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Marine News

OCTOBER 2012
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OPC

Race is on to build USCG's Offshore Patrol Cutter

Subchapter M

What will be Your CO$T for Compliance?

page 24

Gulf of Mexico

Hopes Pinned on Oil Recovery ... AGAIN

page 40

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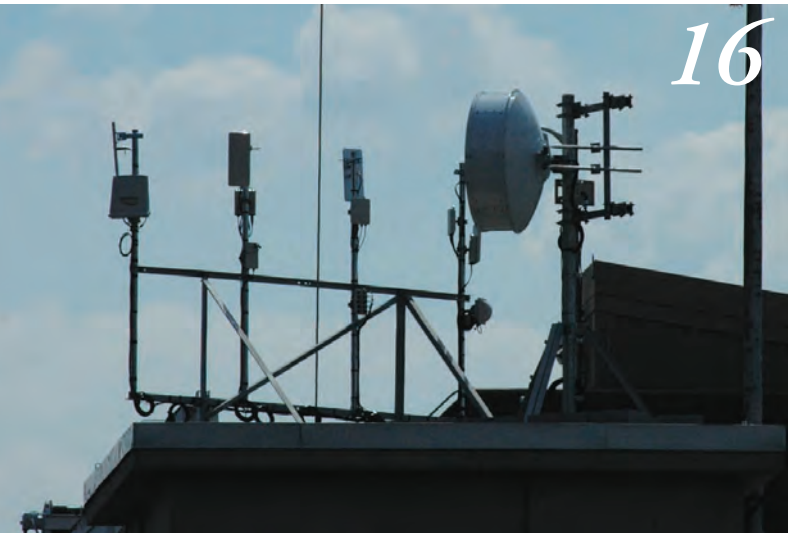
CONTENTS

MarineNews October 2012 • Volume 23 Number 10



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POSTMASTER Time Value Expedite

BPA WORLDWIDE BUSINESS

On the Cover

Vigor's introduction of the Ulstein X-BOW design hull – in service on 43 different platforms in a variety of workboat roles already – gives the Coast Guard plenty to think about as it selects an OPC design for replacement of its aging medium endurance cutter fleet.
Read Joseph Keefe's story, starting on page 34.

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EDITOR'S NOTE

keefe@marinelink.com

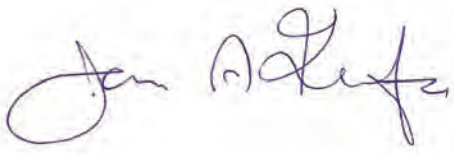
On the domestic waterfront, the past twelve months have been nothing short of eventful. A withering drought, a hurricane and at the same time, the legislative mess inside the Beltway have all taken their collective toll on (your) bottom line. In this edition, we look back at the year in review and look forward to the leadership that will shape what is to come next. With the New Year looming large in the porthole, a little help from *MarineNews* will therefore come in handy.

Inside the Beltway, federal action is affecting the way we do business; in more ways than one. That's to be expected. Without a doubt, our Subchapter M update and analysis promises to be the most comprehensive and valuable primer that you will ever read on this impending, game-changing rule. As issuance of the final rule approaches, we believe that this standard will be the most far reaching event for domestic inland transportation in the last half century. David English explains why, starting on page 24.

Elsewhere and as the U.S. Coast Guard continues its massive recapitalization efforts, the need to replace its aging fleet of medium endurance cutters now comes to the head of the line. A raft of shipyards will compete to produce as many as 25 of the so-called Offshore Patrol Cutters (OPC). In the thick of the fight will be Vigor Shipyards and their bold, Ulstein X-Bow inspired entry. Vigor's choice of design and partners will, if selected, arguably change the way we think about what a Coast Guard cutter should look like, and more importantly, why.

Keeping the white hot spotlight on the regulatory and legislative climate that has so much impact on our business plans, our Washington coverage continues with PVA and WCI input on today's regulatory burdens. In a year when the inland bulk transportation sector finds itself literally aground in the nation's heartland, there are few issues more critical then health of the nation's waterways. Indeed, WCI Chairman and Kirby Corporation Executive Matt Woodruff's Legislative Report from inside the Beltway puts the exclamation point on ongoing efforts to adequately fund the nation's inland infrastructure.

Finally, and in an edition focusing in part on maritime leadership, you shouldn't be surprised to find out that our most valuable leaders emanate from business itself. A number of years ago, Foss Maritime and Gary Faber rolled out environmentally sound policies and tonnage even when they knew the payback was likely to be a long time in coming. Faber's dialogue in our regular *INSIGHTS* slot arguably provides the ideal template for those who wish to follow in his inviting wake. Faber looks back, ahead and outlines two kinds of "green" hatched from the same egg. Apparently, regulatory compliance, environmental stewardship and financial success can all go hand in hand. As we prepare to exit a particularly challenging twelve months for marine businesses everywhere, that's something you can take to the bank for the year to come.



Joseph Keefe, Editor, keefe@marinelink.com

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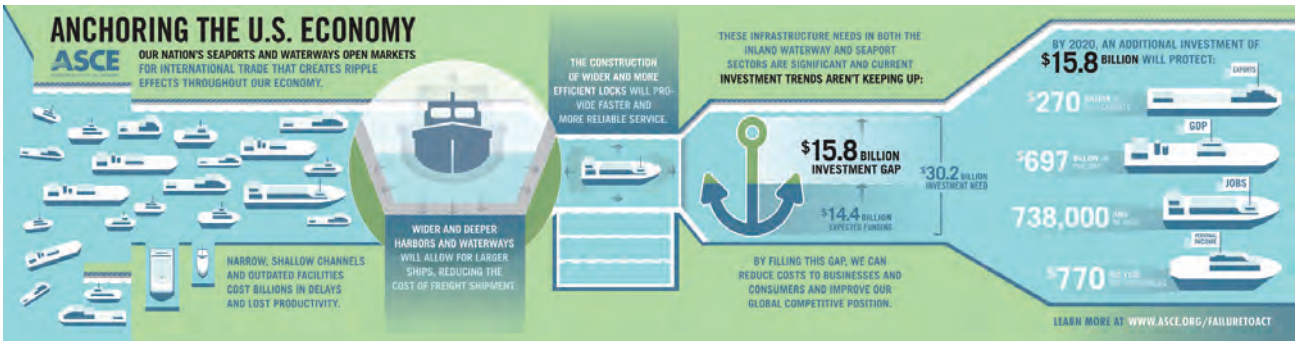
BY THE NUMBERS

It's really no secret that aging infrastructure and congestion at America's ports and inland waterways make shipping more expensive, increase the cost of goods and make us less globally competitive. In September, the American Society of Civil Engineers (ASCE) issued a report entitled *Failure to Act: The Economic Impact of Current Investment Trends in Airports, Inland Waterways, and Marine Ports Infrastructure.* Their findings, which touch upon more than just inland waterways, quantify what we already know. According to ASCE, "these costs reverberate through the economy, causing exports and GDP to fall, ultimately threatening more than 1 million U.S. jobs and causing a drop in personal income." ASCE further insists that with adequate investment, America will remain globally competitive and ultimately lower the cost of goods for consumers.



For those who didn't already know, ASCE's report confirms that America's system of inland waterways and marine ports play a vital role in the domestic and global intermodal equation. Costs attributable to delays in the nation's inland waterways system amounted to $33 billion in 2010. This number will reach $49 billion by 2020. BY THE NUMBERS, that reality becomes even more obvious:

- **152** *the value of cargo in billions of dollars transported on inland waterways.*
- **118** *millions of tons of freight that traffic on inland waterways will increase by 2040; 25% in total.*
- **56** *% of all crude petroleum transported.*
- **51** *millions of tons of freight that traffic on inland waterways will increase by 2020; 11% in total.*
- **24** *% of other fuel oils transported.*
- **22** *% of basic chemicals transported.*
- **19** *% of nonmetallic minerals transported.*
- **18** *% of agricultural products transported.*
- **15** *% of all coal transported.*

As much as 70% of U.S. imports, valued at $944b, arrived by water in 2010. These imports included 86% of America's crude petroleum imports as well as the majority of 28 other commodities. The U.S. depends heavily on waterborne trade for its growing export markets, especially agricultural products, manufactured goods, and, increasingly, the exporting of energy and refined petroleum products. And, while this report addresses all manners of infrastructure needs – the costs to maintain and upgrade drinking-water and wastewater treatment systems, for example – our focus remains on the need to invest in America's aging water infrastructure. ASCE insists that investment is not keeping up with need and the Table shown below amply demonstrates what will happen if this trend is not reversed.

Annual Impact:	2020	2040	Cumulative Losses:	2012 - 2020	2012 - 2040
Jobs	$95	$255	*GDP*	$697	$3.3 trillion
Business Sales	738,000	1,384,000	*Business Sales*	$1.3 trillion	$6.5 trillion
Disposable Income	$117	$269	*Disposable Income*	$872	$3.7 trillion
Exports	$43	$142	*Exports*	$270	$1.7 trillion

America's airports, inland waterways, and marine ports link the nation directly to the global economy, and link regions of the United States together. Moreover, and because the current administration insists on funding rails and roads to the detriment of other sectors, 99% of all ARRA funding never reaches the waterfront. Perhaps we could first redirect some of that money to the ports, before worrying about where the rest will come from. That's our view. Read the ASCE Report and their take on things at: http://www.asce.org

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Gary Faber

President and Chief Operating Officer, Foss Maritime

Gary Faber brings more than 30 years of experience in the maritime industry to the position of president and COO of Foss Maritime Company. His extensive experience in marine engineering, vessel operations, salvage and project management in extreme environments extending from the arctic regions of Alaska all the way to the southern extremes of South America frame perfectly the diverse workload of this Seattle-based marine services firm. His notable accomplishments include recognition for the U.S. Coast Guard Benkert Award for Excellence in Environmental Protection and he earned a Bachelor of Science degree in Marine Engineering from the U.S. Merchant Marine Academy at Kings Point and holds a U. S. Coast Guard Third-Assist Engineer License. Faber is perhaps best known to industry, however, as a forward-thinking leader of an environmentally aware team of maritime professionals. In particular, his leadership in way of producing marine equipment that far exceeds minimum environmental standards sets him apart from all but a few of his contemporaries. This month, he weighs in on those efforts, why they are important and what's coming next.

When you announced in 2007 plans to build the world's first true hybrid tug boat, you were arguably leaps and bounds ahead of the competition. Despite the cost and an industry that wasn't ready to pay for "green," you went ahead anyway. Why?

When Foss built the Carolyn Dorothy we were being true to our corporate culture. To be sure there were doubts internally. But we had willing partners in the ports of Long Beach and Los Angeles; this allowed us to push beyond conventional marine technology and into technologies far more compatible with our environment. We're taking a long view with the hybrids. After all, there are tens of thousands of harbor tugs around the world – from Singapore to Rotterdam. A global market exists to reduce emissions and move us closer to a zero-trace industry.

In 2009, Foss built the world's first hybrid tug, and in 2011, converted the first Dolphin class tug to a hybrid. You must have some metrics on their performance by now. What's the environmental scorecard?

The results were better than originally predicted. The University of California-Riverside's Center for Environmental Research and Technology did a side-by-side comparison of the Carolyn Dorothy and a conventional Dolphin-class tug over seven months in 2010. The difference between the hybrid and its conventional sister was stunning: a 73 percent reduction in particulate matter, a 51 percent reduction in nitrogen oxide and a 27 percent reduction in carbon dioxide. These numbers helped convince Long Beach and Los Angeles to join us in retrofitting a second Dolphin class tug to hybrid technology.

Green is measured in two different ways. Let's talk about money for a minute. The hybrid tug, by your own admission, cost 40 percent more to construct. You projected a five-year payback on those extra dollars. How are you doing on that score?

We're a little closer to seven years now, primarily because

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fuel costs in the first few years did not rise as fast as we estimated. There are basically two ways we get payback: Reduced fuel consumption and lower maintenance costs. The Carolyn Dorothy uses less fuel: Carbon dioxide is a proxy for fuel consumption. If you look at the UC-Riverside study, there's a 27 percent reduction in carbon dioxide. That translates into a 27 percent reduction in fuel. As for maintenance costs, there are additional expenses involved in maintaining hybrid components. But because we're not operating the tug's engine for as many hours, we dramatically lengthen the time between overhauls. Fewer operating hours equal lower maintenance costs.

Operating your own shipyard obviously creates economy of scale, reduced middle man costs and real convenience to the operator of marine tonnage. You're not the only one to do it. What's the advantage to doing so? The downside?

The greatest advantage to running our own shipyards – including facilities in Rainier, OR, on the Columbia River, and in Seattle – is that when business opportunities come along we can move quickly and economically. The latest example is our decision to build three new Arctic-class tugs to serve our oil and gas customers. Work on the first tug starts in the first quarter of 2013 – something Foss might not have been able to do if we'd gone searching for an outside shipyard. Our Rainier facility and its workforce – which is experienced and highly skilled – will be expanding to take on this new work. Significantly, our shipyards grew new lines of business over the past few years. For instance, for the first time Foss is building vessels for outside customers; a pilot boat to transport River and Bar pilots on the Columbia River at Astoria, Oregon, and now a ferry that's a joint partnership between Washington state and the Colville Nation. Even when the economy was down Foss was innovating.

The concept of going green for the environment or conversely, because it will eventually make you money are frequently given as the top two reasons for doing so. What's your take on this important mission?

