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# Marine News

MARCH 2013
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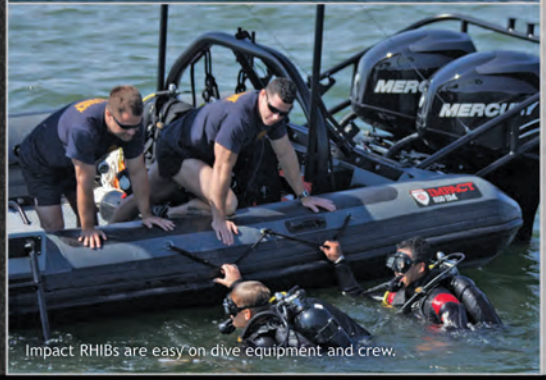

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**MarineNews** March 2013 • Volume 24 Number 3



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ISSN#1087-3864 USPS#013-952
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## On the Cover







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**POSTMASTER:** Send address changes to ***MarineNews***, 850 Montauk Hwy. #867 Bayport, NY 11705.
***MarineNews*** is published monthly by Maritime Activity Reports Inc. Periodicals Postage paid at New York, NY and additional mailing offices.

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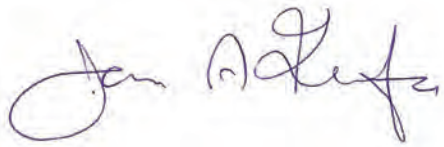
Compelling Copy. It is what we all strive for. After all, it's why you read *MarineNews*. But, what defines compelling copy? Is it feature articles that highlight emerging technologies and innovation? Or, perhaps, does that entail Insights from key industry stakeholders? Maybe, for you, it means the collective subject matter expertise of *MarineNews*' impressive stable of contributing columnists. Actually, it's all of that, and more.

In the February edition of *MarineNews*, (Captain) Jeff Cowan struck a chord with some readers – and not necessarily a completely happy one – when he discussed the regulatory aspects of the articulated tug barge trade. The article spurred a raft of mail but it also reinforced what we already know: maritime industry stakeholders want to be challenged; they want to be inspired and they want to engage in substantive conversations about the businesses that they hold near and dear. Inside, you'll read ATB industry icon and innovator Bob Hill's response to our February article; a well-reasoned response, but also one which is bound to evoke more discussion. We wouldn't have it any other way. That's why you tuned in; right?

Front and center this month are the domestic shipyards that fuel the growth for our inland, offshore and coastal trades. As it turns out, U.S. newbuild and repair specialists alike are also quickly carving out a niche of their own in the global markets. Some yards, faced with the challenges of a sequestration that is sadly already here, have been attempting to diversify their backlog portfolios in order to hedge their bets against what could soon be a markedly reduced federal spending policy. Still others are bidding aggressively and winning business in foreign markets because they already know what you will soon discover when you turn the pages of this edition: American shipbuilders – in the right markets – can and do compete on the global stage. Susan Buchanan leads us through the story that debunks the theory that U.S. builders are too expensive, can't provide quality and/or can't deliver on time. Now, that's compelling copy.

For inland operators, as we approach the spring thaw in the nation's heartland, a comprehensive situation report on the status of the U.S. Army Corps of Engineers and their efforts to maintain and improve our critical waterways and infrastructure comes just in time, also within these pages. That's also compelling copy that you won't read that anywhere else.

Finally, it probably goes without saying that these uncertain times – sequester, regulatory changes and iffy freight markets – demand straight talk, and yes, compelling copy to guide you through the shark-infested waters that define today's inland, brown water and workboat industries. At *MarineNews*, we'll continue to give just that to you; as we see it, tell you why, and then listen for your response. Your marine business enterprise will always be the heartbeat of this magazine. That's something compelling and something we won't ever forget.



**Joseph Keefe**, Editor, keefe@marinelink.com

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# BY THE NUMBERS

A new, Bi-national study *(The Environmental and Social Impacts of Marine Transport in the Great Lakes-St. Lawrence Seaway Region)* has highlighted green advantages of Great Lakes-Seaway shipping. It's official: Ships are the most fuel efficient and carbon-friendly mode of transportation. *MarineNews* readers already know that, but the breadth of that gap between the maritime modes and others is startling. The report provides marine stakeholders with an assessment of environmental and social impacts that could occur if Great Lakes-St. Lawrence Seaway navigation system marine cargo shifted to road and/or rail. The study examines modal comparisons of Fuel efficiency, Greenhouse Gas emissions, Criteria Air Contaminant emissions, Traffic congestion, Infrastructure impacts and Noise impacts using data compiled from U.S., Canadian and international carriers representing nearly 80% of cargo carried on the Great Lakes-Seaway System. The findings take into consideration potential changes when future fleet renewals are complete, based on EPA requirements and other regulatory pressures:

**Distance in miles to move one ton of cargo with 1 U.S. gallon of fuel**

| | Base Year 2010 | | | Post Renewal All Modes | | |
|---|---|---|---|---|---|---|
| | Marine | Rail | Truck | Marine | Rail | Truck |
| **Seaway Size Fleet** | 688 | 553 | 109 | 1,022 | 586 | 127 |
| **U.S Fleet** | 610 | 550 | 88 | 887 | 581 | 104 |
| **Combined Great Lakes / Seaway Fleet** | 631 | 553 | 91 | 929 | 584 | 106 |

*Source: RTG analysis of confidential marine carrier data.*

Great Lakes-Seaway vessels are 30+ years old. Rail and truck fleets are newer than 20 years old. The delay in renewal of domestic marine vessels has been influenced by the 25% duty on foreign-built vessels brought into Canadian domestic trade, and Jones Act prohibitions on foreign-built vessels in U.S. domestic trades. The repeal of the import duty and introduction of the EPA's assistance program for repowering existing U.S. vessels are stimulating fleet renewals that will improve the efficiency of both. In advance of that, the following metrics are in play on the Great Lakes and in the Seaway:

| |
|---|
| **963**: *number of trucks it would take to carry 30,000 tonnes of cargo that just* **1** *Seaway vessel carries* |
| **301**: *number of rail cars to carry the same load.* |
| **2,340**: *number of trucks needed to transport 62,000 tons of cargo carried by* **1** *Great Lakes vessel.* |
| **564**: *number of rail cars to carry the same load.* |

The study also calculates the potential traffic congestion that would be created on highways or railways if Great Lakes-Seaway marine cargo was shifted to trucks or rail.

| |
|---|
| **7.1** *million additional truck trips in the region would be required.* |
| **1.9** *million extra truck trips across the border would be required to move the cross-border cargo.* |
| **3.0** *million additional railcar trips throughout the region, or 115 addition trains daily.* |

**Infrastructure Impacts**

| |
|---|
| *The study found that if Great Lakes-Seaway marine shipping cargo shifted to trucks permanently, it would lead to* **$4.6** *billion in additional highway maintenance (over 60 years).* |

**Noise Impacts**

| |
|---|
| *The noise footprint of the Combined Great Lakes-Seaway fleet is negligible in comparison to other modes and the noise footprint for rail and truck would increase by 40% if cargo was shifted to either mode from the water.* |

**Energy Efficiency and Greenhouse Gas Emissions**

| |
|---|
| *The Great Lakes-Seaway fleet is 7 times more fuel-efficient than trucks and 1.14 times more fuel-efficient than rail. Rail and trucks would emit 19 and 533 PCT more greenhouse gas emissions respectively if these modes carried the same cargo the same distance.* |

**Traffic Congestion – Shortsea Shipping in Action**

| |
|---|
| **3 million**: *Number of train trips to carry the total cargo transported by the Great Lakes-Seaway fleet, as much as double the Canadian rail traffic and a 50 percent increase in traffic on U.S. rail lines.* |
| **7.1 million**: *Number of truck trips to carry the total cargo transported by the Great Lakes-Seaway fleet in 2010. That would increase existing truck traffic by between 35 to 100 percent.* |

**The Executive summary of the Report can be found at: www.marinedelivers.com**

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# FKAB Designs Large Dredger with Nupas-Cadmatic

**By Henk Kramer**

FKAB has secured a contract for the design of a 2,400m³ trailing suction hopper dredger (TSHD). The concept design was developed by the Ministry of Transportation and Communication's Kaoshing Harbor bureau, which will own and operate the vessels. The order was acquired by the Ching Fu Shipyard. The company won the contract in competition with three other Taiwan-based companies. The Ching Fu Shipyard has commissioned FKAB for the basic and detail design contract based on the company's experience and international standing in the shipbuilding industry.

In order to improve the dredger's performance, FKAB will review the concept design and provide the complete basic design package to the shipyard. FKAB will also deliver the detail design and related production drawings. In order to complete the commission swiftly and efficiently, FKAB has chosen Nupas-Cadmatic as their CAD/CAM system for the project.

FKAB is part of the Swedish Mattson Gruppen, which is an independent engineering company mainly active in the marine and shipbuilding industries. With offices in both China and Sweden and over 50 years of experience, it has established itself as a reliable partner. To date FKAB has completed various dredging designs, ranging from backhoes, split barges and trailing suction hopper dredgers. Hopper dredgers are designed at the offices in Sweden as well as at FKAB's Shanghai office.

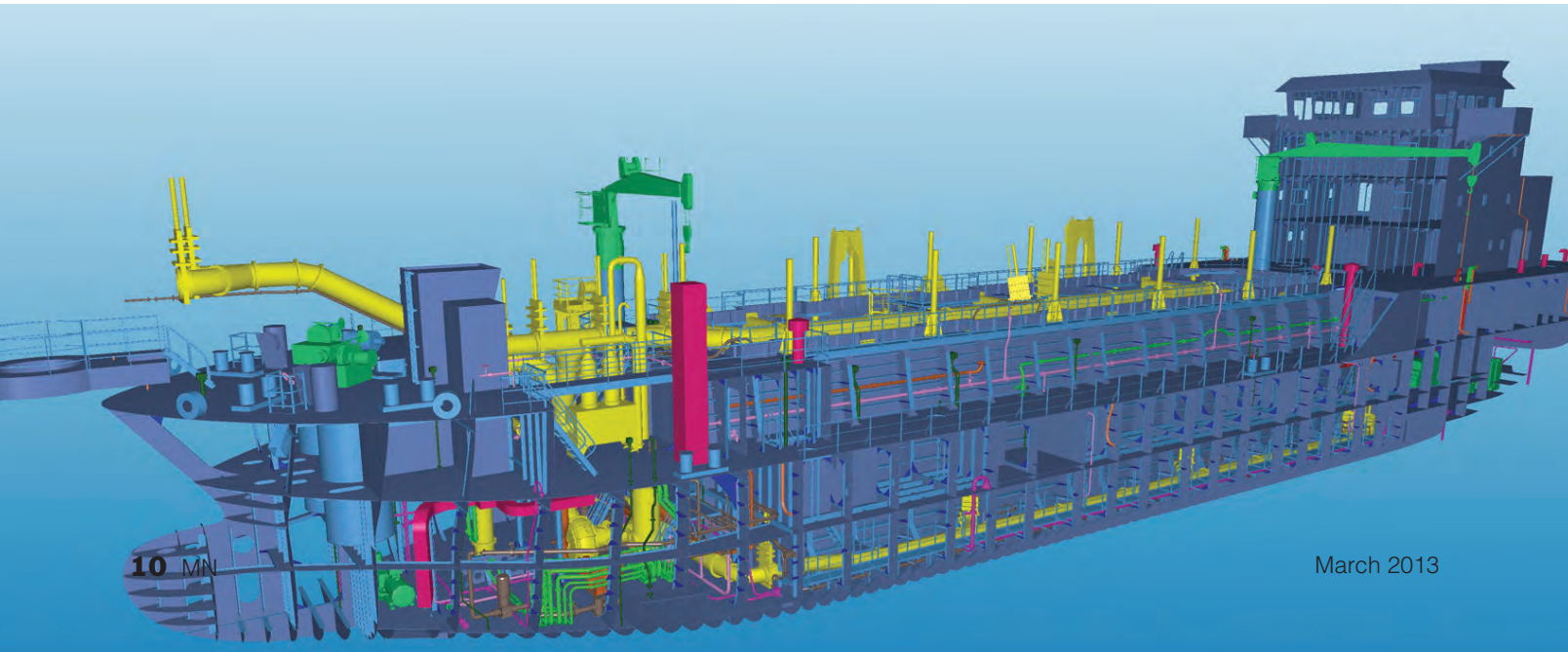
The Swedish office created the basic design drawings and the FKAB China office will carry out detailed and production design with Nupas-Cadmatic. FKAB has owned Nupas-Cadmatic licenses for some years, but up until now the Nupas-Cadmatic design work has been done at the Dalian (China) office. The Shanghai office will now use the licenses for the complete design and production engineering of the dredger.

The power supply of the dredger will be provided by two MAN 6L21/31 1290kW main engines, three 6090AFM75 222kW auxiliary engines and a single CAT3512C 1118kW dredging engine. The power supply enables the vessel to dredge to depths of up to 25 meters. This is sufficient for its main task; clearing the Kaoshing Harbor (Taiwan), the fourth largest port in the world.

## Nupas-Cadmatic: Ease of Use

FKAB chose Nupas-Cadmatic for the job based on its ease of use and intelligence. This combined with the open interface to other systems and the advantages of Nupas-Cadmatic's eBrowser, convinced FKAB that Nupas-Cadmatic could reduce engineering hours used in development and production. This is particularly evident in this case as the Ching Fu shipyard also uses Nupas-Cadmatic. Since FKAB will carry out all the design and production engineering for the dual class BV & CR dredger, the designers will extensively use the 3D modeling and production information advantages of Nupas-Cadmatic.

The company has successfully used the software on design projects and will continue to do so in the future. FKAB has





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particularly appreciated the Nupas-Cadmatic CoDesigner (a free of charge functionality in Nupas-Cadmatic V6.0 and up), which enables users all around the world to work simultaneously on a single project.

## Added Features

CoDesigner makes it possible to add new design teams to a project with a few clicks. All object data is accessed via a check-in/check-out procedure that guarantees that only one designer can modify the same object at any given time. Simply by adding remote design teams to a Nupas-Cadmatic project, the project owner can decide which user has access to work on which sections in a ship. The owner can completely define how users can access the database environment. The owner thereby stays in control of the actions taken by subsidiary contractors, from the same company, especially when working with several subcontractors.

CoDesigner allows FKAB's Swedish and Chinese offices to work together on the same project at the same time. Before implementing CoDesigner they were able to work together on the same projects, but haven't been able to do so concurrently.

The use of CoDesigner means that projects don't have to be shipped back and forth and sees data exchange reduced to a minimum.

As a result, FKAB expects to save even more time and money while at the same time being able to draw on the knowledge of both offices. This allows FKAB to increase its effectiveness by seamlessly applying international know-how from multiple offices around the world.

## Facilitating Collaboration

Magnus Wikander, Manager at FKAB, told MarineNews, "Nupas-Cadmatic is not only a great tool for our work; it also facilitates cooperation between our offices. Until now we only had Nupas-Cadmatic at our office in China, but now the Swedish offices also use the program fully, which will strengthen FKAB as a complete provider of sustainable marine engineering."

The trailing suction hopper dredger project is an example of how these companies intend to work together in the future. By fully utilizing know-how in collaborating shipyards, design offices, subcontractors, project owners and clients, the parties expect to gain a competitive advantage.

***Henk Kramer*** *is a Sales & Marketing Officer at Numeriek Centrum Groningen (co-developer of Nupas-Cadmatic).*

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# Advances in Bollard Pull Testing Technology

**By Joseph Keefe**

Many arguments about the capabilities of a tug can be quickly settled when you can conduct a full-ahead power, bollard pull test. "Many captains will argue about horsepower, hull design, rudder angles, and other variables, but the only thing that really matters is bollard pull and a test provides empirical data of pure power," says Mark Babcock, VP of Machinery for Sause Brothers' 200 tugs, barges and OSVs. "A well maintained vessel shouldn't lose bollard pull over time, but with every propulsion related change, engine overhaul, shaft or propeller retrofit, the vessel should be re-tested."

While the bollard pull test has been around for many decades, recent changes in technique, technology and data-logging allow engineering and operations to fine tune the analysis and provide more accurate information. Providing accurate reports allows pilots, agents and customers to have confidence in towing and tug capabilities at the edge of the performance envelope. While many new tugs are built larger and more powerful than ever before, most of the tugs on rivers and ports have years on their engines and the ability to move their tow when it ultimately matters, should be tested against expectations.

**MTNW Tension Link**

## What is Bollard Pull?

Bollard pull is the static force exerted by a tug at zero speed on a fixed line. Almost always, a test involves affixing a line to a shore-based bollard and ramping the RPM's of the engine to full- throttle, typically in ahead and astern conditions. The vessel is then held at full RPM's for between 1 and 10 minutes. Some versions of this test are completed quickly and some, like in Brazil, last for over an hour.

## Test Variables

Many variables can influence a bollard pull test reading, including water depth, prop wash, wind, tidal forces or currents, rudder angle, and stretch of the tow line. Finding an ideal site is difficult, so external forces must be figured into the final analysis. Beyond this, A bollard pull test requires a tension sensor which is put in series with the tow line, a local display of the line tension and a process to record that data. Often, an engineer will be present in the engine room to evaluate engine RPM's and another engineer will stand on the back deck to track the forces on the load cell by noting them on a display and manually tracking the figures by hand. This process can be challenging and inaccurate in rough weather and in river conditions which change quickly. In river situations, the tug may start upriver of the shore-based bollard, bring the tug up to full power and when the vessel is perpendicular to the shore, the engineer must quickly capture the data from the tension sensor. This short window for readings can make it challenging to capture accurate data.

## Advances in Technology

Measurement Technology NW of Seattle has developed a PC-based software solution that allows data capture up to 100 times per second (Hz). The software time-stamps the incoming data so that it is easy to match up with other data in post-event analysis; automating and simplifying data correlation. Recently, MTNW supported Glosten Associates' work with a tugboat bollard pull test intended to verify the bollard pull of a number of tugs. "The MTNW tension monitoring system and engineer provided the tension data that we required to

perform our analysis," said Ken Lane, Director of Production Services at Glosten. "The MTNW system captured the line tension data with an accurate time stamp which allowed us to easily synchronize the tension sensor data with other important measurements."

