of almost every recent offshore lease sale BOEM has declared that offshore activity doesn't affect onshore air quality. Most people would think those statements were proof the existing national and international regulations on vessel emissions were working. Yet, BOEM published a new massive rule regarding offshore air emissions. After surveying our members, we determined that the rule would cost OMSA members at least $270 million in just initial compliance costs. Yet, the agency's own analysis said they were unsure the rule would have any positive effect on the environment. For that reason, we worked with our members to ensure these detrimental and unnecessary impacts were well documented in the docket. OMSA also worked with our industry partners (API, NOIA, OOC, IADC and others) to have an amendment passed by the House of Representatives that prohibits this regulation from moving forward before it is proven necessary and cost effective. This amendment was championed by U.S. Representatives John Culberson (R-TX) and Steven Palazzo (R-MS). Additionally, U.S. Senator Bill Cassidy (R-LA) led a letter from 16 of his Senate colleagues to BOEM echoing OMSA's message of not moving forward with the regulation until it is empirically proven to be beneficial. All of that said, OMSA recently sat down with BOEM and found the agency to be very receptive to our comments. As such, we are hopeful that if these regulations are promulgated, they will be done so in a way that provides a positive environmental impact without negatively affecting our members.

You mentioned working with BOEM, but what about the other regulatory agencies? How is OMSA's relationship with those agencies?

OMSA and the Coast Guard continue to have a great working partnership. In fact, at least twice a year the OMSA Board of Directors and Admiral Paul Thomas meet for the OMSA/Coast Guard Partnership. During these meetings, we spend hours in a constructive dialogue regarding safety improvements and other issues impacting the offshore industry. Sometimes, we agree to disagree, most of the time we find a pathway forward. Even when we don't find consensus, we know that our regulators are listening to the needs of our industry. That willingness to listen extends down to the District and Sector level as well. We have local Coast Guard personnel at almost every OMSA meeting. Regardless of the level we are speaking to, our association is always impressed with the Coast Guard's willingness to find a solution, instead of looking for reasons to say "no." Additionally, OMSA has a very good partnership with the U.S. Customs and Border Protection, the agency charged with enforcing the Jones Act. We were especially pleased to see CBP announce in July the formation of the National Jones Act Division of Enforcement (JADE). This office—headquartered right here in New Orleans—will be a clearinghouse for all coastwise trade and Jones Act issues and assist CBP and industry partners in understanding and enforcing the Jones Act and coastwise trade laws. We're certain that the formation of JADE, will lead to a furthering of our partnership.

You bring to OMSA deep Washington, D.C. experience from the legislative side of the equation. What can maritime organizations like OMSA do better to communicate "the message" to our elected officials?

The best thing OMSA—and anyone else wanting to affect policy—can do is, be involved. Elected officials, be they local, state, or federal officials can only represent and advocate for your views if they know what your views are. The OMSA Board of Directors has always understood that fact and has always prioritized political involvement. That said; the recent Louisiana budgetary fights and other legislative and regulatory issues have caused us to be more involved in politics and policymaking. For this reason, we've redoubled our efforts in Washington and have become more involved in Baton Rouge than ever before. Some examples of this involvement include having Louisiana Governor John Bel Edwards come and speak to our members and, this year, we took more members to DC for our annual fly-in than ever before. In short, the old adage about policymaking remains true, if you're not at the table, you're probably on the menu.

The past 18 months have been especially difficult for Jones Act proponents – the attacks from various coalitions have ramped up considerably. Where are we now in that battle? Is the situation still precarious?

To be truthful, I'm running out of ways of telling the Board of Directors and membership of the latest unprecedented attack against the Jones Act. While these attacks are unfortunate, they haven't moved the needle. Besides a non-compulsory sentence in the unofficial part of a defeated budget alternative and single plank in the non-binding Republican Party platform, the Jones Act remains intact. Every attempt to weaken the actual law has been decidedly defeated. Of course, that is a very good thing. The

Image: Harvey Gulf

40,000 U.S. Flag vessels in operation (and the more than 170 new vessels that are built every year) employ 80,000 Americans directly and 500,000 indirectly. As important as those jobs are, even more important is Act's preservation of our nation's shipbuilding capability, an asset the DOD has said would cost tens of billions to replace if the U.S. flagged fleet went away. Moreover, the Jones Act is important to our Homeland Security, keeping our 95,000 miles of shoreline and 25,000 miles of navigable waterways safe. Thus, those of us that are Jones Act supporters have a great story to tell. And fortunately, we have a wealth of good friends on Capitol Hill that are more than happy to help us tell that story. Case in point; U.S. Representative Garret Graves (R-LA) did a masterful job of defending the Jones Act during a recent Congressional hearing. Chairmen Shuster (R-PA) and Hunter (R-CA) have also continued to be champions for the Jones Act as well. So, while I don't like having to relitigate the Jones Act every quarter, these fights have strengthened our connection to our existing allies and allowed us to build relationships with new allies.

You became the President of OMSA last year, and are still working with the OSVDPA. Is that a sign that the two organizations are merging?

No, OMSA and OSVDPA continue to be separate organizations with separate Boards of Directors, finances, and even addresses. My circumstance is like so many in the oil patch right now, we're all trying to do more with less. Thus, I'm far from the only person in our industry wearing two hats right now. This arrangement works right now because both organizations have engaged, committed, and immensely knowledgeable Boards of Directors and staffs of industry-leading experts.

What is the current status of OSVDPA's certification program?

The OSVDPA's DPO certification scheme is operational and working well. Mariners are taking our assessments and we are issuing OSVDPA DPO Certificates. We worked hard to make our assessments (the cornerstone of our certification system) as close to real life DP operations as possible and the feedback has so far been that we hit the mark. Additionally, mariners have found our website to be intuitive and easy to use. Hats off to OSVDPA Administrator Ben Berson for designing the site and making it run efficiently. Ben's system and customer service recently received a great vote of confidence with a letter from Captain Chuck Williams who wrote to us to say, "This has been absolutely hands down the best and easiest interaction I have had with any maritime governing body." As we work in such a close-knit and—quite frankly—wary industry, we greatly appreciate that sort of feedback.

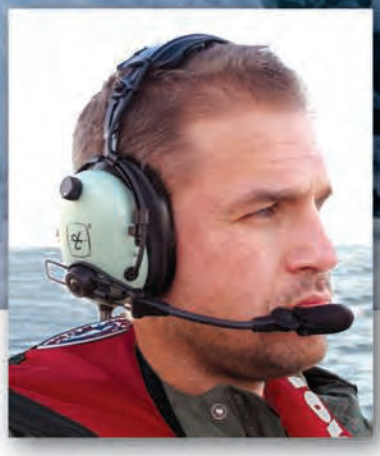
What about the training centers, where do you stand in accrediting the centers where future DP operators will take their courses and conduct assessments?

I'm pleased to report that in July, the OSVDPA accredited the Marine Training Institute as its first accredited Training Provider. TMTI impressed us with their professionalism, commitment to safety, and ability to uphold the OSVDPA's high standards. Our accreditation process is not easy. After TMTI filled out what some referred to as a mountain of forms regarding their facility, equipment, curriculum, and procedures; and the OSVDPA reviewed all of this information, the OSVDPA and the independent auditor we contracted with camped out at TMTI for more than three days reviewing and testing every aspect of TMTI's operation. Additionally, we have recently received an accreditation request from GE's Marine Technical Training Center in Houston. Kongsberg Maritime has also submitted forms to have their Houston training center accredited. We are currently reviewing each of these training providers' applications and hope to conduct their accreditation site visit sometime in the near future. Our hope is that by the end of the year we have training providers accredited across the Gulf Coast.

What about other stakeholders? How have they reacted to the progress made by the OSVDPA?

Some of the best news the OSVDPA received came in late July. On the 29th of that month, the U.S. Coast Guard issued an informal information note in the Federal Register, stating that the USCG was "aware of three industry accepted training certification programs for dynamic positioning," specifically listing the OSVDPA, the Nautical Institute, and those programs accredited by DNV-GL. The notice did state, and the OSVDPA understands, that Coast Guard "does not endorse or recommend" any one DPO certification scheme, however, it was great to have the Coast Guard place the OSVDPA on equal footing with the other DPO certification schemes. Additionally, I'm looking forward to next month when the OSVDPA will present a paper at the Dynamic Positioning Conference 2016 in Houston as sponsored by the Marine Technology Society's DP Committee. This paper will be a statistical review of the assessments conducted by the OSVDPA over the past few months, in this review we will show what common faults and failures we have found in these assessments. It is our hope that by presenting this information, we can show the industry where our collective weaknesses are, and once that point is known we can work to fill those gaps and hopefully prevent incidents.

How to keep calm when the sea is anything but.



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"A Few Good Men" Thanks for the Leadership!

By Michael J. Toohey, President & CEO of Waterways Council, Inc.

Toohey

Change is inevitable, especially in Washington, DC, and particularly within the U.S. Army Corps of Engineers. Waterways Council, Inc. (WCI) is a strong partner with the Corps, as navigation is a critical business line within its Civil Works' mission.

Over the last year, we have seen some of the Corps' best and brightest officers and civilians retire after decades of service to the Army, to the Corps of Engineers, to the inland navigation industry and of course, to the nation. And while they have been succeeded by a new crop of dedicated, seasoned leaders who will continue to serve as reliable partners, WCI will miss what these stalwarts brought to the collective table to maintain and modernize our inland waterways system.

Last August (2015), Major General John W. Peabody, Deputy Commanding General for Civil and Emergency Operations, retired after a career that spanned more than 35 years in numerous leadership positions including the Corps' Pacific Ocean Division, Great Lakes and Ohio River Division, and the Mississippi Valley Division, and as Executive Director of the Inland Waterways Users Board.

In an article in WCI's newsletter *Capitol Currents* written just after his retirement, General Peabody noted that within the Corps, "the most notable area of improvement is in Planning, where we have nearly tripled our rate of study completion over the last three years. In the navigation program unscheduled lock outages have been declining in number and duration for the last few years, due in part to a more focused risk reduction performance metric instituted in 2013."

General Peabody was succeeded by MG Ed Jackson, PE, who came to Corps' headquarters after serving in a variety of command assignments that included Commanding General (Forward) of the Corps of Engineers' Transatlantic Division in Kabul, Afghanistan for Operation Enduring Freedom. He was also Commanding General of the Corps' South Atlantic Division in Atlanta, the Commander and District Engineer of the Little Rock District, and Commander of the 54th Engineer Battalion (Mechanized) for Operation Iraqi Freedom among many impressive command assignments.

In speaking to WCI's Board of Directors and 2016 Washington Meeting attendees last March, General Jackson said that he was committed to delivering on Corps' commitments, to strategic engagement, to continuing the Corps' Civil Works Transformation, and to managing transitions, noting, "The nation's security depends on its economic strength, and its economic strength depends on its infrastructure."

Last May, Lieutenant General Thomas P. Bostick retired as the Corps' Chief of Engineers after serving the U.S. Army for 38 years. In this role, he served as the senior military officer overseeing most of the nation's civil works infrastructure and military construction, and was responsible for more than 37,000 civilian employees and 600 military personnel who provided project management and construction support to 250 Army and Air Force installations in more than 100 countries around the world. Prior to his work with the Corps, LTG Bostick served as Deputy Chief of Staff, G-1, Personnel, U.S. Army, responsible for developing, managing, and executing manpower and personnel plans, programs, and policies for the Army. General Bostick also served in a variety of command and staff assignments both in the Continental United States and overseas.

Proud of many things during his career with the Corps, upon retirement, General Bostick noted that "Our efforts to educate stakeholders, including Congress and the Office of Management and Budget (OMB), are paying off. President Obama, Vice President Biden and members of Congress are now talking more about our infrastructure due to our efforts to educate leaders about our pressing water resources needs."

General Bostick was succeeded by LTG Todd Semonite as the 54th Chief of Engineers of the Corps of Engineers. General Semonite had last served as Deputy Commanding General, Combined Security Transition Command in Afghanistan. Before that, he was Deputy Commanding

General for the Corps.

General Semonite, in a series of "On the Road Again" YouTube videos at various Corps' lock projects, said, "Technology reaps innovation and that is what the Corps is going to do. We have to continue to deliver on time – we are Building Strong and we are going to finish strong!"

Also last May, Brigadier General Mark Toy was named as the new Commanding General of the Great Lakes & Ohio River Division of the Corps to succeed Brigadier General Richard Kaiser, who headed out to serve in Afghanistan. General Toy was previously the Commanding General of the Corps' South Pacific Division.

On August 3, Steven L. Stockton, P.E., SES, retired as Director of Civil Works for the Corps, the highest civilian position in the agency. He served more than 45 years in service to the Federal government, 41 years with the Corps of Engineers. Steve had been extremely generous with his time to industry over his career and his wise counsel will be sorely missed by many.

As Mr. Stockton's successor, we welcome James Dalton, who is serving as the Acting Director of Civil Works. Before this, he served as Chief of the Engineering and Construction (E&C) Division and was responsible for policy, program, and technical expertise in the execution of multi-billion dollars of design and construction programs for the U.S. Army, U.S. Air Force, Department of Defense, other Federal agencies, and over 60 foreign nations. He also served as the Corps' South Atlantic Division Regional Integration Team (RIT) team leader, the South Pacific Division RIT Leader, the USACE Climate Change Adaption Committee Chair, and the lead for USACE on Resilience.

Our country is stronger for having all of these distinguished gentlemen serve the U.S. Army and the U.S. Army Corps of Engineers. Our waterways – and all that they bring to the United States – will continue to support commerce and all their beneficiaries under the direction of these fine Corps leaders.

A grateful and strong nation thanks them all.

Rethinking Inland Infrastructure Finance

P3: An alternative to tolls or lockage fees in public-private partnerships for inland waterways.

By James A. Kearns

Kearns

Within the generally sorry state of the U.S. inland waterways infrastructure, there are some locations where conditions are particularly dire. Among those in this latter situation are several locks and dams on the Illinois River, including the La Grange Lock and Dam and the Peoria Lock and Dam, both of which were completed in 1939. Both of them are on the U.S. National Register of Historic Places, which is a dubious distinction for a major transportation facility of the twenty-first century.