Instead of using the recession as an excuse to relax our emphasis on safety and the environment, we decided to use it as an opportunity to strengthen these important aspects of our business. Over the past few years we set in motion important programs that have our company ready to compete with cutting edge safety and environmental initiatives. Our vision is long-term: By making incremental steps going forward, we can achieve our corporate goal of propelling vessels in ways that have no adverse impact on our waters or in the air. We want to use recyclable supplies in our vessels, shipyards and offices. We're very serious about this. Environmental stewardship is a core value and it is a primary business driver. Our customers are well aware of our "Zero Trace" goal that pushes Foss beyond simple regulatory compliance. In this way Foss will compete successfully for new businesses in the most extreme, environmentally sensitive environments on earth; places like the Arctic.

"There is a difference between being environmentally aware and environmentally proactive." When you said this, you also referenced the Foss triple bottom line: People, Profit and Planet. Explain that philosophy for us.

Just to be clear I didn't coin that phrase. But at Foss we embrace it – every day. We believe sustainability is embodied in that triple bottom line: People, Profit and Planet. This means we constantly look for ways to balance these three crucial things. One way we accomplish this is with our laser-focus on safety. Foss is now achieving record lows in "lost time" incidents on our vessels and in our shipyards. We also believe in protecting the planet by developing new technologies – like the hybrid tug – and environmental processes. We believe those commitments, to people and the planet, will, over time, give our company a decided edge when it comes to winning more sophisticated, environmentally sensitive projects in partnership with customers.

Foss Maritime Company will soon build the first three tugs in an innovative Arctic class of tugs. Arctic and oil & gas opportunities make this a logical move, especially at a time when response/support infrastructure many not be keeping up with increased commerce. What do you see as the primary roles for these units?

With Foss' emphasis over the past five years on cutting edge safety and environmental programs, we've positioned the company to take advantage of opportunities like the Arctic. Things are starting to move. Our customers are keenly aware of the importance of workplace safety and environmental stewardship. When our Arctic-class vessels are completed they will be state-of-the-art, built to meet American Bureau of Shipping (ABS) Ice Class requirements, SBS A1 requirements; and, Safety of Life at Sea (SOLAS) requirements. These units will fulfill a variety of important roles.

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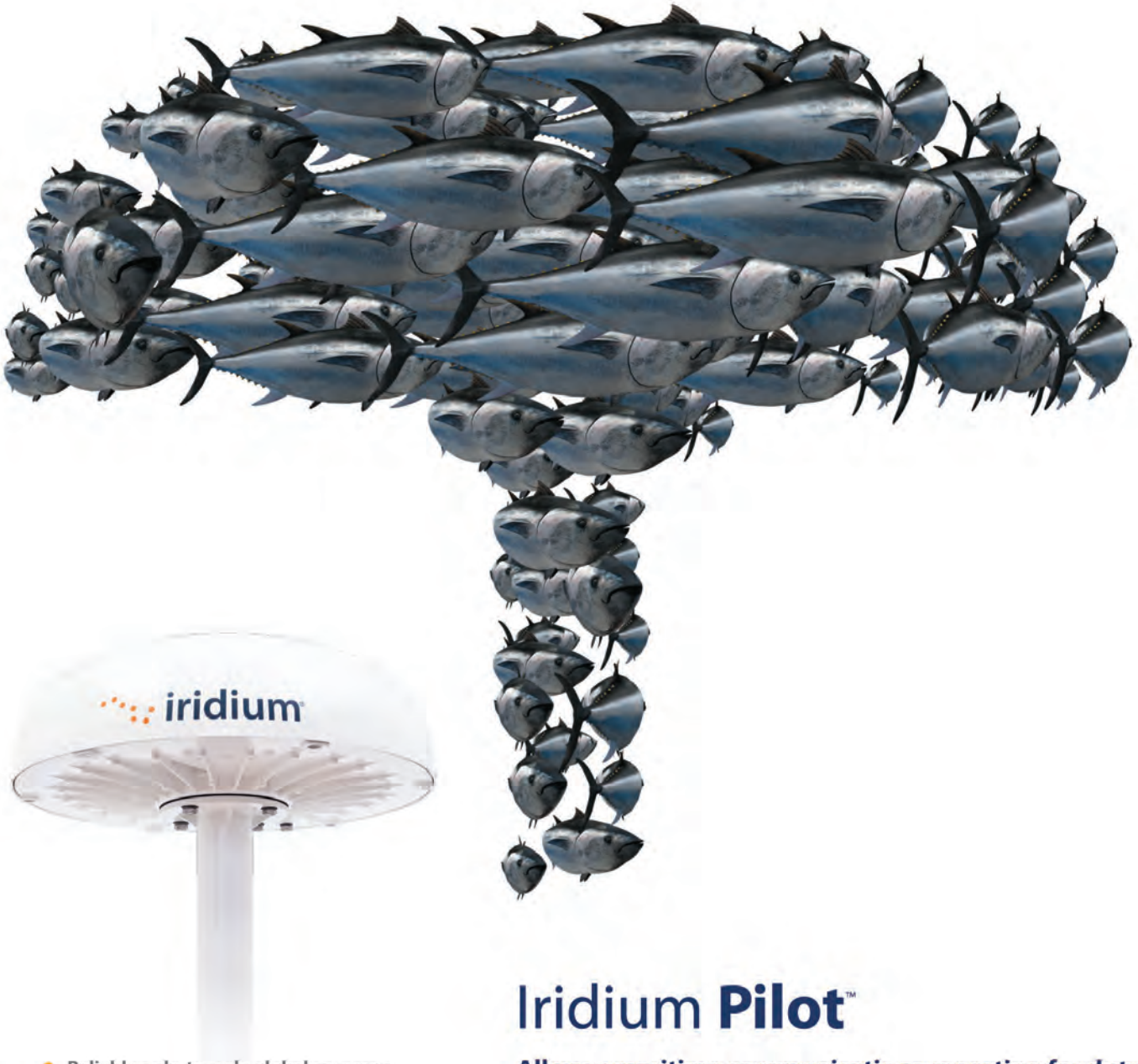
FOSS

If you had to point to one big thing that will be the next challenge to the domestic or international maritime industry, what would that be?

It is people. Recruitment, training and retention are our number one challenge. This is a deep commitment. Foss – and the maritime industry as a whole – must be prepared to make the investments necessary to attract and sustain the next generation of sailors. The up-front costs of sustaining people as they train are great. But those costs will be paid back many times over the course of their careers. At Foss, we're making adjustments to allow trainees to learn both on vessels and shore side. We want our sailors to understand how shore-side operations work. Why? This gives them a future path to follow after they gain experience in the fleet, which benefits long-term retention. Recruitment, training and retention are Foss' future. It must be supported by all – at Foss and industry wide.

Ship Shape



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Inland Leadership Means Embracing Technology

The Port of Pittsburgh's state-of-the-art wireless network will eventually allow a myriad of users to collaborate, improve operations, maritime safety, security and a host of other tasks. Really: the cloud is the limit.

This story weaves technology, leadership and innovation – all of it happening on the waterfront. The inland waterfront. If this sounds like something more closely associated with bluewater container shipping logistics, then you can be forgiven for getting lost in the moment. That's because, and as inland shipping claws its way into the 21st century, the Port of Pittsburgh is also moving at the speed of a robust broadband connection. They call it the Wireless Waterway. We call it smart.

Prime Movers

The Port of Pittsburgh commission was created in 1990, which it makes it a fairly young entity as maritime organizations go. At that time, the port was fully functional – all through private industry located along the waterway. Hence, the Commission was not created to make another terminal or port complex. Instead, it developed as a function of private industry that was looking to promote the use and development of the waterway. The Commission, in turn, began looking around at a number of things that it could do to help industry. Early on, these efforts typically involved grants and economic development assistance tools.

James McCarville, Executive Director of Port of Pittsburgh Commission told ***MarineNews*** in September, "What we really looked at was the 45,000 direct jobs in southwestern Pennsylvania that depend directly on the health of waterway system." But it was the concept of doing anything that would make business easier in the port and on the river that was the primary driver for the wireless waterway. McCarville continued, "The two projects that we spend the most time on is maintaining and modernizing the infrastructure through the budgetary process, and the other, involves the question: 'How do we make this port better?' We looked around and saw that no one was really looking at the system-wide problems. The towing industry made their improvements, the USACE made their improvements (as budget allowed), but there wasn't a lot of focus on improving interaction between those two entities and between the private and public sectors."

Design and Build

Employing a number of focus groups, in different venues, the Port of Pittsburgh asked: 'What would you like to see in the waterway of the future?' That shopping list was compiled and taken to Carnegie Mellon University. In turn, the port asked we asked, "What's been done, what could be developed, what are other folks doing, and what's the low hanging fruit?"

Out of that effort came a system the port now calls "SmartLock" – a virtual locking system similar to that which allows airlines being able to land on instruments in zero visibility. Jim McCarville explains, "We still need a pilot but it (the system) gives precise measurements. The same thing holds true for lock approaches. This is something that would improve navigation. Early on, it became obvious that we'd need a network to distribute the signals and you couldn't do it lock by lock. It had to be a system. And, you don't build a system or network to do only one thing." McCarville's explanation is the key to what will come next.

A second project, also conducted through CMU, involved communications architecture for the waterways. The Port of Pittsburgh recognized, early on, that not only was the wireless system needed for navigation, but also by the Coast Guard, the U.S. Army Corps of engineers (USACE), and by industry itself for a dozen disparate tasks that otherwise operated independently but needing a centralized network while protecting proprietary data and maintaining their independence. With over 200,000 direct, indirect and induced jobs dependent on the river traffic, the beginnings of a better, communications tool that would be available to multiple parties began to take shape. McCarville adds, "Our intent to build out a system that eventually we expect to be a nationwide concept – especially at all of the locks and dams."

In June 2012, the port contracted with CONXX, Inc. to begin work. By December, McCarville says that the network will extend from the Emsworth Dam on the Ohio River to the Braddock Dam on the Monongahela River to Lock No. 2 on the Allegheny River. The port doesn't have funds to go beyond Pennsylvania but is now seeking partners, grants and investors to go beyond the initial areas of coverage. The cost of the Pittsburgh area wireless system will reach $1.3 million, funded in part by $975,000 in federal Port Security money, with the Port of Pittsburgh underwriting the rest.

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Structured to expand as needed, the system is set up to engage and serve the entire community. For example, environmental agencies and highway departments with sensors on bridges could tie in. So, too, could a myriad of law enforcement and homeland security efforts, linking each to a fusion center to better coordinate any number of services. Networking existing cameras within range of a facility, delivering that feed to the Captain of the Port and/or law enforcement, makes all that camera investment even more valuable and effective.

Even Carnegie Mellon has a research project that will leverage the available bandwidth. A common view could be part of the future of the wireless system. For towboat operators, engine performance could be transmitted back to the home off in real time, e-learning could become a reality for mariners and ECDIS charts transmitted and updated more frequently. And, mimicking the new service being testing by a firm called ARGUS (*see* ***MarineNews*** *December 2011 edition, BY THE NUMBERS, page 12*); towboat operators might someday be able to take advantage of the depth sounder on the boat in front of them. Beyond this, Internet access for crews and boat business could expand to obviate the cost of expensive satellite services.

The Wireless Waterway: According to the Port of Pittsburgh

Eventually, says, McCarville, the Wireless Waterway could be a revenue generating enterprise that could expand beyond itself. Users would pay for access to the network and profits could then be the engine that helps expand the system beyond the original coverage area.

The potential uses for the new system are many, and some, no doubt still undiscovered. In the meantime, Jim McCarville reports that a number of other cities, ports and companies have made inquiries about the system. For many years, brown water transportation technology and equipment lagged behind their bluewater cousins. Clearly, that's no longer the case at the Port of Pittsburgh. Very soon, America's Marine Highway efforts – as always, still stuck in low gear – could leverage this innovation to further develop the nation's most important, but least appreciated transportation system. The Wireless Waterway Online: www.Wirelesswaterways.com

A many-layered, Collaborative Maritime Domain Awareness Community, with four major attributes: a safe, secure, fixed and mobile, trusted Wireless Broadband Network for the waterways; an Interoperability Developmental Test Bed to test and improve products; a broad based Waterway Portal; and multiple Private Networks. The project is modular and scalable and can be extended across the Nations Inland Waterways. The core goal is to provide an agnostic, wireless, broadband network, with multiple frequencies, that will facilitate and improve maritime security by connecting proprietary, and stove-piped, and stand alone systems into one "system of systems" that improves Maritime Domain Awareness (MDA).

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Paul Belforti

President, Passenger Vessel Association

By Paul Belforti

Striving to achieve excellence is, I believe, at the core of the human spirit. It is what motivates us in business and what makes our country great. The pursuit of excellence also defines how we treat each other, our customers and our employees. It drives us to be creative, to look beyond what is mediocre and to dream of what is possible. The pursuit of excellence is certainly a core value of my company and it is also at the foundation of the Passenger Vessel Association (PVA) and its members.

As the 2012 President of the Passenger Vessel Association (PVA), I am particularly proud of the industry that our association represents—the U.S. passenger vessel industry. Carrying more than 200 million passengers annually, the domestic passenger vessel industry operates in virtually every port of our nation. It provides convenient and affordable transportation options for commuters and travelers alike on our nation's abundant ferries—large and small; public and private. Consumers also benefit from an extraordinary array of spectacular entertainment options aboard hundreds of dinner cruise vessels, charter boats, overnight cruise ships, excursion boats and sailing vessels.