MTNW's tension monitoring systems include a certified tension link, rugged water proof local display and a laptop PC with data-logging software. The system is plug-and-play for quick set up which allows for more time testing and lower fuel costs. The engineer can now watch the tension locally, but also know that the data-logging software is catching every tension spike for post-test analysis. "MTNW equipment can accommodate tests as simple as full ahead or astern to more complicated tests which seek to correlate line tension to engine RPMs and other variables. The Winch-DAC software prints easy-to-read PDFs of each test.

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MTNW's equipment is available for bollard pull testing and certification for tugboats and can be used as a rental device so that more naval architects, tugboat operations managers, and engineers can perform these services on their own. MTNW's equipment is certified regularly and MTNW will work with certifying witnesses from DNV, ABS, Lloyds, Bureau Veritas and any other required certifying body.




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# James Hannon

## *USACE Chief, Operations and Regulatory Division*

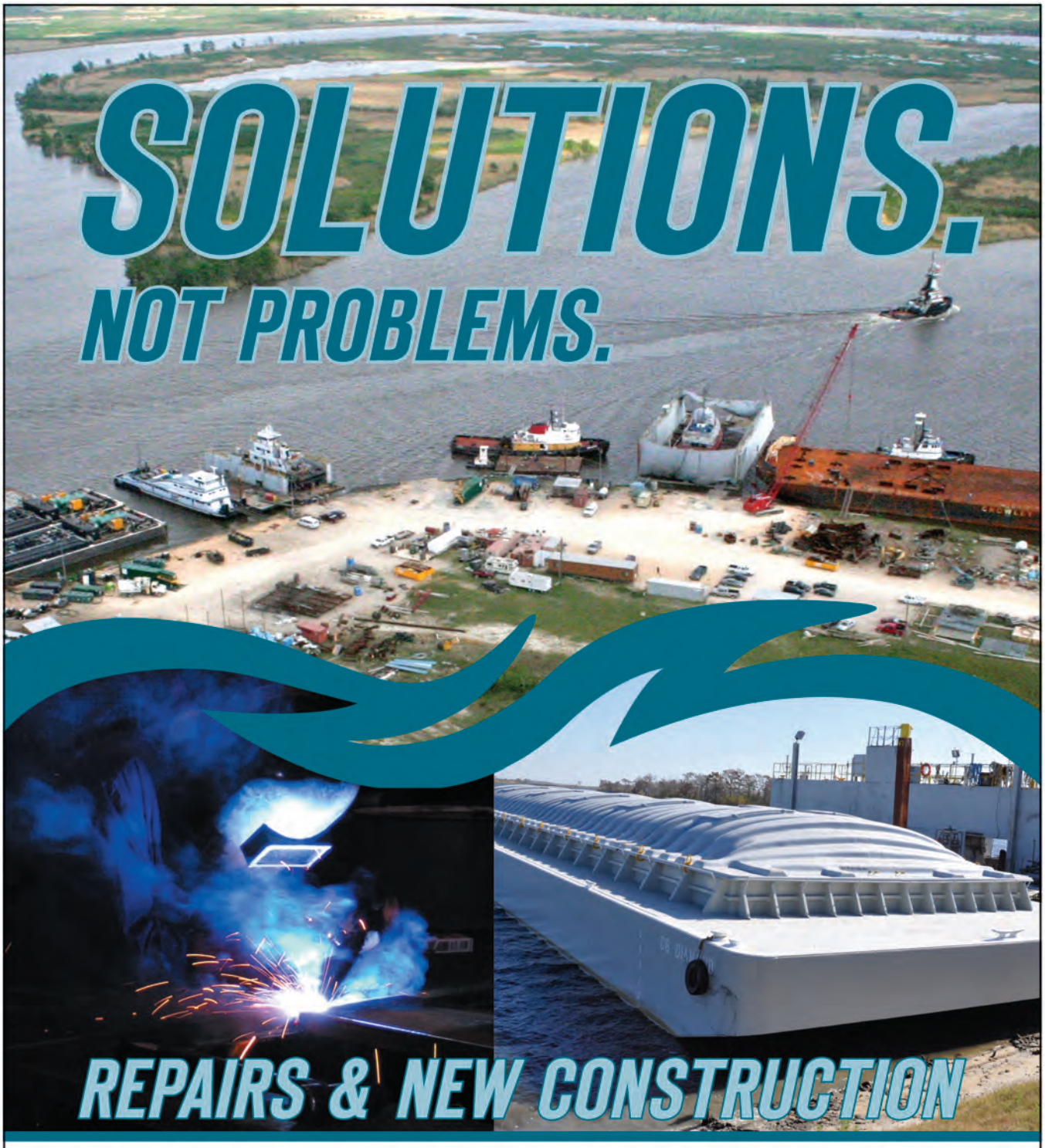
Jim Hannon is Chief, Operations and Regulatory Division for the U.S. Army Corps of Engineers (USACE). He also provides leadership and oversight for activities within the USACE Lakes and Rivers and North Atlantic Regional Integration Teams. Hannon is a member of the Society of American Military Engineers and the American Society of Civil Engineers and was appointed to the Senior Executive Service in July 2010. After earning a bachelor's degree in civil engineering from Mississippi State University in 1980, he began his career with the U.S. Army Corps of Engineers as a civil engineer with the Mobile District at the Lock C Resident Office. Since then, he has taken on increased duties and responsibilities in a variety of roles for USACE. As the Senior Executive for one of the USACE's most important missions, Hannon is therefore the perfect choice to bring *MarineNews* readers up to speed on all things related to the current status of the nation's inland rivers and the efforts to maintain and improve that infrastructure.

**Bring us up to speed on the size and breadth of today's U.S. Army Corps of Engineers (USACE).**

The U.S. Army Corps of Engineers comprises approximately 36,000 civilian and 800 military employees who perform critical military missions, civil works and research and development for the Nation. We are geographically dispersed throughout the United States and OCONUS with our headquarters in Washington, D.C., nine division and 44 district offices, six centers, two Army Reserve theater engineer commands and the active-duty 249th Engineer Battalion (Prime Power). Our OCONUS presence includes one Hawaii-based division office and district offices located in Hawaii, Alaska, Japan, Korea, Europe and Afghanistan. In our civil works program, we are responsible for the construction, operation and maintenance of much of the nation's water resources infrastructure. This includes the work we do to maintain navigation on the inland waterways at our coastal ports and harbors and on the Great Lakes. It also includes the work we do to protect, restore and enhance the environment, our role as the nation's largest federal provider of outdoor recreation opportunities and largest owner/operator of hydroelectric plants; projects to reduce risk to people and communities from floods and coastal storms; water storage and supply, and our support to FEMA in responding to disasters. We are still awaiting congressional passage of an energy and water appropriation to fund the civil works program for fiscal 2013, but in general our annual appropriation for the program is between $4.5 and $5 billion. The overall funding for the program also varies year by year based on supplemental appropriations that might come our way and by the amount of reimbursable work that we do for other federal agencies. USACE has approximately 2,700 various vessels, including a wide variety of survey boats, dredges, patrol boats, tugboats, towboats, boat houses and more.

**Arguably, there is no more important mission in your domain than maintaining the nation's inland waterways. Do you have enough at the present time to get the job done?**

The U.S. Army Corps of Engineers, like all other federal agencies, realizes that the nation is currently in an era of constrained fiscal resources and that not all of the great

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things that we can do for the nation can be fully funded. Given that reality, it is incumbent upon us to make sure that we are the best stewards possible of the financial resources we are entrusted with and to fully optimize what we do with those funds. Within our navigation business line, our overall funding has remained relatively steady over the past several years, but that means we can do a little less actual work every year when you factor in inflation and the rising cost of doing business.

There are certainly more needs for dredging projects on the inland waterways, at our ports and harbors and on the Great Lakes than there is funding available to meet those needs. This requires us to make very tough decisions every year on where to allocate our available resources to do this critical work, and we do so knowing that there are many other places with authorized projects that we will not be able to support.

**Of all the challenges facing inland waterway users today, the depth of water on the Mississippi River is arguably the biggest. Give us a SITREP on the current conditions, and when you think you might think users will get some relief.**

It's important to remember that navigation on the Mississippi is not the only thing that has been impacted by the extended drought across approximately 60% of the nation. This drought has affected communities, fresh water supplies, agriculture, livestock, water-dependent commerce and more. The U.S. Army Corps of Engineers certainly understands the importance to the nation's economy of maintaining commercial navigation on the Mississippi River, and we have dedicated a lot of resources and efforts since last summer to doing everything we can within our existing authorities to keep the river open for commerce during this drought. We are completing a project to remove rock formations in the river near Thebes, Ill., that pose a threat to navigation during low water conditions. We continue to aggressively and proactively maintain the navigation channel, including actions to accelerate dredging, construct structural measures, strategically manage water releases from upstream Mississippi River USACE reservoirs, perform routinely scheduled surveys, and closely collaborate with navigation industry users and the Coast Guard on river conditions and navigation aids. The long-term solution for the Mississippi and other inland waterways is rain, and we need a lot of that to get us out of the current drought.

**The situation on the inland rivers is part manmade and in part, a product of Mother Nature. What can be done to help prevent or at least partly alleviate future situations?**

The bottom line solution to the drought for the Mississippi River and many of the nation's other critical inland waterways is rain and a lot of it. In the near term, within USACE, we are actively monitoring the availability of water within the river systems on a daily basis and managing project operations in accordance with long-standing plans that have been closely coordinated with state and local governments, users and other agencies. These plans are designed to consider a wide range of operational scenarios from drought to flooding and are intended to ensure our projects continue to meet all of their congressionally authorized purposes like hydropower, water supply, recreation, navigation and the environment. In the long term, USACE will continue to participate in national, regional and local dialogues that look to the future of water-resources management in the United States. As a nation, we must work together to plan the future of fresh water resources management to ensure that it is available to meet our needs for quality of life, population shifts, health, the economy and the environment.

**Aside from the current issues on the Mississippi, what other project is the top priority of the USACE on the inland rivers today?**

While there are many high-priority needs on the inland waterways, our priority construction project is the Olmsted Lock and Dam project on the Ohio River near Olmsted, Ill. The project includes twin 110-foot wide by 1,200-foot long lock chambers and dam with navigable pass. The Olmsted project will replace the outdated navigation locks and dams 52 and 53, both of which are beyond their designed project life and are becoming increasingly unreliable. The project's location is one of the most crucial points in the nation's navigation system – the hub of the inland waterways navigation system – and approximately 90 million tons of waterborne commerce passes through the area on an annual basis.

**What, if anything, is the USACE looking to change – operationally, administrative, infrastructure – in terms of how they do business in the near future?**

The USACE faces a significant challenge in addressing the deteriorating state of the water resources infrastructure it owns, operates and manages. We have a number of difficult decisions to make about the future of these assets with respect to what to recapitalize, what to repurpose and what is no longer serving any useful purpose and therefore should be divested. These decisions are made more complicated by

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the potential that the nation could be in a fiscally austere environment for the foreseeable future. One challenge is the fact that we have about a $60 billion backlog of authorized construction projects, but we only get about $2 billion every year in construction appropriations. There are a lot of worthy projects that we cannot get to because the federal resources are not available to meet the needs, and tough decisions have to be made every year on where to expend our resources in a way that maximizes return to the nation.

For the past couple of years we have been crafting and implementing a transformation plan designed to improve our management of the nation's water resource infrastructure and how we make investments for the future. Our civil works transformation initiatives give us the means to adapt to all of the changes going on around us to and to better meet the nation's needs when resources are limited and expectations are high.

The transformation is based on four pillars – managing the water resources infrastructure portfolio; planning modernization; enhancing product and service delivery methods; and transforming the Civil Works budget to better address America's water resources needs.

The USACE water resources infrastructure portfolio has a plant replacement value of more than $251 billion. These assets generate jobs, facilitate imports and exports and contribute to a stronger economy, environment and quality of life for all Americans. Comprised of dams, locks, levees, hydroelectric power plants and much more, the majority of the portfolio are more than five decades old. Much of the portfolio needs significant investment to remain viable and to meet future demands, and we believe that some infrastructure should potentially be divested or repurposed because it is no longer serving its intended purpose. Our asset management program strategy has given us a much better understanding of what infrastructure is in our inventory and the condition it is in. This in turn gives us the ability to be smarter about where we invest our limited resources and where we can reduce performance risk at our projects. Some of the steps that we are taking to implement this infrastructure strategy are:

- ***Developing reliable methods of assessing the current value and levels of service of infrastructure systems to determine where priority investments need to be applied.***
- ***Emphasizing the interdependence and inter-relationships of assets within a watershed or system to provide reliable, resilient, and adaptable infrastructure systems that deliver the required levels of service.***
- ***Evaluating assets in terms of value to the nation.***
- ***Systematically evaluating infrastructure based on current performance in meeting original authorized project purposes, and how demands within the watershed or system have evolved and changed over time.***

Planning modernization is intended to reduce the complexities that have become a part of the USACE project planning process over the past couple of decades. We have a very rigorous planning process that looks at a project's engineering feasibility, environmental acceptability and economics but many of our studies take too long and are overly expensive. Our planning modernization effort is designed to get us back to the basics of planning execution, accountability and improvement of the organizational and operational model to ensure consistent quality in planning. Going forward, our feasibility studies will be expected to meet a metric we call the "3x3x3 rule" which will streamline the development of projects, emphasize performance and deliver timely quality solutions to water resources needs. In short, studies should be completed in three years, cost no more than $3 million and engage all three levels of the USACE vertical team. The studies should also fit into a three-inch binder. Any schedule or cost that is anticipated to exceed these standards will have to be elevated to USACE headquarters for review and approval. Enhancing our product and service delivery methods for water resources infrastructure means more consistency in product design, enhanced technical competence and improved ability to meet or exceed customer expectations. The focus is on ensuring we have the most efficient, cost-effective and timely delivery of projects, programs and activities; how we link technical capability to desired levels of service; how we retain expertise and core competencies; and how we reduce risk. The transformation plan promotes shared capabilities to deliver products and services at the regional level with the objective that service delivery methods are consolidated and viewed with an enterprise-wide perspective nationally. The Civil Works budget transformation plan calls for a new approach that establishes a systems-based, watershed approach to decision making and consideration of alternative financing vehicles. Our objective is to ensure the budget is aligned with national priorities. We also want to budget for projects that make sense within the context of a watershed, and that means we have to have an awareness of what else

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is going on within the watershed in terms of other federal, state, local or non-governmental organization investments or initiatives. Collaboration and input from our customers and stakeholders are keys to successfully implementing this holistic approach. We're also looking at other options to include streamlining procedures for non-federal parties, innovative/alternative financing, public/private partnerships and streamlining processes/procedures for non-federal partners to move forward on their own with important water resources activities, while ensuring federal interests are maintained. The extent of our success in budget transformation will greatly impact our future ability to ensure the civil works infrastructure is maintained and performs safely and that our projects deliver the economic and environmental benefits for which they were authorized, designed and constructed.

**If you had one message to get out to the users who depend on your services today, what would that message be?**

The United States Army Corps of Engineers is proud of the work we continue to do for the nation, both at home and abroad, and this public service is what motivates us to do what we do. We also know that there is much more work to be done, particularly in finding enduring solutions for the Nation's many water resources challenges. We are committed to finding sustainable, 21st century water resources solutions as a means of strengthening the Nation's economy, supporting job creation, reducing risks, bolstering long term global competitiveness and improving quality of life. Addressing these challenges will require all of us to come together to leverage resources, particularly during this time of fiscal austerity.

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# Send a Clear Message:

## *Report Accidents, Incidents and Injuries Immediately*

**By Captain Katharine Sweeney**

*How well do you communicate to your crew your expectations that accidents, incidents and injuries are to be reported immediately? Is it a clear and consistent message repeated over and over? One good place to list this policy is at the footer of the form your company uses to record safety meeting minutes so that it is reiterated frequently. This message needs to be as basic and as ubiquitous as the message you see in public restrooms reminding you to wash your hands.*

### See Something, Say Something

"See Something, Say Something" is an example of a clear message about safety we all see when we go through airport security or step on board a ferry. It's the tag line for H.R. 495, Act of 2011, which granted immunity from civil liability to persons who, in good faith and based on an objectively reasonable suspicion, report suspicious activity. See Something, Say Something is a short and easily understood message. Can you say the same of the message you send your crew about accident, incident and injury reporting?

Reporting accidents, incidents and injuries immediately is important for several reasons:

1. *to address the issue that caused the problem, so no one else gets hurt,*
2. *to make sure the injured party gets proper treatment, and*
3. *to make sure the injury is documented appropriately.*

Your procedures should indicate that all injuries need to be reported, no matter how slight. They should include clear instructions as to what details should be covered in the report and to whom the report should be given.

Recently, I ran across a Safety Management System which seemed to have no policy regarding injuries. The procedures only indicated what was to be done in the case of an incident or accident. However, an "accident" does not necessarily need to occur for someone to get injured. A crew's work area is constantly moving, subject to the motions of the waters they operate in: heaving, surging, swaying, pitching, rolling, and yawing. Often crewmembers (especially those that routinely come back to the same vessel) experience strained muscles, sprains, etc. from performing normal activities. They take the Tylenol or ibuprofen they brought with them and go about their duties, but sometimes the pain doesn't go away because the injury is worse than they thought or exacerbated by inattention.

Late reporting can impact proper treatment of the injured party as well. There's nothing like having a crew member come forward with a complaint just after getting underway, following a long in port period. When the vessel was tied up it had access to real doctors and now the injured crew member must be evaluated by someone who has maybe 40 to 80 hours of training, and perhaps the ability to call a doctor shore side for advice.

### You're Not Done Until the Paperwork is, too

Making sure the injury gets documented appropriately is also important; however, there is a danger that should be pointed out here. Focusing solely on the paperwork can backfire and discourage crew members from reporting an injury. When you have a procedure that goes overboard and every band-aid dispensed requires a stack of paperwork to be completed by the injured, the witnesses, the person giving treatment, the non-witnesses, etc., you are providing a big disincentive to report injuries. Most likely the person that is tasked with filling out the reports, probably a managerial part of the vessel staff, will complain about the copious amount of paperwork to everyone involved. This is not the message you want communicated to your crew.

I suggest charging captains with a medical log in which they can write down any brief complaints. You employ your captains for a reason, and hopefully their judgment can be relied upon to decide whether further documentation is needed regarding a reported accident, incident or injury. A medical log gives captains a convenient means to follow up with the individual to confirm if the symptoms of his or her injury, no matter how slight, are improving or if they might need further care.