The farmers in Illinois provide a significant portion of our nation's corn and soybean crops, and the Illinois River plays an important role in getting those crops from the farms in Illinois to the Mississippi River and thence to New Orleans for export. It would be a major hardship for many corn and soybean growers in Illinois if either of the La Grange or Peoria lock and dam facilities were to become inoperable. However, there remain many competing needs for new construction, rehabilitations and major repairs throughout the inland waterways system, and the funding provided by Congress never addresses more than a small fraction of these needs.

Corn and soybean growers in Illinois are understandably worried, therefore, that one or both of the La Grange or Peoria lock and dam facilities might fail before the necessary money is found to keep that from happening. Reflecting this concern, two organizations representing these constituencies—the Illinois Corn Growers Association (ICGA) and the Illinois Soybean Association (ISA)—have recently conducted extensive studies and proposed alternative solutions to fund the refurbishment or replacement of these locks and dams. Both organizations gave detailed presentations of similar solutions at the 12th Annual Waterways Symposium in New Orleans in November 2015.

Public/Private Partnerships

Both organizations propose using public-private partnerships in which some of the funding would be provided by private parties in some combination of debt and equity. As has been previously recognized with other public-private partnership proposals, such a structure needs to include a revenue source to provide economic return to the private party lender or equity investor. Both the ICGA and the ISA proposals include payments in the nature of fees or charges to be paid based on usage of the locks in order to generate this revenue.

By and large, the inland waterways industry has opposed having such lock usage fees, by whatever name they might be called, as an element of any proposed public-private partnership for funding improvements to the inland waterways infrastructure. In April of this year, for example, Waterways Council, Inc. submitted letters to the Senate Environment and Public Works Committee and the House Transportation and Infrastructure Committee signed by 75 organizations, including carriers, shippers, port authorities, labor unions, and trade associations (including several agricultural industry groups), opposing the imposition of tolls or lockage fees on inland waterways transportation. This opposition is repeatedly voiced by representatives of the inland waterways industry at conferences and in publications whenever any suggestion of such tolls or lockage fees arises.

Photo: Ruben Diaz

Those who propose tolls or lockage fees typically emphasize that what they are proposing this is just one suggestion and that other ideas are welcome if they will address the undisputed and urgent needs at hand. To help the inland waterways industry avoid being perceived as only naysayers who oppose tolls and lockage fees but who do not offer constructive alternatives, I wish to present—or perhaps it might be more accurately said, to recall—a public-private partnership approach that largely follows what has been recently suggested by ICGA and ISA, but without the tolls or lockage fees component.

The models of debt and equity financing that have been suggested by ICGA and ISA recall those that were proposed in studies done in 2013 by the Texas Transportation Institute for the United Soybean Board and by the Horinko Group for the U.S. Soybean Export Council, but with this difference: the 2013 studies included proposals to use some portion of the fuel tax revenues that are paid into the Inland Waterways Trust Fund to provide the necessary debt service and return on equity for such financing.

Sorting out the Funding Rules

The use of funds received by the Inland Waterways Trust Fund to support the issuance of bonds is also contemplated by Section 2004 of the Water Resources Reform and Development Act of 2014 (WRRDA 2014). That section of the statute requires the Army Corps of Engineers to study "potential benefits and implications of authorizing the issuance of federally tax-exempt bonds secured against the available proceeds, including project annual receipts, in the Inland Waterways Trust Fund." By a memorandum dated June 28, 2016, the Corps issued "implementation guidance" which was simply a report that the study has not yet been started since no funds have yet been specifically appropriated for it.

In the model presented by ISA at the Waterways Symposium in November 2015, annual revenues of approximately $11 million were projected to support a total of approximately $150 million of combined debt and equity financing. The ISA model also assumed that there would be contributions from the Federal government and other sources totaling approximately $405 million, for a total of approximately $555 million, which could be applied to address the needs of several lock and dam installations on the Illinois River in addition to those of La Grange and Peoria. The ISA model assumed a financing term of 30 years, bond proceeds (i.e., debt) in the amount of $128 million in two tiers with interest rates of 3.50% and 4.75%, respectively, and an annual return of 11.0% on an equity investment of $22 million.

Photo: Stefan Danielski

A Twist on the Plan

A variation on this theme that should be considered would be the issuance of the same amount of total financing, i.e., $150 million, but comprised entirely of bonds or other forms of debt. According to the presentation by ISA, this amount should be sufficient to address the needs of at least the La Grange Lock and Dam and the Peoria Lock and Dam. Assuming that this bond financing would have the same term as in the ISA model, i.e., 30 years, and that the same amount of annual revenue, $11 million, would be available from the Inland Waterways Trust Fund for the payment of interest and principal on these bonds, this would translate into an effective interest rate of 6% on the bonds, which would be attractive in today's interest rate environment.

The ISA model assumed an interest rate of only 4.75% on the portion of the bonds with a Standard and Poor's rating of BBB, generally considered the lowest rating that qualifies as investment grade. Even further, if those bonds were tax-exempt, a possibility contemplated by Section 2004 of WRRDA 2014, then such an interest rate would represent an even higher effective return to the holder of such bonds. On the other hand, if the interest rate on the bonds turned out to be less than 6%, then either a greater amount of financing could be raised for the same $11 million of annual debt service, or the required annual debt service on $150 million of bond proceeds would be less, or the length of the financing term could be shortened. Anyone who has refinanced a home mortgage to take advantage of declining interest rates knows how these factors relate to each other.

To be sure, committing a certain amount from the Inland Waterways Trust Fund to support a long-term bond financing would make those funds unavailable for any other infrastructure projects during the term of that financing. However, the ISA and ICGA models, the studies for the United Soybean Board and the U.S. Soybean Export

Council, other proposals for public-private partnerships, and the Corps of Engineers itself all recognize the cost savings and other advantages that come from borrowing against a future revenue stream to obtain full funding of a project up-front, rather than paying for it piecemeal. To return to the home mortgage illustration, no one buys a home one room at a time, year by year, as each year's current income allows.

In a letter to Congress earlier this year, the Inland Waterways Users Board reported that, for the 10-year period 2005–2014, each penny of the fuel tax paid by carriers on the inland waterways generated $4 million each year for the Inland Waterways Trust Fund. This means that, in effect, less than three cents of the current 29-cents per gallon fuel tax would need to be allocated to supporting a bond financing of $150 million.

This alternative proposal would require some legislative changes in order for it to be implemented, but so also would the imposition of some form of toll or lockage fee. Each Water Resources Development Act that is passed by Congress provides an opportunity to enact such changes, as most recently evidenced by the important steps taken in WRRDA 2014. There is currently pending in Congress a bill that will hopefully become the Water Resources Development Act of 2016, and efforts are being made to have such enactments restored to a biennial schedule. Each of them will provide an opportunity to find a way to use public-private partnerships to provide funding to restore and improve the inland waterways infrastructure. In this article, it can be seen that this would be feasible – without tolls or lockage fees.

BRYAN CAVE

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SINK OR SWIM

Navigating interesting times has the nation's shipbuilding industry searching in unusual places. The answers could be blowing in the wind.

By Joe Hudspeth

Hudspeth

Conducting commerce and forecasting the future for shipyards is akin to setting out in uncharted waters. For some, the voyage might prove to be easy sailing with favorable winds. Other times, it can be a rough ride, forcing long and unprogressive diversions. In the worst cases, one might run aground temporarily, hit rock bottom, capsize belly up, or be forced to turn around and give up.

Just as the most skilled sailors know how to watch for and navigate storms, America's shipyards have also proven to remain fluid and adaptive to the winds of change and current trends. The disappointing pull back of drilling efforts in the Arctic and poor market conditions for the American Gulf of Mexico has collectively created a precarious environment for several of our nation's yards. Fortunately, many of the most heavily impacted yards appear to be on the right tack to ride out the storm, many through diversification of their work portfolios.

Absence of the Arctic

The low oil prices that, in part, caused things in the Gulf to dry up are also among the factors of safety, environmental, and political concerns that have cast a dim shadow on any polar promise. West Coast shipyard giant, Vigor Industrial, built a large infrastructure in part to provide key support for the Arctic oil and gas offshore trade. Without any definite future plans for oil companies to make a go again in the northern circle, Vigor has nevertheless been able focus their efforts on their repair business and towards ferry construction projects, which has kept their many yard locations busy.

Vigor is currently constructing several car ferries for Washington State Ferries, two car daytrip ferries for Alaska Marine Highway System, and a couple of passenger ferries for California's San Francisco Bay Ferry overseen by the Water Emergency Transportation Authority. Beyond that, key acquisitions of smaller yards have opened up markets in other sectors for this West Coast giant that have markedly diversified and brightened this builder's portfolio.

Mountain Movers

Gulf builders have faced an even tougher obstacle in redirecting their capabilities to other unaffected and growing segments of the marine industry. The ferry market from coast-to-coast seems to be robust, providing opportunities for many yards nationwide, including those in the Gulf. Conrad Shipyard, for example, has been busy with the recent delivery of a 235'new car and passenger ferry for the Woods Hole Steamship Authority. Separately, Horizon Shipbuilding and Metal Shark have won awards to deliver up to 19 aluminum catamaran passenger ferries to support Hornblower's new contract with Citywide Ferry Service in New York.

Beyond this, Metal Shark is venturing outside of their core market of smaller military craft and Horizon is shifting focus from the large steel offshore support vessels that they are most typically known for. This project will prove to be one of the most ambitious in recent years and if executed successfully could demonstrate a turning point for the industry. Diversification seems to be the key.

Winds of Change

Those affected most by the slow running oil patch may soon see the idle period end. One place where relief may be waiting is in America's new offshore wind farms. The first offshore wind farm is nearly complete and the very first turbine has been installed. While the initial farm of 5 turbines is relatively small, many other large scale farms are in the development stage. The obstacles mounted against the realization of domestic, marine-based wind have been substantial. One such issue involves the lack of domestic, Jones Act eligible support vessel infrastructure.

While many underutilized vessels from the Gulf could be redeployed to the coastal farms planned for the eastern seaboard, the move would only be interim and temporary. Barrel prices are sure to rise and the oil rigs will soon be back at work, beckoning high demands for crew boats, supply boats, barges, and tugs. While there is some overlap in required capabilities, the use of gulf-type crafts – not built-for-purpose hulls – should only fill in while purpose-built wind support vessels can be custom designed and constructed. And, that's already happening.

Too Good to be True

Conventional wisdom holds that increased competition is good for the market. For example, when the offshore industry keeps industry in full production, domestic ship-

"Those affected most by the slow running oil patch may soon see the idle period end. One place where relief may be waiting is in America's new offshore wind farms. The first offshore wind farm is nearly complete and the very first turbine has been installed."

yards tend to remain segmented in their areas of market focus. The segmentation extends not only to applications but can also restrict shipyards to focus more regionally. And when many yards vie in for fewer projects, there also looms the possible downside of builders taking on projects that are fairly specialized and potentially beyond their capabilities or areas of expertise.

There are there are deals to be had; both good and bad. Recent reviews of several competitive federal awards have shown a significant disparity and inconsistency in competitive pricing, with awards arguably trending lower than typical market value. Nationwide prices for materials remain highly competitive and transparant, hence any pricing disparity amongst shipyards should come only from variances in labor rates and assessed labor hours—most likely rendering an anticipated variance of 10 to 20%.

While the federal government is, in theory, on guard for those looking to buy their way into contracts, there is a lot of gray area and contract officers have been willing to award contracts to shipyards at or below cost. The purchase process tends to be circular and while lower prices may be offered on the front end, the builder and eventually the purchaser will arrive at a point of reconciliation whereas more money will need to be invested in the project in order for the full scope to be supplied.

Around the Bend

More new construction opportunities are on the horizon, with the promise to bring good fortune to those who endeavor set sail on such a course. New segments in hybrid vessels and unmanned technology will require specialized expertise and the shipbuilding industry will need to find a way to meet the likely demand. Likewise, the new federal fiscal year will begin in October and regardless if spending bills are approved or if a continuing resolution exists, there will be new vessel needs. True, some uncertainty exists for the significance and fallout of the newly released U.S. Coast Guard Subchapter M regulations for inspected tow vessels. Those who are quick to chart a successful implementation plan are sure to find a steady stream of work.

Unfavorable tides will undoubtedly continue to shift sands and whirlpool our industry through unstable market conditions, restrictive regulations, and stringent environmental factors. Shipyards that triumph through rough weather eventually prove to be stronger and more sustainable in the long run. Thankfully, the industry as a whole is not in dire straits, but current conditions should prove sobering regarding the importance of keeping the Jones Act securely in place. Here's hoping that all yards will soon be underway with fair winds and following seas.

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The Advent of Subchapter M

A primer: the new rule and guidance for operators as they search for the right mix of compliance options to meet their specific and unique needs.

By Ian McVicker, ABS Operations Coordinator for towing Vessels

McVicker

For several years, the towing vessel industry has been waiting for final publication of the U.S. Coast Guard's Subchapter M regulation. While some have begun to proactively comply with the expected regulation, the unknowns of the new requirements have left many standing by for a final decision. With the final regulation being released to the public and entering into force on June 20, 2016, the time to act has arrived.

The long awaited final rulemaking contains many of the same requirements published in the Notice of Proposed Rulemaking, but includes some significant changes as well, specifically concerning existing vessel requirements.

First, Subchapter M is applicable to all U.S. flag towing vessels engaged in pushing, pulling, or hauling alongside, with some exemptions including vessels less than 26 feet in length; vessels engaged in assisting recreational vessels; workboats operating within worksites; and vessels subject to other subchapters. There also are some exceptions to the rules for vessels used solely within an approved Limited Geographic Area, for Harbor-assist, and response to emergency or pollution event.

Subchapter M includes a flexible list of compliance options, allowing the towing industry to approach company and vessel compliance in a manner that works best for each individual company, and vessel. Owners and operators have the opportunity to choose from several options.

The Towing Safety Management System (TSMS) Option uses approved, third-party organizations to perform compliance verification. Recognized Classification Societies already are approved as third-party organizations.