Most recently, the Coast Guard, through its research on maritime industry safety, cited the passenger vessel industry as having a safety record that is unmatched by any other segment of the U.S. maritime industry. We certainly are flattered that the Coast Guard has recognized the many years of hard work and dedication that led to this noteworthy milestone. Nonetheless, we understand that risks still exist and while it would be easy to become self-satisfied about this accomplishment, we believe that excellence in safety is only achieved through a high regard for life and property and vigilance. As a result, we are now working closely with our Coast Guard partners to continue to elevate safety practices and professionalism through the development of FLAGSHIP, a new domestic safety management program.

New vessel designs, construction materials, more efficient sources of energy and lighting, along with new technologies that monitor systems and streamline operations all foreshadow exciting things to come for passenger vessel operations. Customer demands and market forces are constantly changing and are driving much of this change. As a result, industry must be able to respond at a moment's notice as we strive to stay competitive with land-based venues. Unlike those land-based businesses, who are often our competitors, passenger vessel operators must first get approval from Coast Guard regulators before building or modifying a vessel. In many cases, such approval can be slow and cumbersome. While industry has responsibility, as well, the process could benefit from improvement. All good companies reevaluate their processes and policies regularly in the quest for continuous improvement. I believe that the Coast Guard's Marine Safety Center must evaluate and sharpen its approval processes so as to better accommodate industry evolution. The Coast Guard should look forward—with the input and help of industry; including manufacturers—to anticipate advances in technology, materials and concepts so as to be in a better position to approve new submissions swiftly.

Some forms of technology are not as welcome as others. The Transportation Worker Identification Credential (TWIC) for one has proven itself to be ineffective in promoting security and very burdensome to both domestic passenger vessel operators and U.S. mariners. The concept of TWIC may have seemed like a good idea in 2002 when Congress enacted MTSA, but a decade of first-hand experience with it has uncovered numerous shortcomings, at least for the passenger vessel industry.

PVA was hopeful that TWIC relief was on the horizon but after more than two years, the Department of Homeland Security has failed to initiate a rulemaking to implement section 809 of the Coast Guard Authorization Act of 2010, providing TWIC relief for U.S. mariners who do not need unescorted access to secure areas of vessels with approved security plans. PVA has asked Congress to press the Department of Homeland Security to expedite

this process.

Electronic TWIC readers are the next chapter in the TWIC saga. PVA firmly believes that TWIC readers are not necessary to ensure security aboard U.S. passenger vessels and would interfere with day-to-day operations, fail to provide additional security and, as a result, would impose unnecessary expense. After participating in a very thorough pilot study, three PVA member companies independently reported that that they had derived no security enhancements due to using TWIC readers.

Reaching beyond the continuing issue of TWIC and TWIC readers, passenger vessel operators are experiencing growing frustration with the Coast Guard's marine casualty reporting process. When to file a form 2692 and when not to file is a point of confusion that is not fostered by unclear regulation but rather by inconsistent application of that regulation by Coast Guard personnel. In some ports, the Coast Guard requires a form 2692 be filed for incidents that are not related in any way to the operation of the vessel. In other ports, there are different standards.

Over reporting has many related costs. The costs of unnecessary crew drug testing, management time to report non-incidents, costs of vessel delays caused by investigating minor incidents, and most importantly, costs related to potential damage to corporate reputations when press and others draw inaccurate conclusions about a company's safety record. In addition, there is the potential for punitive fines. PVA is working with Coast Guard leadership to solve this ongoing problem, yet we need relief and the consistent national application of policy soon.

I am enthusiastic about the future for the passenger vessel industry and the maritime industry at-large. We have intelligent, creative and hard-working individuals engaged day-in and day-out in the pursuit of excellence for our companies. The contribution that they make as maritime workers is fundamental to our Nation's improving health. With the understanding and support of government partners, such as the Coast Guard, in working with us to ensure a balanced and reasonable approach to regulation, we can most assuredly be confident about our future.

Civil Suits Can Sink a Professional Mariner's Assets

By Randy O'Neill

"Have you been injured by the negligence of others?" "Do you know your rights?" "You won't pay a dime unless we make a financial recovery." "They have insurance company lawyers; you need someone in your corner."

If you watch television, listen to the radio or surf the internet, you have undoubtedly seen, heard or read advertisements using phrases like these from plaintiff attorneys looking for business. And while injured persons are indeed entitled to representation if they are injured due to the negligence of another party or parties, sometimes the melodramatic advertising scripts are a bit over the top, encouraging even the questionably injured to file lawsuits.

In past columns, I have focused primarily on U.S Coast Guard licensed mariners involved in Administrative Law proceedings following charges brought against them and their licenses resulting from their involvement in a marine casualty. Specifically; they have been charged with negligence for their actions, or lack thereof, which led to a collision with another vessel, a grounding, or allision with a dock or anchored vessel, etc.

As discussed previously, if the professional mariner has a license insurance policy from a specialty company such as MOPS, he immediately reports the claim and is assigned a local maritime attorney from the MOPS Legal Network. And, from that time to the final resolution of the case, he has his own attorney whose sole responsibility is to protect his license up to and sometimes including an appeal to the Commandant.

When in Doubt … SUE!

But what happens if that same incident leads to a lawsuit for monetary damages being brought by a third-party who claims to have been injured as a result of the licensed mariner's negligence? It happens much more frequently than you might think. And, fortunately, most experienced maritime attorneys have the skill and experience to represent the affected mariner in both the Administrative and Civil court venues.

In these civil cases, the mariner is often not necessarily the ultimate "deep pocket" target of the suit, but he will almost certainly be named in the action as the plaintiff and his attorney usually cast a very wide net in their quest for financial compensation and, in some cases, punitive damages. If the mariner defendant is an employee of a marine transportation company, whether it is an oil company, a tugboat company or a passenger transportation ferry, the real target is not him but rather that deep pocket corporate entity. One thing is certain: The outcome of the mariner's Administrative Law case, i.e. the negligence proceedings against his U.S.C.G. license, will either significantly strengthen or weaken the Civil case linked to the same incident.

Perhaps the professional mariners most susceptible to the potentially devastating effects of these civil suits are members of state pilot associations. As independent contractors, they have no "deep pocketed" employers/companies to rely on. Quite simply, they are on their own. And while some states have ($1,000 to $5,000 limitation of liability) laws in place to protect them, most do not, meaning that in many states the affected pilot is not only responsible for the costs of defending his license, but also responsible for funding his civil defense and, potentially, for paying the full amount of any monetary judgment against him resulting from the plaintiff's case.

All told, the license defense, civil legal defense costs and indemnity payment total could easily exceed $100,000 … and often more. Not a very pleasant prospect to consider when bankrolling your own defense.

The MOPS claim files contain more than a few vivid examples of the financial, reputational and emotional toll that personal injury lawsuits have on hard-working ship pilots, but I selected one fairly typical case to demonstrate the arduous process.

A 24-Month Ordeal

This case involved two vessels: a large tanker being piloted on a river outbound to sea and a small privately-owned cabin cruiser with two men onboard fishing. The plaintiffs alleged that their small boat, Sea Dog, anchored about 50 yards off the riverbank was impacted by such violent turbulence caused by the passing of the tanker-piloted Avalon Sun that both passengers were thrown about, resulting in serious injuries to the boat owner. The primary plaintiff's attorney specifically alleged that "the incident was caused by one or more negligent acts and/or omissions on the part of the defendants, its agents, vice principals and/or employees" (including the non-employee pilot). "Said negligent acts were a proximate cause of personal injury to plaintiff. As a result of the incident, plaintiff suffered a fractured skull and

compound fracture of his leg."

It's important to note that there was no limit of liability statute for pilots in the state in which the incident occurred.

Among the many alleged acts and/or omissions of negligence included were:

- *Failing to keep a proper lookout;*
- *Failure to operate the ship in question in a reasonable and prudent manner as to prevent injury to persons and/or property;*
- *Operating the Avalon Sun in an unreasonable manner;*
- *Operating the Avalon Sun at an unreasonable speed; and*
- *Creating unreasonable pressure fields, suctions, Bernoulli effects, waves, wakes and/or surge at the place of the occurrence.*

The case against the pilot's license was conducted before the State Pilot Commission which determined very quickly that he was not negligent in performing his pilot duties throughout the incident in question. Yet it took over two years, dozens of court appearances, countless depositions and attorney/client conferences for that same pilot to finally be released from the civil case brought by the injured boater. And while relatively little money was expended in his successful license defense, the final cost of his civil case defense exceeded $60,000. And, that was a victory!

At the end of the day, all licensed mariners should consider protecting themselves and their families by purchasing some level of civil legal defense coverage. Whether they be frivolous, legitimate or somewhere in between, most civil lawsuit proceedings are lengthy and time-consuming and, as such, become very expensive to defend … particularly on your own dime.

The Cost of Compliance

USCG Regulations Making All Towing Vessels Inspected Vessels: Requirements, Costs, & Consequences?

By Gary E. English

The Coast Guard and Maritime Transportation Act of 2004 (Aug. 9, 2004), established new authorities for towing vessels. This act authorized the Coast Guard to draft a regulatory scheme requiring towing vessels to become inspected vessels and obtain a Certificate of Inspection (COI). Thereafter, the Coast Guard drafted proposed Subchapter M for title 46, U.S.C., which covers Certification, Vessel Compliance, Towing Safety Management System (TSMS), Third-Party Organizations, Operations, Life-Saving, Fire Protection, Machinery and Electrical Systems and Equipment, and Construction and Management of towing vessels.

In the fall of 2004, the Coast Guard requested that the Towing Safety Advisory Committee (TSAC) assist in developing an inspection regime for towing vessels. Additionally, the Coast Guard contracted with the American Bureau of Shipping Group (ABSG) Consulting, Inc. for assistance with gathering data and categorizing the vessels that make up the towing industry.

A Multiple Choice Question

There are two proposed schemes for owners and managing operators to comply with Subchapter M. One option is to establish a TSMS. A TSMS would require detail processes, procedures, recordkeeping, and auditing. Owners and managing operators who select the TSMS option would have two years from the effective date of a final rule to create their TSMS, have a third-party approve their TSMS, and have a third-party issue their TSMS certificate. They would have four years from the date of that TSMS certificate to bring all vessels under their ownership or management into the TSMS and obtain a COI.

The alternative to establishing a TSMS would be having an annual inspection performed by Coast Guard Maritime Inspectors. The inspection option is proposed because a SMS may not be a very cost-effective way to achieve safer operation by some entities. Industry personnel made it clear that effective implementation of an SMS would be a very difficult task for a company that had not previously been highly structured and had not formally documented its policies and procedures. Therefore, an SMS will likely have a large and more devastating impact on smaller companies who do not have the economic means, manpower, or even time to implement a SMS.

Owners, managing operators, and towing vessels subject to Subchapter M requirements would need to select the annual Coast Guard inspection option two years from the effective date of the final rule, if they have not created a TSMS by that point. They would have four years from that date to attain COIs for all vessels under their ownership or management.

The Cost (& Breadth) of Compliance – and its Ultimate Impact

It is estimated that 1,059 owners and operators (companies) would incur significant costs from implementing and maintaining compliance with Subchapter M. This scheme would affect a total of 5,208 vessels owned and operated by these companies. The total present value cost to implement Subchapter M to the industry during the first ten-years after promulgation of the final rule could range from $129.1 million to $153.9 million. Including governmental costs could bring this range from $141.1 million up to $165.9 million.

The government has estimated that more than 92% of the businesses affected would meet the definition of small, as per the Small Business Administration's (SBA) standard of less than 500 employees. Additionally, 25% of these businesses would be subject to a significant economic impact (more than 1% of revenue) during the phase-in period of years one and two. Furthermore, potentially 49% of these businesses would incur a significant economic impact for each of the next eight years.

The TSAC Economic Analysis Working Group (EAWG) and the ABSG (http://www.regulations.gov/#!documentDetail;D= USCG-2006-24412-0017) issued reports detailing the costs to the towing industry concerning the implementation of Subchapter M. Table 1 presents the requirements and costs as identified by the TSAC EAWG of the new costs that would be incurred in order to bring a company with an existing SMS into compliance with the proposed Subchapter M. **This cost could range from $76,200 to $143,700.**

For companies without an existing SMS, **the cost for the initial implementation for an individual company could range from $100,000 to $350,000.** The actual costs will

vary depending on the size and mission of the company. While large companies will spend more to implement and maintain an SMS, the cost to a small company may be more difficult to absorb.

Many Layers to This Onion

Additionally, each owner or managing operator would have to consider additional costs associated with Subchapter M compliance. There will be new costs for dry-docking vessels. These costs will range from $32,000 for small towing vessels (800 hp) to $72,000 for the large towing vessels (6,000 hp.) Additionally, Tables 2 – 6 provide a brief summary of other potential time and costs associated with the implementation of this new system. These costs for an average size towing company could approach $3 million. It is also estimated that approximately 175 to 325 additional auditors will be needed throughout the inland waterway system.