Some companies have each crew member sign a statement prior to signing off the vessel indicating they were not injured during their tour of duty or that they reported all injuries incurred while on board. These practical procedures send a clear message that all injuries need to be reported immediately and will help protect the crew from greater injury and vessel operators from potential legal troubles.

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# Three Sheets to the Wind

## *Three Key Ingredients of the Sober Financial Statement*

By Richard Paine

Financial reporting is a sobering issue. Creative accounting, "cooking the books," earnings manipulations and other accounting shenanigans have been around as long as folks have had income, paid bills, taxes or sought investors for their ventures. With intent to defraud for economic gain and financial crimes, came the passage into law of the Sarbanes-Oxley Act of 2002 (Sarbox or SOX) that made the consequences of such behavior more than just a slap on the wrist.

The 2000's were to some companies public and private, financial reporting's wild, wild, west. Exaggerations of earnings, fiduciary negligence and make-it-up-as-you-go nonchalance all contributed to the confidence of American investors being shaken to the roots. An overhaul of regulatory standards was needed to restore some measure of that confidence in U.S. public corporate financial reporting.

Enacted in July 2002, Sarbanes-Oxley contains 11-sections or titles which detail corporate board responsibilities, penalties, rulings and requirements in complying with the law. Enhanced reporting requirements for financial transactions, including off-balance sheet reporting changes and the requirement that the Chief Executive Officer personally sign the company's tax returns further focused the Federal Governments scrutiny on public company boards, management and public accounting firms. Is it a success? It is expensive to implement, and the jury may still be out on its overall value.

Now, what does this mean to those companies that are not public? First a primer regarding financial statements:

There are three "sheets" in a financial statement: Income (or Profit and Loss), Balance and Cash Flow statements. As a package, they detail the financial condition of a business during a given time period. They also function as a tool to compare current financial information with a similar historic time period. They are useful to a lender or investor because, in addition to the information they contain, they follow, in certain forms, a standardized format known in the United States as GAAP or Generally Accepted Accounting Principles.

### GAAP

GAAP comprises the rules and standards that accountants use in the preparation of financial statements. As of yet, there is no world standard although many countries are beginning to embrace International Financial Reporting Standards (IFRS) maintained by the International Accounting Standards Board. All European Union countries, Canada and Taiwan follow such standards.

Companies report their results at regular intervals, usually quarterly. For those reporting on a fiscal year basis, the year usually starts at the beginning of a quarter such as April 1 or July 1 and ends one year later on the last day of the preceding quarter. For those that report on a calendar year, January 1 is the jump off with December 31 as the year end.

Uncle Sam operates on the Federal Fiscal Year which runs from October 1 to September 30. This is, ostensibly, to allow time for the creation and submission of a budget by giving Congress time to seat new members and keep the business of government going. We all know how that has worked in the past few years.

### Income Sheet & Cash Flow

The Income Sheet is used to report all income and expenses relevant to the operation of the business for the purpose of generating income. It is also known as the profit and loss statement. It is formatted to include income, cost of goods, gross profit margin, operating expenses, net profit, depreciation, interest and taxes. The line items may change based on the nature of the business. EBITDA or earnings before interest, depreciation and amortization is computed from the items reported. It is a valuable tool in determining the capacity of a business to pay its obligations.

There are two "sides" to a Balance Sheet, and both must balance out. One side summarizes the company's assets, and the other side its liabilities during a reporting period. The difference between assets and liability is equity. Equity is the net worth of the company. Positive equity is good; negative equity is not.

A Cash Flow Statement reports how changes in the Balance Sheet affect cash and cash equivalents. It breaks down operating costs, investing and financing to give a better picture of the short term financial health of a company, especially its ability to pay its bills.

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### Three Qualities

There are three "qualities" of financial statements: Compiled, Reviewed and Audited. Different factors dictate which level of quality is necessary as a reliable reporting tool. Client, lender or investor need, company size, revenue or type (the SEC requires that all public companies provide audited statements) all contributes to the level of quality required.

Compiled statements require the accountant to have a working knowledge of the company and will draw the financial information for the statement from a general ledger. Documentation of entries is not specifically required and thus there is "no assurance" that the statements conform to generally accepted accounting principles.

Reviewed statements offer "limited assurance" inasmuch as the accountant performs inquiry and analysis of the entries. Assurance is provided that conformity to generally accepted accounting principles has been demonstrated.

Audited statements are the highest level of assurance providing all the steps performed in compilation and review plus verification of the entries in the statements. This is an extensive process which, in addition, is expensive. However, to a lender or investor, the high quality of the financial statements provided by the Certified Public Accountant is invaluable. From these statements, lenders and investors derive "key" financial ratios from the information being reported to determine the value and credit worthiness of the company.

Sarbanes-Oxley does not require compliance by private companies with two exceptions: it is illegal to destroy documents to prevent use in a legal action and it protects whistle-blowers from company retaliation. That said, some best practices of SOX are being adapted by non-public companies with inherent benefits:

- *Creation of a code of ethics which informs employees and ownership alike of what behavior is and is not acceptable.*
- *An independent audit committee created and comprised partially of outside directors or those with financial expertise which may increase the value of lower quality statements.*
- *Assumption of personal responsibility by top management for financial reporting increases assurance to lenders and investors.*

A company that might be nearing an IPO or possible acquisition by a public entity may be more valuable because of selected SOX implementation. There is no doubt that more state and federal government regulation is headed towards both public and private businesses. Consult with your accountant or other legal or financial professional to discuss how this may impact your company.

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***Richard Paine*** *is the National Finance Manager, Commercial Marine Group for TCF Equipment Finance, Inc. He can be reached at 516-431-9285 or rpaine@tcfef.com.*

# What a Difference a Year Makes

***Channel and water management will become increasingly important for freshwater supplies and trade in the years to come. The work and our vigilance must continue.***

**By Sean M. Duffy, Sr., Executive Vice President, Louisiana Maritime Association**

The present conditions on the Lower Mississippi River find the deep-draft channel from Baton Rouge to the Gulf of Mexico in good shape with no channel deficiencies or related transit restrictions. On the other hand, the Middle Mississippi from St. Louis to Cairo and especially around the areas with rock pinnacles at Thebes and Grand Tower both in Illinois have been areas of concern for much of the last two months. The Commander of the USACE Mississippi Valley Division Brigadier General John Peabody now believes that due to several factors, including the work to remove the problematic pinnacles, new precipitation and managed releases from the Carlyle and Shelbyville Reservoirs have all helped to maintain – at least for now – the authorized channel depth.

The federally authorized channel for most of the entire river system is 9 x 300 ft. although outside times of extreme drought barge traffic often is able to load deeper than the authorized depth because of water availability. Nevertheless, industry members remain concerned about water levels and have responded to concerns by enforcing their own draft reductions to promote safety. As one variable of the equation only, the possibility of long term drought and the disruption to the maritime transportation system is one that only Mother Nature can solve.

The startling differences in water levels over the course of just one year (from 2011 to 2012), record, historic highs as it turned out, show that as man tries to manage this immense watershed that natural processes are in fact in control. I have two photos that show the difference in water level between these two historical events and it is amazing what a difference 60 feet of water looks like. In 2011 with the Carrolton Gauge in New Orleans at 17 ft. and predicted to reach 18.5 ft., I found myself contemplating evacuation from New Orleans much like we would do if a significant hurricane were approaching. Hurricane Isaac showed that a Category 1 on the Safford-Simpson scale could really be a devastating storm, just as the National Weather Service often tells us. Every storm brings threats that must be prepared for. For example, and during the historic floods of 2011, before the Carrollton Gauge got much higher than 17 feet, the USACE opened the Bonnet Carre and Morganza Spillways to manage the record water levels with controlled releases.

After the preparations and the storms pass, restoration projects begin. Beach restoration projects are often questioned on the justification for the financial support from state or federal funds. There is considerable evidence that beach locations that had been maintained or restored offered tremendous protection to their local communities. In the wake of the impact of recent hurricanes – like Katrina, for example – a select few members from the navigation industry have worked to increase the beneficial use of dredge material. Historically, this material had been referred to as dredges spoils and I think that is simply an inappropriate term with negative connotations for material that could be used to help restore coastal Louisiana. A better descriptive term perhaps is "marsh recycling."

The Big River Coalition has worked to develop plans to promote the marsh recycling program and hopes to be able to test one portion of this plan through hopper dredge pumpout in Southwest Pass this year. It is therefore important that the navigation industry work to promote coastal restoration. Unfortunately, because of the Corps being severely underfunded, these plans have been impossible to implement financially. And this reality underscores the need to repair the Harbor Maintenance Trust Fund mechanism.

There are several recent studies that suggest one out of five jobs in Louisiana depends on the Mississippi River. Members of the navigation industry also want coastal restoration for a myriad of reasons including protecting their families and homes, human lives, our unique culture shaped by the gumbo of our waterways and yes, the facilities which our part of our economic lives. Navigation interests want the sediments out of the channel to maintain authorized safe dimensions and what better place for this material to be placed than along our coastal boundaries.

Challenges beyond trying to manage the Mighty Mississippi and the super environmental impacts include preparing for the Panama Canal expansion that will have

# BIG RIVER COALITION


an undeniable impact on our industry and nation. Many channels are presently undergoing efforts to be deepened to 50 feet. The President's Task Force on Ports has announced plans to expedite several port deepening projects and I cannot think of a more important channel than the world's economic superhighway (Mississippi River).

The Mississippi River channel was approved for deepening to 55 feet in 1986, but at in the same Water Resources Development Act (WRDA Bill) another section established that all channels deeper than 45 feet would be deepened and maintained with 50% funding from the federal government and 50% from the non-federal sponsor. Because of this overwhelming requirement, the channel was never deepened. In the last year the Big River Coalition has begun working on a compromise to see the channel deepened to 50 feet, a compromise that we hope will allow the channel to be maintained at 50 feet and to develop marsh recycling to help protect our coast. At the same time, advocacy efforts continue from BRC to educate Congress and the administration on the importance on this trade artery and the positive impact on the 31 states it connects to world markets through the Mississippi River Basin.

There is no doubt that in the next few decades the channel and water management will become increasingly important for freshwater supplies and trade. As an example, world governments could work to make desalinization affordable and promote this technology. As sea levels rise and glaciers melt, you can argue about the causes, but the future of a civilization that could economically and efficiently convert sea water to fresh water would arguably establish its future in the ever-changing world in which we live. This is of course a long-term goal while deepening the Mississippi River to 50 feet could be done in months.

In some quarters, realignment of the Mississippi River channel or delta so that the riverine system would be more naturally able to promote marsh restoration has been proposed. Whether this is a practical matter is far from certain, but it will remain important that navigation interests are embedded with these teams if the concept is brought forward. Changes to this channel have unintended consequences and the threat to the nation's economy makes this effort one that warrants extreme scrutiny to protect the $120 billion annual impact generated by this channel. Losing the Mississippi River for ship traffic would be a blow to the U.S. economy that it may never recover from and it is important to remember that waterborne commerce is the cheapest, safest and most environmentally friendly mode of transportation.

# To Report or Not to Report

## *That Should Never be the Question*

**By Randy O'Neill**

In the realm of marine casualties and incidents, each case has its own set of facts, cast of mariners and vessels involved and, frequently, sharp differences of opinion regarding same. The one common denominator of most marine casualties, however, is the requirement to report them to the U.S. Coast Guard (U.S.C.G.). While what defines a marine casualty is often in the eyes of the beholder/mariner, it is much more prudent to err on the side of caution and, when in doubt, report it using Form CG-2692.

### Reporting Criteria Is Clear

The Coast Guard's definition of a marine casualty leaves little room for interpretation as 46 CFR § 4.03-1 defines a "marine casualty as any occurrence on the navigable waters of the United States, or anywhere if a United States documented vessel is involved, which results in damage by or to any non-public vessel, its cargo or an injury which requires professional medical treatment beyond first aid or death to any person." 46 CFR § 4.03-1(a) further requires the owner, agent, master or person in charge of the vessel involved in a marine casualty to give notice as soon as possible to the nearest Coast Guard Marine Safety or Marine Inspection Office if the casualty involves, among other criteria, damage to property greater than $25,000. Finally, 33 CFR §164.53 requires the master or person in charge of any vessel of 1,600 or more gross tons to notify the U.S.C.G. of any "hazardous condition" aboard the vessel, including loss of main propulsion, loss of generator power, loss of steering, etc.

Failure to make the required report of a casualty or a hazardous condition can result in a civil penalty of up to $25,000 or criminal penalties of up to $100,000 and 10 years imprisonment. The two brief case studies that follow shed 'real world' light on the consequences of not reporting what may, at the time of occurrence, appear to be a minor incident.

### A Failure to Communicate

The first case involves the captain of an integrated tug-barge unit (ITB) which experienced mechanical problems while departing a southeast U.S. port for a relatively short trip up the coast to a mid-Atlantic port. While transiting outbound, the vessel's starboard main engine shut down and, after conferring with the river pilot onboard, the tug's master decided to proceed to anchorage where the problem was identified and, with some shore-side assistance, quickly repaired. The fully-powered ITB then continued on to its original destination, arriving eight days later. Unbeknownst to the vessel's captain, Coast Guard officials at his trip's destination learned of the breakdown incident and determined that he had not properly reported the casualty over a week earlier. The captain was subsequently informed that he would be given a Letter of Warning (LOW) or a Civil Penalty up to $25,000 (see above).

Three weeks after the original incident and almost two weeks after hearing from the U.S.C.G., the affected master notified his license insurer of the investigation, and the insurer (MOPS) promptly assigned a maritime attorney who made best efforts to catch up with the Coast Guard's casualty/investigation and work with the ITB's captain to complete and submit a CG-2629 as soon as possible. Sadly, despite solid representation and incurring almost $2,500 in legal fees, the ITB's captain did indeed receive a Letter of Warning which, upon acceptance, became part of his permanent record.

This is but one example of a truly unfortunate and unnecessary consequence for failing to report a blameless temporary mechanical breakdown.

### A Bridge Too Low

The second case involved a docking pilot in a New England port who allided with a railroad bridge and failed to report the incident to the Coast Guard. Sadly, but not all that rare, the pilot was provided with faulty draft information regarding the vessel he was piloting leading to the allision. No damage was reported by the pilot or the ship's master to either the vessel or the bridge, and the assumption was 'no harm, no foul'. Not surprisingly, the Coast Guard viewed the incident differently and, subsequently contacted the docking pilot advising him that he was the subject of their investigation into the unreported bridge allision.

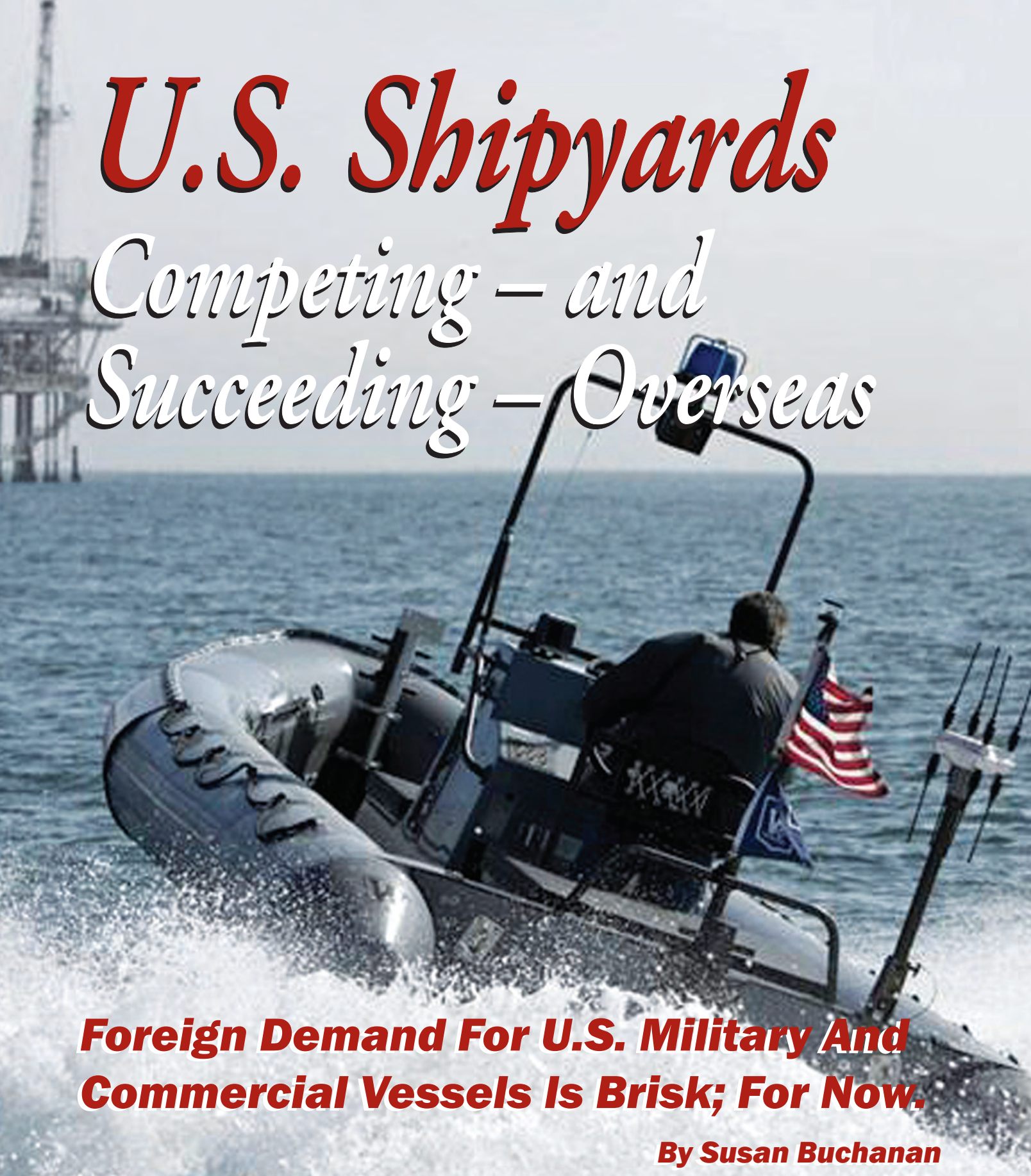
The investigation consumed over three months of interviews and paperwork before the Coast Guard concluded that the faulty draft information was indeed a major contributing factor to the incident, but while the pilot was not subjected to negligence charges or civil penalties because of the allision, he too received a Letter of Warning for not reporting the incident or submitting a written CG-2692 within 5 days of the casualty. This proved to be yet another costly ($4,900) and somewhat hollow 'victory' for the experienced pilot due to the issuance of the LOW.