There are four paths to compliance in the TSMS. Using a Recognized Classification Society permits alternate compliance options, including classing vessels, ISM, and load line certification. These options are based on recognized standards, which means industry can begin now. Another option is the External Survey Program, which relies on an approved third party to complete compliance requirements. The fourth choice is an Internal Survey Program that employs a combination of approved third-party and towing company personnel to complete all compliance requirements.

Some companies will opt to go through the U. S. Coast Guard, a choice that puts USCG personnel carrying out compliance operations, including dry-dock/internal structure examinations and annual vessel inspections.

The regulatory compliance timeline begins with a two-year implementation period through July 20, 2018, or when a vessel obtains its initial Certificate of Inspection (COI), whichever comes first. The implementation period allows for companies to prepare their vessels for compliance. With a few exceptions, all vessels, whether they have been issued a COI or not, must meet Subchapter M standards no later than July 20, 2018.

Exempt vessels must meet alternative requirements:

- *Towing vessels must meet Watertight and Weathertight Integrity standards by July 20, 2016;*
- *New Installations not "Replacements in Kind" made after July 20, 2016, must perform a Verification of Compliance with Design Standards, meeting the requirements for "New Vessels;"*
- *Major Conversions must perform a Verification of Compliance with Design Standards, meeting the requirements for "New Vessels;"*
- *New Towing Vessels, those with a "keel laid" date after July 20, 2017, must obtain a COI before entering service.*

The regulations include a compliance phase-in period, allowing industry to complete the required dry-dock examinations, and the Coast Guard to inspect and issue vessel COI's. The owner or operator has five years from the date the COI is issued to complete any delayed implementation requirements. The compliance phase-in dates are:

- *July 22, 2019 – 25% of fleet;*
- *July 20, 2020 – 50% of fleet;*
- *July 19, 2021 – 75% of fleet;*
- *July 19, 2022 – 100% of fleet;*
- *Companies using the TSMS option must have a Safety Management System Certificate in place on a vessel for at least six months before the vessel can be issued a COI.*

Many changes were made in the final rule for existing towing vessels as it pertains to Machinery and Electrical Systems and Equipment. The proposed rulemaking, Part 143 contained two sections addressing "deferred machinery" requirements for vessels. In the final rule publication, these two sections were removed, and most requirements contained moved to "New Vessels Only" requirements. Existing towing vessels now only have two delayed implementation engineering requirements for Towing Machinery and the Pilothouse Alert System. The Pilothouse Alert System will only be required on vessels greater than 65 feet.

One thing is for certain as organizations begin to take the steps to comply with the final rule, no one size fits all solution exists. It is important for organizations, regardless of size, to make sure they find the right mix of compliance options to meet their specific and unique needs.

Subchapter M: Post Publication Highlights

An extra T in TSMS, nowhere left to hide from systems documentation, and an emphasis on continuous improvement.

By (Captain) Katharine Sweeney

McVicker

Back in January of this year, the United States Coast Guard (USCG) predicted Subchapter M would be released in spring 2016. I put my money on June 20, that being the very last day of spring, and on June 20 the long-awaited regulation was finally published.

Subchapter M doesn't come with much we weren't expecting, which is a good thing. Surprises in this industry are not met with enthusiasm. The USCG should be complimented in that regard. Aside from its impact on approximately 5,500 vessels and 1,100 companies, this legislation was needed, and many companies were mostly there already.

Some people even thought the legislation did not go far enough. I, for one, believe it is a start, and starts are important. Slow steps are needed to enact monumental change, as is careful deliberation. Risk assessment is a requirement in this new regulation. The same risk assessment should be used by the USCG and industry partnership to indicate how much further the regulation needs to go. Only in time will we understand what was left out of the original subchapter and still needs to be addressed.

My question is why the regulation is called a Towing Safety Management System (TSMS). The industry should demand the "T" be dropped as the regulation doesn't just apply to towing operations. When the vessel is running light boat with no tow, does that mean the SMS doesn't have to be followed? Sorry, no, it is still in effect; tow or no tow. The TSMS actually applies to the whole operation of the company, the vessels and the crews. "Safety Management System (SMS)" is a more generic and appropriate term in my view.

Subchapter M, like other subchapters, is concerned with vessels of a specific size and type. Subchapter M applies to vessels 26' or greater engaged in certain towing or pushing operations. Enough said. There is no need to add the word "Towing" to "Safety Management System."

You may be wondering about the Certificate of Inspection (COI) option. Coming from the unlimited tonnage side of the industry, I call this option "old style," because it's what we had before most companies went with the Alternative Compliance Program (ACP) back in the 1990's. Even with the COI option, you will still be required to train your employees and ensure they follow procedures. The USCG will require a "Health and Safety" manual or plan on board and you will still need some type of system.

What will this change mean for crews? No matter where you go, or who you work for, some sort of system will be in place to ensure a practice of *"do-what-you-say, say-what-you-do and prove-it."* For those captains and crew that hate paperwork and retreated to smaller tonnage, your time is

AWO

up. Perhaps you can find work on a vessel less than 26' in length (and is not involved with hazardous or petroleum cargoes), but that doesn't mean those companies won't have bigger vessels and a one-SMS-fits-all-vessels mentality. You may be stuck with following Subchapter M on a 25.5' tug, as a requirement of employment. And most other industries also have similar systems in place. Surrender to job safety analysis, tool talk meetings, or some other moniker. It's time to embrace safety meetings and management reviews.

The biggest change contained in the officially published Subchapter M rule is the inclusion of a robust non-conformity/corrective action system in the SMS. This means a systematic procedure to document where your SMS isn't working or addressing required regulations, what corrective action is being taken, and if this corrective action is effective in addressing the non-conformities. This sums up the continuous improvement model of "plan, do, check and act."

Your system needs mechanisms to ensure the procedures are actually followed as written, or the procedures need to be changed. The system must also have mechanisms to identify the need to add a documented procedure. These mechanisms could be reviews of accidents or near-accidents, or internal and external audits. Also required is a systematic approach to review the SMS. Non-conformities can be the result of a management review, either by top-level management, or by captains and crews. Those directly impacted by the SMS should be able to effect change as well. Your company should take great efforts to ensure that written procedures represent what actually occurs on vessels on a day-to-day basis. Captains and crews can help with this. Enlist their help.

For an auditor, this continuous improvement element can sum up the whole operation. How well management can admit they have a problem, figure out the best way to incorporate a change, correct the problem without causing more problems, and do so in a timely manner, is a good indicator of the health of a company overall.

Compliance Maritime

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Sustainable (R)Evolution – A Multi-Purpose Maritime Education Fleet

Industry Stakeholder Chad Fuhrmann presents 'an unprecedented opportunity' as well as a viable option when it comes to finding replacement training vessels for future maritime officers …

By Chad Fuhrmann

Efforts have been underway since 2014 to procure government funding for new training vessels for the State Maritime Academies (SMA). Pending bills in Congress at this time would provide $300 million for the construction of the first of four training vessels for the SMAs with a total of $1.2 billion for the proposed four vessel package. Domestic maritime stakeholders have other options, however. These alternatives are attractive for more than one reason.

Separately, the U.S. offshore energy sector has experienced a significant decline in demand and production, reflecting the international drop in oil prices. Consequently, utilization rates of Offshore Support Vessels (OSV) have dropped significantly over the last two years. Indeed, some global estimates put the number of idled OSVs at as many as 1,000 units. Many of these assets are on the market at a time when demand is low, and valuations are moving in the same direction.

Considering the number and type(s) of vessels currently laid up in the Gulf of Mexico region and the need for new and relevant training platforms for the nation's maritime schools, this fleet of inactive OSVs represents a potentially unique opportunity to create a diverse, *Multi-Mission Maritime Education Fleet* comprised of high tech vessels that are capable of performing both training and commercial functions, and are readily equipped with the modern equipment now standard across the maritime industry.

The Changing Face of the U.S. Maritime Industry

Modern OSVs make up a growing sector of the U.S. maritime industry. The total number of Jones Act eligible vessels currently hovers at around 40,000 hulls, with less than 400 of these considered deep draft or blue water tonnage. OSVs (+/- 1,000), coastal vessels, and boats plying

the inland waterways make up the remainder, accounting for fully 99 percent of U.S. flag, Jones Act assets.

Growing significantly since the 1990's, the OSV sector has provided employment to thousands of people, including graduates of the six SMAs and the federal academy at Kings Point. Beyond this, of the 1.5 million jobs provided by the greater marine industry, over 400,000 are located in the Gulf of Mexico region alone, with a large portion of those dedicated to the support of the offshore industry.

It is therefore time to reconsider the mission and method of the nation's maritime education and training programs and shift focus to an area of the industry that continues to grow and evolve more quickly than the sectors that have traditionally been the focus of the U.S. SMA's. And, while the focus of domestic maritime training is evolving to match changing demands – robust brown water programs have emerged at the Massachusetts Maritime Academy, SUNY Maritime College and Maine Maritime Academy, for example – the U.S. Merchant Marine Academy remains focused on a blue water track curriculum.

In with the New

Technologies such as Dynamic Positioning (DP) and Electronic Chart Display & Information System (ECDIS) are active components of the modern OSV and a requirement of any modern fleet, including many deep water vessels. Additional equipment installed on these vessels includes advanced propulsion, power generation, and ancillary systems required for their operation. While classroom training can provide a basic understanding of technologies in use in the industry, OSVs offer opportunities to interface directly with this technology on actual operating plat-

"… utilization rates of Offshore Support Vessels (OSV) have dropped significantly over the last two years. Indeed, some global estimates put the number of idled OSVs at as many as 1,000 units. Many of these assets are on the market at a time when demand is low, and valuations are moving in the same direction."

Photo: Cheryl Gosson

forms. This work can likewise be used to provide practical experience to both marine and non-marine technical training programs.

The vessels currently serving SMAs as training vessels, all on loan from Marad, range in age from 26 years (Maine Maritime) to a whopping 54 years (SUNY Maritime). These vessels remain in good overall condition despite their age but are equipped with outdated technology and are approaching or exceeding the extent of their useful service lives. In short, the existing training vessels are not up to the industry standards for which the future leaders of the industry will be responsible when entering the industry.

Maritime Training & Education Afloat

Firsthand training and experience in manning, operating, and maintaining well-equipped, modern vessels will result in a larger pool of better trained officers available to serve the future marine industry. Cadets can serve as active crewmembers with responsibilities for the day-to-day management, execution, and maintenance of vessel operations under the supervision of experienced industry professionals and Academy/school staff.

Relevant experience in vessel handling and seamanship remain more applicable to the requirements of the modern seafarer than traditional single screw vessels. OSVs, for example, maneuver in and out of port more frequently than larger, ocean-going vessels providing more frequent opportunities for maneuvering exercises. Likewise, the horsepower requirements of these vessels typically exceed the minimum horsepower requirement for unlimited engineering licensure. The engineering basics remain identical to larger vessels but with

more opportunity to witness and participate in both routine and unscheduled maintenance activities on modern marine systems.

On the deck side of the equation, the tonnage requirements for deck cadets is the same as for any other mariner seeking an unlimited license. All time must be acquired aboard vessels of 100 GRT or more, and 50% of all time must be acquired on vessels of 1600 GRT or more. At the Massachusetts Maritime Academy, cadets acquire more than 50% of their time aboard the T/S *Kennedy*, they can serve aboard various tonnage vessels for their commercial shipping time (not to exceed 60 days), as long as those vessels are over 100 GRT.

There are hurdles to overcome: a typical modern 225-foot OSV might have berthing for less than 20 and a GRT of just 500 tons, enough for a cadet to garner 50% of his or her sea time, but not enough to get it all. On the other hand, a 340-foot multi-purpose support vessel (now under construction) will eventually be rated at almost 8,000 GRT and have accommodations for as many as 87 persons. Hence, the academies would have to choose wisely – both in terms of berths to accommodate as many cadets as is possible, while also exceeding minimum tonnage thresholds.

Shore Side Education & Experience

One very unique aspect of this program involves the shoreside fleet management responsibilities that may be assigned to students pursuing maritime business degree paths. Practical experience will extend beyond the classroom into an industry environment as students actively participate in the operations and management of individual vessels and the overall fleet. Not only would cadets be active on board the vessels but they – as well as non-sailing, maritime business and management students – can likewise develop applicable management skills through involvement in the detailed aspects of fleet management.

The *Multi-Mission Maritime Education Fleet* can offer students a one-of-a-kind, firsthand understanding of the detailed aspects of fleet management by being directly involved in fleet logistics, moving vessels between the schools, scheduling maintenance and general upkeep, and by marketing vessels for other commercial purposes.

"PartnerSHIPS" – Government & Industry Collaboration

When and if fully realized, the Multi-Mission Maritime Education Fleet would offer the industry a functioning

Photo: Jill Friedman

fleet of mobile learning platforms capable of fulfilling multiple purposes and industrial missions. If developed properly such a fleet can serve the greater marine industry as training facilities and commercial assets all while providing a mobile and adaptable tool for the Nation's defense needs. In addition to its primary mission of educating, training, and developing maritime personnel, collaborative efforts may include:

- ***National Defense & Emergency Response*** – *Fleet vessels would serve the Department of Defense as supply vessels carrying military cargo and/or performing specialized operations for the U.S. Military.*
- ***Humanitarian Missions*** – *The Multi-Mission Maritime Education Fleet can serve not only as a means of projecting U.S. power but also promoting the Nation's humanitarian capabilities in times of crisis. Vessels and management resources may be used for the purpose of supporting operations around the globe.*
- ***Commercial Entities*** – *The proposed fleet of vessels would continue to serve a variety of commercial purposes depending on original industrial missions, comprising an array of services to the offshore industry and continuing to serve the needs of various commercial entities.*
- ***Environmental Response*** – *Fleet vessels can serve as an agile line of response in the event of an environmental disaster. The Multi-Mission Fleet can act in the capacity of an Oil Spill Response Organization (OSRO) with vessels located around the U.S. OCS and even in the Great Lakes providing a quick primary response.*
- ***Academic Institutions*** – *Learning institutions outside of Maritime Academies can likewise benefit from the education and research facilities provided by the fleet. Services may be provided through agreement between institutions, the government, or whatever form the fleet management organization may take.*

Commercial & Political Challenges

Creating and developing a *Multi-Mission Maritime Education Fleet* will require the support of a multitude of stakeholders inside and outside of the industry. Moreover, it will take a perspective that realizes the maritime industry is at a critical juncture from which the evolution of the industry will be determined.