While the goals of Subchapter M are laudable, the depth and breadth of the regulatory scheme is far reaching. It will be up the individual reader to extrapolate the data from the TSAC EAWG Tables to determine the cost in dollars and time for any particular vessel or entity to come into compliance with Subchapter M due to the large number of commutations and permutations. However, it is most certain that a number of vessels and entities will not survive the implementation of Subchapter M, despite a generous phase-in process. Exactly how many of the 1,059 companies and 5,208 towing vessels will go the way of the dinosaur is beyond the scope of this article. From the tables presented, one may suppose that the number of victims will be significant. Additionally, the cost of Subchapter M will almost certainly be passed onto the customer either in the form of taxes paid to the government or increased rates. Finally, Subchapter M could result in an unintended consequence. If shipping lines and barge companies begin to suffer significant delays due to an insufficient number of towing vessels being available to meet the demand, this could leave the door ajar for non-US flagged towing vessels to enter the market. Alas, this too is a question for another day.

SMS related equipment	Amount (USD)
Engine room fixed pipe systems for MDE oil	$4000
Power loss emergency light installation	$2000 (avg. 8 lights at $250 each)
Fixed fire extinguishing system (galleys & stoves)	$1200 – $2500
Engine room remote monitoring (cameras)*	$1500 – $3000
Fire retardant paneling	$3500 – $20,000
Multi – point alarm system (10 – 30 points)	$10,000 – $22,000
Mechanical seals to facilitate dry bilges	$40,000
Electronic charting/AIS interface (Wheelhouse)	$1200 – $9700
Electric start/stop E/R equipment - Wheelhouse	$4500
CEMS specific	
Noise reduction (additional insulation)	$1000 – $30,000
Blackout shades and green lighting	$1000
RCP third-party auditing/monitoring cost	$1800 – $5000
Total	**$76,200 – $143,700**

Table 1 - (800 – 2000 hp towing vessels)

Company Size	# of Towing Vessels	# of Persons on Audit Team	Cost (Plus Expenses)	Days to Complete Audit
Small	<10	1 or 2	$2,500-$3,500	1.5
Medium	10 – 20	1 or 2	$3,000-$6,000	1.5 – 2.5
Large	>20	2	$4000 to $6000	2.0 – 3.0

Table 2 – Cost & Time of Third-Party Audits of a Company SMS

Size of Vessel	Length of Vessel	# of Auditors Per Vessel	Cost (Plus Expenses)	Days to Complete
Small	<65 feet	1	$1,000 - $2,500	1.0 - 1.5
Large	≥65 feet	1	$1,000 - $3,000	1.0 - 1.5

Table 3 – Cost & Time For Towing Vessel Audits

Category	Potential Per Vessel Range of Unit Cost to Comply with Standard
Hull and Machinery	$40,000 – $833,000
Firefighting	$1,514 – $8,184
Total	**$41,514 - $841,184**

Table 4 - New UTVs (constructed aftereffect of data regulation)

Category	Potential Per Vessel Range of Unit Cost to Comply with Standard
Hull and Machinery	$69,500 – $297,000
Navigation and Communication	$9900 – $38,950
Pollution Prevention	$16,020 – $125,600
Life-saving	$4716 – $11,859
Firefighting	$2,055 – $72,065
Total	**$102,191 – $545,474**

Table 5 - Existing UTVs (Constructed prior to effective data regulation)

Cost Element	Estimated Potential Cost
SMS development	$750 – $70,000 (one–time cost)
SMS initial implementation	$311,000 overall for an average towing vessel company: $1680 per employee for an average towing vessel company (one-time cost)
Ongoing SMS maintenance and activities	$2.5 million for an average towing vessel company; $14,490 per employee for an average towing vessel company (annual cost)
Internal auditing	$5000 – $18,000 on a cost (per audit)
External auditing	$750 – $6000
Total	**$2,817,500 – $2,905,000 (see notes above)**

Table 6 - Estimated Potential Cost for an SMS

Allen Marine's Modular, Catamaran Workboat

A unique modular catamaran workboat is currently making waves in the industry. The vessel can be transported easily in a disassembled form and reassembled for use anywhere in the world. And, its range of maritime and offshore applications is extensive.

Allen Marine's all new, 65' (LOA) craft has a 21' 6" beam and 2' 6" draft and is powered by two Caterpillar C18 engines with 600HP each. Propulsion is provided by two 403 Hamilton Water Jets. With an oversized fuel capacity, it can be scaled to other dimensions to suit customer requirements. The hull sections can be quickly assembled by coupling a center section to the bow section and then coupling the stern section to the center section. Width can be increased by adding additional sections as desired. This unique, trend-setting workboat can work in the harshest sea conditions on any number of jobs and can also be used as a transport vehicle for personnel as needed.

Center sections are coupled by locking arrangements and then secured by installing a support member that bridges the joints between the gunwale sections of adjacent hull sections. Each modular hull section has a supporting deck; the deck pieces can be installed inside the assembled hull or the deck may be modular. The current modular twin hull design includes a bow, middle and stern sections, and when a cockpit is included in the middle portion, the boat is given good buoyancy while reducing the length of the middle portion to as little as the required length, with the bow and stern portions adding greater buoyancy. The side sections can also include and provide for additional equipment. An upper flange connects the side and stern members for resting on the lower flange of the stern so that buoyancy of the stern causes the upper and lower flanges to engage one another. The upper members of the bow and stern members have flat upper deck surfaces which can be used as deck surfaces.

This unique, trend-setting workboat can work in the harshest sea conditions on any number of jobs and can also be used as a transport vehicle for personnel as needed. Principal characteristics for this Workboat entry include:

Length Overall:	**65 feet**
Engine Make:	**(2) Caterpillar C18**
Propulsion:	**(2) 403 Hamilton Water Jet**
Tank Capacities:	**2,400 Gallons**
Load Capacity:	**65,000 LBS**
Engine Power:	**600 HP each**
Generator:	**Northern Lights Generator 20KW**

Making it Big
With the 58-foot Alaskan Limit

Delivered by Fred Wahl Marine of Reedsport Oregon this past summer the Afognak Straits is currently in Dutch Harbor, Alaska. Typical of the beefy design by Fred Wahl Marine, the 58-foot boat has a 26-foot beam with a 13-foot depth. Prompted by the regulated 58-foot Alaskan limit the beamy boat provides a big stable work platform for the crew. The Afognak Straits has comfortable accommodations for a crew of six. For extended voyages she carries 9,450 gallons of fuel and 1,735 gallons of potable water. There is also a 338-gallon lube oil tank. Propulsion power comes from a Cummins QSK19-M main engine generating 600 hp at 1800 RPM. The main turns into a ZF2450 gear with a 5.5:1 ratio. The gear turns a 5-inch diameter shaft and a four-blade bronze propeller. Two auxiliaries provide 175kW and 55 kW of electrical power. On deck there is a 26-foot Knuckle crane. The two fishholds are 2210 cubic feet and 1120 cubic feet. To fill those big holds the Afognak Strait is fitted with a Mustad AutoBaiter longline system. The system has been used for halibut and black cod over the summer. In September, O'Leary was in Dutch to change over to cod pot fishing. These are modified Kodiak style crab traps 6.5-feet square by 42-inched deep.

The R.M.S. Titanic's Positive Impact on the Law of Salvage:

Court Orders Title to Ship's Artifacts, Worth Over $110 Million, Conveyed as Salvage Award, But with Important Strings Attached

By Frederick B. Goldsmith

Finding that "the proceeds of any sale would clearly be inadequate to pay the salvor its full reward," a federal judge in Norfolk, Virginia, wrote that the amount of the salvage award due salvor R.M.S. Titanic, Inc. ("RMST") for rescuing artifacts from the Royal Mail Ship Titanic "can only be satisfied by the court conveying title to the artifacts." In her order handed down one year ago, U.S. District Judge Rebecca Beach Smith granted RMST title to the artifacts it recovered between 1993 and 2004 from the passenger ship which sank in the North Atlantic after striking an iceberg in the early hours of April 15, 1912. The vessel was on its maiden voyage from Southampton, England, to New York City. More than 1,500 of the 2,228 passengers and crew aboard died in the accident. A year earlier, Judge Smith had granted RMST's motion for a salvage award in the amount of 100% of the fair market value of these same artifacts, yet she reserved the right to decide later whether to pay the award in cash or by conveying title to the Titanic's artifacts to RMST.

For more than 50 years after it sunk, the Titanic rested undiscovered in international waters 12,500 feet deep, four hundred nautical miles southeast of Newfoundland. The wreck was discovered by a joint American–French expedition in 1985. Aside from the monetary value of the Norfolk federal court's salvage award, though, the most significant and perhaps precedent-setting aspect of the court's order is that the title conveyance is subject to 19 pages of covenants and conditions that the United States government negotiated with RMST.

One legal scholar has observed that the attachment of these covenants and conditions to the salvage award "marks the first time that historic preservation principles have been combined with the law of salvage." See Laura Gongaware, "The Day Historic Preservation Principles saved TITANIC from a Second Maritime Disaster," Tulane Maritime Law Journal (Summer 2012).

Among other things, these covenants and conditions require the collection be kept together, managed, and conserved in accordance with scientific and archeological standards. This will ensure, Gongaware notes, "that the collection will remain accessible to both the public and future researchers." Unlike the fate that has typically met cargoes and artifacts discovered at other shipwreck sites, which valuables are generally sold to the highest bidder, the artifacts from the Titanic, by Judge Smith's order, will not be dispersed to private owners around the world. Gongaware observes it was actually RMST itself which was "the first to suggest that the court attach a set of protective restrictions on the transfer of title to the artifacts."

RMST's salvage award is, under the general maritime law, an example of "pure" salvage, distinct from "contract" salvage. The latter applies when the salvage operation is performed under a contract. To win a case of pure salvage, the U.S. Supreme Court wrote in 1879, in a case entitled "The Sabine," that the salvor must prove three things: First, that the salved property faced a marine peril; second, that the salvor's services were voluntarily rendered without any preexisting contractual obligation; and finally, that the salvage efforts were successful in whole or in part. Courts do not employ a precise formula or automatically award a percentage of the value of the vessel or cargo salved when calculating a salvage award.

In 1870, the U.S. Supreme Court, in a case entitled "The Blackwall," described how trial courts are to calculate salvage awards. (The Blackwall was the name of a British freighter which, along with its cargo of wheat, was afire in San Francisco harbor when it was rescued by the combined crews of a tug and two land-based fire engines which were hastily rolled onto the tug's deck.) When calculating a salvage award, the Supreme Court wrote trial courts should consider the following six factors: (1) the labor expended by the salvors in rendering the salvage service; (2) the promptitude, skill, and energy displayed in rendering the service and saving the property; (3) the value of the property employed by the salvors in rendering the service, and the danger to which such property was exposed; (4) the risk incurred by the salvors in securing the property from the impending peril; (5) the value of the property saved; and (6) the degree of danger from which the property was rescued.

In a 1992 decision in a case entitled "Columbus-

America Discovery Group vs. Atlantic Mutual Insurance Company," the U.S. Fourth Circuit Court of Appeals added a seventh factor to be considered by courts within that Circuit (which includes the federal trial court in Norfolk hearing the Titanic salvage case): "the degree to which the salvors have worked to protect the historical and archeological value of the wreck and the items salved."

Judge Smith of federal district court in Norfolk applied the factors from the court decisions noted above in deciding RMST's salvage award. Preliminarily, in deciding whether RMST was even entitled to a salvage award, the court found, applying the law noted above from The Sabine, "there can be little doubt that the Titanic, which now lies 12,500 feet below the surface, has faced, and continues to face, marine peril." She further ruled RMST's salvage efforts were voluntary; that RMST owed no contractual duty to perform the salvage. Finally, as to the third factor bearing on entitlement to any salvage award, the court found "RMST's efforts have been successful in retrieving thousands of artifacts from the wreck site." Next, the court addressed the seven factors described above which bear on the amount of the salvage award due RMST.

Conclusion: Auction of Artifacts Cancelled, They Remain on Public Display

In April 2012, RMST had planned to auction the artifacts from the Titanic in a single lot. But the auction was cancelled because RMST was in discussions with multiple parties for the purchase of the entire collection. Steve Sellers, a representative of RMST's parent, was quoted in January of this year, "It's not about money so much as it is about turning the ownership over to someone better equipped for stewardship of these artifacts." Portions of the Titanic artifacts were on display at The Henry Ford Museum in Dearborn, MI, through September 30, 2012.

Regardless of where the Titanic artifacts collection ultimately comes to rest, though, Judge Smith's salvage decision, which preserves these artifacts together as a collection, for generations to publicly view and study, represents a milestone in, and a positive impact on, the evolving law of salvage.