Clearly, the need to report marine casualties to the Coast Guard (and your license insurer if you have coverage) is critical. The consequences of not reporting can leave an unnecessary blemish on a professional mariner's record that will follow him/her throughout their career.

***Randy O'Neill*** *is Senior Vice President with Lancer Insurance Company and has been Manager of its MOPS Marine License Insurance division since 1984. Over the past 28 years, Mr. O'Neill has spoken and written on many occasions on the importance of USCG license protection. He is a regular contributor to MarineNews magazine.*

***roneill@lancer-inc.com***

# U.S. Shipyards Competing – and Succeeding – Overseas



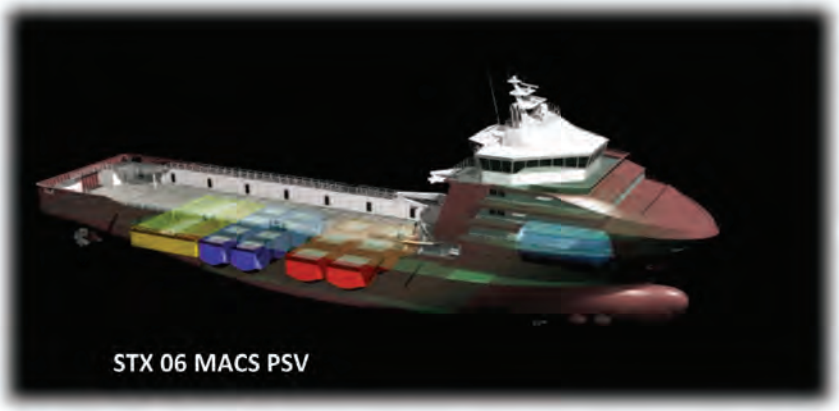
## Foreign Demand For U.S. Military And Commercial Vessels Is Brisk; For Now.

**By Susan Buchanan**

# PG Marine Group

## PG is a specialized manufacturer / supplier of highly efficient, safe and most intelligent solutions for liquids handling on rigs, ships and subsea

**PG-MACS** - the next generation below deck cargo handling solution - has proven its performance in the toughest environment


STX 06 MACS PSV

Drill Cuttings and Rig Slop transported below deck, were triggers for **PG-MACS®** development, but the full flexibility of all bulk material dry- or wet- have proven its performance in the North Sea, and now even in Brasil and other regions.

Drill Cutting transportation below deck, athmospheric, flexible tank clusters for wet and dry bulk, and extremely high capacities for **Recovered Oil** are hallmarks of this novel, w.w. patented solution

**PG-Hyde Ballast Water Treatment Systems** have proven exceptionally well suited for OSVs, during numerous installations

Through its modular design, and flexible lay-out options **Hyde GUARDIAN** BWTS offer competitive solutions in combination with PGs vast experience with maritime installations.

Among the first IMO Type Approved systems, and based on the most efficient technologies, the Hyde modules have won market shares at high pace in International as well as Domestic markets. More than 100 installations secured, and first fleet agreements signed confirm competitiveness and trust to products and partners

Skidded units, or modularized to fit the most space-limited footprints at retrofitting ships


PG-HYDE HG 150 Skid

**OSV's are supposed to deliver to the rig, the same mud as they receive on shore - this is often challenged**


**PG-Submix 80 Viscoprop 35°**

**PG-Submix 60/80** is the solution, when high yield drilling mud shall be kept in suspension over extended time - typically for deep water fields, far ashore as many of the current, major oil & gas fields are developed.

Slow running, high torque, vertical circulation (highest velocity in the bottom of the tank) with typical vaues **P**rimary **P**ump **F**low between 8.000 and 15.000 m3/h

Superior to any other agitation method, the Submix hydraulically driven agitators secure the quality of both product delivered to rig, and avoiding settling of weight components in the drilling mud during the long hault voyages and storage onboard

In the heavy shadow of possible sequestration-induced federal budget cuts, some U.S. companies are busy supplying vessels to overseas customers under the Navy's Foreign Military Sales program and through private contracts to foreign government and firms. Demand for offshore oil vessels is strong. A big chunk of overseas business now is under the U.S. FMS, transferring defense equipment, services and training to other nations. Countries approved for the FMS pay for vessels themselves and/or with U.S. government help.

U.S. defense budget cuts will affect the FMS program ahead, however, boat builders said last month. Nevertheless, the reality for U.S. boat builders – especially in the mid-tier and smaller yards – is that they are successfully competing for foreign business, especially in the less than 300-foot vessel arena.

This month, we asked industry leaders what they plan to deliver this year, where, how and why. The answers may surprise you.

## Brunswick Sends Boston Whalers To Multiple Foreign Destinations

In Edgewater, Fla., Brunswick Commercial and Government Products sales director Jeremy Davis said, "In 2013, we plan to deliver thirty Boston Whalers to Colombia, eight Impact Rigid Inflatable Boats to Mexico, four Boston Whalers to Singapore and seven Boston Whalers to various Central and South American countries." (Boston Whalers are outboard-powered, fiberglass boats.) "Our vessels delivered overseas typically range from 25 feet to 37 feet in length and are primarily outboard powered, though we've installed inboard diesel engines with water jets in the RHIBs for regions requiring a shallower draft vessel," he said.

Davis also told *MarineNews* in February, "We have a four-year, ongoing U.S. military contract for counter-narcotics vessels to multiple South American and Central American nations." And, some of these contracts are for direct purchase by foreign countries.

"Our larger Boston Whaler models, as well as our mid-sized Impact RHIBs, serve as great patrol platforms," Davis said. "And we're seeing an uptick in demand for surveillance vessels, counter-drug craft and high-speed patrol boats in international markets. Boston Whalers fit this application well since their foam-filled construction makes them unsinkable."

He said, "Our rigid inflatable boats, called Impacts, are speedy and maneuverable, and their collars reduce damage during boardings and inspections. We anticipate that our aluminum patrol boat line will do well because of customer demand for aluminum products." The company has nine months of backlog, spread between its domestic and international contracts.

As for competing with foreign shipyards, Davis said, "In general, we find that this market is price-sensitive and many customers prefer to purchase locally or in-country. Some foreign governments require their procured items to consist of local content, whether it's the whole boat or a percent of the components." That said, Brunswick seems to be getting more than its share of foreign work.

## Tampa Yacht: Competing and Winning Contracts Overseas – outside of FMS

At Florida-based Tampa Yacht Manufacturing LLC, CEO Bob Stevens told MarineNews, "We'll deliver a series of six 50-foot Fast Attack Craft over the next 18 to 24 months, as well as a series of 10 36-foot RHIBs over the next 12 months. We've just completed delivery of 17 35-foot SWAT Patrol Craft to the Indian Government." Continuing he said, "late next year, we expect to deliver the first of a series of 28 44-foot Fast Coastal Interceptors or FCIs over a two-year period."

Significantly, none of the company's sales were negotiated through the FMS program. "All of our contracts are direct purchase in international competition and lowest bid awards," Stevens said. "Our customers are foreign-government military agencies, and they make acquisition announcements themselves, though they actually seldom do so for security reasons. We don't publicly announce specifics about our customers unless it's been announced by the government agency."

Stevens reported a backlog that includes 50 FACs, 36 RHIBs and 44 FCIs, stretching out as much as 36 months. "The difficulty in competing with our foreign competitors stems from government agencies or buyers not requiring a prototype or 'parent craft' as a technology demonstrator and allowing shipyards the opportunity to bid paper," Stevens explained. "Concept drawings of vessels not yet built can contain impossible specifications and can greatly underbid pricing." Tampa Yacht has a stable of demonstrator craft that prospective buyers can test under varying conditions. "That qualifies us as a competent builder, able to meet the delivery schedules and quoted pricing," he said.

## Silver Ships Delivers Work And Patrol Vessels

Last month Alabama-based Silver Ships, Inc. completed construction of six Riverside Patrol Boats (RPB), awarded through the U.S. Navy's FMS for delivery to the Philippines, said Scott Clanton, special projects director. The RPB has a 40-foot length overall, center-console configuration, with a bow area capable of transporting troops and equipment and providing rapid egress through a bow door, he said.

equipment and providing rapid egress through a bow door, he said.

Built with marine-grade aluminum, the RPB is beachable, with the ability to work in shallow or open water, powered by twin Yanmar inboard diesel/Hamilton waterjet propulsion. "It's designed to facilitate maintenance, inspections and repairs to provide ease of operation and extended service life," Clanton said. Ballistic protection is included in the design, and the RPB has multiple, crew-served weapon foundations."

This contract is the complete package - boats, trailers, on-board and deployable spares, OEM or original equipment manufacturer technical manuals, and boat manual and training. It provides the customer with a one-stop shop."

Silver Ships is also under contract to deliver two center-console, 11-meter Rigid Hull Inflatable Boats to Yemen, awarded through the U.S. Navy FMS. The two boats for Yemen are in production now and should be shipped mid-year. The contract includes boats, trailers, on-board and deployable spares, OEM technical manuals, boat manual and in-country training.

Clanton said, "Silver Ships continues research and development on innovative armor solutions and C4SIR capabilities, and has delivered tactical watercrafts for the U.S. Dept. of Defense and Dept. of Homeland Security."

The company is building two commercial boats for Aramco Oil Co. for delivery to Saudi Arabia. Those boats are 48-foot oil-recovery barges, powered by CMD with traditional direct drives. Both are pilot house-configured with 20 feet of open well deck area--which the oil recovery system will occupy, deploying through a bow door that's 10 feet wide.

According to Silver Ships, production schedules are otherwise filled through third quarter FY13 with U.S. government and federal and state law-enforcement contracts. "Our competitiveness with foreign shipyards is based on our quality of workmanship, along with our quality assurance standards, and our understanding and implementation of design in accordance with American Boat and Yacht Council or ABYC standards," Clanton said. "That's kept us on or above our peers, whether they're U.S. or foreign small-boat manufacturers."

He said, "Building and delivering a vessel is probably the easiest part of a foreign sale while 'cradle to grave' requirements are a challenge. Being able to provide after-sale service and support is crucial to end users. Silver Ships has limited its area of focus to those areas of the world that we

**Representative U.S. Companies Delivering Vessels Overseas in 2013**

| Company | Vessel Types | Client(s) | Backlog |
|---|---|---|---|
| **Brunswick** | Boston Whaler / RHIB | South & Central America, Singapore | 9 months |
| **Metal Shark** | Patrol & intercept | SOCOM, AFRICOM, PACOM | Reportedly on large contracts |
| **Silver Ships** | Patrol, RHIB, Oil Recovery | Philippines, Yemen, Saudi Arabia | Not disclosed |
| **Swiftships** | Patrol Boats | Iraq, Egypt & others (undisclosed) | Backlog on Iraqi Contract |
| **Tampa Yacht** | Fast Attack, RHIB, Patrol FCI | India and others (undisclosed) | 2-3 years |
| Williard Marine | RIB | Philippines, Lebanon, Ukraine | Not disclosed |

*Source: Company data*

know we can support." Notably, Silver Ships has provided, on a global basis, military, municipal and commercial users with work and patrol vessels for more than 27 years.

### Metal Shark Supplies Patrol Boats to Many Nations

Greg Lambrecht, vice president at Metal Shark Boats, said the Jeanerette, La. company plans to deliver a variety of boats to foreign militaries and governments over the next few years, including 26-foot riverine patrol boats, 28-foot pilothouse patrol boats in outboard and diesel configuration, 33-foot center console patrol craft with outboard propulsion, 38-foot pilot-house patrol boats in outboard and diesel configuration. "We'll also deliver 40- to 60-foot intercept and patrol boats that are in different stages of negotiations with multiple countries."

"These boats are being delivered to countries in the SOCOM, AFRICOM and PACOM geographical regions," he said. A majority of these contracts are through U.S. FMS. "Our backlogs are largely dependent on the size of the contract or number of boats," Lambrecht said. "While smaller contracts are usually completed within the contract year, larger contracts span multiple out years, especially when options are exercised."

Lambrecht added, "Providing quality vessels and supporting our international customers will continue to lead us to follow-on contracts. In the international patrol-boat market, we compete with manufacturers around the world, but in the government-supported FMS competition is almost exclusively U.S. companies." Clearly, Metal Shark – heavily involved with building U.S. Coast Guard small craft – is watching the sequestration situation, but also protects its bottom line with a diversified contract list.

### Willard Marine Caters To Clients Under FMS

At Willard Marine, Inc. in Anaheim, Ca., president C.J. Lozano said "We have a series of boats under the FMS Navy program, including 7-meter RIBs, 9-meter RIBs and 11-meter RIBs, for delivery to the Philippines, Lebanon and Ukraine through 2013. Our boats for the Philippines are already in country, and we're deploying personnel to do training there. Boats will be delivered to Lebanon early this summer and to Ukraine in the fourth quarter. We're also working to do more direct sales with other countries."

"We do have a work backlog," Lozano said, but gave no details. As for competition with foreign shipyards for sales outside the FMS, he said "If a country wants a very inexpensively made boat, we don't build to those low standards. Our boats are built to last. We don't bid on lower-quality specifications," and he added, "some foreign buyers need to be educated about new technologies and new specifications."


**Metal Shark's 28' Defiant with diesel water jets, built for Djibouti.**

## Swiftships Builds For Iraq And Others

Last month, the Iraqi Navy took delivery of two, additional 120-foot Coastal Patrol Craft built by Swiftships Shipbuilders, LLC, in Morgan City, La. as part of a 15-ship U.S. Navy FMS case, said Shehraze Shah, Swiftships CEO. "P-310 and P-311, handed over at the Umm Qasr naval facility on Feb. 12, are the tenth and eleventh of the class. Lead vessel P-301 was delivered in Sept. 2010 during Iraqi Navy Day celebrations."

Using a design chosen by the Iraqi government, the Coastal Patrol Craft will be used to enforce the nation's maritime sovereignty and protect offshore oil platforms, Shah said. Propelled by three MTU 16V2000 diesel engines with three propellers, the vessel's aluminum alloy superstructure and hull with seven watertight bulkheads can reach speeds in excess of 30 knots and can sustain a 25-man crew for up to six days.

"We serve commercial and military markets around the globe," Shah said. "Our client list ranges from Tidewater Inc. to the Dominican Navy. The Egyptian Navy has been buying patrol boats from us since 1976. Now we're delivering to Egypt under a one-of-a-kind, Build Operate and Transfer/Co-Production program for them." As for backlogs, he said, "On our existing Iraqi patrol boat task, we have a backlog of three vessels that are part of fifteen vessels ordered by the Iraqi Navy under the FMS. We've delivered eleven of those vessels so far, with another to be delivered in March."

Shah said the Iraqi Navy considers Swiftships a trusted agent and contractor. "Asian and other foreign builders don't have a leg to stand on because they'll never offer the same quality and design agility that we do," he said. "We have over 125 designs and 600 plus hulls under our belt, along with a price-conscious business model. As we manage our growing ship portfolio, our new partnership with Iraq allows us to fill new demand and expand our reach in the military-ship construction industry while we continue to differentiate Swiftships as a quality brand. Over the last year, we've expanded in Latin America, Asia and the Middle East." Founded in 1947, Swiftships announced

Interior view of 35m patrol boat built by Swiftships Shipbuilders, LLC

a recent, management transition to improve profitability. The company intends to increase its portfolio and supply a greater variety of vessels.

## Outlook? Uncertain For FMS Sales, but Good For OSVs

Lozano at Willard anticipates that U.S. defense budget cuts will impact the FMS program. "If the sequester goes through as expected, people will be furloughed, time of contracts will be affected and work will slow considerably," he said. "Delays will add to backlogs. That will influence sales projections and possibly the quantity of boats that will be purchased." But tensions in the Middle East and elsewhere indicate that demand for military vessels will remain strong, industry members said. What's more, the need for more specialized, sophisticated and bigger offshore oil vessels will keep that market well supported, they predicted.

If diversification is the key to beating sequestration and leaner government spending habits predicted for the future, then these U.S. yards probably already have a leg up on the competition – foreign or domestic. U.S. yards can and do compete with foreign yards in certain sectors. That much, we know for sure.

# Foss Maritime Expanding Ocean Tug Fleet

## *Tug and barge operator is building three new Arctic Class deep-sea tugs at Northwest shipyard*

**By Joseph Keefe**

Responding to new oil and gas industry opportunities, Foss Maritime Company is building the first three tugs in an innovative Arctic Class of tugs, a fleet expansion that broadens its capacity to take on large projects in extreme environments. Construction on the first tug starts in early 2013 at the Foss' Rainier, Oregon shipyard, which will be expanded by an additional 10,000 square feet, and will require additional staff, in part to accommodate this project. The delivery date for the first hull is December of 2014, with the second to follow in December of 2015, and the third, a year later in December of 2016. Glosten Associates is Foss' naval architecture partner on the project.

Gary Faber, Foss' President and Chief Operating Officer, said in a prepared statement, "These vessels will be built using the latest advances in technology and equipment. We want to increase efficiency, improve safety and performance and reduce environmental impact. These concerns are paramount to our customers, our stakeholders and our crews involved in offshore drilling and other project work in extreme environments."

Specifically, the new tugs will meet American Bureau of Shipping (ABS) A1 requirements, including standards for hulls, machinery, towing, anchors and cable, ABS Ice Class requirements, SOLAS requirements for on-board rescue boat and davit; and – in keeping with the FOSS emphasis on protecting the environment – the Green Passport, which requires an inventory of shipboard hazardous materials that make decommissioning of vessels far safer.

The new tugs are designed to withstand the rigors of Arctic operations and will be positioned to compete for opportunities in the oil and gas industry. Foss has five assets committed to an Arctic offshore exploration project in the Chukchi and Beaufort Seas, and the newbuild project will position the Washington-based operators to provide services and support with tugs, landing craft, crew boats and barges. The lack of infrastructure in the rapidly thawing Arctic regions increases the need for suitable, robust tonnage for that purpose. And, Faber said that additional ABS-classed tugs and support vessels are already under consideration.