Despite the decline in U.S. deep water shipping, the acad-

Photo: Derek Frampton

emies have continued to develop training programs around the needs of this sector. Sea time on training vessels and merchant ships of unlimited tonnage was seen as taking priority over smaller vessels serving the coastal, inland, and offshore trades. Presumably, experience on unlimited tonnage vessels could be more easily transferred to smaller vessels versus the opposite direction.

Considering the number and type(s) of vessels currently laid up in the Gulf of Mexico region and the need for new and relevant training platforms for the nation's maritime schools, this fleet of inactive OSVs represents a potentially unique opportunity to create a diverse, Multi-Mission Maritime Education Fleet comprised of high tech vessels that are capable of performing both training and commercial functions, and are readily equipped with the modern equipment now standard across the maritime industry.

Existing OSVs already fulfill many of the requirements outlined in proposed regulation currently before Congress and the Senate, but to fulfill the needs of the industry and the nation, cadets will need to be trained and prepared for service in both the limited and unlimited tonnage markets. The proposed *Multi-Mission Maritime Education Fleet* offers a viable alternative to the traditional training philosophy which continues to be promoted in the current legislation.

Industrial (R)Evolution

Understanding and accepting the modern maritime industry, including all of its various facets, will allow the training institutions and their programs to evolve at a pace consistent with industry trends. A Multi-Mission Maritime Education Fleet can evolve with the industry offering a functioning fleet of mobile learning platforms capable of fulfilling multiple purposes and industrial missions while making use of existing assets, at a potentially and substantially lower price. Together, this opportunity provides unprecedented opportunities to students and cadets while promoting a sustainable approach to the industry and providing a higher return on investment to taxpayers in comparison to proposed newbuild programs.

With the creation of a modern and pragmatic fleet of vessels cadets, midshipmen, students, veterans, and technicians can learn, grow, and graduate with competence and applicable experience that would prepare them as licensed mariners and leaders for service in the transportation and defense needs of the Nation.

Chad is an independent consultant with two decades of experience in the maritime industry. He sailed internationally as a Chief Engineer before shifting focus shoreside, consulting clients in marine operations, engineering, and dynamic positioning. As the owner of (R)Evolution Consulting & Engineering Services, Chad provides new and innovative approaches to marine operations, engineering, and professional development guided by his Company's core mission, "Protecting commercial viability through integrity assurance." Chad volunteers his time to industry groups including the National Offshore Safety Advisory Committee and the Marine Technology Society and acts as an adviser to the US Coast Guard and other organizations.

Photo: Avalon Freight Services

Avalon Freight Services Redefines the Shortsea Shipping Formula

Anything but business as usual, trusted partners operate innovative, environmentally correct and cutting edge equipment – in a decidedly niche trade.

By Kathy A. Smith

Avalon Harbor, courtesy of Avalon Freight Services

Co Founders (L) Harley Franco (R) Greg Bombard courtesy of Larry Duncan

A new freight service began operation in southern California this past April. For the businesses and residents of Catalina Island who depend on freight from the mainland, this new service aims to provide the safest, fastest, quietest, most efficient, eco-friendly and state-of-the-art freight transportation in the island's history. Customers will also benefit from the use of unique and innovative tonnage built specifically for this niche trade. In doing so, Avalon Freight Services is redefining the concept of short sea shipping.

Deep Roots, Careful Planning

Avalon Freight Services (AFS) is a unique partnership of Seattle-based Harley Franco of Harley Marine and Greg and Tim Bombard of LA-based Catalina Express. For nearly a century, three generations of the Bombard family have been welcoming Catalina Island visitors on board their boats, and now the new, totally green freight service will take the well-known company into a new realm of expanded service.

"My family has actually been on Catalina Island since 1919," says Greg Bombard, president and co-founder. The Bombard family have operated the well-known Catalina Express passenger service to Catalina Island for 35 years. Catalina Island is about 24 miles off the coast.

The new AFS mainland facility at Berth 95 in San Pedro at the Port of Los Angeles, boasts a new 7,500-foot warehouse and office facility right next to the Catalina Express terminal, which allows for customers to conveniently drop off freight and board one of the Catalina Express vessels to make the island trip. "The facility also provides consolidating freight for larger customers like us," says Randy Herrel, Santa Catalina Island Company's (SCIC) CEO. "It's worked incredibly well. I'm sure they put a lot of effort into planning it out."

Custom-designed vessels have been built, and a new style of self-propelled Landing Craft named the Catalina Provider, which meets EPA Tier 3 emission standards, allows for transportation of freight or evacuation of residents. In addition to Provider, the fleet currently includes one tug – the Lucy Franco – and two deck barges. Rebuilt at Diversified, the tug also had its engines upgraded to Caterpillar Tier 3 units.

"We're giving Catalina a serious upgrade on the freight business they've had over the last 50 years," says Harley Franco, CEO of Harley Marine Services, Inc., and AFS co-founder. "Everything is Tier 3, fuel-efficient, air quality-compliant, and the type of equipment that we brought in is more efficient and effective and our new warehouse is more secure and more state of the art."

Catalina Provider is able to land without adverse environmental impact on any beach on the Island, to deliver anything from camp supplies to fire engines. A new Ramp Barge capable of landing at any beach with its 40-foot-long ramp, is fitted with a 90,000 gallon tank to transport potable water. The Ramp Barge will work with the reliable and completely upgraded 69-foot x 26-foot tug Lucy Franco – purchased from Harley Marine specifically for the new service – boasting 1,500 horsepower and retrofitted engines that meet Tier 3 emissions standards.

"We're giving Catalina a serious upgrade on the freight business they've had over the last 50 years. Everything is Tier 3, fuel-efficient, air quality-compliant, and the type of equipment that we brought in is more efficient and effective and our new warehouse is more secure and more state of the art."

– Harley Franco, CEO of Harley Marine Services, Inc., and AFS co-founder.

Shortsea Efficiencies Produce Economy of Scale for Catalina

All of this means a faster, one-way channel crossing time of three hours for customers. Additionally, Avalon Freight guarantees the current freight tariff for two years. The current operating schedule covers a minimum of five days a week, year round. This was an important factor that was considered in the rigorous RFP process, which began in late 2012. A lot of discussions with the Avalon community, the Port of Los Angeles, and various marine stakeholders took place before invitations were sent out. SCIC wanted to find a sole provider for the new service.

Once Avalon Freight Services was selected as the new tenant (granted dock access and warehouse space) in December 2014, research began to secure and build the company's facilities and vessels to meet the April 1, 2016 launch date.

"One of the challenges for this service is that it really is a lifeline for Catalina Island," says Jim Price, partner at Hardesty, LLC, a professional services consulting firm that worked alongside Santa Catalina Island Company to prepare the RFP tender and review bids. "From an economic standpoint, it might make sense to take a much larger vessel and deliver once a week. But it doesn't make sense for the community."

Of course, the pairing of two award-winning marine entities with long-held excellent reputations for what they do is bound to bring innovation to the table. "One of the things we wanted to do was make sure that when we brought this service forward, we really took a hard look at what would be the easiest, safest, and quickest way to move freight to and from the island," Bombard explains. "We transport everything it takes for a city as well as a tourism area to operate – everything they need, from heavy equipment to food to building supplies to fuel to all the different things it takes for a city to operate, we move across the water on our landing craft or barge."

Bombard told MarineNews that when researching the feasibility of the landing craft, AFS reviewed successful applications of this kind of vessel in various transportation services in Alaska. The 150-foot x 150-foot Catalina Provider, was built by Diversified Marine in Portland, Oregon, a company that had provided similar landing craft for the Alaskan fleet.

Catalina Provider can carry up to 12 passengers in addition to a small number of trucks with containers as well as smaller loads. For instance, Bombard says regular customers such as the island's grocery store transport four or five trailers up to three times a week. "We've also got an operator on the island called Catalina Beverage, and they bring quite a few dry and reefer vans with us three times a week," he says.

Hotel and restaurant supplies are also trucked over, the odd car is shipped, and even horses. "There are a couple of rides where horses go back and forth, so this makes it convenient for the wranglers to ride along with the horses and keep them calm and be able to work with them," he adds. Important to customers is also the fact that goods can be loaded and unloaded at both high tide and low tide at Pebbly Beach, where the Avalon building supply warehouse is located.

AFS Equipment: at a glance ...

Catalina Provider (Landing Craft)
LOA: 150' long by 50' wide
Caterpillar Tier 3 engine, triple screw
Built at Diversified Marine in Portland, OR
Delivered 3/2016
Started service 4/1/16

Two Harbors (barge)
LOA: 140' long (40' ramp for landings)
Breadth 40'
90,000 gallon tank to hold potable water
Built: Conrad Ship Yard in New Orleans
Delivered in 2/2016

So Far, So Good ...

So far, things have been progressing very well for the new venture. Although no formal review has been carried out yet by SCIC – a six months and annual report are forthcoming – early indications are positive. "What we've done is listen to the customers and the City of Avalon and we have heard no complaints on the new AFS service, which is quite remarkable for a city like Avalon," says Herrel.

Safety and security of passengers and freight is paramount for vessel operations. Preparing for additional capabilities for potential emergency situations is also an important need. Back in 2007, there was a large fire on the

Island. Catalina Express high-speed boats were able to move people off quickly, but it was difficult to transport equipment, reports Bombard, who has been working with the LA County Fire Department to test the Catalina Provider as an evacuation vessel. "Once you land on the beach and drop the ramp, it's like you've built a pier," he says. "With the ramp being that long, it makes it very easy access on and off for firefighting equipment and the trucks."

The tug and barge operation takes care of tasks such as transporting gravel and sand. "We find that the barge is better for that type of service, where you can bring a skip loader on or a loader and be able to scrape that stuff off the deck and move it to the shore side a little easier," says Bombard. "That's worked out to be more efficient than dealing with the wood deck that we've got on the landing craft. But for all other operations, the roll-on, roll-off, the landing craft works very well for us."

Smooth Transition, Solid Partner

AFS has worked in close cooperation with Catalina Freight Line (the previous operator) to make the transfer of operations as smooth as possible for everyone involved. In fact, AFS hired many employees who worked for CFL. "Our employee group has been fantastic to work with," adds Bombard. "Going in, they had a good relationship with existing customers," says Herrel. "I think that's why there have been very few complaints. When the customer is happy, that's a big hurdle."

Bombard appreciates the deep experience Harley Marine brings to the enterprise. "Harley Marine is well vetted in tug and barge operations. They keep us up to date on all the latest regulations like Subchapter M. They've been a good partner."

"We're highly motivated to exceed everybody's expectations," says Franco. "And I think the Island people are the real winners here, because they got a safer and nicer warehouse on the Los Angeles side, they have steady, reliable, newer, cleaner, greener equipment making their deliveries, and I think they'll find that it's really going to work out for the best for all of them."

Photo: Avalon Freight Services

Powers Clean Air in California

California Commercial Marine Operators Take Advantage of Grant Money to Repower with Eco-Friendly Engines.

Edited by Joseph Keefe

Capt. Joe Nazar recently repowered his whale watching excursion vessel in San Francisco with twin Volvo Penta Tier 3 diesels, and he couldn't be happier with the results. Since the new engines were installed, he is seeing dramatic improvements in fuel efficiency, lower emissions, reduced noise levels and better performance. He has another good reason to be happy. A large percentage of the cost of repowering the boat came from a State of California grant.

New Power, Cleaner Air, Lower Costs

Nazar's 64-ft. catamaran, Kitty Kat, was retrofitted with a pair of Volvo Penta D11 625 hp Tier 3 engines in April, replacing the previous 12-liter Tier 2 engines. The installation was performed at Bay Marine Boatworks in collaboration with Helmut's Marine Service, an authorized Volvo Penta Power Center in San Francisco. Kitty Kat carries up to 99 passengers on daily whale-watching tours of the Farallon Islands National Marine Sanctuary.

Nazar said he normally repowers his vessels every five years. He was more than ready to switch, being dissatisfied with the competitor engines, which he described as "dirty-burning, oil-leaking monsters, constantly rattling and shaking."

"Our customers could tell the difference right away after we installed the Volvo Penta engines," said Nazar. "With no diesel fumes on deck, we are getting fewer cases of seasickness when we're out on the open ocean, and you can barely hear the engines when they're running – just a low-level 'swoosh' like the sound of a passenger jetliner in the air." Nazar also reports fuel savings of at least 60 percent. "I don't go to the fuel dock nearly as often, and that goes straight to our bottom line," he said.

Carl Moyer Program

The state grant money for Kitty Kat's repowering came from the Carl Moyer Memorial Air Quality Standards Attainment Program, usually referred to as the Carl Moyer Program. According to the California Air Resources Board (CARB), the Carl Moyer Program is a voluntary grant program intended to reduce air pollution by providing incentive funds to private companies and public agencies to purchase cleaner engines earlier than required by law. The broad-based program embraces on-road trucks, off-road equipment, locomotives, stationary agricultural equipment, forklifts, light duty vehicles, airport ground support equipment, lawn and garden machines, emergency vehicles and marine vessels.

The Moyer program, according to CARB, has provided over $710 million since its inception in 1998, and disburses $60 million in grants per year, funded through tire fees and smog impact vehicle registration fees. The funds are distributed through the 35 local Air Districts in California, but the application requirements and criteria for selection may vary somewhat from region to region based on local priorities.

The strategy behind the Moyer program is to accelerate the replacement of older engines with new greener engines before they are required by regulation. In order to receive Moyer funds, the project must not be subject to any regulatory requirement, and it must be completed at least three years prior to the deadline for mandatory replacement.

"By funding emission reductions that are surplus – earlier and/or beyond what is required by regulation – the Moyer Program complements California's regulations," says CARB. "Small businesses with vehicles or equipment that are exempt from or not yet subject to air quality rules are particularly encouraged to apply." Funds are allocated annually and applications are evaluated by the Air Boards on a first-come first-served basis until all funds have been awarded.