Highlights of Judge Smith's extensive analysis included:

***Blackwall* factor #1:** "The amount of time, money, and energy that RMST has expended since 1993 represents an enormous investment for the salvors...In expedition costs alone, RMST has spent $9,049,000....When considered in conjunction with its efforts conserving and exhibiting the artifacts, RMST has devoted well over 500,000 hours of labor to the salvage of the Titanic."
***Blackwall* factor #2:** "The Titanic lies two and a half miles below the surface of the North Atlantic. Without question, recovering artifacts at such a depth requires state of the art equipment and expertise. As of 2007, there were only five manned submersibles in the world capable of descending to this depth, three of which were employed by RMST.... Because those vessels were designed for purposes of research, not salvage, RMST was required to invent approximately twenty new tools with which to equip the submersibles.
***Blackwall* factor #3:** "The most frequently used vessels include the Nadir, a surface support ship, and the Nautile, a manned submersible, which RMST chartered...[a]t the time of these expeditions, the Nadir had an estimated value of $10,000,000, whereas the Nautile was worth approximately $44,000,000.... As RMST did not own this equipment, however, the court views this factor to be less important than the others. This factor's relevance exists solely in exemplifying the technological demands of salvaging the Titanic wreck site, and to that extent, the factor weighs in RMST's favor."
Blackwall factor #4: "[T]he Titanic wreck site lies approximately 400 nautical miles offshore, in an area of the North Atlantic in which the only 'open weather window' occurs in the summer, in the midst of hurricane season....The dangers on the surface, however, pale in comparison to the dangers faced by the passengers of the manned submersibles diving to the ocean floor. The water pressure at that depth is 6,300 pounds per square inch, meaning that a breach in, or even significant damage to, the hull of the submersible would cause the instantaneous death of the entire crew."
***Blackwall* factor #5:** "According to RMST's experts...the fair market value of the artifacts is currently over one hundred and ten million dollars....Although the appraisers determined fair market value by comparing the artifacts to 'other reasonably comparable assemblages of artifacts and collectibles . . . because of the uniqueness of these artifacts, there are no precise comparables.' ...That figure is representative of the invaluable service that RMST has provided in its salvage of the Titanic."
***Blackwall* factor #6:** "[T]he Titanic artifacts were previously lost on the bottom of the ocean, depriving the public of all social utility in their historic symbolism and cultural beauty. Instead, RMST has recovered those items from a fate of being lost to future generations... such a rescue can be considered 'the ultimate rescue from the ultimate peril.' Moreover, the wreck of the Titanic itself is in a process of biodeterioration that, in one projection, may lead to the deterioration of the promenade decks by the year 2030, with the decking at all levels continuing to collapse towards the keel as the walls fail.
Factor #7: (from Columbus-America Discovery Group vs. Atlantic Mutual Insurance Company): "RMST has been in possession of some of the artifacts before the court for almost seventeen years. In that time, RMST has been dedicated not only to preserving the condition of the artifacts, but also to exhibiting them to the public in a series of exhibitions around the world....There is extensive evidence before the court of RMST's efforts at conservation, education, and exhibition, and thus, the court finds RMST's efforts to be deserving of a salvage award that includes recognition of these efforts."

Resin Infusion in Workboats

By Keith Ranieri

Let's talk about weight loss. No, not the kind that involves hours on a treadmill. Weight reduction in fiberglass workboats has a multitude of advantages: better performance on lower horsepower, the ability to carry heavier loads, and improved fuel economy. Brunswick Commercial and Government Products (BCGP), a manufacturer of fiberglass, RHIB, and aluminum workboats, recently incorporated resin infusion technology into their lamination process to add a "lightweight" option to the IMPACT rigid inflatable line.

David Adams, a development engineer for BCGP, explained the rationale. "Our government clients have been asking for lighter weight small patrol boats. The inherent challenge is to create lightweight parts that have structural integrity equal to or better than our normal construction," says Adams. "But if you give your customers what they ask for, then you better not have any issues with the end product. In our case, we had to ensure that the weight savings were significant enough to justify the added cost, and most importantly, the finished product had to be just as robust. Resin infusion is not a new technology. Large yacht manufacturers have used this process for years with great success, but it's been cost-prohibitive for smaller recreational boats."

BCGP incorporates the SCRIMP (Seemann Composites Resin Infusion Molding Process) method, which was initially developed in order to reduce the emission of volatile organic compounds (VOC's). The first patent was awarded in 1990 to Bill Seemann, a former boat builder and founder of Seeman Composites, Inc. Purchased by Brunswick Corporation, the technology was put to use in the construction of luxury yachts. Because the method does not require the use of unique materials and fabrics, it is a viable alternative to more expensive carbon fiber or Kevlar. When resin is introduced to dry glass under vacuum, the process yields a significantly higher glass to resin ratio over traditional open-molding techniques. Excess resin in the final part is minimized, achieving weight savings of up to 35%. "Traditionally, infusion technology has been used to reduce production cost, but our goals are slightly different: we were looking for significant weight reduction of the completed boat, and to improve consistency and laminate quality," says Adams.

Infusible stacked laminate material is selected to maximize the flow of resin through the part under vacuum, assuring that the user will saturate the part completely. The laminate and core usually consist of coarse materials that will serve as "resin highways" to flow resin through the part when put under vacuum. This is seen firsthand with the increased demand of grooved cores and infusion-specific fiberglass mats that resist full compression under vacuum, thus creating a void through which resin can travel. The rate of failure is reduced, giving boat builders the confidence to implement the resin infusion process. Knowing that the driving force for the implementation of infusion technology was customer demand for significant

weight savings, the engineers at BCGP took a slightly different approach, starting with the selection of their laminates. They abandoned the use of "resin highways" to flow resin through a part, since they become brittle and serve a minimal structural purpose once the part has fully cured. Whereas most laminates are typically selected to easily flow resin, BCGP engineers selected laminates to be as light as possible, without sacrificing strength. After numerous test panels on both glass tables and tooling, enough data was gathered in order to move forward with full size production parts, and assemble a complete boat.

An additional benefit to using resin infusion technology is consistency, which is in high demand in a production environment. By removing the variables of the ambient conditions and individual laminating styles during molding, the resin infusion process yields a repeatable and consistent part. Since the part is sealed under vacuum, the only condition variable is temperature. This can be adjusted with resin chemistry and various additives. The entire fiberglass part is laid up in dry form and essentially gives the user the freedom to determine when the part is actually infused, which takes less than an hour. Since there is no "clock" running while the dry glass is being laid in the mold, it gives the laminator the ability to have an even higher level of quality control before resin is introduced into the part. This gives the builder the ability to work at a slower, more controlled pace.

The cost trade-offs associated with resin infusion technology vary. In large boats, resin savings alone can be enough to justify the additional time and labor. This can be seen with the increasing popularity of infused hulls that are over 45 feet in length. For BCGP, it is all about weight. The resin savings help offset the cost, but the SCRIMP process requires additional materials to improve the quality of the part. The additional materials as well as the increased production time add cost, but the end result of weight savings and improved consistency make this option attractive for some customers. The first infused boat from BCGP is a 27' rigid inflatable boat, called an 850 IMPACT. The boat will be debuted in New Orleans in December.

The OPC Race: Vigor is "In it to Win it"

Vigor Shipyard's unique entry into the ongoing U.S. Coast Guard Offshore Patrol Cutter Competition turns heads now, but ultimately may change how we look at Homeland Security on the water – for good.

By Joseph Keefe, Editor

The U.S. Coast Guard's well-publicized, although clearly flawed recapitalization campaign is alive and well. 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 – the so-called offshore patrol cutter (OPC). At least three shipyards can be considered serious candidates for the first installment, but only one – to date – has succeeded in generating genuine excitement with an innovative design proposal.

According to Matt von Ruden, a retired U.S. Coast Guard Captain and Program Manager at Vigor Shipyards, the Coast Guard has been talking to industry about the OPC for some time. von Ruden retired as Director of Fleet Maintenance for Coast Guard Maintenance & Logistics Command Pacific in Oakland CA in 2009 and eventually brought his experience to Vigor Shipyards. As the Program Manager for OPC, he has led Vigor's pursuit of the $8B, 15 year vessel construction contract since 2010. He told ***MarineNews*** in September, "Given the importance of this recapitalization effort, they (the Coast Guard) really are taking a low risk approach." Vigor began discussions with the Coast Guard in late 2008. Out of those discussions came four unique, key metrics for the OPC concept. These include:

- ***Endurance on the order of 8,500 to 9,500 miles range;***
- ***Excellent seakeeping essential to all missions;***
- ***Affordability – they need to replace as many as 25 hulls; and***
- ***A low risk approach embracing proven hull forms and technology.***

Unspoken in all of that is the choppy memory of the deficiencies that eventually doomed eight 123-foot Coast Guard patrol boats almost five years ago. Early into the so-called Deepwater Recapitalization plan, those failures led the Coast Guard to alter course and pursue only proven hull technology and designs for future projects. The Sentinel class design and build strategy, now underway on the Gulf Coast using a Damen designed hull, is a perfect example of this metric. Now, Vigor's introduction of the Ulstein X-BOW design hull – in service on 43 different platforms in a variety of workboat roles already – arguably raises the bar even further and potentially adds another foreign-designed hull to the Coast Guard's domestic arsenal.

Vigor's startling and early release of their design concept surprised some observers, but company officials wanted people to get used to the idea that such a revolutionary design could work for the Coast Guard. "It's different and we wanted to put it out there early to let it sink in and let people understand the facets of it. We want people to be comfortable with it – it is not a high risk concept. It's a great fit, actually, for the Coast Guard's requirements," von Ruden adds.

Without a doubt, and if it eventually comes to fruition, Vigor's introduction of the Ulstein X-Bow is destined to change the perception of what a U.S. Coast Guard cutter should look like – and more importantly, why.

The Journey

Released in June of 2011, the Coast Guard is quickly coming to the end of the Draft RFP portion of the bidding process. A final RFP is expected at the end of September, with proposals from competing yards probably coming in January. From that list of entries, the Coast Guard will winnow the field down to no more than three shipyards to enter phase one, which is a preliminary 18 month contract and design effort.

According to Vigor's von Ruden, shipyards will either have to pair up with a designer or they'll need to have organic capability. He adds, "That's part of the Coast guard's low risk approach. The Coast Guard needs to know that the vessel can be built affordably, with high quality and delivered on time. During this time, there will be program and design reviews, and close involvement by the Coast Guard.

Vigor Shipyard, Seattle, WA

Eventually, there will be another proposal submittal and they'll select one shipyard to complete detailed design and building for the first vessel. We expect that to be roughly two years later from the January 2013 time frame." Initially, the Coast Guard would likely order and build one vessel per year, starting in 2017, eventually doubling that production schedule. The first contract will likely be for up to 11 vessels, with another subsequent "re-compete" for another 9 vessels. Eventually, it is intended that the Coast would build 25 vessels.

More than Just a Pretty Hull

The Vigor strategy involves a lot more than just putting forth a revolutionary new hull form. Matt von Ruden explains, "We partnered with Ulstein for the concept design. It's more than just selecting one of their PSV's and painting it white. They were involved early on and the first challenge was that the requirements are export controlled. So, we needed a technical assistance agreement with the government, to bring in Ulstein. We did that and involved them in the concept design. They used their patented X-Bow, as well as other characteristics in their other vessels, and put them all together to best meet the Coast Guard's requirements."

These requirements include a minimum speed of 22 KT, high endurance and certain beam restrictions. As they went forward, Vigor also knew that Ulstein couldn't operate in a vacuum when it came to mapping out just the right design. "We educated Ulstein about the Coast Guard using our in-house team of subject-matter experts. They conveyed what life is like on a Coast Guard cutter as well as the various functional needs of the vessel – not just the hull form." Pooling the expertise of both parties, a concept

design was born.

Beyond the Ulstein concept, Vigor's team also includes its U.S.-based design agent, CDI Marine of Glen Burnie, MD. Consistent with the Coast Guard's desire to invoke the recently developed ABS Naval vessel rules – which are also export controlled – there is the third party rule itself, which is going to classify the vessel. According to Vigor, CDI's considerable experience with the U.S. Coast Guard and the U.S. Government's National Security program will be a welcome asset. With a license agreement in place to use their unique hull form, Ulstein remains interested in ensuring that the hull form meets the design specifications of the vessel. Any kind of change going forward will thereof need to be blessed by Ulstein, ensuring that the boat performs just like each of the other 43 other X-Bows in service today.

Unique Requirements: Adaptable Platform

The X-Bow today is widely in service for the commercial sector. Vigor's proposal therefore brings about an arguably radical change within the Ulstein hull form. Or, does it? The same advantages enjoyed by the commercial oil & gas industry afforded by this hull will now be available to the U.S. Coast Guard. Originally designed for service in the North Sea, sea conditions are typically not good. Von Ruden adds, "In those settings, the X-bow allows you to do is get on station sooner, and back sooner. That's one of the main jobs for an OSV. For a seismic vessel, it means being able to stay out there for several months and being able to map the ocean floor. Waves in the north Atlantic are typically above 2.5 meters, 74% of the time. Ulstein wanted a design that can perform in those kinds of conditions, so they put a lot of money into research and development and came up with the X-Bow design

for the oil & gas industry."

Both commercial and military applications for this hull form are driven chiefly by pure economics. In smaller sea states, the X-Bow, with more volume up forward and high up over the waterline, absorbs the motions of ship through the added buoyancy of the hull. A controlled submergence prevents the bow from ever being submerged, virtually eliminating green water on deck, lessening the loads and accelerations associated with that. Markedly reduced hull (and crew) fatigue and more efficient propulsion are key benefits of this metric. Depending on the sea state, this allows significantly higher speeds and significantly better fuel consumption. And, given the vessel's wide range of expected mission mix, the vessel will therefore be fitted with a diesel electric propulsion system.

It all sounds great. But, with the Coast Guard in no position to make another mistake, the track record of the X-Bow is arguably unrivaled by any other design in the oil patch. Receiving great reviews from early customers such as Bourbon Offshore, there are now actually eight different shipyards producing the hull all over the world, in series, with a combined output to date of 43 boats serving as OSV's, anchor handlers, and seismic vessels. With that kind of proven functionality, two more are under construction in Norway right now.