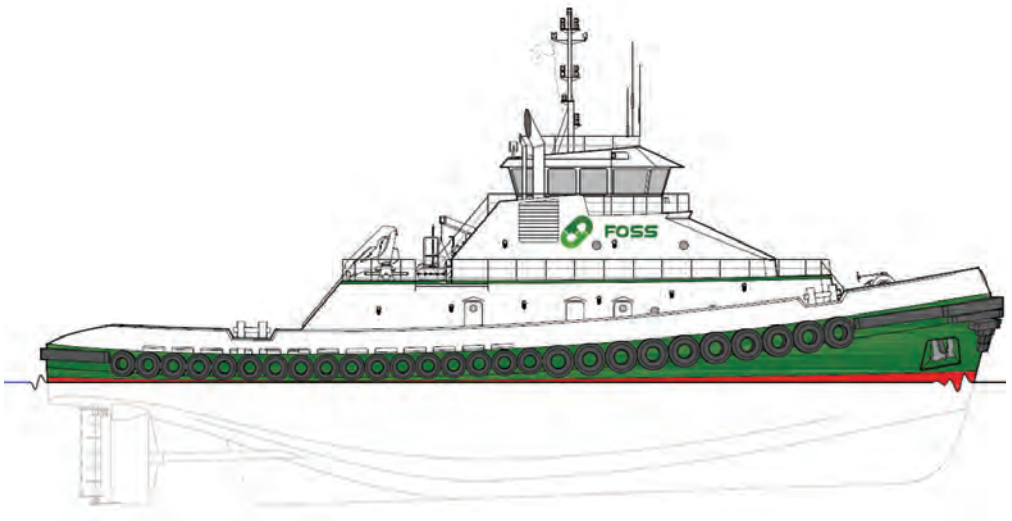
**Arctic Class Ocean Tug ... At a Glance**

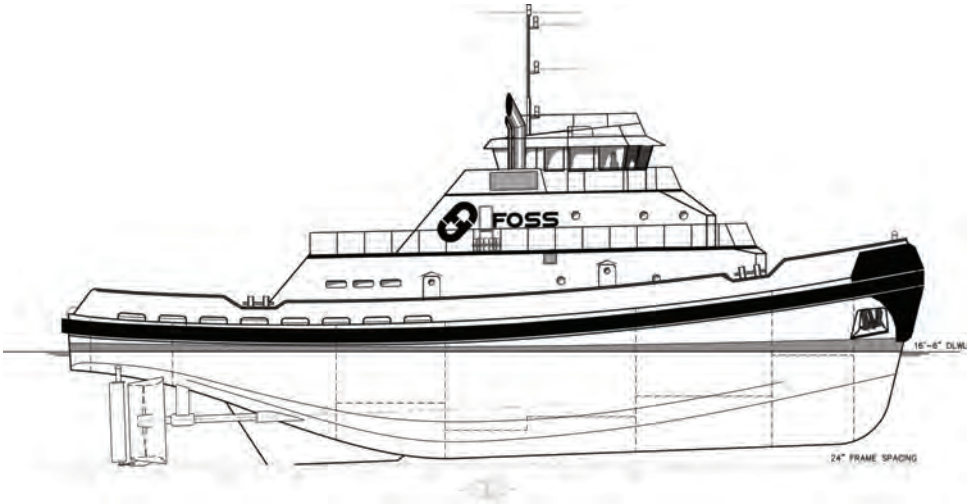
| | |
|---|---|
| Vessel Type Twin Screw Ocean tug | Main Engines 2 x Caterpillar C280-8 |
| Breadth 41 ft | Hull, 44 ft including fenders |
| Crew Up to 8 / Berths 10-11 | Rated Power 2 x 3,634 HP |
| Shark Jaws Smith Berger | Service SOLAS Reduction Gear Reintjes |
| Propeller 126" diameter | Class ABS / A1 / AMS / A1 Towing Vsl, Ice Class |
| Builder Foss Maritime Company, Rainier Oregon | Aux.Engines 2 x Cat C9 / 1 x Caterpillar C4.4 |
| Nozzles & Rudders Nautican | Length 130 ft |
| Depth 20 ft | Tonnage (Est.) GRT: <300 |
| Tow Pin Table Smith Berger | Tow Winch Markey Machinery |
| Max Draft TBD | Bow Winch Markey Machinery |

FOSS

"The most important design consideration when building workboats for the Arctic is definitely safety and ability to perform consistently meeting our customer's expectations."

John Tirpak, Senior Vice President, Global Services at Foss

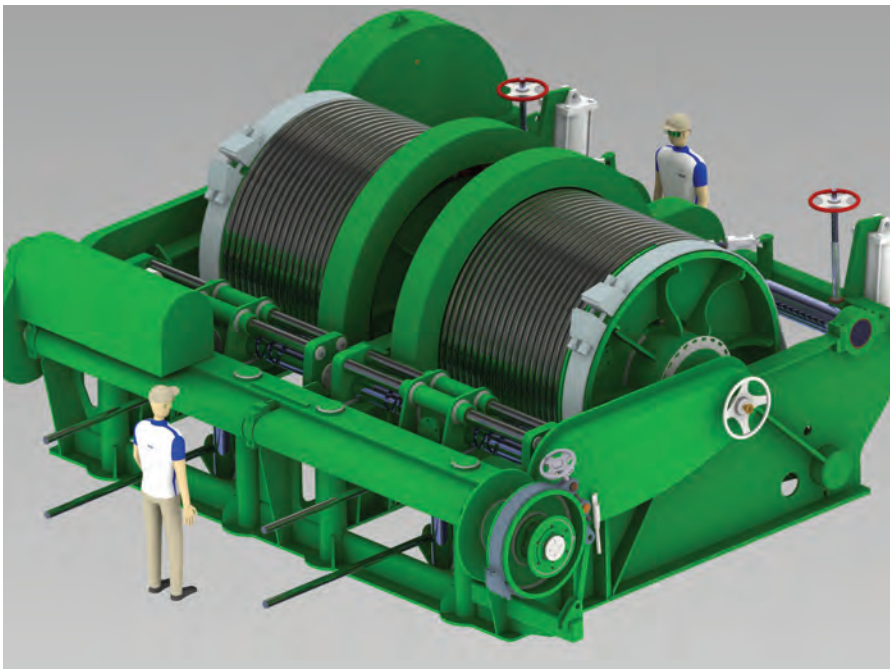





## ARCTIC CLASS OCEAN TUG

| | | | |
|---|---|---|---|
| Vessel Type | Twin Screw Ocean tug | Crew | Up to 8 |
| Vessel Name | TBD | Berths | 10-11 |
| Official No. | TBD | Propeller | 126" diameter |
| Builder | Foss Maritime Company, Rainier Oregon | Nozzles & Rudders | Nautican |
| | | Main Engines | 2 x Caterpillar C280-8 |
| Year Built | 2013/2014 | Rated Power | 2 x 3,634 HP |
| Service | SOLAS | Reduction Gear | Reintjes |
| Class | ABS ✠A1 ✠AMS ✠A1 Towing Vessel, Ice Class | Auxiliary Engines | 2 x Caterpillar C9<br>1 x Caterpillar C4.4 |
| Length | 130 ft | Range | TBD |
| Breadth | 41 ft hull, 44 ft including fenders | Potable Water | TBD |
| Depth | 20 ft | Tow Winch | Markey Machinery |
| Max Draft | TBD | Bow Winch | Markey Machinery |
| Tonnage (Est.) | GRT: <300 | Tow Pin Table | Smith Berger |
| Max Draft | TBD | Shark Jaws | Smith Berger |

The three new tugs will be designed to achieve in excess of 100 metric tons of bollard pull and will be used primarily to tow barges with oil field modules, rig topsides and project cargoes throughout the world. Machinery will include Caterpillar C280-8 main engines, which comply with the highest federal environmental standards, and Reintjes reduction gears. Markey Machinery will supply the tow winch. Other environmentally focused designs and structural and technological upgrades include the elimination of ballast tanks, holding tanks for black and gray water to permit operations in no-discharge zones (such as parts of Alaska and California), hydraulic oil systems compatible with biodegradable oil, Energy efficient LED lighting; and High-energy absorption Schuyler fendering.



**Markey type TDSD-40UL Towing Winch, 3000 ft. of 2.5" wire each drum, 200,000 lbs. line pull**

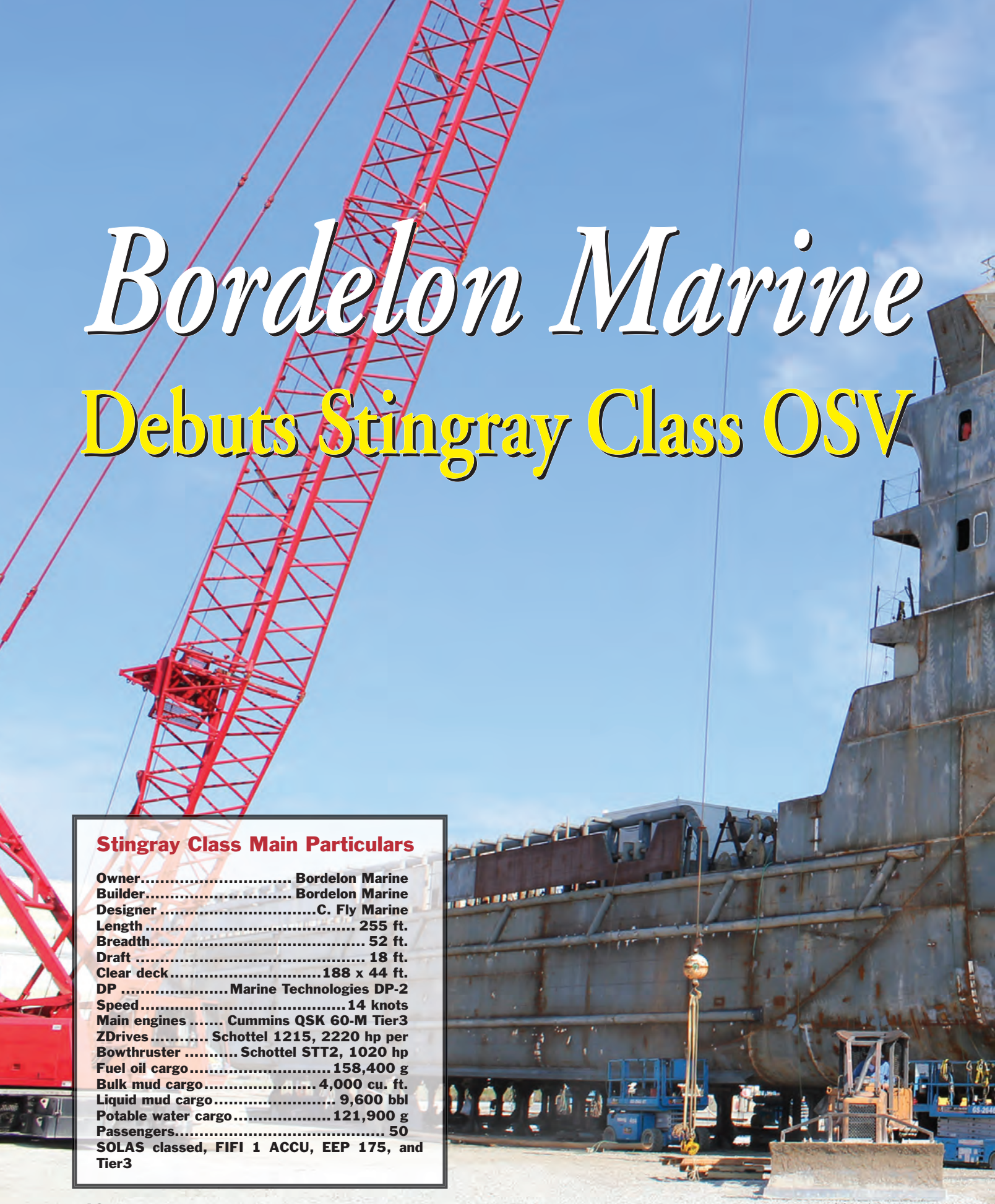
According to John Tirpak, Senior Vice President, Global Services at Foss, the tugs are not being constructed with a specific client in mind. He added, "We will market them as the market emerges in Alaska."

Tirpak talked about the specific requirements for building tonnage for Arctic conditions. "The most important design consideration when building workboats for the Arctic is definitely safety and ability to perform consistently meeting our customer's expectations. We also need the boats to operate under difficult and changing conditions and for different purposes, so versatility is also paramount." The class ice notation was critical, as well, he said. "Certification for 'ice class' requires increased shell thickness and frame strength in the vicinity of the waterline, and additional modifications for the propeller/nozzle, rudders, propulsion engines, sea chest, propulsion shafting and reduction gears."

Already with one of the largest fleets of tugs and barges on the American West Coast, Foss operates two shipyards and offers worldwide marine transportation emphasizing safety, environmental responsibility, and high-quality service. In this case, the primary impetus for building the boats was simple. Tirpak explained, "Foss is building these new tugs in response to new oil and gas industry opportunities. We are well known for our ability to safely operate in extreme environments. This investment in our fleet will broaden our capacity to take on new projects in the Arctic." And, as the entire maritime industry and its energy cousins look north to new opportunities, the boats arguably arrive, just in the nick of time.

# Bordelon Marine

## Debuts Stingray Class OSV



### Stingray Class Main Particulars

| | |
|---|---|
| Owner | Bordelon Marine |
| Builder | Bordelon Marine |
| Designer | C. Fly Marine |
| Length | 255 ft. |
| Breadth | 52 ft. |
| Draft | 18 ft. |
| Clear deck | 188 x 44 ft. |
| DP | Marine Technologies DP-2 |
| Speed | 14 knots |
| Main engines | Cummins QSK 60-M Tier3 |
| ZDrives | Schottel 1215, 2220 hp per |
| Bowthruster | Schottel STT2, 1020 hp |
| Fuel oil cargo | 158,400 g |
| Bulk mud cargo | 4,000 cu. ft. |
| Liquid mud cargo | 9,600 bbl |
| Potable water cargo | 121,900 g |
| Passengers | 50 |

SOLAS classed, FIFI 1 ACCU, EEP 175, and Tier3


UMA SHIPYARD
S-80
S-80
877-700-RENT
4x4

**The story of Bordelon Marine is not far afield from many others in the Gulf of Mexico, that of a small, family owned business carving a niche for itself. But when Wes Bordelon joined his namesake company in 1999, he knew that change was essential for survival. More than a dozen years later, MarineNews sat in Bordelon Marine's brand new shipyard in Houma, La., a month before the debut of its Stingray class of offshore service vessel, to discuss the renewed trajectory of the company in step with the changing demands in the market.**

**By Greg Trauthwein**

As Bordelon Marine sets to debut it luxury class of OSV – the 260-ft. Stingray class – the man who ultimately envisioned and drove the company to this historic mark could not have imagined the course of his life, his company, more than a decade ago. Bordelon Marine, which has been a familiar name in the Gulf of Mexico since Wes' father started the company in 1980, had become a shell of itself by the late 1990s.

At the time, Wes Bordelon was carving a career for himself in the music industry in Chicago, and the notion of owning and operating boats was the furthest thing from his mind. But in deciding to move back to Louisiana in the late 1990s, Wes found that where he had roots is where he wanted to stay, and that rebuilding the business which bore his family name was indeed his future.

"I came out of the music industry, working for Interscope Records and Universal Records as an artist development and A&R representative in Chicago," said Bordelon during a recent interview in his new Houma, La., shipyard. "Coming down here, I had no aspirations to be in the boat business, but after being here for a few months, I knew this is where I wanted to be and that this is what I wanted to do."

What Wes Bordelon found upon his return was a company in dire need of rebuilding. At the time, the 'fleet' consisted solely of three 110-ft. utility vessels, with four people working in the main office and 30 mariners.

"You can't effectively compete with only three out-of-date utility boats," Bordelon said. So Bordelon embarked on its mission to build, not in a wild or speculative manner, but in a conservative and fiscally sound yet systematic way; a course that would prove prudent. When the world economy went into a collective nosedive in 2008/09, Bordelon Marine was financially strong, carrying no debt, and making plans to build a state-of-the-art shipyard to build its innovative new brand of OSV, the Stingray class.

## A New Chapter

Before the shipyard in Houma was a proverbial twinkle in his eye, though, Wes Bordelon and his crew first set out on its mission assemble a larger fleet of boats with which to compete. First it built three DP1 150-ft. mini supply vessels at Bollinger in 2001, adding a pair of 170-ft. DP 1 newbuilds in 2005. In 2007 it acquired a small company that added four more to the fleet, and picked up another 140 foot vessel in 2008. Today the fleet stands at 11 vessels, but that is only a fraction of the story.

"We grew conservatively and organically, with very limited debt," said Bordelon. Bordelon four years ago envisioned the vertical integration of the company, a plan which centered on the construction of its own state-of-the-art shipyard building vessels to its own design, to its own level of quality and outfit. "We are branching off from that now, developing the new shipyard and the new Stingray series vessel, which is a much larger and more sophisticated vessel. (than we currently have in our fleet). We're taking it to the next level, but we're doing it within our own control."

So the company that started in 1999 with three small utility boats and 34 employees, today includes 11 vessels and 300 employees (which includes 150 shipyard workers); due to grow to 14 vessels and 350 employees when the company delivers its trio of 260-ft. OSVs in the Stingray class.

## Building the Vision

Vertical integration in industry is hardly a new concept, but a path Wes Bordelon has embarked upon with his company in the quest to position it for future growth and prosperity. Given the market at the time and the tough nature of the shipbuilding business, Bordelon's plan to build now was met with more than a few raised eye brows.

"Four years ago, building the shipyard was a thought, a dream," Bordelon said. "But when you're in this business long enough you develop an appreciation for boats, and I've been in and around this industry long enough to know there are pros and cons. When I let people know that I wanted to be in the shipbuilding business, they thought I was crazy." Crazy like a fox, as it turns out.

Wes Bordelon has a vision and developed a strategy to enter a niche in the offshore oil and gas sector that he felt


"The Stingray is a prototype design that incorporates a number of cutting edge features and capabilities only commonly found in much larger new generation vessels. The concept here is to give our clients a more affordable MPSV or light IMR/ROV support vessel option."

**Wes Bordelon**
(with Stingray in the background)

was underserved. Building a shipyard was central to the mission. In the shipyard, Bordelon and his team are able to exercise a high degree of control and adaptation, to design and build the vessels that they want, the way they want them, when they need them. So the shipyard gives Bordelon a high degree of control on quality: one that could exist only with an high price tag when building at an outside yard. The manifestation of the strategy sits in the form of the 260-ft. Stingray class offshore service vessel, a vessel designed in concert with C. Fly Marine of Covington, La., and the first of which was in the process of being completed at press time. "Developing the Stingray was almost a two-year process to design and bring it to fruition," Bordelon said. "We wanted to grow and develop a design that was unique, and cutting edge."