"By funding emission reductions that are surplus – earlier and/or beyond what is required by regulation – the Moyer Program complements California's regulations. Small businesses with vehicles or equipment that are exempt from or not yet subject to air quality rules are particularly encouraged to apply."

– The California Air Resources Board (CARB)

The program pays 50 to 85 percent of the cost to repower commercial marine vessels, according to the Bay Area Air Board, which covers San Francisco and surrounding regions. Eligible projects include replacement of an older engine with a new lower-emission one or installation of an engine remanufacturing kit that reduces its emissions. In some limited cases, the program will provide funds for purchase of a new marine vessel with engines certified to be at least 30 percent cleaner in terms of NOx emissions. All repower applicants must demonstrate a cost-effectiveness of $18,030 per weighted ton of NOx, ROG and PM emissions reduced by the project to be eligible.

CARB Commercial Applications

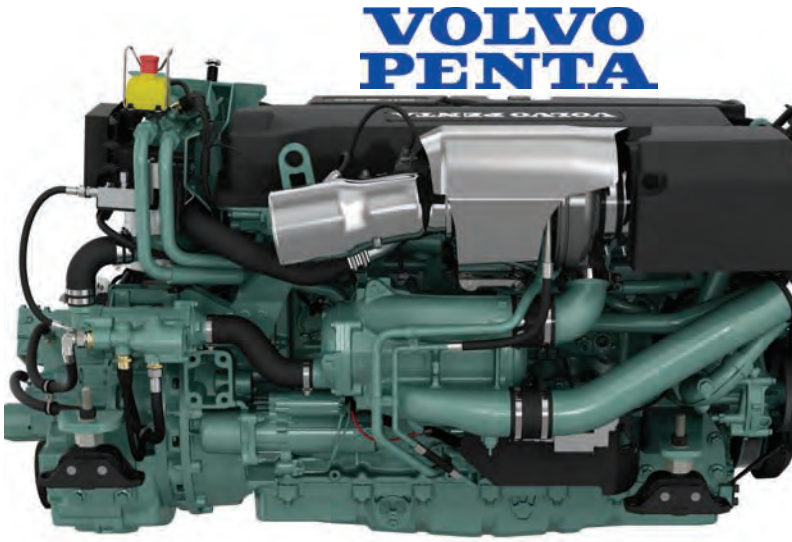
Barges, crew boats, supply boats, dredges, excursion vessels, ferries, towboats and tugs operating mainly within the harbor and inland waters can receive grant money up to 50 percent of the cost of upgrading. Fishing boats, pilot boats, work boats and other vessels not subject to Harbor Craft Regulation in-use compliance requirements can receive 80 percent for upgrade to Tier 2 or 85 percent for Tier 3 repowering projects.

Eligible costs include the capital cost of the new engine and modifications to the cooling system, fuel and exhaust system, wiring and harnesses, power take-offs, controls, gauges, alarms and other ancillary items. The program also covers the cost of moving frames to accommodate the new engine. Tax and transport costs are included, as is labor for installation.

"The Carl Moyer program incentivizes small commercial marine operators with limited financial assets to take advantage of new-technology engines that reduce operating costs significantly in terms of fuel and oil consumption, maintenance, service and less downtime," said Helmut Ahollinger, president of Helmut's Marine Service.

Helmut's Marine Service does about 20 to 25 Volvo Penta repowers per year in Southern California and Northern California with Air District grants, according to Ahollinger. Usually the installations are made by a local boatyard. "We provide assistance to steer our customers through the grant application process, using an independent consultant who is very familiar with the rules and regulations. She ensures the applications are complete and correct, and all the necessary documentation is included, to speed up the process."

Another boat recently repowered with Volvo Penta under the Carl Moyer program is the research vessel Harold



"The Carl Moyer program incentivizes small commercial marine operators with limited financial assets to take advantage of new-technology engines that reduce operating costs significantly in terms of fuel and oil consumption, maintenance, service and less downtime,"

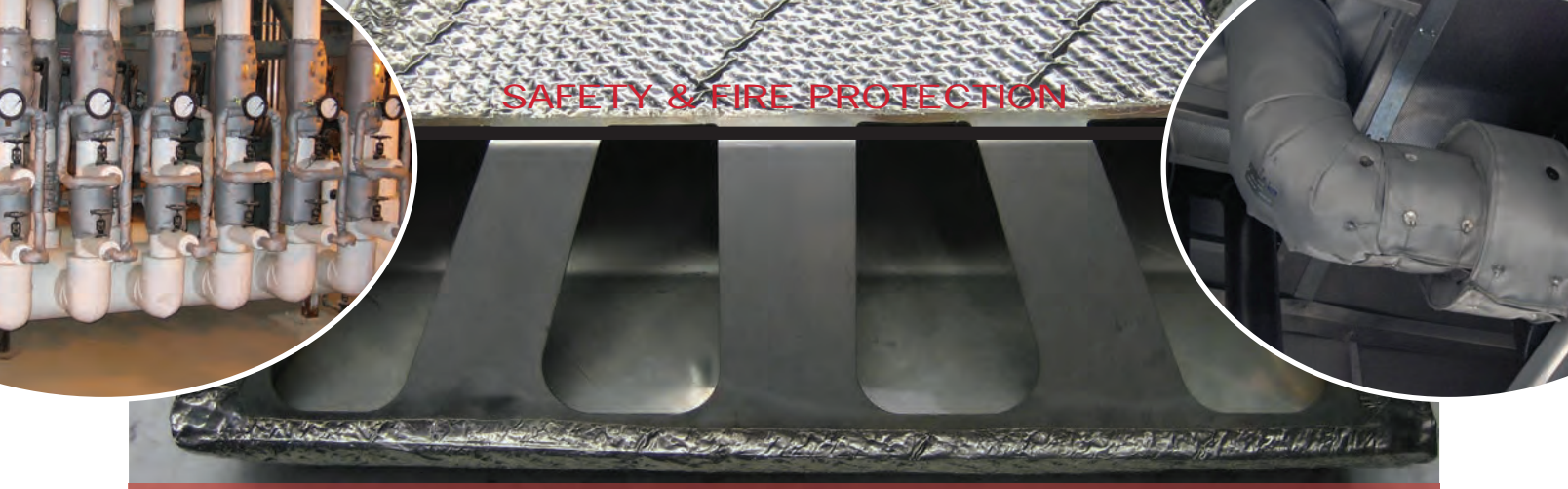
– Helmut Ahollinger, president of Helmut's Marine Service.

Heath, operated by the California State University at Monterey Bay. The 1982 vintage 46-ft. Hatteras motor yacht was donated to the university's marine science department in 2010 for use in seafloor mapping projects. Capt. Bill Williamson said that the boat was still running the original engines and was in serious need of repowering.

Fortunately, the Carl Moyer program came to the rescue. A pair of new Volvo Penta D11 625 hp Tier 3 diesel engines was installed this past Spring by Peninsula Diesel at Moss Landing Boat Works. Williamson said the compact package made it easier to fit the new engines into the cramped engine room. He's thankful for the Moyer funds – without it, he believes the university would have had to get rid of the boat and look for a replacement. The boat underwent sea trials in April, and Williamson is very pleased with the result. "It was exactly what we hoped for – very economical cruising range, good performance at top speed and ability to cruise at slow speeds for long periods of time when doing underwater survey work."

"It's too early to have any solid fuel efficiency data, but we expect at least 35 percent improvement – maybe more," he said.

As for Nazar, he says he will repower his other two excursion boats as grant money is released. In the meantime, he's more than happy with his new eco-friendly and efficient Volvo Penta Tier 3 diesels.



Why Should I Care About Thermal Insulation?

Compliance, Safety, Insurance, Emissions & Maintenance

By Bruce Kaplan, Product Development Manager at Thermal Structures, Inc.

There are a million important things to worry about on any vessel, so why does high-performance thermal insulation deserve a place on the list? Answer: Because it has a very important role to play in keeping your vessel out on the water, being operated safely by a crew and safely carrying passengers.

WHAT IS HIGH-PERFORMANCE THERMAL INSULATION?

When we talk about high-performance thermal insulation, we're talking about insulation that can stop a significant amount of heat, in a relatively small space. Not the stuff that sits in between your drywall at home, but insulation made from sheet metal, metal foil, high-performance fabrics and composites that manage heat around exhaust and after-treatment systems, turbo chargers, high-pressure oil and hydraulic lines and other high-heat areas on a vessel.

So, now that we know what it is, why should you care about it?

THERMAL INSULATION, SOLAS AND SAFETY

SOLAS and safety go hand in hand. SOLAS regulations are there to keep your crew and passengers safe. And, of course, failing a SOLAS spot-check could mean getting stuck in port. The first area where thermal insulation is critical to SOLAS compliance is fire prevention. SOLAS calls for insulating any hot surfaces that could come into contact with fuel, as well as protecting fuel and oil lines against failure. Practically, this typically means insulating engine turbochargers and exhaust and after-treatment systems, as well as shielding fuel and oil line connection and joints, and double-walled piping for high-pressure fuel and oil lines.

Another area SOLAS specifically addresses is noise, requiring compliance with the Maritime Safety Committee's resolution MSC.337(91). This resolution prescribes acceptable noise levels for different parts of a vessel, such as machinery spaces, control rooms and other working spaces. High-performance thermal insulation not only insulates against heat, it can be designed and implemented to significantly decrease the noise emitted by engines and other mechanical systems.

One area that SOLAS doesn't address specifically, but which we recommend considering, is safe-touch temperatures. SOLAS only requires insulating surfaces against fire danger if they reach above 220°C, but ASTM C1055 recommends keeping exposed surfaces that workers might come into contact with at or below 60°C. Many process engineers recommend 48°C as a more reasonable safe-to-touch temperature.

Typically, insulating engine components and exhaust systems to maintain safe-to-touch temperatures is impractical, and workers won't come into contact with these surfaces while they're at operating temperatures under standard maintenance procedures. However, if your vessel has high-temperature equipment in areas where workers could accidentally come into contact with it, such as hot water pipes, valves or other components, it is well worth implementing a thermal insulation solution that considers safe-to-touch temperatures.

THERMAL INSULATION & INSURANCE

It should be no surprise that, given thermal insulation's role in safety, it's also something that could be of great importance to your insurer. We were recently contacted by a company who was at risk of a significant insurance rate increase. They had experienced several fires caused by flammable materials coming into contact with exhaust components. Their insurer gave them a mandate: Fix the problem, or take a rate hike.

Thermal Structures was able to help them develop a

thermal insulation solution that reduced the risk of fires, improved safety, reduced downtime and made their insurer happy. Thermal insulation has so many safety benefits that, even if you haven't experienced any problems, it's worth talking with your insurer to see if implementing more comprehensive thermal insulation could help to reduce your rates.

THERMAL INSULATION & EMISSIONS

Whether you're simply subject to the International Marine Organization's (IMO) global marine engine regulations, or the more stringent Emission Control Area (ECA) regulations, thermal insulation plays a critical role in helping to meet those requirements. Meeting emissions standards often goes hand in hand with the generation of additional heat. Sometimes that heat is an essential part of the process, like with Diesel Particulate Filter (DPF) regeneration. Other times, it's simply a byproduct. In either case, when engines are producing more heat, they need more effective thermal insulation.

Today, that's largely relevant to compliance with IMO emissions standards, but it's likely that, in the future, reducing emissions could become a source of profit. The EU and other organizations have already proposed "cap and trade" style programs for maritime emissions, where lower emissions producers would be able to sell their excess capacity to higher emissions producers. Vessels and fleets that have taken strides toward lowering emissions today will be well positioned to take advantage of those programs when they come into place.

THERMAL INSULATION & MAINTENANCE

The type of thermal insulation on your vessel can have a big impact on how easy or difficult it is to perform maintenance on systems covered by that insulation. Many times, thermal insulation has to be removed to perform maintenance on the system it's protecting. If thermal insulation is poorly designed or implemented, it can cause a significant and costly obstacle to that maintenance.

There's no one-size-fits-all answer in picking the right thermal insulation, so it's important to consider several factors. For example, fabric insulation blankets typically have a lower initial cost, but over time they can "cure" into shape, and removing them can cause them to disintegrate. Foil and sheet metal insulation might have a higher initial cost, but they can be removed and reattached for the life of the engine without being damaged.

Cleaning is also an important consideration. On many vessels, surfaces that could become contaminated with oil, fuel or other flammable chemicals are frequently cleaned. Sheet metal and foil insulation can stand up to rigorous cleaning and even pressure-washing without any issues, but fabric insulation could present a problem. Picking the right thermal insulation can have a big impact on the ongoing cost and ease or difficulty of your vessel's maintenance.

GETTING HELP

The implementation of thermal insulation can be a lot to think about, and there's no need to go it alone. Your best bet is to work closely with your engine manufacturer, or a thermal insulation provider, to make sure that your vessel or fleet is using appropriate, suitable and effective thermal insulation. It's the first step in making sure your vessels are as safe, efficient and easy to maintain as possible.

Sennebogen 870 Material Handlers: Versatile, Powerful and Reliable

Material Handlers provide critical link in Hudson River PCB Remediation

Hopper barges are used for a wide range of applications; from grain carriage to bulk commodities and even for contaminated dredge spoils. All three applications have one thing in common: they all need versatile, timely, reliable and robust cargo handling equipment in order to get the job done. It turns out that Sennebogen bulk material handling equipment is often specified for just these reasons.

For example, and approximately three times a week, for six months of the year, trains depart from upstate New York, en route to one of three EPA-approved long-term disposal facilities. These trains are loaded with dewatered, PCB-containing sediments, representing the last leg of a complex environmental dredging project undertaken by General Electric Co. in New York's Upper Hudson River.

In 2002, the EPA issued a Record of Decision requiring dredging of PCB-containing sediments from 40 miles of river bottom between Fort Edward and Troy, N.Y. EPA determined the areas and depths to be dredged, based on more than 60,000 sediment samples collected and analyzed by GE. Support facilities to transport, dewater and process the dredged material were built, including a 1,500-foot-long wharf for barge unloading, size separation equipment, dewatering equipment, staging areas, roads, more than seven miles of rail track, and a water treatment plant larger than some municipal water treatment systems.