The hull form lends itself to series-build economy of scale, and this could eventually help Vigor demonstrate that they can produce an affordable hull for the Coast Guard. The scalable hull is today being built in various sizes; from 85 meters all the way up to 130 meters, with a 16 meter beam and up. The Coast Guard version will probably entail a 100 meter LOA design with a beam of 54'. Von Ruden adds, "It's reasonably slim in a 'cutter' form, aside from that boxy bow. The length-to-beam ratio is more slender than its predecessors. That's because we looked at that early, and matched this to the Coast Guard's speed requirements."

With accommodations planned for 126 to handle a myriad of missions and a crew size of about 90, this OPC hull will try to replace both the 210 foot medium endurance cutter (crew of 70) and the larger 270 foot medium endurance cutter (crew of about 100). Staying true to the Coast Guard's mission of delivering coast guardsmen out to where they are needed, the crew size will average out to about the same, but Vigor says the hull will be more flexible, doing more missions with one platform.

Reality Meets Requirements

Operational requirements often have a painful way of colliding with political and financial realities. The Coast Guard may eventually only get 8 national security cutters – indeed, they may only get 6. Those are intended to replace 12 high endurance cutters, four of which will very soon be decommissioned. As such, the old mantra that every Coast Guard Commandant hates to hear – doing more with less – will once again come into play. Eventually, then, the OPC will have to step up and fill some of those capabilities. For example, today's 270-foot cutters are not suitable for operations in the Pacific and their 210-foot cousins are likewise not well suited for extended offshore operations, either.

Utilizing the Ulstein X-Bow, the Vigor OPC design could likely fill that gap and deploy in the Bering Sea's harsh, Arctic conditions. And, although the Coast Guard has no public plans to augment new designs with "ice-strengthened hulls," it is worth noting that Ulstein does produce ICE 1A classified (DNV) vessels, so this class of vessel could be strengthened. Vigor's von Ruden says, "We've been watching that closely, being up here in Seattle, especially with the increased activity in the Arctic."

In it to Win it

Vigor Shipyards and the Pacific Northwest itself already boast a good reputation for quality. The firm has shown what it can do in terms of series-build construction. The Washington state ferry projects have, by most reports, gone

Vigor Shipyard employees in action

well, winning awards for delivering seven hulls in a row, on-time and on budget. Beyond this, Vigor has also performed more than its fair share of U.S. Navy and Coast Guard repair work. Vigor's von Ruden insists, "They can be comfortable with our stewardship of their dollars," adding for emphasis, "We're in it to win it – absolutely. We'll submit in January, and selections will be in the June time-frame. I would expect the contract to be awarded by the end of the fiscal year (2013), with the Coast guard down-selecting one more time in 2015 for the single yard."

In addition to the futuristic Ulstein X-Bow design, Vigor brings three new construction facilities and a skilled workforce to the competition. For the production and engineering tasks, Vigor will employ ShipConstructor, an AutoCAD based shipbuilding CAD/CAM software suite. Matt von Ruden said that the program had been used with success in the Washington State ferry efforts. Widely used in Tier II shipyards (like Vigor), the cost-effective software is, von Ruden reports, continually getting better. Rounding out the Vigor team are well-known maritime industry stalwarts DRF Power Control Technologies and L-3 Communications.

That the Coast Guard is insisting upon a proven hull form for their fledgling OPC design and build program comes as no surprise to industry analysts. On the other hand, Vigor's early unveiling of a hull concept that could not only change, but significantly enhance operational capabilities has many doing a 'double-take.' Imagining a Coast Guard cutter in this unique package will, for some, take some getting used to. Once that happens, however, there may be no going back. And, given the pedigree of this team and its chosen design, why would anyone want to?

Gulf Vessel Industry Benefits From Offshore Oil Uptick in 2012

Trends in the Gulf that began in late 2011 - including more rig permitting - crystallized in 2012, and optimism grew with offshore-oil lease sales, creating dividends for the vessel industry.

By Susan Buchanan

Last month, Paul Candies, president and chief executive of Otto Candies, LLC, in Des Allemands, La, said "deepwater oil projects have increased nicely in 2012, generating some good orders to shipyards for large vessels." Qualifying those remarks, however, he added, "Shallow water-shelf work is slow."

Weighing in on Hurricane Isaac, which made landfall west of Port Fourchon, La. on August 29 and moved up the West Bank of New Orleans, Candies also said that while it closed yards for a few days, it otherwise had little impact on the marine industry.

In Morgan City, La., David Barousse, business development director at Fleet Operators, said "so far, 2012 has been good for vessel operators on the GOM shelf. Demand for vessels for various types of offshore work has been high compared to recent years, especially in the summer of 2012." Fleet Operators owns and charters supply vessels for offshore oil and gas.

"The past few years were hard on everyone," Barousse noted. Gulf oil production declined in 2010 as the government placed a temporary ban on drilling during the BP spill. The Obama Administration approved tougher, drilling-safety rules after the spill, affecting vessel operators in addition to oil and gas companies. After the drilling ban ended in October 2010, rig permitting remained slow into 2011 but has since improved.

Barousse said, "vessel owners are now enjoying some stability, which is a result of a strong market, meaning demand for vessels is greater than supply." How much has the drilling pace improved? Seventy-six rigs were under contract in the Gulf on Sept. 24, versus 60 a year earlier, according to IHS Petrodata. The Gulf's drilling-fleet utilization rate was 66.1 percent in late September, above 51.7 percent a year earlier but below the global rate of 83.4 percent.

Above Image: Ocean Wave and Ocean Wind in production at Bollinger Marine Fabricators.

Rigs in the Gulf of Mexico	Sept. 24	Prior Week	Month Ago	Year Ago
Total Rigs in Drilling Fleet	115	115	112	116
Rigs Under Contract	76	76	73	60
Rigs Without Contract	39	39	39	56
Fleet Utilization Rate	66.1%	66.1%	65.2%	51.7%

Bollinger Fills New and Existing Contracts

At Bollinger Shipyards Inc. in Lockport, La., Robert Socha, executive vice president for sales and marketing, said "Bollinger has maintained continuous utilization in our facilities this calendar year. We have not had an uptick in our repair and conversion activities in 2012 to date. As for new construction, we've seen several opportunities for DP2 offshore supply vessels, deck barges and various smaller inland boats and barge units. We have several building programs that we had commitments on prior to 2012." He added optimistically, "we continue to move forward with our Crowley ocean class tug-building program, on which we delivered a boat in early September. We also have sludge ships for New York City, a flood protection gate for Terrebonne Parish and our U.S. Coast Guard Fast Response Cutter or FRC program, which delivered boat number 3 in August."

Port Fourchon Thrives As Drilling Accelerates

Chett Chiasson, executive director of Port Fourchon in Louisiana, also weighed in on the past twelve months and told MarineNews," We had a little hiccup from Isaac, but fared pretty well and were able to get back fairly quickly. Commercial interest and demand for property in the port is high. Our future is looking good, all because of new drilling permits and new drill ships and rigs coming back into the Gulf. With more rigs drilling, more new vessels are needed."

Chiasson said Fourchon services 90 percent of all deepwater activity in the Gulf and about half of all drilling rigs in the Gulf. "We support 20 percent of the nation's oil supplies," and, he insisted, "We're the premium oil and gas service port for this country. We have about 45,000 linear feet of waterfront serving the oil and gas industry, and that's still growing." No other port on the Gulf has more than 6,000 linear feet devoted to oil and gas. "If you combined other Gulf ports serving oil and gas, they'd only have a fraction of the linear feet for the industry that we have," he said.

Chiasson said "an estimated 8,000 jobs in the region are impacted by the port, and that number is expected to rise. We're doing an economic study now and will have updated jobs figures next year." In addition to supporting offshore production, Port Fourchon is home to the Louisiana

Flooding in Plaquemines Parish, Louisiana from Isaac. The storm widely impacted residential housing but had little lasting effect on the oil & gas sector. Courtesy of Plaquemines Parish.

Offshore Oil Port or LOOP, offloading imported crude from supertankers.

Optimism About Gulf Lease Sales

The Obama administration was widely criticized along the Gulf for the 2010 drilling moratorium, and oil and gas industry and vessel operators serving them continue to grumble about stricter, post-BP spill regulations. That said; many members have since conceded those rules were needed. Recent oil lease sales conducted by the Administration, with more coming, have created optimism. In June, 56 companies bid $1.7 billion for rights to explore over 2.4 million acres in the Central Gulf controlled by the federal government. That followed a December 2011, Western Gulf lease sale, which offered 21 million acres and resulted in $325 million in accepted bids.

This fall, the Obama Administration is preparing to hold a dozen auctions of drilling rights under the new Outer Continental Shelf Oil and Gas Leasing Program for 2012 to 2017. The first sale in that five-year plan is

scheduled for November 28, offering leases in the Western Gulf. Acres in the Central Gulf will be offered in a March 20, 2013 sale.

Meanwhile, Republican presidential candidate Mitt Romney has his own take on the oil and gas situation. For his part, Romney has pledged to loosen regulations on drilling and to make the U.S. nearly energy independent by 2020 – something energy giant BP recently said is entirely possible.

Industry Weathers Hurricane Isaac

When Isaac moved into Louisiana in late August, 509 of the 596 oil production platforms and 50 of the 76 drilling rigs in the Gulf were evacuated, according to the federal Bureau of Safety and Environmental Enforcement or BSEE.

Barousse said "vessels were on standby during and after the hurricane as the GOM was evacuated, but that doesn't mean companies were shut down. Vessels came in for safe harbor, and most went right back on the same projects once the storm passed. Some customers asked for standby rates and some did not. Oil and gas projects in the Western Gulf didn't even shut down."

Barousse said "there was some minimal damage to oil and gas structures offshore. The biggest impacts for offshore operators were costs associated with evacuating personnel and loss of production while wells were shut in during the storm."

Socha at Bollinger said "Louisiana locations closed for two days during Isaac. The weather and effects associated with Isaac had minimal impacts on Bollinger as a whole, though we did have loss of production in Louisiana. Once the storm moved farther inland, production was back up and running at 100 percent at all our facilities, allowing our assessment

teams and personnel back to work."

Thomas Holden, Deputy District Engineer at the U.S. Army Corps of Engineers in New Orleans, said "one of the success stories during Isaac was that increased coordination compared with past storms between the Coast Guard and several port authorities prevented navigation accidents from occurring." He spoke at a September 24th Isaac Reconstruction Summit organized by the United States Leadership Forum in Slidell, La.

Also at the forum, U.S. Small Business Administration information officer Mark Randle said that businesses on the Gulf that suffered Isaac-related losses should contact the SBA for assistance. Barousse said "after Isaac, operators and service companies quickly got to work fixing any hurricane damage to offshore structures. That tightened an already strong vessel market." But he said tightness should ease during the coming winter.

Gulf Outlook Hinges on Election and Region's Oil Output

Gulf of Mexico oil and marine industries are waiting for the November presidential election. With an Obama win, new drilling regulations will be strictly enforced; a Romney victory might relax certain rules. It is a fact that getting a permit to drill in the Gulf now takes about twice as long as it did before the BP spill. Still, BSEE has issued more permits in 2012 than last year. Bottom line: If Gulf oil and gas output in federal waters recovers to its 2009 peak in the next few years, as some analysts predict, more support vessels will be needed. Until November, however, you'll need a crystal ball to figure it all out.

Matt Woodruff

Chairman, WCI and Director, Government Affairs, Kirby Corporation

As Director of Government Affairs for Kirby Corporation, the nation's largest tank barge operating company, Matt Woodruff spends much of his time advocating wise investment in our waterways infrastructure and a sensible scheme of legislation and regulation to ensure the safety and security of maritime commerce. The Chairman of the Waterways Council, Inc., the national advocacy organization for our nation's inland waterways and ports, he is also past president of the Texas Waterways Operators Association and recently concluded two terms as a member of the Inland Waterways Users Board. This month, he provides an insider's look at what is happening not only on the water, but inside the Beltway, as well.

As we head into the November elections, what is the most pressing thing on the plate of the Waterways Council?

WCI remains firmly focused on ensuring that our nation's inland waterways infrastructure is maintained and improved when and where needed to keep the system safe, reliable and efficient for the users of today and tomorrow. Our waterways keep us efficient at home and competitive in the global marketplace because they can move large quantities at low costs. Often, the transportation savings waterways provide is the difference that makes a U. S. product the low-cost choice in the world market. We need our leaders to understand that waterways will help our nation become even more competitive in the years to come, keep people employed here at home and improve the standard of living

To get those projects (authorized in prior WRDAs) built will require changes in the way we go about executing and funding these projects. That is what the Capital Development Plan and WAVE 4 are all about. The natural vehicle to move forward these concepts is a WRDA bill, so for that reason, we have called on our Congressional leaders to take up a WRDA bill. We just need Congress to get it done.

for all Americans. The most pressing issue right now is pushing for legislative activity this year that addresses maritime infrastructure and enacts a comprehensive set of policy changes needed to speed up the recapitalization of our waterways. Regarding pressing issues for Kirby and the industry in general, in terms of public policy issues, I think the issues we are most likely to be able to impact are the infrastructure issues discussed above and some of the regulatory issues that AWO is working very hard on. Ultimately, what is most important for all of our companies is a strong economy that creates demand for our services. The best waterways in the world will do us no good if there is no cargo to move. Of course, reliable, efficient waterways promote a strong economy, so I think that by focusing on the issues where we have expertise and can make an impact, like infrastructure and a reasonable regulatory environment, we can do our part, while at the same time recognizing that all Americans and American businesses need to promote a legislative and regulatory environment that will create a vibrant economy.