Bordelon chose Houma as the home for the new shipbuilding venture based on the tried and true axiom of real estate: location, location, location.

"We wanted to be in Houma because it's a good epicenter of support, there are many excellent service and support companies here, and a deep pool of quality workers," Bordelon said.

So simultaneously, Bordelon was designing its new boat and building its new shipyard, no easy task by any metric. While shipyard design and outfitting is essential to efficient and quality production, anyone in the business knows that a shipyard is only as good as its workers, and in the regard Bordelon's timing was just right to pick up a choice crew of experienced builders.

"One of the biggest challenges, of course, is at the same time (we're working on the boat), we're building a shipyard. Then you need to source experienced crew." Bordelon found fortune in a New Orleans misfortune, specifically just as Bordelon was building up, a New Orleans shipbuilding icon – Avondale – was closing down. With this, Bordelon gained immediate access to entire crews of experienced technical workers as well as managers and supervisors. Highly trained people from day one that were experienced in building in a modular way.

So with an experienced shipyard crew and a brand new ship construction facility – one that was purpose built for the new Stingray class of boats, Bordelon and crew were set for the next phase: construction of the Stingray class.

## Meet the Stingray

The first of three new Stingray class series 260-ft. DP2 PSV and MPSV – M/V Connor Bordelon – was expected for completion at press time.

"We are very excited to introduce the new Stingray DP-2 PSV and MPSV series," said Bordelon. "The Stingray is a prototype design that incorporates a number of cutting edge features and capabilities, only commonly found in much larger new generation vessels. The concept here is to give our clients a more affordable MPSV or light IMR/ROV support vessel option."

The Stingray class was designed to be an ROV support vessel, or a light IMR vessel, according to Bordelon. "It's most ideal function would as a life of field deepwater production boat that has an ROV onboard and can conduct subsea intervention."

Bordelon said that by design the Stingray class is a small vessel for that sector of the offshore market. We wanted to provide our clients with a more affordable option, but still have all of the power, cutting edge features – the automation, DP2, and the interior amenities – that you commonly only find on a much larger vessel."

In analyzing the Stingray design, finish and potential use, Bordelon described it as such: "It is more of a Swiss Army Knife than a workhorse. You see a lot of 260s out there now that are in the 4000 to 4500 deadweight range, meaning it is a wider, and deeper vessel. These larger boats are designed to primarily move a lot of product. This is what I mean by a whorkhorse; we're really not that king boat. We can still move the cargo, but the Stingray's advantage comes in her accomodations, automation, and multi-purpose functionality."

The 255 x 52x 18-ft. Stingray is more of a specialized support boat, with an innovative, thinner hull design to optimize speed and fuel consumption. While performance is the bottom line, according to Bordelon the comfort and amenities of crew and passengers remained a priority. The boat is near comfort class, featuring well-appointed staterooms with features that cater to the passenger, the client and the mariner. "We gave a lot of thought and consideration to the comfort of the Mariners, when we designed this vessel. These boats are the home away from home for our guys, and you can't expect them to be safe, smart, and productive unless they are well rested and comfortable with their surroundings. Each stateroom has a private head, individual climate controls, and TV, internet and phone connections," said Bordelon

"For us, it's about the culture of the company," said Bordelon. "We take care of our people, and its good business to do so. A well rested, happy mariner is a safe mariner. Someone who wants to be here will take better care of the equipment, will take better care of our clients."

"People always ask me why on earth would I want to be in the ship building business. It's messy, expensive, and incredibly risky. Well for us it's simply about the boats. If you stay in this business long enough, you develop a

genuine affection and appreciation for these boats. Some people look at them and see a big hunk of steel. I see an amazing balance of power, engineering, and thought. We wanted to be able to build a unique vessel that was our design alone, and to the needs and standards of our customers. We also wanted to build the vessel on our timeline and make whatever changes we needed, with a focus on quality instead of just price and schedule. A shipyard gives you the options to do all of those things."

So while the success of the Stingray Class in field operation is a chapter still to be written, in the Stingray Class Wes Bordelon has done his part in bringing the vision full circle. He has not only the crew on both the vessel construction and operations side, but the boat and the corporate culture to help Bordelon Marine carve its new niche for a generation to come.

## RAACI Delivers The Power

Robichaux Automation and Control, Incorporated (RAACI) was contracted by Bordelon Marine, to design and supply Hybrid Diesel Electric Propulsion equipment to outfit the Stingray Series 260 Class DP2 PSVs. RAACI is under contract to provide a complete diesel electric system including two 480 VAC water cooled Active Front End (AFE) Variable Frequency Drives (VFD's) to control two 950 HP electric bow thrusters, one 480 VAC Ship Service Switchboard (SWBD), one Emergency SWBD and four Motor Control Centers.

In addition, RAACI will provide an Engineer's Operating Station (EOS), an ABS ACCU, DPS-2 approved Alarm, Monitoring and Power Management system all to be installed on Bordelon Marine's new Stingray Series 260 Class DP2 PSVs.

**www.raaci.com**


# Proceeding Quietly with Vigor

**West Coast Shipyard banks on the old adage, "if we build it, they will come."**

**By Joseph Keefe**

*In a climate of both seemingly fat backlogs and at the same time uncertainty for domestic shipyards, Vigor Industrial is one company that continues to make news in the shipbuilding and repair merger and acquisition markets. After acquiring Todd Pacific Shipyards in 2011 for $130 million, Vigor also diversified its geographic offerings when it scooped up Alaska Ship and Drydock in Ketchikan after raising $75 million through private equity firm Endeavour Capital. Vigor CEO Frank Foti continues to build scale through acquisitions, while diversifying the company's construction and repair capabilities to include cargo fleets, barges and workboats, ferries, and US Navy and Coast Guard vessels, among others.*

*Vigor's quiet expansion is built upon four primary pillars: the acquisitions mentioned above, an aggressive capital spending plan that includes a new vessel assembly hall in Alaska and a new drydock that once deployed will be one of the largest on the U.S. West Coast, a Workforce development program intended to beef up and augment Vigor's shipyard staff and last – but certainly not least – a highest profile effort underway to secure the brass ring of the Coast Guard's new Offshore Patrol Cutter replacement program. Any one of those efforts would be fodder for a closer look; together they represent the potential emergence of a new tier I shipyard in a field that has been winnowed in recent years by attrition, consolidation and – no pun intended – vigorous and robust foreign competition.*

VIGOR
INDUSTRIAL

### The new dry dock

For anyone doubting Vigor's intent to compete and indeed grow their West Coast business, then their January agreement with Daoda Marine Heavy Industry Company (DDHI) to purchase a new floating drydock for $40 million removed all doubt. At 960 feet long, with an inside width of 186 feet and a lifting capacity of 80,000 long tons, it will be the largest floating drydock in the United States. "We decided now is the time to buy because demand to service large vessels is growing and large drydock capacity in proximity to the US West Coast has diminished," said Vigor Industrial CEO Frank Foti. The new asset, scheduled for delivery in March 2014, will be stationed in Portland, Oregon.

With the new capacity, Vigor can bid to service the incoming generation of the US Navy's Military Sealift Command (MSC) dry cargo/ammunition ships and the drydock will be large enough to service private vessels including post-Panamax cargo ships and cruise ships. The increased capacity will also help Vigor meet growing demand from the Arctic as oil and gas exploration and other ship operators take advantage of longer ice-free sum-

Sue Haley, Vice President of Human Resources, Vigor Industrial

Rene Doiron, Vice President of Ship Repair, Vigor Industrial


Matt von Ruden, Program Manager at Vigor Shipyards

Vigor Shipyard, Seattle, WA

mers. Beyond this, Vigor says that demand for such capability is very strong, while capacity around the Pacific has significantly diminished over the past ten years.

Rene Doiron, Vice President of Ship Repair, Vigor Industrial, told ***MarineNews*** in January, "Over the past decade, half a dozen medium and large drydocks have gone out of service around the Pacific region. At the same time, demand to service ships in such drydocks has remained very strong. Looking at this situation, and our strong financial position, it absolutely made sense to make this investment at this time. The new drydock will allow Vigor to win business from a range of private and government customers with large vessels."

## ASD Assembly Hall

New ship construction in Vigor's Ketchikan location is now supported by a new ship transfer system capable of launching and lifting marine vessels to land level berths. The new enclosed shipbuilding berth known as the Ship Assembly and Production Hall, and a new Module Fabrication ship supporting modular ship construction processes will together be capable of fabricating modules, then assembling and outfitting the modules into ships up to 450 feet in length. In a public private partnership Alaska Ship & Drydock, a Vigor Industrial Company (ASD/Vigor), and the Alaska Industrial Development & Export Authority (AIDEA) opened the assembly hall in the fall of 2012. The project secures Ketchikan as a strategically located marine industrial center capable of building the new ships required to modernize and diversify Alaska's marine vessel fleets. AIDEA is the owner and ASD/Vigor is the private sector operator of the Ketchikan Shipyard.

The new capacity, in combination with the yard's strategically positioned, ice-free location, could allow Vigor to capture new business from a variety of sectors, including: new shipbuilding opportunities in marine transportation, ferries, Arctic OCS shipping and development, Oil and Gas exploration and production, and Bering Sea Fishing vessel replacement and an expanding marine vessel maintenance, repair, and reconfiguration market. Vigor also hopes to expand employment there from 160 to 300 in the next two years.

Congressman Don Young will be in Ketchikan on March 26, 2013 to dedicate the new ship production facilities at the Ketchikan Shipyard. Adam Beck, President, Alaska Ship and Drydock, declared, "ASD is strategically positioned to serve a wide variety of customers … Specifically, our new assembly hall provides an indoor, weather-controlled facility capable of housing over 85%of the vessel types and sizes that operate in our area."

**Welding project in a Vigor Shipyard**


**OPC depiction at sea**

## Workforce Development

According to Vigor itself, infrastructure and mere capacity increases will not be enough. To that end, Vigor is engaged in a wide range of workforce development efforts, from traditional on the job training and union apprenticeships, to partnering with local educational institutions to provide industrial workforce education at the K-12 and community college levels. Already, workers are moving up in the ranks from these training efforts, and Vigor is seeing high demand and waitlists for industrial training programs, as well as gains in recruiting a younger, more stable workforce.

Identified as a particularly pressing issue for Vigor – its average age of skilled industrial workers is about 52 (albeit slightly younger than the industry average of 54) – there are not currently enough young people to replace all of the older workers expected to reach retirement age in the near term.

Specific efforts include:

- ***The Pathways to Manufacturing Program: targets students in grades 9-12 about career opportunities in skilled industrial jobs,***
- ***A partnership with Portland Community College,***
- ***Apprenticeships, and***
- ***On the job training.***

Sue Haley, Vice President of Human Resources at Vigor explained, "Workforce development is a key part of our business strategy and company philosophy. With many of our highly experienced craftspeople nearing retirement age, maintaining our skilled workforce is a top priority … Workforce development is a bridge that helps Vigor recruit the workers we need, and provides hard-working people with the skills they need to do these family-wage jobs."

## The Offshore Patrol Cutter (OPC)

Where other shipyards have kept, until now, relatively low profiles for their considerable efforts to secure the contract to design and produce the highly anticipated U.S. Coast Guard Offshore Patrol Cutter (OPC), Vigor went on the offensive late last year to showcase its decidedly different, but well-proven hull design. Spurred by the need to replace as many as 25 medium endurance cutters, the nation's primary homeland security provider on the water

has domestic shipbuilders queuing up to design and build its next generation vessel. At least three shipyards can be considered serious candidates for the first installment.

According to Matt Von Ruden, Vigor Industrial's OPC Program Manager, "Vigor's primary advantage is our thorough understanding of the Coast Guard's requirements. This enabled us to get an early start, mature our design, and assemble an exceptional team.

-The result is an innovative OPC option for the Coast Guard that is uniquely capable and affordable. As a mid-sized shipyard with a strong track record with the government, we are able keep our costs down, while remaining highly responsive to the customer."

U.S. Coast Guard Commandant ADM Bob Papp, in his Situation Report released in late January said, "We have started the most important acquisition program in our service's history – the Offshore Patrol Cutter (OPC). In 2013, we will award three design contracts. We will down-select to a single OPC design that best meets our requirements, including affordability." As the domestic shipbuilding industry waits for the first edict, it is safe to say that OPC is a big part of Vigor's ongoing efforts, but at the same time, just one leg of a sturdy four-legged chair.

## Vigorous & Hopeful

If you build it, will they come? Clearly, that's what they are counting on at west coast-based Vigor Industrial. Starting with asset acquisition, infrastructure upgrades, workforce improvements and an aggressive design and build competition, Vigor Industrial has served notice that they will be a force to be reckoned with; now and down the road. Self-described by Vigor's Matt Von Ruden as "a mid-sized shipyard," it is also clear that very soon, Vigor won't be able to fit anymore into that neat little package.

With the cornerstone laid for what CEO Frank Foti hopes will come next, the Vigor Industrial transformation is perhaps just one of any number of good news stories emanating from the domestic, mid-tier shipyard sector. Unlike some, however, Foti's backlog is a healthy mix of both private and government sector work. Without a doubt, a lot of big news has come out of this firm in the past two years. The best may be yet to come.

# Responding to "The Articulated Tug Barge (ATB) Quandary"

By Robert P. Hill

I read with great dismay, the article that appeared in your magazine's February 2013 issue, entitled "THE ARTICULATED TUG BARGE (ATB) QUANDRY". I'll open with the definition of quandary:

*noun, plural quandaries : a state of perplexity or uncertainty, especially as to what to do; dilemma.*

There is no dilemma involving AT/B's present in the coastwise or ocean transportation marketplace. AT/B's are indeed increasingly supplanting ships in the Jones Act coastal trade. It is a trend that is slowly beginning to spread to coastwise transport in other regions of the world as well. But the reality is, that it is also a force in deep water/ocean transport as well. So I want to examine the assertions made by the article's author and essentially show the inaccuracies present in them, and provide the actual facts that trump the opinions expressed by the author. My goal is to deal with the technical inaccuracies of the article. I will leave it to others to deal with the manning contentions – though I will cover them with regard to places where they are not correctly stated as they apply to AT/B's themselves.

**Last month,** *MarineNews* **ran an article entitled,** *"The Articulated Tug Barge (ATB) Quandary,"* authored by Captain Jeff Cowan. To say that the piece elicited much discussion and reader input would not give justice to the response that this article received. To be fair, most of the responses received to date were critical of Captain Cowan's narrative. That said; Cowan is an infrequent, yet knowledgeable and I think, compelling contributor to the ***MarineNews*** editorial product. Certainly, his copy – at least in this case – provides ample material for good debate. And, I'm happy to present opposing opinions.

Robert P. Hill is President & Principal Naval Architect at Ocean Tug & Barge Engineering Corporation. Billed as the leader in Articulated Tug/Barge Unit Design, Hill's firm celebrated 33 Years of experience in 2012. They provide Articulated Tug & Barge (AT/B) Design, connection system retrofits, model testing and harbor & ocean tug design. This month, we chose his carefully worded response to provide a balanced view on the subject of safety, regulatory oversight and how all of that impacts the "ATB" equation. We received a lot of mail; Mr. Hill's by far was the most eloquent. Read on to see what he had to say. ***Joseph Keefe, editor***

The very first paragraph of the article is grossly inaccurate. There is no "safety gap" between AT/B's and ships. Every time AT/B's insert themselves deeper into the maritime trades, shipowners will lament the "lack of regulation" the AT/B is alleged to have. Well, I design them for a living. It is all I do. I've done it for over 30 years. Anyone who believes that AT/B's somehow get a pass regarding regulations, has no idea what they are talking about. We are presently engaged in designing AT/B's for a whole range of product transportation, including LNG. So, please allow me to directly quote a section from a Specification we are preparing for an AT/B liquefied gas carrier, indicating the regulations and standards that are be-

ing applied to the design of this AT/B. Note that we apply a similar range of project-specific Regulatory scope in ALL the AT/B's we design.

### 2.0.3 Applicable Regulatory Standards for Vessel Design

The AT/B will be designed to the following domestic and international regulations and standards for safety, portions of which are found to be specifically applicable to gas carriers, or to Articulated Tug/Barge Units, Barges carrying hazardous cargoes or Towing Vessels. Further Rules & Standards may be found to be applicable and will be applied as required:

- *IMO (IGC) Code for Carrying Liquefied Gases in Bulk*
- *46 CFR 38 Liquefied Flammable Gases*
- *46 CFR 54 Pressure Vessels*
- *46 CFR 151 Barges Carrying Bulk Liquid Hazardous Material Cargoes*
- *46 CFR 153 Ships Carrying Bulk Liquid, Liquefied Gas, or Compressed*
- *46 CFR 154 Safety Standards for Self-Propelled Vessels Carrying Bulk Liquefied Gases*
- *46 CFR 162 Engineering Equipment*
- *46 CFR 172 Special Rules Pertaining to Bulk Cargoes*
- *ABS Guide for Building and Classing Liquefied Gas Carriers With Independent Tanks*
- *ABS Rules for Building and Classing Steel Barges*
- *ABS Rules for Building and Classing Steel Vessels Under 90M in Length*
- *USCG Navigation and Vessel Inspection Circular 10-82, 10-92, 2-81*
- *USCG Marine Safety Center Bulletin #01-98*
- *OCIMF Standard for Loading Arms*
- *API2000 Venting Atmospheric and Low Pressure Storage Tanks*
- *33 CFR 159 Marine Sanitation Devices*
- *USCG NVIC 2-81 – Tug/Barge Units – Dual-Mode AT/B*
- *USCG NAVIC 12-82 - Time Weighted Noise Exposure … Compliance w/IMO Noise Criteria.*
- *ABS "Guidance Notes on the Application of Ergonomics to Marine Systems"*
- *IMO Int'l Convention on Load*

*Lines 1966 with declaration Resolution A 231 (VII) and A 320 (IX)*

- *IMO International Convention on Tonnage Measurements 1969*
- *IMO International Telecommunication and Radio Regulator of 1973/1976 and 1982 including GMDSS - Rules 1999 For Radio Communication*
- *IEEE-45 Recommended Practice for Electrical Installations on Shipboard*
- *IES Recommended Practice for Marine Lighting,*
- *IEC, Electrical Installations In Ships*
- *ILO, convention no. 92 and no.133 for crew accommodation.*
- *US Environmental Protection Agency (40 CFR 140)*
- *Federal Water Pollution Control Act (33 USCG 1251 et seq.)*
- *ASTM Publication F1166 – Standard Practices for Human Engineering Design for Marine Systems, Equipment and Facilities - latest edition, as well as other ASTM Standards specifically called out in these Specifications*
- *ANSI Standards, as specifically called out in the vessel Specifications*
- *SAE Standards, as specifically called out in the vessel Specifications*
- *Oil Spill Prevention Act of 1990*
- *UL Standards, including, but not limited to UL 1581, Reference Standard for Electrical Wires,*
- *Cables and Flexible Cords*
- *IMO International Convention for the Prevention of Pollution from Ships, MARPOL*
- *1974/1978 Annexes I, IV, V resolution MEPC 14 (20) 07.09.84, resolution A 393 (x) and Annex VI*
- *with all current amendments and/or modifications*
- *ISPS requirements*
- *SOLAS Certification (Tug – there are no living quarters on the barge)*
- *SNAME guidelines for conduct of tests and trials*
- *Other Flag State requirements. (Assumed to be Jones Act, USCG/American Flag)*



The above list of regulations that our units meet, is not a "wish list." It is the reality of what we do. To be certain, there are some regulations that do not apply to Unmanned Barges. Why? Because they are as noted; "unmanned." As a designer however, I have yet to have a client who did not ask me point blank if something that is not required by regulation, is truly needed for safety – and not a one who refused to install something I felt was necessary for the safety of the crew.