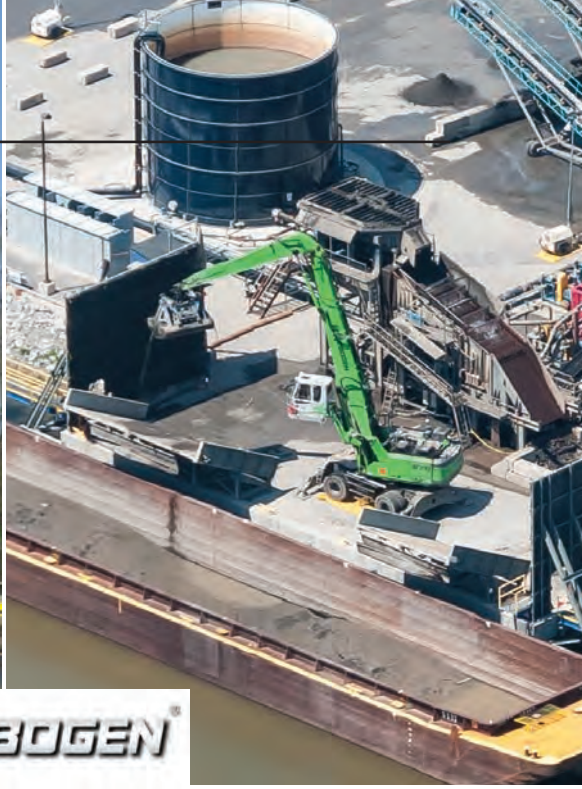
In this case, GE relies on two purpose-built material handlers from SENNEBOGEN – an 870 R-HD and an 870 M – each moving as much as 3,000 cubic yards of sediment daily from hopper barges that continuously cycle up and down the river filled with dredged sediments and water removed from the river. For this project, the 870 R-HD material handler is especially well suited to get the job done. "We recognized that our operation required equipment with a specific reach and height," said Timothy Kruppenbacher, GE's Operations Manager, Global Operations Environment, Health & Safety. He added, "The bucket had to reach down 12 feet into and across the hold of the 35-foot wide scows, then clear a 30-foot height to reach above the rim of the hopper feeding our processing stations."

The nature of the sediment makes the selection of bulk handling equipment especially important. That's because it simply isn't enough for a machine to simply complete that swing cycle. It has to move quickly, to keep pace with the dredging operations at work in the river. And it has to move precisely to accurately remove all sediments from the barge and avoid spillage of any material.

One particular feature of the SENNEBOGEN 870 was especially attractive to GE. "The elevating up-and-out cab allows operators to look down into the barges to maximize the amount of sediment in each bucket and to ensure they are removing all the material right to the bottom of the barge."

The 870 R-HD is a 200,000-pound, crawler-mounted material handler. In the project's second year, GE purchased a rubber-tired model of the same machine to service a second processing station north of the 870 R-HD. In addition to its precision, this unit has a wheeled mobility enhancing its capabilities. "It's a more versatile machine," Kruppenbacher said. "In the off-season when we're not op-

Image above: General Electric constructed two large wharf facilities to process the material and treat the water from the project's dredging operations.



erating, we can easily move it where we need it to perform lifting operations to support maintenance activities. Also during the off-season, we use it often because we're able to move it to and from material staging areas to more easily move, mix and pile material with it."

Reliability, then, is a critical aspect of the equipment. The environmental dredging project is performed approximately six months a year, 24 hours a day, six days a week, requiring the two machines to operate around the clock. Since dredging began, more than 2,500,000 cubic yards of PCB-containing sediment have been removed from the river.

Uptime is a critical factor for equipment on this job, as GE's work schedule is restricted by the seasonal closure of the New York State Champlain Canal each year. John Waechter, Project Manager for the project's processing operations contractor, CB&I Environmental & Infrastructure (CB&I) said, "We are very focused on proactive maintenance here. Even a few hours of unexpected downtime has a costly ripple effect on the whole project. Altogether, there are more than 85 pieces of heavy equipment and vessels working in a continuous process, running 24/6 each week of the season."

At any given time, 12 to 14 hopper barges carrying 600 – 800 CY's are cycling between the dredge location and the loading station, a distance of 15 to 35 miles each way. The water treatment plant is processing 2 million gallons/day. An interruption anywhere in the process would create serious problems for the more than 350 employees working on the dredges and at the support facilities. Each Sunday, CB&I maintenance crews inspect and service all project equipment. At each 1,000-hour operating interval, the 870s are serviced by the local SENNEBOGEN distributor; in this case, Anderson Equipment.

Each barge requires four to six hours at the unloading station, including about two hours to decant the barge (pump off the free water). The SENNEBOGEN machines then move the material from the barge to a feed hopper equipped with a grizzly screen. On an average day, together they will unload six to eight barges or up to 5,000 yards of sediment. Operators on the 870s work in pairs, working 12-hour shifts. CB&I's Waechter explains, "It's a very comfortable cab for working long shifts. The joystick control and hydraulics are so responsive and accurate that they can pick individual logs and oversize debris right off the top of the hopper grizzly screen."

Kruppenbacher compliments the speed, precision and safety of the equipment. "With the level-cut buckets, the 870s can clean out the barges down to bare metal, without damaging the bottom of the vessel. These barges are light, built for minimal draft in the river but we have not had any problems with damage from the use of the 870s. The machines have performed very well, and reliably." Dredging and backfilling activities are scheduled for completion this year. Next year, the final season of habitat reconstruction work will be performed and support facilities will be dismantled. Until that happens, Sennebogen material handlers will be there, providing robust and reliable – and proven service. **www.sennebogen-na.com**

Images above: (L) Dependable uptime is critical to sustain a continuous flow of material involving more than 350 workers in the project. **(R)** The 870 machines combine speed and precision to clean out the lightweight barges without damaging their hulls.

Lightweight Synthetic Lifting Slings Take Shipyard Productivity to New Heights

Material Handlers provide critical link in Hudson River PCB Remediation

A job completed on time or ahead of schedule is a display of the proficiency, productivity, and innovative thinking that can give you a competitive edge. And with the current oil market and the upcoming elections fogging the forecast for future orders (and indicating a likely dip), shipyards are vying to become better and faster, and capture every edge they can. To seize these opportunities as they arise, many are leveraging innovative systems, materials and tools that allow them to be agile, efficient, and nimble.

As a manufacturer of one such tool — the synthetic heavy lifting sling Fortis² — Yale Cordage has seen this movement through a unique vantage point – one where seemingly small details and tools are optimized for big results. Back in May, we shared how Fortis² transformed the safety and efficiency of heavy lifts at one large American shipyard. More recently, another shipyard followed suit – not only creating safer, more efficient lifting conditions, but, in coordination with other process improvements, performing a 700-ton lift and its corresponding construction phase a full three weeks ahead of time. And while we can't speak to the other factors that contributed to the ahead-of-schedule delivery, we can speak to how lightweight cordage played a role – and how it can do so for your yard, too.

All the Properties of Steel Wire Slings at 1/8th the Weight

Fortis² is a multi-part sling made of Unitrex XS Maxwear synthetic cable that has a core of Honeywell Spectra HMPE fiber, is encased with a neoprene coating, and is overbraided with a tough high-tenacity polyester jacket – a construction just as abrasion-resistant as its wire counterparts. For routine heavy lifts, a 15-foot, 44-lb. synthetic

"For routine heavy lifts, a 15-foot, 44-lb. synthetic multipart Fortis² sling exhibits the same stretch characteristics and stiffness of its 250-lb. wire equivalent, with an even better lifting capacity at 50 tons."

multipart Fortis² sling exhibits the same stretch characteristics and stiffness of its 250-lb. wire equivalent, with an even better lifting capacity at 50 tons.

For massive lifts, yards can employ multiple 160-lb, 55-foot Fortis² slings, which are rated for 100 tons and can still be lifted and moved around without a crane or forklift – a protocol that contrasts sharply with that of its 1,000-lb. steel wire counterpart. Together, these strength, stiffness, and lightweight characteristics make it possible to use synthetics in ways you never have before – saving minutes and hours that add up to weeks over the course of a project or job.

Time Savers:

Until recently, the efficiencies of synthetics were limited to lifts that didn't require the sling to be pushed underneath the load. Because of its stiffness, wire was the only option for those lifts – which also tend to be the heaviest. But today, even the heaviest of them all – like the 700-ton shipyard lift, which required three cranes – can be rigged in record time with lightweight lifting slings. Because the core fiber in Fortis² is parallel-braided to minimize twist and then sealed in place with the neoprene layer, the fiber retains its optimal strength and exhibits stiffness comparable to wire – a win-win all around, and a big time saver when it comes to rigging up a lift.

An elite modern shipyard workforce should not be defined by the brute strength of its workers. But without an equivalent or superior synthetic alternative, it's hard to avoid either hauling enormous, heavy steel wire and chain slings around the assembly area manually, or waiting on the slow strength of cranes to do the job for you. One is a tax on your body; the other is a tax on your time. Fortis² slings can be moved around by hand without wasting time or risking injury. For routine lifts, instead of involving multiple workers and possibly multiple machines, most Fortis² sling sizes can be picked up by one person who can carry it over, slide it under the hook, and complete the job without ever needing help from a coworker or machine.

Several yards have adopted 55-foot Fortis² slings, which are rated for 100 tons and can be lifted and moved around without a crane or forklift. Compared with their 1,000-lb. wire counterparts, these slings weigh just 160 pounds. And because even the heaviest-lifting sling is still such a manageable weight, yards can use a set of 100-ton rated slings in various lengths to lift loads of all weights. It's still necessary to have multiple lengths available to keep angles correct based on the width of the load, but there's no need to have multiple load ratings for each length – the higher (100-ton) may always work. Not only does this save time, space and money, it also eliminates the risk of ever overloading by grabbing the wrong sling for the job. And in stark contrast with steel, the synthetic Fortis² slings don't rust, freeze or corrode — eliminating a major maintenance concern and a lot of headaches.

While steel chain and wire slings are vulnerable to salty ocean air, rain, sleet, snow and other common shipyard weather conditions, Synthetic Fortis² slings are not. So while the effects of rust, ice and corrosion on steel wire and chain slings require extra-frequent inspections and precautions to be taken to prevent accidents or failure, rust-free, non-freezing, non-corrosive Fortis² can save a lot of time. It needs only to be inspected on its regular schedule and before every lift, and the easy to handle material allows inspections to be both thorough and fast.

Looking Ahead

Shipyards can see valuable gains from the implementation of lightweight slings – gains that put them in solid profit positions. Both outcomes amplify the importance given the uncertain economic and political environment, in which decreased future demand is still top of mind. But winning in tomorrow's marketplace isn't just about dominating a shrinking pond; it's also about exploring new markets and seizing opportunities. Depending on largely unpredictable market conditions, shipbuilding demand could quickly shift from a primary need for Navy ships, to deep water exploration vessels, to the tugs, barges, and workboats expected to leverage the expanded Panama Canal.

In the construction of all of these vessels, plus buildings, bridges and more, Fortis² slings can maximize efficiency, safety, and a company's competitive edge. And as conditions change, new easier-to-use, more flexible equipment will be at the heart of yards' ability to turn their own large ships around (so to speak) on a dime.

***Jamie Goddard**, vice president of sales at Yale Cordage, leads sale strategy for the company and manages Yale's industrial and electrical utility accounts throughout the United States. His responsibilities include building and maintaining client relationships while understanding and supporting the needs of more than 75 national and international accounts.*

YALE CORDAGE

Performance. Passion. Possibilities.

Chesapeake Shipbuilding Delivers 12th Tug to Vane

Chesapeake Shipbuilding Corp. of Salisbury, MD has delivered another ocean going tugboat to Vane Brothers of Baltimore, MD. The Fort McHenry marks the 12th tugboat that Chesapeake Shipbuilding has built for the maritime transportation company. Chesapeake Shipbuilding has 5 additional tugboats under construction for Vane Brothers. The Fort McHenry is equipped with twin Caterpillar 3512 main engines producing a combined 3,000 horsepower, and a single drum hydraulic winch from JonRie of New Jersey. The tug measures 94' long with a 32' beam, and a 13' depth. All Chesapeake Shipbuilding tugs are built in a controlled indoor environment prior to being moved and launched into Maryland's Wicomico River. Chesapeake Shipbuilding has recently made significant upgrades to its facility to increase its production capacity and efficiency.

Tidewater Transportation & Terminals Christens Towboats

Granite Point and Ryan Point are the newest inland river towboats in Tidewater Transportation and Terminals' fleet. Patty Reed, wife of Bruce Reed, Tidewater's Vice President and Chief Operations Officer, and Diane Laya, wife of Marc Schwartz, Tidewater's Maintenance and Engineering Manager, broke champagne bottles over the vessels' hull while the City of Vancouver's fire boat sprayed Columbia River water in the background. Three years ago, Tidewater retained the services of CT Marine, Naval Architects and Marine Engineers of Edgecomb, Maine, to design a towboat that can maneuver barges through the swift-moving currents, high winds, and eight navigation locks along the Columbia Snake River System. Once the plans were developed, Tidewater contracted with Vigor's Portland shipyard to construct the series of vessels, returning propulsion-construction to Swan Island, and partnered with Umpqua Bank's Equipment Leasing and Finance Division to finance the two tugs.

The first vessel in the series, Crown Point, was christened in June of 2015 and has been in operation for over a year. All three vessels are built to the same specifications: 104 (length) by 38 feet (beam), with a depth at full load of 11 feet, and a hexagonal wheelhouse with floor-to-ceiling windows on all six sides. An enhanced steering system utilizing four main steering and four flanking rudders, coupled with two Caterpillar 3516C Tier 3 engines, allowed the design team to increase the margins of safety and efficiency. With crew endurance being a priority, Tidewater employed Noise Control Engineers of Billerica MA to develop a sound and vibration control package for the vessel. By incorporating Christie and Grey vibration control mounts and comprehensive acoustic insulation, noise levels register at less than 60 decibels in the accommodations during vessel operation – which is equivalent to an air conditioner.