Update our readers on what is happening legislatively on WAVE 4 in the House and, if anything, in the U.S. Senate? Describe your lobbying efforts to jumpstart that effort.

WAVE 4 continues to pick up support in the House of Representatives. We are now up to 27 bipartisan co-sponsors. We continue our efforts to educate members and build support for the Capital Development Plan as set out in WAVE 4. On the Senate side, we are encouraged that a number of Senators are personally engaged in efforts to deal with project delivery and funding issues that impact our coastal and inland ports and waterways. While we have yet to see legislation, my view is that we are approaching critical mass on the Senate side and we may well see some action, even before the end of this Congress. Today, I am more hopeful of action than I have been in some time.

What are the prospects for a Water Resources Development Act to pass in 2012? And, what are the main sticking points to prevent that from happening?

As hopeful as I am, I recognize it is a challenge to get any legislation passed before the end of this year and that is because there is so little time, in terms of legislative days, available to move legislation. Congress has adjourned until after the election. What happens in the "lame duck" session after the election will be determined in part by the election results. I wish I knew what those will be. You can build a scenario where a lot gets done in the lame duck session and you can build an alternate scenario where virtually nothing happens. I think an increasing number of our leaders in the Congress recognize the urgent need to deal with water issues, so if we have an active lame duck session, I think we could see action on some of our issues, whether in a WRDA bill or some other legislative vehicle.

Briefly describe why WRDA is so important your membership?

WRDA is the traditional platform for authorizing waterway projects and setting related policy. In many years, we need a WRDA to pass so that important projects can be authorized for construction funding. At this point, our problem is not the need to authorize projects, it is the need to get projects built that were authorized in prior WRDAs. To get those projects built will require changes in the way we go about executing and funding these projects. That is what the Capital Development Plan and WAVE 4 are all about. The natural vehicle to move forward these concepts is a WRDA bill, so for that reason, we have called on our Congressional leaders to take up a WRDA bill. That being said, where it gets done is not as important as getting it done, so I don't care whether it is a WRDA bill, a stand-alone bill like WAVE 4 or any other bill. We just need Congress to get it done.

What is the status of Olmsted funding and construction methods?

Right now, we are putting virtually every available penny from the Inland Waterways Trust Fund into finishing Olmsted. That is consistent with the idea that the most efficient way to deliver projects is to prioritize them, fully fund as many as you can afford to work on at any given time, then finish them, so you can go on to the next ones. The problem is that with the current cost-share and the ballooning cost overruns on the Olmsted project, it will consume all the resources available for inland waterways construction for years to come. That means that many other high priority projects will not be completed in our lifetime. That is unacceptable.

The "in the wet" construction methodology selected for Olmsted is an experiment that has turned into a disaster. The Corps argues that we should continue on "in the wet" rather than shift to the proven cofferdam technology used for virtually every other construction project on the inland waters, even though they say we could save over a hundred million dollars in construction costs by making the switch.

They say that a cofferdam solution would take longer to complete, but as I understand their analysis, the additional time is not construction time, but time they assume it would take to cancel and re-issue contracts, wait for funding from Congress and do other things. They are also assuming they will get a whole lot faster than they have been so far in building "in the wet." So, the right decision for the future at Olmsted comes down to the assumptions you make.

With one set of assumptions, you can save a lot of time and money and get this project finished by shifting to a cofferdam approach. By making a different set of assumptions, the Corps says it will take longer and the savings would be less. I am not an engineer, but I think this project is ripe for some serious oversight so that we can all be comfortable the right assumptions are being made and we are on the right course. As a nation and as an industry, we don't have a day or dollar to waste. We need to make sure that Olmsted is finished as fast as we can for the least possible sum. We think the industry has already paid far more than it committed to when this project was authorized and the right thing to do is to finish Olmsted with no further contributions from our trust fund.

What is your view of current Corps' waterways metrics and measurements? More importantly, do they have the funds to do what they need to do, in the face of a reported 5 percent cut in their operating budget?

I am not a fan of the metrics currently in use and think we need an entirely new set of metrics to better recognize the economic value of our waterways. Tons and ton-miles tell part of the story, but not all of it. They fail to account for the value of the cargo, the jobs associated with producing that value or the cost of not having that waterway. It completely omits the non-transportation related values of the waterway, such as industrial and municipal water supply, recreation and property value enhancement, just to name a few. With respect to the budget, I think the Corps needs more resources and needs to continue their efforts to more efficiently employ the resources they have. You are wise to tie these two questions together. In these tight budgetary times, it is hard to demand more resources when you don't have the metrics that show the value of what you are doing. I think some of the limited funds available to the Corps should be invested toward developing meaningful metrics.

Damen EcoLiner's LNG Concept for Inland Shipping

Bodewes Binnenvaart B.V., Damen Shipyards Group's inland waterway shipyard, and inland shipping company QaGroup are set to launch an entirely new inland shipping concept. The LNG concept operates alongside another innovation developed by Bodewes Binnenvaart, the air lubricated hull 'ACES'. Working in combination, these innovations lead to fuel savings and emissions cuts. The concept also involves appealing to oil companies and logistic operators keen to get their cargo off the roads and keen on having one partner; one contact to deal with. Although the LNG/ACES system can be fitted to any inland ship, at the moment the system has been designed around a 110 m long vessel. The new vessel has a bunker capacity of approximately 45 cubic meters LNG and it will be fully classified by Bureau Veritas. Equipped with four generator sets, these power all of the consumers via the comprehensive power management system; the power management system ensures efficient energy generation, distribution and storage. For example, there is more power needed going upriver from Rotterdam to Basle than on the return, so the management system will automatically switch the generator sets on and off. Energy created can be stored when using less power or instead it can be used to heat or cool the cargo or for cooling water or heating accommodation. In addition, waste heat is used and becomes energy, so absolutely nothing is wasted. On top of this, there's the 15% fuel reduction because of the ACES hull. Extensive trials have proven that fuel savings of around 25% can be realized on the EcoLiner.

Veka-Group Develops
LNG Inland Bunker Ship

Veka-Group has developed an LNG inland waterway bunker ship, is the first of its type in the world. The tanker sails almost completely on the 'boil off' of the load and is 100% emission-free. The 100 percent LNG engine burns the 'boil off' completely, thereby outperforming even dual fuel engines. The tanker's innovative design has been submitted for approval to the Central Commission for Navigation on the Rhine in Strasbourg and to the Maritime Safety Committee (AND) of the United Nations Economic Commission for Europe (UNECE). With the hull already completed, and following plan approvals, Veka will proceed with the construction and completion of this tanker. The LNG inland shipping bunker tanker is expected to be put into service late 2013. Details of the LNG inland bunker tanker include:

Length overall:	86 m
Width overall:	11.5 m
Draught:	3.5 m
Tonnage:	2,050 tons
Loading capacity:	4 LNG containers (-164 ºC) 4 x 200 m3
Main engine:	gas engine 1.000 kW

Ulstein Wins Twelve Design Deliveries

Sinopacific's Zhejiang yard in Ningbo, China, has entered into a contract with ULSTEIN for the delivery of twelve design packages for platform support vessels of the PX105 design for Seatankers Group. The contract incorporates a comprehensive equipment package including design, engineering and equipment supplied by ULSTEIN. The vessels are 88.9 meters long and 19 meters in the beam. Equipped with a diesel-electric propulsion system and a comprehensive electrical package delivered by Ulstein Power & Control, they additionally feature Azipull 100 propellers, and will be able to reach speeds of 15.5 knots. The loading deck area is in excess of 1,000 m2 and the vessels each have a dead weight of 4,700 tons. They comply with the DNV requirements of the Clean and Clean Design standards. Including these new contracts, ULSTEIN has sold a total of 26 vessels of the PX105 design incorporating the X-BOW hull line design. X-BOW vessels are fuel-efficient and can maintain high speeds even in harsh weather conditions. 62 vessels with the X-BOW design have been sold since its launch in 2005.


Johnson


Smith


Galuk


Charman


Vauclin

Ingram Names Johnson AVP, Coal

Joe Johnson has been promoted to Assistant Vice President, Coal, Ingram Barge Company. Already serving in this newly created position, the Ingram sales team reports to Johnson, with respect to their coal accounts. Johnson joined Ingram in 2002 and has handled the majority of the company's utility and export coal customer base. Prior to joining Ingram, he gained over 20 years of experience in the coal industry. He received his Master's degree in Transportation University of Denver and a Bachelor's degree from Western Kentucky University.

Global Diving & Salvage Names Smith Gulf Coast GM

Global Diving and Salvage, Inc. has announced the hiring of Ryan Smith as general manager for its Houston-based Gulf Coast office. Smith will be responsible for day-to-day operations as well as development of business opportunities. Smith brings 12 years of experience and comes from his previous position as the Vice President of Shipyard Representation at L&R Midland and holds a degree in Marine Engineering Technology from Maine Maritime Academy.

Galuk Joins Thunderbolt Marine

Thunderbolt Marine has welcomed Rich Galuk to the position of Vice President and General Manager. Rich has worked closely with TMI over the years in his duties managing the Savannah Bar Pilots' fleet of vessels & marine surveying. Galuk's 29+ years in the marine industry also include service with the United States Coast Guard, maritime law enforcement, marine repairs, consulting and expert witness services.

IMCA Appoints New Chief

Chris Charman has been appointed as Chief Executive of IMCA (International Marine Contractors Association) taking over from Hugh Williams who is retiring. He will take up the position on 3 December 2012. Charman is a Fellow of the Institute of Risk Management and an Associate member of both the Chartered Institute of Insurers and Chartered Institute of Arbitrators. After leaving the Navy he worked as a loss adjuster in various venues, dealing with the impacts of poor or failed risk management.

Bollinger VP Vauclin to Retire

Bollinger Shipyards announced the upcoming retirement of its Vice President Central Division, Larry Vauclin. Vauclin started his shipyard career in Houma, La., in 1960 with Main Iron Works working as a supervisor until leaving to help start Quality Shipyard in 1969 as yard superintendent, working his way up to executive vice president/GM for new construction and repair. Vauclin's career at Bollinger started in 1996 as vice president and general manager of the Larose facility.

RADM White Appointed Oceanographer of the Navy

Rear Admiral Jonathon White has assumed the title of "Oceanographer of the U.S. Navy," replacing Rear Adm. David Titley who retired in July. White is now head of the Oceanography, Space and Maritime Domain Awareness directorate (OPNAV N2N6E). He also serves as head of the Navy's Positioning, Navigation and Timing directorate and he holds the title "navigator of the Navy."

Acteon appoints Revere as VP

Subsea services group Acteon has appointed Kevin Revere as vice president. Based in Kuala Lumpur, Revere will report to Bernhard Bruggaier, executive vice president. He will initially provide support to Asia-based business CAPE as the company expands its product and service offering in the subsea pipeline sector. Revere has more than 20 years of experience in the oil and gas pipeline coating industry and joins Acteon from Wasco Energy's pipe coating division, where he was vice president of operations.

Cummins Leadership Changes

Cummins reorganized it Commercial Marine Business around five customer-focused market segments: commercial transport; offshore oil and gas; passenger transport; government/defense; and special use (fishing). In line with


White


Revere


Young


Marchetti

MFNSA

this reorganization, the company has named Greg Young Director of Strategic Growth – Commercial Transport and Waldemar Marchetti Director of Strategic Growth – Offshore. Young has been with Cummins for over 30 years, most recently serving as the Director of Strategy, OEM and Business Development for Cummins Westport since 2003. Marchetti served as the Marine Sales and Marketing Director in Latin American for the last six years.

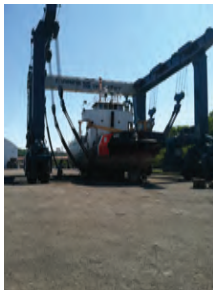
U.S. Postal Service Honors Barges

The United States Postal Service recently dedicated a series of Forever Stamps entitled "Earthscapes," one which features an aerial view of Kirby Corporation's Apollo and Enterprise Marine Services LLC's Taurus commercial tow boats positioning themselves against liquid tank barges in the Old River Barge Fleeting area near the Houston Ship Channel in Texas. Speakers at the dedication event, which was open to the public, included William J. Mitchell, USPS Houston District Manager, Joe Pyne, Chairman and CEO Kirby Corporation, Ray Sick, Director Enterprise Marine Services LLC, and Jonathan Topper, Board of Directors - Houston Philatelic Society.

Students Win Marine Enviro Awards

P1 Marine Foundation National Student Awards 2012 honored Undergraduate and Postgraduate students for their outstanding projects that will have a positive and sustainable impact on the marine environment. The winners were

USPS


Buckthorn


GRT Lakes Stone Carrier


Metal Craft 25th Anniversary

Douglas Conway from Newcastle University in the Undergraduate category who designed a combined alternative energy solution of tidal and wind power. Paul Barker from Loughborough University, whose research is based on real time sonar measurement and how this affects marine life, was successful in the Postgraduate category.

Seaway Cargo Shipments up 7%

The St. Lawrence Seaway reported a 6.78 percent increase for total cargo shipments in August – 4.3 million metric tons – compared to August 2011. From March 22 to August 31, year-to-date total cargo shipments were 21.3 million metric tons, up 1.5% over the same period in 2011.

MetalCraft Marine Celebrates 25th

MetalCraft Marine recently celebrated its 25th anniversary of building boats along the waterfront of beautiful Kingston, Ontario. Carrying on the boat building tradition that was started on this same site over 100 years ago, the yard is currently building a 70' fireboat for the Port of Houston at a value of $5 million. The MetalCraft journey extends from hull number 1 to hull, number 571.