It is news to me, and to my clients that charterers allow extra days when chartering an AT/B due to weather being a concern. An AT/B can operate in the very same weather as a ship can, and truth be known, ships sometimes slow more than AT/B's in bad weather due to propeller and rudder emersion.

I do not know of a single AT/B utilizing a high capacity connection system that came out of the notch because a pin broke – the connections are designed along with their surrounding structure, for as much as 3X the expected loads. Name me all of the AT/B accidents using a major connection system since they came into widespread use in the 90's where there was a casualty? An oil spill?

The author's description of the motions of an AT/B is also incorrect. The contention regarding emergency haw-

sers parting due to no catenary is also incorrect. The AT/B's I design have at least 1000' of emergency hawser aboard. It is pure scare-tactics to contend that if an AT/B barge got away we'd have a repeat of the North Cape disaster. Rubbish. The North Cape was a single hull barge – all AT/B petroleum and chemical barges are double hull and the North Cape got away from a towing tug, in horrible weather they should not have been out in – not an AT/B. Whatever would befall an AT/B barge aground would also happen to a ship aground. And look at the largest spills since the 90's. How many were from AT/B's – how many from tankers? MANY more tanker accidents with significant spills. It is more likely that a ship will lose steering (see recent experience) or propulsion (see recent problems with fuel switchover in ships) than a tug losing a properly sized towing hawser while holding station offshore. So by the author's reasoning, we should see tankers as the real "quandary". He cites ship accidents as the reason why one has to further regulate or by implication, bad – the

demonstrably safer AT/B.

AT/B motions? "Poor Souls" and pendulum movement? Has the author ever even ridden an AT/B? I have. There are *YouTube* videos that can be watched. The motion is not horrible even in extreme seas – and we design these boats for a significant height sea spectrum exceeding 7M.

It also not universally true that AT/B's have a crew of only 7. Several of the ones we have designed have 10 to 14 aboard. All of our AT/B tugs are capable of berthing a minimum of 10. There is also a major problem with this statement written by the author: "Industry consensus says these 'ships' (when connected) are constructed to

take advantage of a loophole in the law. Since these boats do not travel more than 200 miles from the U.S. coast and are not engaged in international voyages, they are not subject to the International "Standards of Training, Certification and Watchkeeping" (STCW) nor will they be subject to the upcoming "Maritime Labor Convention 2006" (MLC 2006) guidelines coming into effect 20 August 2013."

Talk to an AT/B operator instead of relying on hearsay. AT/B's ROUTINELY operate in trans-oceanic service. I know because my boats do it. The limitations of space for this article do not allow me to enumerate the many cases of such, but they operate under the same international rules as ships do.

Space limitations again prohibit me from answering each inaccuracy in the article, but interested parties are welcome to contact me at rhill@oceantugbarge.com to hear the REAL AT/B story. I would not send a person to sea on an unsafe vessel design. The safety of these crews is everything to a naval architect. We have to think of them constantly. To suggest by inference that those of us who design or operate these vessels care nothing for the concepts of safety or environmental protection is to do an injustice to a lot of good people. The TRUE AT/B record speaks well for itself.

*Sincerely,*

*Robert P. Hill, N.A.*
*President, Ocean Tug & Barge Engineering Corporation*
*rhill@oceantugbarge.com*

OCEAN TUG & BARGE ENGINEERING CORP.


# Hyde Marine, PG Marine Group and OSV's: a perfect fit

***Ballast water treatment equipment manufacturer Hyde Marine provides systems for all sizes and manners of vessels, but increasingly, the U.S.-based subsidiary of Calgon Carbon Company is being recognized for its work with offshore operators – here and abroad.***

**By Joseph Keefe**

Hyde Marine has long been active in the worldwide effort to control the spread of aquatic invasive species in ballast water. Early on, Hyde supplied the first fully operational shipboard Ballast Water Treatment system. In 2003, after requirements were better defined, Hyde installed a state-of-the-art filtration and UV disinfection system aboard the Coral Princess. This system was tested extensively on land-based installations and on board the Coral Princess in the fall of 2004. The on-board tests demonstrated the Hyde Guardian's capability to meet the IMO BWT Convention requirements.

The U.S. Coast Guard is now moving towards certification of BWT systems. This can take the form of an Alternate Management System (AMS), which gives a five year temporary window for flag approved systems, or permanent type approval. USCG Type approval will require biological laboratory testing and shipboard tests as well. Applications for approvals will take about 60 days to get a verdict. The five-year period is designed to provide the BWMS manufacturer time to obtain USCG approval. Any vessel using an AMS must still comply with the terms and conditions of the U.S. EPA Vessel General Permit (VGP). The proposed 2013 VGP already contains discharge limits similar to the IMO D-2 standard.

**Image above: OSV Olympic Zeus was a recent, successful Hyde Marine retrofit project.**

## Hyde Marine's Solution: Simple, Certified & Compliant, too

Today, Hyde could be one of the first in line to receive the Coast Guard's new AMS certification. Two applications will be sent out within a month. For Hyde, its IMO testing will be conducted through G-8 and they may have to do additional testing. Hyde is actively preparing for both possibilities. Hyde's Guardian Ballast Water Treatment Systems have

IMO Type Approval for capacity from 60 to 6000 m3/hr. A Type Approval Certificate has been issued by Lloyd's Register on behalf of the UK Maritime and Coastguard Agency to confirm compliance with Guidelines contained in IMO resolution MEPC.174(58). Other certifications include ABS, Dutch Flag State, Russian Maritime Registry of Shipping, DNV (Hazardous Area Certification) and DNV EC-Type Examination Certification.

Hyde's Guardian features a two-stage process: stacked disk filtration to remove sediment and larger organisms; and a UV disinfection unit to kill or inactivate smaller plankton, bacteria and other pathogens. During ballasting, water is processed through both filter and UV stages. All captured solids and organisms are discharged during backflushing to the location they entered. During de-ballasting, the filter is bypassed and water flows only through the UV system before discharging overboard. Hyde Guardian system and ballast operation data are automatically logged and Hyde provides guidance on the design/installation of sampling ports in accordance with IMO G2 Guidelines.

With over 225 BWT systems already sold into the marine markets via about 180 ships, Hyde is well known in blue water shipping as a top tier provider of BWT solutions. But, Hyde has also sold as many as 75 systems to Offshore Supply Vessel (OSV) owners and also sells to a myriad of other smaller platform operators as well. In fact, Jim Mackey of Hyde Marine told MarineNews in February that about one half of Hyde systems sold to date have been placed onto OSV's and smaller sized – less than 300 foot – vessels. These include tugs, research vessels, fishing vessels, dredges and private passenger vessels. Mackey said, "We don't want to be buttonholed into just one market, but we are very effective in serving that sector and it is certainly a big part of our business." He added, "Success has made us an expert in that area."

## Relationships: Why PG Marine?

PG Marine Group is one of the more easily recognized names in liquid cargo systems for the global OSV fleet. The core of PG Marine's business is pumps, and pumping systems for the oil and gas sector, in particular those sophisticated systems used by offshore service providers. PG started screening the BWTS market when the first products were being IMO

Type Approved. Early on, it became clear that they had to narrow down to technologies which target the market's demands. These include low CAPEX, low OPEX and flexibility in installation.

According to Roy Norum CEO of PG Marine Group, "It was clear to us that Hyde Guardian met the criteria at an attractive profile to PG's market approach." Norum also said that PG gave early commitment to Hyde to high market shares within the Norwegian shipping market regionally, and the Global OSV Market internationally. PG has since then represented Hyde exclusively for these market segments.

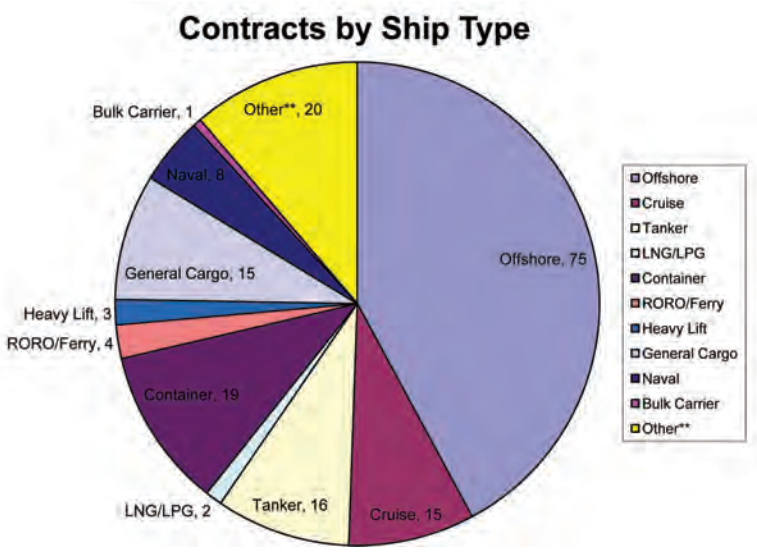
Since then, PG has built fabrication, testing and packaging capacities and secured contracts for newbuilds and retro-fits for Hyde for about 75 vessels. To date, PG has secured 7 BWTS units in the US market. Norum went on to say, "We are currently negotiating major fleets-accounts and expect to significantly increase volumes of delivery during 2013." And for those operators worried about whether they will be able to secure BWT systems in a timely manner as the installation deadline approaches, Norum has news for them. "PG is currently building a new 94,000 square foot fabrication facility in Norway, in which an initial BWTS fabrication capacity of 400 units is secured annually.

The PG philosophy includes making the BWT installation process as painless as possible. Norum added, "We are currently down to one to two days of commissioning after installation, and even train larger customers to commission their own units to 'ease the pain' of early installation, as we all await IMO's ratification." Norum is certain that, in the next few years, PG will be the largest contributor in number of BWT systems delivered for Hyde. He may be right. And, that's because one major advantage in targeting the OSV market is that it is arguably the only really strong shipping (in terms of BWT alone) market in these difficult times.

In short, PG Marine Group knows the OSV markets well. And since many operators want to use the same pumps for cargo as they employ for ballast water handling, the relationship between PG Marine and Hyde becomes clearer. Marketing a turnkey solution to those contemplating new build projects but also standalone Hyde systems to those looking at retrofits, PG Marine also has the in-house technical and engineering expertise to meld the Hyde solution into one of their own systems, or conversely, an existing ship already in service. PG Marine Group, therefore, is a close technical and business partner for Hyde, acting in certain cases as Hyde commissioning engineers. Rather than just shoehorning any solution onto a particular hull, PG Marine and Hyde work together to provide a seamless, integrated approach, leveraging the strengths of both groups into a predictable outcome backed by global service.

## BWT for OSV's: Why, and more importantly, how?

Increasingly, OSV owners are starting to look at BWT systems for newbuild projects. That makes a lot of sense on many levels. For one, it is far more expensive to retrofit BWT onto an existing hull than it would be to design and properly plan installation during the newbuild process. That's not to mention the additional cost of downtime and lost daily revenues during the retrofit period. Beyond this, the uncertainty of what the Environmental Protection Agency's final Vessel General Permit (VGP) will call for in terms which sized vessels must comply has many owners stepping up in advance of the final rule language to ensure compliance, no matter what the rule says. That, and many owners simply want to run as green an operation as is possible.




The ultimate challenge for OSV solutions is the obvious lack of space on board these highly specialized, but compact workboats. Normally, there is plenty of power, but the available space to place BWT equipment can be more than 15% less than what might be available in the typical VLCC pumproom. To that end, PG Marine and Hyde provide 2D and 3D design-modeling, physical engineering on board, prefabrication and the flexibility that Hyde's BWT solution can be split and built into clusters, lines, L-shaped formations or even stacked. And while the physical footprint of Hyde's equipment isn't the smallest in the industry, it might just be the most flexible in terms of how it is placed on board a vessel.

While retrofits can involve more money, time and complications, they can be done. Hyde, through its partnership with PG Marine, has been involved in its fair share of this type of installation. As a baseline, careful planning is at the heart of any BWT retrofit operation. The OSV Olympic Zeus installation – sold through PG Marine – is a perfect example of one such job. Tight spaces, the need for a compact physical footprint and a simple design were all part of the winning package.

Operating in today's OSV markets, however, requires savvy that extends far beyond simple cost comparisons of systems. Owners who want to be in a position of being able to quickly reposition a vessel from one are to another also need to know that ballast water compliance issues may come into play. And with OSV day rates commanding breathtaking six figure magnitude for some specialties, operators do not want to lose even one day of fees. And, in the not-too-distant future, the difference in securing an oil major's offshore support work and losing that work to a competitor could well come down to which operator has the best, most environmentally sound and compliant equipment on board.

## Hyde Marine, PG Marine, & OSV's, too: a tight package

As more and more U.S. OSV owners start to think about ballast water treatment, long term and reliable service, experience and a compliant product will just be three of the metrics they will insist upon. If so, then some will have to look no further than U.S.-based Hyde Marine, its global partner in PG Marine Group and the combined experience represented by their business relationship. For its part, Hyde Marine's approach with one of its most important client sectors – the offshore service vessel operator – is to sell them on a package that (a.) lowers risk, (b.) lowers the cost of operations and (c.) promises long term support. For more than 75 of Hyde's OSV customers (and counting), that's been a winning combination so far.


Carroll


Isemann

Laborde


Sulzer


Boudreaux

### Harvey Gulf Hires Carroll

Harvey Gulf announced Mike Carroll will join the organization in the position of Sr. Vice President of New Construction and Special Projects based in Houston.

### Jensen Maritime Names Isemann

Jensen Maritime recently hired Ray Isemann as senior sales account executive. In his new role, Isemann will be responsible for growing Jensen's business in the U.S. Gulf of Mexico, the U.S. East Coast and along the Mississippi River.

### Laborde Augments Sales Team

Rounding out its industrial sales force, Laborde Products welcomes two new salesmen. Cody Dean will handle industrial engine and equipment sales in southern Louisiana and southern Mississippi, while Chris Wright will respond to the needs of northern Louisiana and northern Mississippi.

### Sulzer Sworn in as Member, Advisory Board SLSDC

Dr. Arthur Sulzer has been sworn in as Member, Advisory Board of Saint Lawrence Seaway Advisory Board (SLSDC). Nominated by President Obama in July, 2012 to a five year position on the Saint Lawrence Seaway Advisory Board, he was confirmed by the U.S. Senate and in January, sworn in. Sulzer is President of Arthur H. Sulzer Associates and from 1974 to 2005, he served as a Captain in the United States Navy.

### HHI Names Boudreaux CCO

Huntington Ingalls Industries said that Chad N. Boudreaux has been named to the newly created position of chief compliance officer. Boudreaux earned a bachelor of arts degree from Baylor University and a juris doctor degree from the University of Memphis School of Law.

### Vindeola Joins Global Diving & Salvage

Global Diving & Salvage hired Jose Vindeola, joining the Gulf Coast Region in the Business Development/ Technical support position. He has 30+ years of diving experience in both the offshore and inland sectors.

### WheelHouse Hires Morris

WheelHouse Technologies, Inc., provider of WheelHouse computerized maintenance management system as well as SeaKits Damage Control and Spare Parts Kits, named Ian Morris its Production Manager.

### Buckley McAllister named President, McAllister Towing

McAllister Towing has announced that Buckley McAllister has been promoted to the position of President. Captain Brian A. McAllister, President of the Company since 1984, will remain as Chairman. Buckley joined McAllister Towing in 1998 and has served as the company's Vice President and General Counsel since that time. Prior to that, Buckley was an Associate at Hill, Betts and Nash LLP. He is a member of the bar in New York, California and a number of federal jurisdictions. Buckley is a member of the fifth generation of the McAllister family that has owned and operated McAllister Towing since 1864.

### Lake Joins AEU

The American Equity Underwriters, Inc. (AEU) has hired Jason Lake as a Loss Control Manager. Jason graduated from the U.S. Merchant Marine Academy in 2005.

### TITAN Salvage Appoints Johnson VP

TITAN Salvage, Crowley's marine salvage and wreck Removal Company, has named Michael G. Johnson its new vice president of business strategy and process.

### Crowley Names Rajabi VP

Crowley Maritime Corporation's solutions group named Farhad Rajabi vice president of its project management team. Rajabi's new role will leverage his 30 years of experience in project management and other marine solutions fields to establish objectives, plans, policies and procedures for the project management department.

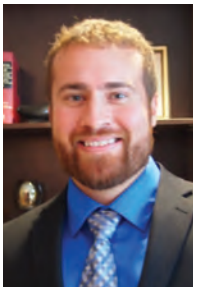
### Sidley New POLA General Counsel

Janna Sidley has been named General Counsel for the Port of Los Angeles. In her new role, she will supervise the City Attorney's Port operations and serve as in-house counsel to Port management and the Los Angeles Harbor Commission.