ESG Launches Impala Soledad for IWL River

The Impala Soledad at a glance …

Eastern Shipbuilding Group launched the Impala Soledad in June, the first in a series of four (4) Inland River Towboats for IWL River, Inc. This series of CT Marine designed 134 ft. ABS Classed Inland River Service towboats are Triple Screw with a Retractable Pilothouse and all are currently under construction at Eastern's Allanton facility. The vessel series is scheduled for delivery starting in late 2016 into 2017.

Length (LOA): 134'-0"	Breadth: 42'	Main Engines: (3) Caterpillar 3512C
Flag: Republic of Panama	Depth: 9'	Reduction Gears: (3) Reintjes
Horsepower: 1,280 @ 1,600 RPM	Minimal Draft: 6'	Classification: ABS A1

Cenac Marine Services Christens Newest Vessel

Cenac Marine Services christened its 24th vessel in its most recent series. Additionally the firm donated a spud barge to Terrebonne Parish in an effort to aide in the maintenance of levees throughout the area.

The M/V Quincey Cenac is the newest addition to Cenac's growing fleet. The donated spud barge will be utilized by the parish to transport various and necessary equipment required for levee conservation and upkeep. The barge features a gate, spuds, and hydraulic units needed to haul and secure such equipment to and from each location. Arlen "Benny" Cenac, philanthropist and owner of Cenac Marine Services, has had a passion for coastal preservation for many years. He said in a prepared statement, "Trying to preserve our heritage and our way of living has always occupied a special place in my heart."

Dredge Manteo Keeps NC Coastal Waterways Navigable

The North Carolina Department of Transportation recently took delivery of a new, fully customized cutter suction dredge, which it christened the Dredge Manteo at the at the NCDOT State Shipyard in Manns Harbor, North Carolina. The 154-foot state-of-the-art pipeline dredge, designed and built by DSC Dredge, based in Reserve, Louisiana, will work to keep North Carolina's state-maintained intercoastal ferry channels clear, from the Cape Fear River near Wilmington to Currituck Sound near the North Carolina-Virginia state line. The Manteo – built to house two eight-person crews, with a full galley, four bunk rooms and two full bathrooms – will replace the Dredge Carolina,

which was built in 1968. The dredge also features a 78-foot deckhouse that contains the machinery area, crew quarters and galley. Far more efficient than its predecessor, the 16" x 14" Manteo is capable of dredging a channel to a depth of 30 feet. Spud carriages, which the original dredge did not have, easily move the vessel as it works.

Blount Delivers Tour Boat for Chicago, Illinois

Blount Boats of Warren, Rhode Island has delivered the M/V Skyview to Shoreline Sightseeing, Chicago. The steel, Subchapter K passenger vessel designed by Seacraft Design, LLC is certified to carry up to 318 passengers and will operate as an architectural tour boat in partially protected waters. The vessel was specifically designed with a recessed pilot house to meet the air draft requirements for navigating the waterways of Chicago. Special features include hand-crafted mahogany doors, railings and bench seating, full-service bar, 20-keg beer cooler, ladies and men's heads (heated), 430 pound ice machine and air-conditioning. The M/V Skyview marks the second vessel built by Blount for Shoreline Sightseeing.

The M/V Skyview at a glance …

LBP: 97'	Draft amidships, fully loaded: 4'-3"	Displacement, light ship: ~ 150 LT
Beam, molded: 35'	Length overall, molded: 100'	Displacement, fully loaded: ~ 200 LT
Speed: 10.4 knots	Depth amidships, molded: 7'	Air draft, min./ max: 14'-2"/ 14'-9"
Draft amidships, light ship: 3'-8"	Fuel Oil capacity: 1,800 gallons	Potable water capacity: 2,000 gallons

Gibbs & Cox Names New Executives


Applequist


Deegan

Gibbs & Cox has announced the appointment of **Chris Deegan** as President and Chief Executive, effective immediately. Deegan previously served as Vice President of G&C's Engineering Group. Separately, **Jonathan Applequist** has been named Vice President and Group Manager of the Gibbs & Cox (G&C) Maritime Services Group (MSG). MSG provides naval architecture, marine engineering and design services to a broad range of government clients including the U.S. Navy, U.S. Army and Missile Defense Agency. Applequist holds a bachelor's of science in Ocean Engineering from Texas A&M University. He is a licensed Professional Engineer in the State of Virginia and a certified Project Management Professional. Deegan replaces **Rick Biben**, who will remain on the G&C Board of Directors. Mr. Deegan spent nearly 28 years in the Navy's acquisition and cost engineering communities, leading nuclear submarine, ship and combat systems programs prior to joining Gibbs & Cox in 2013. Deegan earned a Bachelor's of Science in Industrial Engineering from Penn State University, and a Master's of Science in Engineering from the Catholic University of America.


Bradshaw


Bleiberg


Laheij


Bruun

IMCA Appoints Policy & Regulatory Affairs Manager

The International Marine Contractors Association (IMCA) has appointed **John Bradshaw** as Policy and Regulatory Affairs Manager. He will develop and deliver the international trade association's policy and regulatory strategy, including representing members with regulators and other third parties. John joined the IMCA Secretariat as a Technical Adviser in 2015. This followed four years at Lloyd's Register as Principal Technical Specialist and a career at sea.

ABS Employee Recognized for Gas Development Leadership

ABS announced that the United States Coast Guard (USCG) has awarded **Roy Bleiberg**, Vice President of Engineering for ABS Americas, the USCG Meritorious Public Service Award. The award is the second-highest public service award presented by the USCG to civilians who provide substantial contributions that results in advancement of the Coast Guard's mission and benefit the general public. Bleiberg's notable achievements at ABS include successfully advocating for the safe design and operation of multiple novel maritime gas projects and technologies, training USCG and supporting the USCG and other organizations in developing gas regulations, standards, and policies.

Laheij is VP at SCHOTTEL

Hans Laheij has been named Vice President Sales & Marketing at SCHOTTEL GmbH, assuming the responsibilities of Dr. Jens-Erk Bartels, who is retiring. Laheij earned a degree in Business Administration and began his career with Lips BV in the Asia/Pacific region. Upon his return to the Netherlands and following the takeover by Finnish competitor Wärtsilä, he eventually was named Area Sales Director for the Middle East & Asia region.

KVH Names Bruun COO

KVH Industries announced that **Brent Bruun** has been promoted to the position of chief operating officer (COO). Bruun joined KVH in 2008, and has served as executive vice president of the mobile broadband group. Bruun was previously senior vice president with satellite operator SES Americom, and before that, held positions with both GE Capital and KPMG.

Volvo Penta names New Americas Sales Director

Volvo Penta of the Americas has announced that **Dave Brown** has joined the company as director of commercial marine sales. Prior to joining Volvo Penta, Brown was national sales director for Chemring Sensors and Electronic Systems. He has also held senior sales positions with Mine Safety Appliances, Airgas Safety and Clean Harbors Environmental Service Company. He spent five years with the U.S. Coast Guard. Brown earned a Bachelor of Arts in Environmental Science at the University of North Carolina.


Brown


Roberts


Fink


Allen


Olson

SSI's Roberts named NSRP Vice Chair

Pat Roberts has been named National Shipbuilding Research Program's (NSRP) Vice Chair. This election is recognition by his peers of the practical results that Pat has delivered during years of involvement in NSRP programs. The experience Pat has developed in working on so many projects fit well with his role as Vice Chair of the newly created Business Technologies Panel. This new panel merges the NSRP Business Processes and Information Technologies Panels and has responsibility for various areas of research and development.

SUNY's Fink Tapped for Homeland Security committee

Department of Homeland Security Secretary Jeh Johnson has appointed SUNY Maritime College professor and dean Capt. **Ernie Fink** to an advisory committee. Fink will serve a three-year term as one of 19 members of MERPAC. The committee advises the Coast Guard commandant and Homeland Security secretary about challenges and best practices regarding the maritime industry. Fink, who graduated from SUNY Maritime, served 32 years in the U.S. Coast Guard.

Allen and Olson Join EBDG

Elliott Bay Design Group (EBDG) has welcomed to its Seattle office **Elizabeth Allen** as Human Resources Manager, and **Bradley Olson** as Naval Architect. Allen brings 11 years of experience and she holds a BA in Com-


Small


Haynes


Brown


Beering


Stinson

munications from the University of Washington. Olson returns to EBDG his after his 2015 internship. He completed his Master of Science in Engineering at University of Michigan and, as part of a four-person team, won the Lisnyk award for a U.S. Coast Guard Heavy Ice Breaker design. The Lisnyk award is given for first place in a student ship design competition sponsored by the Society of Naval Architects and Marine Engineers.

Harrington Hoists Promotes Small

Harrington Hoists recently announced the promotion of **Jim Small** from Midwest Regional Sales Manager & International Sales Manager to Vice President Sales. Small started his career at Harrington Hoists, Inc. as a Sales Representative in the Cincinnati territory and was later promoted to Regional Sales Manager.

Seawork Maritime Professional of the Year 2016 - John Haynes

The Seawork Maritime Professional of the Year award celebrates exemplary individuals within the maritime sector. This year's winner is **John Haynes**, managing director of Shock Mitigation. Haynes has chaired myriad technical conferences and has written numerous papers on future requirements and new technology.

BV Appoints Brown as Marine & Offshore Comms Director

Bureau Veritas (BV) has appointed **Nick Brown** as Communications Director, Marine & Offshore Division. He will replace Philippe Boisson, who retires after more than 25 years. Brown joins BV from Lloyd's Register where he has spent the last nine years, most recently as Head of Brand & External Affairs, Marine & Offshore.

Trojan Battery Names Beering COO

Trojan Battery Co. has named **John Beering** as the company's chief operating officer. Beering brings more than 20 years of experience and expertise in leading, implementing and improving business operations across a wide variety of businesses. Most recently, Beering was senior vice president and general manager for the Commercial Powertrain Business with Eaton. He earned a Master of Science degree in management, marketing and finance, and a Bachelor of Science degree in industrial engineering from Purdue University.

Stinson to Lead Northern Lights' New Louisiana Branch

Northern Lights has opened its fifth branch office, in Kenner, LA. **Rick Stinson** has been appointed NL Gulf Branch Manager. Rick has decades of experience in the Gulf and Inland Waterways boating community, having spent the prior twenty years as Sales Manager for Thrustmaster of Texas and before that in sales positions with Schottel, Volvo Penta Marine and Halter Marine Group.

Donjon-Smit Promotes Williamson

Donjon-Smit, LLC announced that **Tim Williamson** has been promoted to General Manager, replacing Raymond Lord who recently retired. Williamson has been with Donjon-Smit from its inception and has served in the roles of IT/Operations Manager, Assistant Salvage Master, Salvage Master and Project Manager in support of Donjon-Smit.

Houston International Seafarers Centers Honors Aalund

This month, the Houston International Seafarers Centers hosted their Annual Maritime Gala. **Niels Aalund** was honored as the "Bronze Anchor Award" recipient. Aalund serves as Senior Vice-President, West Gulf Maritime Association, and on 14 regional and/or national committees and boards. He is also Chairman of the Houston Maritime Museum. Aalund is a graduate of the University of Houston.

Coast Guard Shipyard under New Command

Captain **Matthew Lake** assumed command of the U.S. Coast Guard Yard on July 1, 2016. He is the 42nd Commanding Officer in the 117-year history of the Yard, the only shipbuilding and repair facility of the U.S. Coast Guard. Lake took charge of the Coast Guard Yard from Captain George Lesher who served as Commanding Officer from 2013 to 2016. Captain Lake earned a Bachelor of


Williamson


Aalund


Lake


Hernandez


LaGrange

Science with High Honors in Naval Architecture & Marine Engineering from the U.S. Coast Guard Academy and Master of Science degrees in both Mechanical Engineering and Naval Architecture & Marine Engineering from the University of Michigan and Business Administration from MIT.

Hernandez Named New Orleans Port Commissioner

Tara C. Hernandez has been appointed to the Board of Commissioners of the Port of New Orleans. Hernandez will serve a five-year term, succeeding Gregory R. Rusovich. A graduate of Loyola University with a degree in finance, Ms. Hernandez also earned a master's of science degree in real estate development from the Massachusetts Institute of Technology.

LaGrange Appointed to MTSNAC Committee

The U.S. Maritime Administration appointed Port of New Orleans President and CEO **Gary LaGrange** to its Maritime Transportation System National Advisory Committee (MTSNAC). The term is for two years and begins this month. The objective of the committee is to provide information, advice and recommendations to the U.S. Secretary of Transportation on matters relating to the U.S. marine transportation system and seamless integration with other segments of the transportation system, including the viability of the U.S. Merchant Marine.


Christian


Watson


Kuriyama


Broom


Doyne


Pyne & Ingram


Pesce

New Orleans Port COO Elected to Green Marine BoD

Green Marine, an environmental certification program for the North American marine industry, elected Port of New Orleans Chief Operating Officer **Brandy Christian** to its Board of Directors during its annual conference last month. The Port earned its first environmental certification with Green Marine in May of 2015 and was the 8th U.S. port to achieve the milestone.

Hatteras Yachts names Watson COO

Hatteras/Cabo Yachts, LLC has announced that **Wade Watson** has joined the company as chief operating officer. Wade will oversee daily operations at Hatteras' manufacturing plant in New Bern, NC, with a focus on improving manufacturing operations. With more than 20 years of manufacturing, aftermarket, quality control and management experience, Wade has a proven track record in achieving improvements in manufacturing efficiencies and product quality.

Kuriyama Appointed To Matson BoD

The Board of Directors of Matson has appointed **Stanley Kuriyama** as a Company director. Kuriyama is the Executive Chairman of Alexander & Baldwin, Inc. Prior to joining Alexander & Baldwin, Mr. Kuriyama was a partner in the law firm of Cades Schutte Fleming & Wright, specializing in real estate and real estate financing. He is a 1977 graduate of Harvard Law School.

Broom is Danos' Shell Account Manager

Danos has hired **Tom Broom** as executive account manager, responsible for overseeing and maintaining Danos' long-term relationship with Shell. In 2015, Broom retired from Shell after a 35-year-career, most recently serving as director of coastal issues for Shell Exploration & Production Company.