Kirby to Purchase Allied Transportation Assets

Allied's fleet consists of 10 coastwise tank barges with a total liquid capacity of 680,000 barrels, three offshore dry-bulk barges with a total capacity of 48,000 deadweight tons, and seven tugboats. The total value of the cash transaction is anticipated to be $116 million (before post-closing adjustments and fees), including $10 million that will be paid contingent on developments with the sugar provisions in the U.S. Farm Bill. The purchase will be financed through Kirby's revolving credit facility. Kirby received the consent and commitment from participating banks to increase its unsecured revolving credit facility from $250 million to $325 million. The closing of the Allied transaction is expected to occur in the late third or early fourth quarter of 2012 and is subject to certain conditions, including expiration of the required waiting period under the Hart-Scott-Rodino Act.

Great Lakes Shipyard to Repair USCG Cutter BUCKTHORN

U.S. Coast Guard Cutter BUCKTHORN, a Sault Ste. Marie, Michigan-based 100-foot inland buoy tender, has arrived at Great Lakes Shipyard, Cleveland, Ohio, for extended inspection, maintenance, and repairs including steel repairs, cleaning, and painting. The buoy tender was hauled out on August 28 using the Shipyard's 770-ton Marine Travelift. The BUCKTHORN was commissioned on August 18, 1963 and is the Great Lakes' oldest USCG cutter. It is also the first USCG cutter on the Great Lakes to be drydocked using a Marine Travelift.

Transport Canada, Coast Guard to inspect Seaway vessels

Transport Canada and the U.S. Coast Guard are conducting a pilot project for joint Port State Control inspections on a limited number of non-Canadian and non-U.S.-flag vessels entering the Great Lakes/St. Lawrence Seaway system. Port State Control inspections focus on increasing vessel safety, security, pollution prevention and monitoring living and working conditions for workers on the ships. Transport Canada and Coast Guard officials will simultaneously inspect foreign-flag vessels entering the Great Lakes/St. Lawrence Seaway. Vessel participation in the pilot project will be voluntary; a vessel may stop the Coast Guard portion of the exam at any time during the process, since the joint exams will be carried out in Canadian waters. If the vessel then continues on to a U.S. port, the Coast Guard will conduct its normal foreign vessel examination at that time, if one is required. Reasonable efforts will be made to avoid delaying the vessel beyond the normal time required to conduct a Transport Canada inspection. This pilot project is extending through the fall of 2012. After its completion, Transport Canada and the Coast Guard will make recommendations on forming an ongoing bi-national foreign vessel inspection program.

High Capacity Unitor Plasma Cutter

Wilhelmsen Ships Service has launched the Unitor UPC1041 plasma cutter; a high capacity portable machine specifically for marine use. The new product is designed help ensure environmentally-sound processes onboard. Compact and lightweight, the UPC1041 utilizes an active fan control system, reducing dust and dirt inside the cutter and strengthening functionality. A direct torch connection negates problems associated with twisting the torch connection, and double coated electronics improve reliability. The UPC1041 has a high duty cycle and is tolerant to high ambient temperatures onboard.

http://wssproducts.wilhelmsen.com/welding

Raytheon Anschütz launches Retrofit ECDIS

Raytheon Anschütz has launched the new ECDIS 24, an Electronic Chart Display and Information System designed especially for ECDIS retrofit. The new ECDIS 24 comes with an off-the-shelf 24 inch TFT Panel- PC display. ECDIS 24 does not need a separate PC which simplifies and accelerates installation. Important functions are quickly available through shortcuts, and a configurable Conning panel can show relevant navigation and track information at a glance. Raytheon Anschütz offers approved manufacturer-specific online training for ECDIS in cooperation with Safebridge and land-based training courses in training centers around the world.

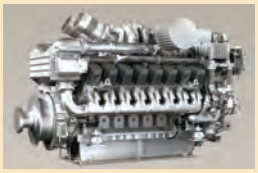
www.raytheon-anschuetz.com

AST Liquid Level Sensors

American Sensor Technologies, Inc. (AST) now supplies its liquid level sensors with ½" NPT male conduit fittings before the cable interface. For installations where the level sensor is threaded into a tank, customers prefer to install conduit to protect the cable from the work environment. AST4500, AST4510, and AST4520 level sensors are Class I Division 1 intrinsically safe, Groups C and D when installed with a barrier as well as ABS certified, allowing sensors to be used in remote monitoring and telemetry applications where liquids and gases are in hazardous environments.

www.astsensors.com/pressure-sensor-products.php

Tognum Upgrades MTU Series 4000 engines



Tognum will enhance its MTU Series 4000 Ironmen workboat engines for compliance with US EPA Tier 3 emissions regulations. Series 4000 engines will be available with 8, 12, or 16 cylinders for use in diesel-mechanical, diesel-electric propulsion systems or for powering on-board gensets. Installed in diesel-mechanical systems, the Ironmen engines will be able to cover power requirements from 750 to 2,680 bhp (560 to 2,000 kW), while diesel-electric drives and marine gensets will deliver 650 to 2,000 kW power output. No exhaust gas aftertreatment will be needed. The engines will be available in mid-2013.

www.tognum.com

Ultra Dynamics Unveils new Waterjet

Ultra Dynamics has released a new waterjet model to its HT (High Thrust) range, the UltraJet 340HT. The new design allows for an engine input power of up to 410 kW (550 bhp). As with all other HT waterjets in UltraJet's range the UJ340HT (high thrust) unit was designed to provide excellent high speed and cruising performance - with superior cavitation resistance at low speeds and when under more extreme load, towing, or thrust conditions. The 340HT will be of benefit to boat builders of Seismic, Landing Craft, Cargo carrying, commercial and Military Tow vessels, where high static thrust is a prerequisite. The UJ340HT has a similar physical size and weight to the standard UJ340 waterjet, but utilizes a different impeller to achieve higher thrust per horsepower compared to the standard UJ340 and other similar-size waterjets on the market.

www.ultradynamics.com

Rescue 21 SAR System Accepted by Coast Guard

The U.S. Coast Guard has accepted the General Dynamics C4 Systems-built Rescue 21 search and rescue communications system now serving Sector Buffalo, New York. The live-saving Rescue 21 system uses advanced direction-finding technologies and digital communications, enabling Coast Guard personnel to respond rapidly and efficiently to calls from distressed mariners out to at least 20 nautical miles from shore. It also enables greater effectiveness in responding to security and maritime environmental threats.

www.gdc4s.com/rescue21

PRODUCTS

Raymarine's New e-Series Multifunction Display

Raymarine announces the launch of the e165 large screen multifunction display. The latest addition to the range of e-Series MFDs (multifunction displays), the e165 sports a full 15.4" 16:9 wide-format display and sits in the same footprint as a traditional 14" screen, giving 20% more screen for the same helm or dash space. The displays offer clear and consistent color and contrast levels, even with changes to the viewing angle, and are further enhanced by a choice of color palettes which allow for optimum use of available sunlight; saving even more power and energy.

www.raymarine.com / www.FLIR.com

Electric Tug Does the Work of Four People

American Sales Development LLC announces the ergonomic ASD electric walkie tug that reduces strain and chance of injury when moving heavy, unwieldy loads in industrial environments. With a capacity of 20,000lbs, on wheeled carts or trailers, the unit safely replaces the effort of four persons, or up to 8 persons, with one electric tug. The electrically powered, walk behind, wheeled cart and trailer mover is constructed of formed 1/4" steel plate. With a 36v DC power circuit, heavy duty deep cell batteries and on-board, 5-stage battery charger, it can run all day on a single charge.

www.americansalesdevelopment.net

Polymer Infrared Windows of Marine Environments

The new Platinum infrared inspection window from IRISS is suited to marine and offshore applications characterized by temperatures extremes, high humidity, continuous vibration and high duty cycles. In harsh environments, Platinum offers distinct benefits over traditional, limited life fluoride crystal windows that easily shatter. Platinum offers the same visibility as its crystal counterpart, as well as impact resistance with an unlimited lifetime warranty. The maritime sector employs substantial machinery, vast electrical installations and electronics systems that need to be inspected with thermal imaging. The IRISS Platinum range can complement and enhance all predictive maintenance programs.

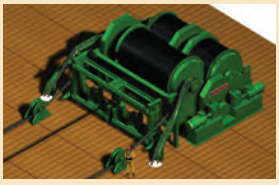
http://www.iriss.com

CeRam-Kote Pontoon Deck Preservation System

CeRam-Kote Coatings, Inc. has developed a high impact and abrasion resistant coating system to preserve drydock pontoon decks, weather decks and ballast tanks. Ceramic particle loading is the key to this coating system, creating adhesion to steel plates prepared with an anchor profile of 2.0 to 3.0 mils. This allows up to a 5 year warranty. The CeRam-Kote 54 SST primer holds the freshly blasted steel to prevent flash rust, and is forgiving in less than ideal conditions. The SPG (Sprayable Grout) top coat provides protection with a 100% solids coat.

www.ceram-kote.com

Cargotec's Electrically-Driven Offshore Winches



Cargotec offers electrically-driven versions of its offshore MacGregor anchor handling/towing winches (eAHT). The eAHT series features line pulls ranging from 200 to 600 tons with an initial speed up to 25m/min and with a brake holding capacity up to 800 tons. Available in double- or triple-drum configurations, the drums are designed to carry a huge capacity of steel wire rope, as well as large diameter low specific weight fiber rope. The extended shaft connections at both ends of the winch are suitable for fitting chain wheels to handle chains ranging from 76mm to 160mm diameter.

www.cargotec.com

Miller's New XR-Pistol-Pro Gun

Miller's XR-Pistol-Pro Gun is built for aluminum MIG and Pulsed MIG welding in heavy industrial applications such as shipbuilding, emergency and general fabrication. Compatible with Miller XR-S/D Control, XR-AlumaFeed, and Millermatic 252 and 350P models, the XR-Pistol-Pro Gun is a push-pull gun designed specifically for use with aluminum wire and other soft alloys where wire feeding consistency is critical. XR-Pistol-Pro Guns feature an improved motor and drive design for better feedability and arc consistency over longer distances, reducing downtime and maintenance costs associated with complex drive systems.

www.millerwelds.com

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- Design, Construction and Operation of Fishing Vessels
- Ocean Energy
- Technology Transfer Within and Beyond Sectors of the Maritime Industry

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Deadline for Extended Abstracts (minimum of two pages): February 15, 2013
Abstracts Accepted: March 15, 2013
Submit to: http://mc.manuscriptcentral.com/snameam2013
For more information: AM2013@sname.org

Ship Production Symposium Papers

Deadline for Abstracts: June 3, 2013 Abstracts Accepted: June 24, 2013
Please send all submissions to SPSpapers@sname.org
For more information: http://www.sname.org/Go.aspx?NavigationKey=f59f7a46-106b-4757-aeed-27c75183bf39

www.sname.org/events/callforpapers

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MASSACHUSETTS MARITIME ACADEMY

Founded in 1891, the Massachusetts Maritime Academy is the nation's oldest and finest co-ed maritime college. The Academy prepares young women and men for exciting and rewarding careers on land and sea. Our graduates have been at the very top of seagoing, engineering, environmental, and international business professions.

POSITIONS AVAILABLE

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Engineering Faculty, Chemistry Faculty
Sea Term Coordinator

The Academy is located in Buzzards Bay at the mouth of the scenic Cape Cod Canal and is a special mission college within the Massachusetts university college system.

For information about this positions and how to apply, visit the employment quick link on our web page at **www.maritime.edu.**

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- GMDSS operator/maintainer a plus

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Qualifications:
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- MMD DDE 1,000 to 4,000 HP
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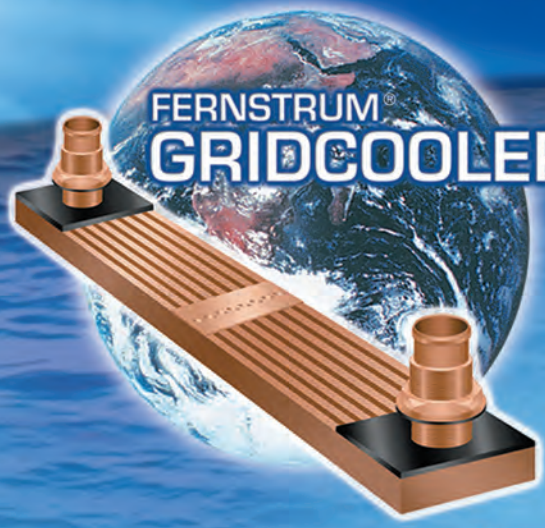

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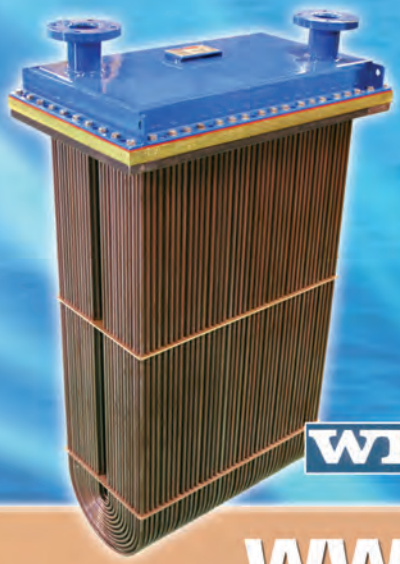

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