Vindeola


McAllister


Morris


Lake


Johnson


Rajabi

**Jones Joins AWT**

Applied Weather Technology, Inc. (AWT) has named Haydn Jones as Director of International Operations.

**WCI Award to Rep. Rahall**

Waterways Council, Inc. (WCI) presented Congressman Nick Rahall, II, (WV) Ranking Member of the House Transportation & Infrastructure (T&I) Committee, with its 11th Annual Leadership Service Award on February 15 in Washington, DC.

**Atlantic Marine Establishes New Consulting Arm**

Atlantic Marine Associates Inc. (AMA), a member of the Eagle Ocean Group, which includes Shipowners Claims Bureau Inc., managers of the American P&I Club, has extended its business reach through the establishment of a marine surveying and consultancy capability.

**CIGI Appoints Higginbotham**

The Center for International Governance Innovation (CIGI) appointed John Higginbotham as senior fellow. Higginbotham will play a key role in leading CIGI's global security project on Arctic governance. A senior distinguished fellow at Carleton University, he has also been working on a transportation studies initiative.

**Willis North America Expands**

Global insurance broker Willis North America made two key appointments: Jeremy Sykes and Francesca Sykes have been appointed Client Advocates of the Willis Marine Practice, Willis of Virginia.

**Drew Completes Acquisition**

Drew Marine completed the acquisition of Alexander/Ryan Marine and Safety Inc., and it will join the organization under the name Alexander/Ryan Marine & Safety division of Drew Marine. With locations in the United States (Louisiana and Texas) and in the United Kingdom, the division brings 82 new employees to Drew Marine. Alexander/Ryan Marine & Safety is a manufacturer and distributor of fire, safety and rescue equipment to the offshore and marine markets.

**Signal Ship Repair Achieves 1,000 Days Without LTI**

Signal Ship Repair recently attained a milestone of 1,000 days without a lost time injury, on January 30th, 2013. This milestone was achieved by the commitment of all Signal Ship Repair employees towards a safe work environment.

# PRODUCTS

### USCG-Approved Fire Detection System

The U.S. Coast Guard's Bridging Program is moving the towing industry toward the new Subchapter M regulations. Among the requirements are installation of a fire detection system to detect engine room fires and a fixed fire extinguishing system. Sea-Fire's FireStop Fire Detection and Alarm System has USCG approval to help towing vessel owners with compliance, in addition to approved fire suppression systems. Sea-Fire's modular FireStop system provides quick and clear identification of open, short and alarm conditions of fire alarms. Its 10" x 7" control panel has fire, heat and smoke monitoring capabilities.

www.sea-fire.com

### Safe at sea with Helly Hansen

Technical clothing specialists Helly Hansen's water sports collection combines design and technical features for warmth, dryness and protection in rough seas. The recently rebuilt Ocean Jacket and Ocean Trousers offer maximum safety and comfort. Constructed with a three-layer, quick-dry system, the three-quarter length Ocean Jacket is designed to offer unrivalled protection, with an extra high Polartec fleece collar, fully adjustable EN-471 hi-visibility hood and a stow-away face visor. The matching squall-proof bib, the Ocean Trouser features seat and knee reinforcements that have been manufactured to endure harsh conditions on the water.

www.hellyhansen.com

### Maxim Reverse Osmosis Evaporators

Maxim Evaporators has launched a new line of Seawater Reverse Osmosis desalination systems to compliment an existing heat recovery evaporator product line. The Sterling Series offers water production capacities from 1,000 GPD to 6,000 GPD. The equipment has standard features that include a 2205 duplex stainless steel ultra-quiet Danfoss pump, high rejection 4" seawater membranes, an energy efficient design, with vertical and horizontal configurations available. The Sterling Series offers clients quality and reliability, a competitive price point and a short lead time.

www.maximevaporators.com

### Diesel Exhaust Cleaning System

Northern Lights' Diesel Exhaust Cleaning System (DECS), based on DCL International's Marine-X system, removes soot and particulate matter as it is emitted from engines. Exhaust gas is routed through a catalytically coated ceramic filter, trapping soot and particulates. DECS uses a passive regeneration process which does not require additional equipment, controls or regeneration time. The DECS filtration process reduces carbon monoxide by up to 98% and diesel hydrocarbons by up to 95%. Soot burns away and transforms into harmless CO2. It is CARB Level 3 verified and NO2 compliant.

www.northern-lights.com

### Thorn-D Antifouling-film Applied to Crew Vessel

Micanti BV has applied its patented non-toxic antifouling on a crew vessel in Dubai. Thorn-D is an adhesive foil with fibers that creates a textured surface. Instead of killing marine growth, the textured foil is preventing it from attaching itself to the hull of a ship. Thorn-D is set to replace the generally used chemical coatings on hulls of ships. Thorn D is an easy-to-apply self adhesive foil physical barrier to fouling and has an expected lifetime of at least 5 years. The physical nature of the product guarantees environmental friendliness.

www.micanti.com

### PPG's Antifouling for Short Sea, Coastal Shipping

PPG Protective and Marine Coatings has launched Sigma Ecofleet 690, designed to deliver self-polishing antifouling for extreme and aggressive fouling conditions. Developed specifically for the dry dock, maintenance and repair market, Sigma Ecofleet 690 ensures consistent performance levels and fouling control for in-service periods of up to 60 months. Compliant with the IMO AFS Convention, it is suitable for a wide range of vessels and contains an ultra-high volume solids content of 70% - reducing potential VOC emissions. Formulated to be easy to apply, it also increases productivity and reduces overall maintenance costs.

www.ppg.com

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*Annual Meeting: alana@sname.org*
*Expo: howard@marinelink.com*

# PRODUCTS

### Raymarine Launches Voyage Planner PC Planning Software

Raymarine has introduced a powerful, easy-to-use, route planning and data management software solution for Raymarine multifunction displays. Voyage Planner allows management of waypoints and routes between multifunction displays and PC's. Using the built-in Wi-Fi capability of Raymarine's new c-Series and e-Series multifunction displays, waypoint and route plans can sync through SeaTalkhs (Ethernet) or flash memory cards. Voyage Planner supports native Raymarine formats and offers GPX and KMZ waypoint file format support, giving flexibility of importing waypoints from other brands of marine electronics, electronic navigation charts, topographic charts, weather overlays, and custom fishing data.

www.raymarine.com

### FLIR's Gyro-Stabilized Thermal Night Vision

FLIR Systems has released the latest addition to its M-Series family of thermal night vision cameras: the new gyro-stabilized M-618CS. This new M-Series camera offers powerful new features, including High resolution thermal night vision, extended range performance, active gyro-stabilization and color TV camera with 10x optical zoom. Housed in a rugged, waterproof gimbaled enclosure that provides continuous 360° pan and +/-90° tilt capability, the M-618CS provides horizon-to-horizon coverage, and incorporates cutting-edge Ethernet connectivity for easy installation and control.

www.flir.com

### Navis Achieves DNV MED-B Certification for AP4000 Autopilot

Navis Engineering Oy has received MED-B type approval for its latest generation AP4000 autopilot from classification society DNV. The MED-B certificate provides assurance that the product complies with international standards and covers equipment delivery to newbuildings or existing vessels for retrofit. One new feature is the fully self-adjusting auto tune algorithm that facilitates the adaption of the autopilot's performance to the hydrodynamic parameters of any yacht, irrespective of its displacement and dimensions. The AP4000 is one of the few autopilots on the market that has a configuration for two independent rudders. It is designed to allow interface with bow thrusters, keeping the vessel's heading at low speeds.

www.navisincontrol.com

### SeaRobotics Autonomous Hull Cleaning System

SeaRobotics Corporation has delivered the first HullBUG (Hull Bio-inspired Underwater Grooming) System to the Center for Corrosion and Biofouling Control at Florida Institute of Technology. This will be tested and further developed at the newly commissioned Large Scale Seawater Facility. HullBUG, a small autonomous vehicle weighing 30-40 kilograms, attaches to the hull and performs a gentle cleaning function, or grooming. Numerous embedded computers perform navigation and sensing tasks to facilitate grooming the ship hull. Attachable to ferrous, non-ferrous and fiberglass hulls, HullBUG also facilitates inspection challenges.

www.searobotics.com

### Nyalic Ultra Thin Resin Coatings


Nyalic is a clear, ultra-thin resin coating that is not a wax or a polish. It is used on commercial workboats to protect bare metal, fiberglass, painted surfaces, plastics, wood and electrical and mechanical connections from salt water, corrosive chemicals and UV damage. A properly prepared coating gives three and five years of protection, generating cost savings in maintenance and down time. Originally developed for the Apollo Space Program, Nyalic is an ideal surface protectant for moist and corrosive environments. It is designed to withstand extreme temperatures – up to 350 F and below 0 F.

www.nyalic.com/marine-workboats

### Powerful LED Floodlights Eclipse Ordinary Halogen

Powerful Hella Marine Sea Hawk XL LED Floodlights and Deck Lamps use 30 LEDs to produce a spectacular 750 lumens of light, far more than 55W or 70W H3 halogen bulbs. The lamps offer more than 80% power savings over halogen models, using only 12W at high intensity and 2W at low. The CE-approved Sea Hawk XL models are built to stand up to the most punishing marine conditions. The LED Floodlight illuminates a wide spread over a cockpit, foredeck or working area. When forward facing, the deck lamp helps illuminate objects in the water.

www.hellamarine.com

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Job Location: USA, West Coast

Buffers USA Inc. is the industry leader in supplying ship lashing, container and chassis parts, cargo control & securement products, to the marine and transportation industry.

We have been providing solutions to improve shipping and transportation efficiency for over 30 years. We currently have four strategically placed locations with fully stock warehouses in the United States and planned expansion into a fifth, this ensuring a fast response time to meet our customers' service deadlines.

Expansion of business has created an immediate need for a Sales Representative to join the Buffers Team to cover the West Coast Territory. We are seeking a salesperson with a proven track record who is ambitious, result driven and has industry experience to sell ship lashing & cargo control & securement products to the marine and transportation industry.

The ideal candidate will possess the following:
1.) Minimum of 5 years industry experience
2.) Great organizational skills
3.) Self – motivated
4.) Be able to cover the entire West Coast independently

Buffers USA is a drug free workplace and equal opportunity employer offering a competitive salary and benefits package.

Please forward your resume to: **Fiona@buffersusa.com** Please include your compensation history. All resumes will be kept strictly confidential.
**Fiona Milbank**
**Buffers USA**

### Shipyard Estimator

Job Location: USA, Cleveland, OH

Great Lakes Shipyard is seeking a highly skilled Estimator with new construction and repair cost estimating experience.

The Estimator will produce cost estimates and production schedules for New Construction, modification and repair projects at the Company's state- of-the- art facility located on Lake Erie in Cleveland, OH.

The Estimator will work with Sales, Purchasing and Project Managers to produce preliminary schedules and detailed cost estimates, for budgeting, bid preparation and proposal purposes; and will also build a database for project schedules and cost estimates. An engineering degree is preferred. Must have a working knowledge of ABS Rules, work with ABS, Lloyds, DNV, BV and others as required to meet all quality and regulatory requirements. Proficient with MS Office, MS Projects and MS Excel.

Minimum 5 years' experience working in Shipyard Production and/or as an Estimator/Scheduler in a shipyard environment. Ability to read, analyze and interpret specs, drawings and technical, government and regulatory documents. Ability to write reports and proposals. Working knowledge of shipyard crafts. AutoCad and welding experience a plus.

We offer an excellent benefits package that includes healthcare, dental, vision, short-term and long term disability insurance, employee assistance program, 401(k) profit sharing plan, vacation time, sick time, company paid holidays and a friendly working environment.

Candidates must be able to pass background check and have E-Verify authorization.

Submit cover letter and resume with salary requirements: by email: **hr@thegreatlakesgroup.com;** by fax: 216-781-7472; or by mail: Attn: Mary Wells, Human Resources Manager The Great Lakes Group, 4500 Division Avenue, Cleveland, OH 44102. For more information on the Company, visit **www.thegreatlakesgroup.com.**
**Mary Wells**
**The Great Lakes Group**

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# Marine Marketplace

## NEW PRODUCTS



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| 64 | Centofanti Marine Systems, Inc. | Please call us at | (724) 438-7666 |
| 9 | Cummins, Inc. | www.cecoteam@gdms.com | Please visit our website |
| 43 | DeFelsko | www.defelsko.com | (315) 393-4450 |
| 11 | DMW Marine, LLC | www.dmwmarinegroup.com | (610) 827-2032 |
| 59 | Don Jon Marine | www.donjonshipbuilding.com | (814) 455-6442 |
| 13 | Eastern Shipbuilding Group | www.easternshipbuilding.com | (850) 763-1900 |
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| 34 | North River Boats | www.northriverboats.com | (541) 673-2438 |
| 3 | Patterson Company | www.pattersonmfg.com | (800) 322-2018 |
| 37 | PG Marine Group - Ing Per Gjerdrum AS | www.pg-marinegroup.com | +47 66 77 56 00 |
| C4 | R.W. Fernstrum | www.fernstrum.com | (906) 863-5553 |
| 43 | Ribcraft USA, LLC | www.ribcraftusa.com | (781) 639-9065 |
| 64 | Rustibus | www.rustibus.com | (832) 203-7170 |
| 53 | Schuyler Rubber Co. | www.schuylerrubber.com | (800) 426-3917 |
| 47 | Scienco/Fast - a division of Bio-Microbics | www.sciencofast.com | (866) 652-4539 |
| 75 | Seawork | www.seawork.com | +44 (0)13298 25335 |
| 31 | Senesco Marine | www.senescomarine.com | (401) 226-1042 |
| 40 | Silver Ships | www.silverships.com | (251) 973-0000 |
| 73 | Sname | www.sname.org | Please visit our website |
| 65 | Suny Maritime College | www.sunymaritime.edu | (718) 409-7341 |
| 42 | Tampa Yacht Manufacturing, LLC | www.tampa-yacht.com | (727) 954-3435 |
| 27 | TideWater Marine | www.tdw.com | (504) 568-1010 |
| C3 | Tuflex Rubber Products LLC | www.tuflex.com | (813) 870-0390 |
| 65 | Tutor-Saliba | Please call us at | (818) 362-8391 |
| 15 | Vigor Industrial | www.vigorindustrial.com | 1-855-VIGOR99 |
| C2 | Virginia Ship Repair Association | www.virginiashiprepair.org | Please visit us online |
| 29 | Ward's Marine Electric | www.wardsmarine.com | (954) 523-2815 |
| 39 | WATERMAN SUPPLY | www.watermansupply.com | (310) 522-9698 |
| 67 | Western Fire and Safety | www.westernfireandsafety.com | (206) 782-7825 |
| 7 | Wing Inflatables | www.wing.com | (707) 826-2887 |

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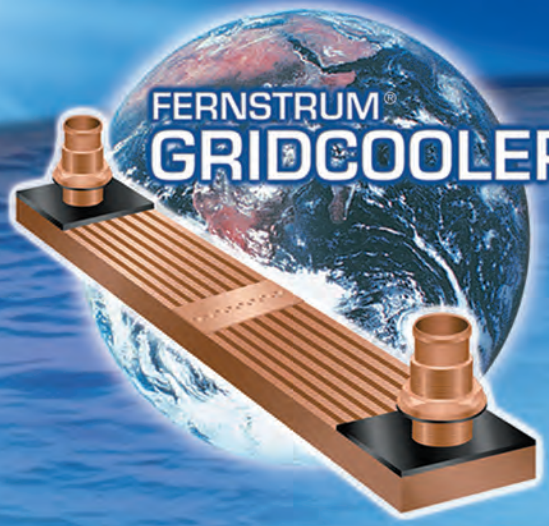


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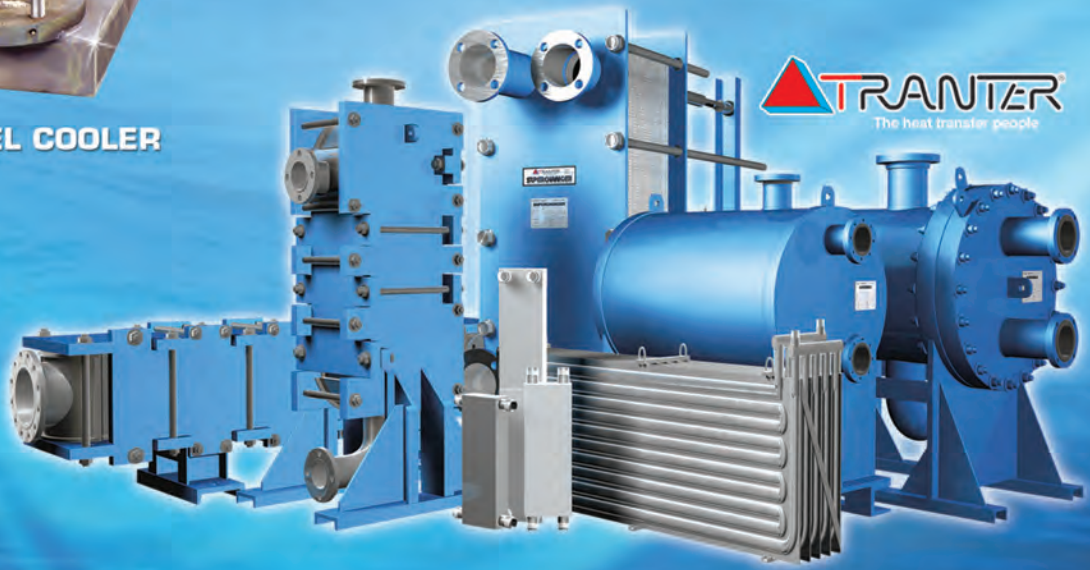


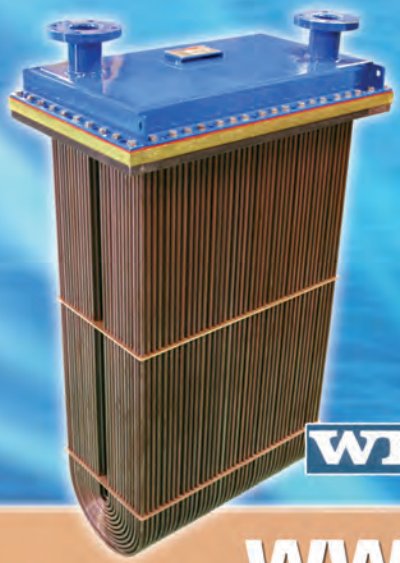

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