Doyne named Little Rock Port Board Chairman

The Little Rock Port Authority Board of Directors elected **Dexter Doyne** to the position of chairman replacing Chris Mathews. The Board also elected **Melissa Hendrix** as Vice Chair and **Frank D. Scott, Jr.** as Treasurer. Doyne was first appointed to the Little Rock Port Authority in the summer of 2010. He served as the Board's vice-chairman for the past two years and earned a BA from San Francisco State University.

Silver Bell Awards Honor Leadership, Courage

Celebrating the maritime connection essential to modern-day life, SCI's annual awards ceremony lauded the contributions made by persons who strengthen the bonds of community and camaraderie. This year's Silver Bell Awards Dinner raised over $800,000 for the Institute's programs and services for mariners. At the event, SCI honored **Joseph H. Pyne**, Chairman of Kirby Corporation with the Silver Bell Award for his service to the maritime industry throughout an extensive and extraordinary career. **Orrin H. Ingram II**, Chairman of Ingram Barge Company and former Silver Bell honoree, called Pyne "a leader among leaders in the maritime industry."

Navigators Welcomes Pesce to Surety Department

Navigators Management Company has hired **David Pesce** to launch a new Contract and Commercial Surety Department. Pesce will initially focus on contract and commercial surety in the small and middle market segments as well as environmental surety. Pesce joins Navigators from AXIS Insurance where he led the surety division. A Certified Construction Industry Financial Professional (CCIFP), Mr. Pesce holds a bachelor's degree in Mathematics from Lafayette College.

Yale Cordage's Application-specific Cordage

Yale Cordage's application-specific synthetics are known for durability and safety, but until recently, many shipyards needed wire for their heaviest lifts. The Fortis^2 Sling addresses this need with a capacity of up to 275 vertical tons in a sling 80% lighter than a comparable wire sling. From vessels to shipyard work, the Fortis2 Sling brings safety, durability and efficiency to any heavy project.

www.yalecordage.com/fortis2sling

JK Fabrication's Specialty Winches

JK Fabrication recently received a strong recommendation for the JK 20-15-RB anchor winches working aboard a DNR research barge. The winches fulfill a mooring mission on the barge, each developing 1,120 pounds of line pull bare drum, at 67 feet per minute hauling speed. The drum accommodates 450' of 5/8" wire rope, or 50' of 5/8" chain.

www.jkfabrication.com

Harrington Hoists ½ Ton Hand Chain Hoist

Harrington Hoists' CX005 mini hand chain hoist is compact and has a rated capacity of ½ Ton and is the second model in their line of smallest and lightweight hand chain hoists. Available with 10 or 20 foot of lift, it also includes a load limiter, a metal chain guide for durability, an aluminum body with steel frame and grade 100 nickel-plated load chain.

www.harrington-hoists.com

Hoists & Cranes – The Captains of Industry

JDN hoists and cranes, available with lifting capacities up to 100 metric tons, move loads reliably and with precision. They are in use in more than 70 different commercial sectors, including oil and gas, and the marine industry. With JDN Global Service it is possible to diagnose, find a solution and fix the problem, in any remote corner of the world.

www.jdngroup.com

DMW Marine Group Cranes

DMW Marine Group has increased their focus on the workboat industry over the past year. DMW Marine Group is headquartered outside of Philadelphia and has specialized in designing, engineering, manufacturing and distributing special application marine cranes since 1995. Pricing, lead time and parts availability have allowed DMW Marine Group to separate themselves from the competition, in the workboat industry in particular.

www.dmwmarinegroup.com

Reliability: Cranston-Eagle Marine Hooks

The most dangerous element of deploying small craft is the unintentional releasing of the hook. Delta "T" Systems, and its sister company Delta "P" Subsea Systems, are agents for Cranston-Eagle Marine Off-Load Hooks in the Americas. The off-load design means that Cranston-Eagle hooks will not open when a load is hanging from them. The companies perform the required five-year load testing and recertification.

www.deltatsystems.com

PRODUCTS

Load Test Software Produces Certification Onsite

New software from Straightpoint will add speed, accuracy and breadth to data recording and certification related to non-destructive load verification or proof load testing. Proof Test plus records data gathered by a Radiolink plus load cell, load shackle or compression load cell. It then creates a pass or fail certificate that includes test data and graphs charting data from the load versus time throughout a test.

www.straightpoint.com

Hendriksen's Electronically Controlled Lift Hook System

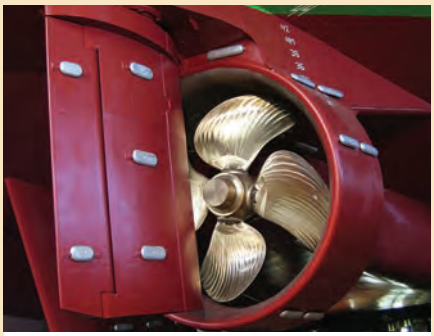
Henriksen Hooks' electrically controlled lifting hook system that has been developed to increase the safety of boat crews. When a boat is being launched by use of fore and aft lifting hooks which must be released simultaneously once the boat is on the water, the HHSRT employs an electrically powered system that opens and closes the hooks, eliminating the danger of one hook being opened before another.

www.hhenriksen.com

Mercury Marine SeaPro FourStroke Outboard

Mercury Marine's family of SeaPro FourStroke outboard engines are the perfect match for high-hour applications and harsh environments. Mercury's new 40hp and 60hp SeaPro FourStroke engines complement the current 75, 90, 115, and 150hp SeaPro FourStroke engines that were released in 2015 and have accumulated thousands of hours in commercial markets around the world.

www.mercurymarine.com



Damen's Optima Nozzle for Inland Shipping

The Damen Optima Nozzle is a propeller nozzle developed and manufactured by subsidiary Damen Marine Components (DMC). The Damen Optima yields the most benefits for inland shipping operators. DMC designed the Damen Optima – a nozzle with a slightly longer and higher intake and a propeller positioned just aft of the centre line – to increase performance even further.

www.damen.com

Cox Powertrain's Marine Diesel Outboard

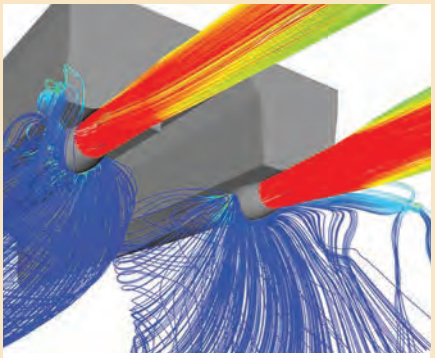
Cox Powertrain is developing a pioneering new outboard motor, the CXO300. This completely new concept diesel engine, providing gasoline outboard performance, with diesel economy and reliability, is a revolutionary opposed-piston, diesel outboard designed specifically for professional marine users. Delivering 300hp and weighing only 300kg, it is designed for commercial, government and military applications, where performance, durability and fuel efficiency are paramount.

www.coxmarine.com

Van der Velden Retractable Flanking Rudder for Pushboats

The retractable flanking rudder system is an in-house innovation of Van der Velden Marine Systems (VDVMS). Flanking rudders are often used for inland river tow boats. To operate the flanking rudder lift units, 2 HDMI touch screens (retractable flanking rudder operation and control system RET2700) are installed. A proprietary follow up steering system operates rudders independently and one FU2700 steering lever operates three main rudders synchronized.

www.vanderdvelden-marinesystems.com



Voith Linear Jets

Extensive data from 12 months' operation of the Voith Linear Jet demonstrates that the new marine propulsion system is a proven product for crew transfer vessels working on offshore wind farms.

The VLJ not only provided a more comfortable and safer journey for its passengers, but was also able to operate in conditions that other vessels would have found impossible.

www.Voith.com

Enginei Automatic Fuel Monitoring

Royston's Enginei system uses volumetric or mass flow measurement for enhanced fuel data analysis and reporting options incorporating detailed performance data, fuel optimization rates and mission critical information. The Enginei integrated fuel management system is compatible with all marine engine types and can be interfaced with new-build engine installations or retrofitted to operating vessels.

www.enginei.co.uk

Schottel Coating Systems for Maximum Corrosion Protection

Schottel rudderpropellers come with optimized coating processes, providing maximum corrosion protection with optimized resistance to abrasion and greater adhesive force in combination with thicker coats of paint. The underwater elements of the unit are coated with several layers of extremely hard, two-component epoxy resin. Compared with a conventional standard coating, this is characterized by 2.3 times greater abrasion resistance and approx. 60% greater adhesion.

www.schottel.de

Viega's No-Stop Couplings for MegaPress

Viega has introduced six extended no-stop coupling options for the Viega MegaPress and MegaPressG systems for joining schedule 5 to schedule 40 black iron pipe in sizes 1/2" to 2". The Viega MegaPress system uses modern cold press connections for pipe installation. The Viega MegaPress system is ideal for hydronic heat, chilled water, compressed air, fire sprinkler systems, low-pressure steam and vacuum lines.

www.viega.us

ClassNK launches NK-SHIPS app

ClassNK has launched the NK-SHIPS app, a mobile version of the free, web-based information service NK-SHIPS for operators, and managers of NK-classed vessels or vessels whose ISM/ISPS/MLC are registered with ClassNK. Clients can access information to manage their fleet using the app via their smartphone or tablet. The NK-SHIPS app is available to both iOS and Android users and can be downloaded for free.

www.classnk.com

Aydin Marine's 19" Pilothouse Monitor

Aydin Marine's KCGBL-19 is a rugged and affordable, 19-inch display ideal for bridge installations on all commercial and recreational pilothouse vessels. The new 19-inch KCGBL glass bridge display is a crystal-clear, dimmable, LED-backlit monitor, and is designed for trawlers, tugs, and cruising and fishing vessels of all sizes. The KCGBL is manufactured specifically for pilothouse applications.

www.aydindisplays.com

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Email: service@extinval.com
Work Phone : +1 504-466-1662
Cell Phone : +1 281-851-2886
8920 Lawndale Suite A HOUSTON, TEXAS, 77012 United States

Skills:
Experienced in lifeboat and safety inspections
Performed annual and five yearly testing and inspections for lifeboat and Davits
Effective in developing strong working relationships with all levels of staff.
Excellent abilities to set, meet, & execute all goals efficiently.
Ability to work under pressure & execute positive out of the box solutions.

Strong work ethic, progressive thinker, and extremely organized.

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Annual and five-yearly inspections, including 1.1 overload test of Lifeboats and Launching Appliances in compliance with the SOLAS Regulation, as set out in MSC.1/Cir. 1206. To perform the load test we use modern water bags placed in the lifeboat, as well as using other specific water bags to carry out the test directly from the davits.

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$999

15J27 - Jetter Base Model

- Honda GX 200 - Portable - Roll Cage Protected - General Triplex Pump - 2.8GPM - 3200PSI - 3+5+5 Manufacturers Warranty - Jetter/Pulse Valve On Demand - 150' x 3/8" Capacity Hose Reel, Ball Valve, & Jetter Nozzle

Jetter Hose Sold Separately

$1,099

15J91 - Electric Jetter Package

- Commercial Industrial Grade Motor 2.0 HP - 115 Volt Single Phase 18 Amp - GFCI Protected - Portable with Rollcage - General Triplex Plunger Pump - 2.0GPM - 1500PSI - 2+5+5 Year Manufacturer's Warranty - Jetter/Pulse Valve On Demand - Ball Valve - Assembled in USA - 150' x 3/16" 4000 PSI Red Jetter Hose - 50' x 1/8" 4000 PSI Red Jetter Hose - 4 Jetter Nozzles

$1,399

15J41 - Jetter Package

- Honda GX 390 - Portable - Roll Cage Protected - EZ Series General Triplex Pump - 4.0GPM - 4200PSI - 3+5+5 Manufacturer's Warranty - Jetter/Pulse Valve on Demand - 250' x 3/8" Capacity M10-5 Hose Reel, Ball Valve - 200' Jetter Hose - 4 Jetter Nozzle Pack

Attachment Kits Sold Separately

$1,479

17HJ39 - Jetter Package

- Honda GX 630 Electric Start - 15 Gallon Fuel Tank - Roll Cage Protected - V-Belt Drive - Triplex Plunger Pump - 5.5GPM - 3500PSI - 3+5+ Lifetime Manufacturer's Warranty - Jetter/Pulse Valve on Demand, 350' x 3/8" Capacity Hose Reel, Ball Valve & 4 Jetter Nozzles Included. 300' Jetter Hose - 50' Hose, Trigger Gun, Wand, Chemical Injector, & QC Nozzles

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Electric Rewind High Capacity, 500' x 3/8" or 350' x 1/2" Hose Reel - 200 Gallon Tank with Float Valve - Poly Tool Box - Lights, Front Jack with Wheel, Safety Chains, Aluminum Fenders - Commercial High Pressure Jetter – Vanguard 18 HP Electric Start Engine - V-Belt Drive - Trailer Mounted Skid - 15 Gallon Fuel Tank - Tank Feed Capable - General Triplex Plunger Pump - 5.5GPM - 3500PSI - Pump Mounted Jetter Pulse Valve - Foot Valve with 8' jumper Hoses - 3 Jetter Nozzles, Penetrator, Flusher & De-Greaser/De-Icer - 1 Year Manufacturer's Warranty

Jetter Hose & Attachment Kits Sold Separately

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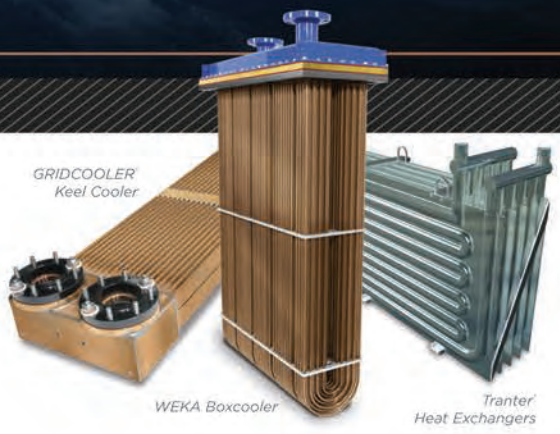

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