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Volume 28 • Number 6

# Marine News

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## Features



ON THE COVER

U.S. workboat yards are especially experienced in the production of custom patrol boat hulls. Recently, Oregon-based North River Boats won a multi-vessel U.S. Navy contract to go along with its many other domestic and foreign market sector portfolios. The story begins on page 34.

**Image credit: North River Boats**


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# Departments & Analysis




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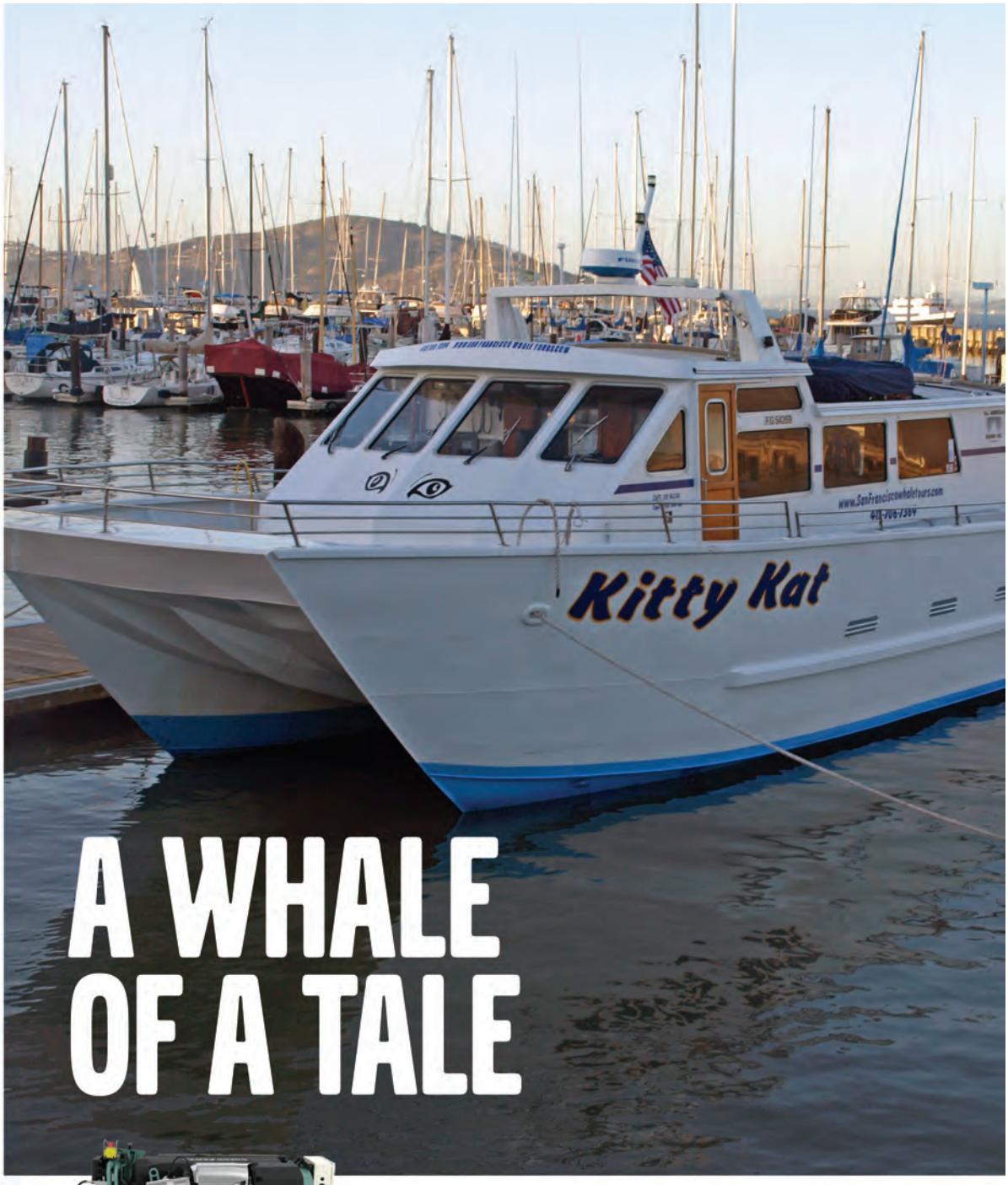


# A WHALE OF A TALE

On the tourist packed San Francisco Fisherman's Wharf, an inoperable sightseeing boat isn't an option. When the time came for San Francisco Whale Tours to repower their flagship boat, *Kitty Kat*, they chose a pair of Volvo Penta D11-625's for reliability and passenger comfort.

"Our customers could tell the difference right away. With no fumes on deck, we're getting fewer cases of seasickness in the open ocean," reports Capt. Joe Nazar. Repowering with Volvo Penta has also bolstered profitability: "I don't go to the fuel dock as often, and that goes straight to the bottom-line."

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This version of *MarineNews* isn't headlined as a Jones Act edition, but it could be. Since I can't necessarily read the tea leaves eight months in advance of current events as I make up the editorial calendar, it would have been difficult to predict the actions of the U.S. Customs and Border Patrol (CBP) when they raised the hopes of Jones Act offshore support operators before abruptly and without much explanation, pulling the rug out from under them. Any doubt that U.S. operators can do any mission in the U.S. Gulf of Mexico has long since been erased, but the key issue here is who can carry what (and where) in cabotage trades. I thought that this was settled law. Apparently not.

Staying with the Jones Act theme a little longer, this edition shines the spotlight on U.S. workboat builders. At a time when those shipyards are often characterized as inefficient, and unable to compete on the foreign stage, the evidence certainly would suggest otherwise. One yard – Louisiana-based Metal Shark – even has the financial wherewithal to commence an ambitious 'hull stocking' program the likes of which has rarely, if ever been seen on this side of the big pond. Separately, Oregon-based North River Boats, riding a business model of diversified output, makes its own mark in the industry. Both yards can and do produce first quality government and patrol craft hulls and both have enviable export records. Hence, their inclusion in this edition.

Shifting gears, and despite the welcome news that the U.S. workboat industry has reduced its environmental footprint by more than 95% over the past few decades, we nevertheless must remain ready to respond to the relatively few incidents that do happen. For that reason, our coverage of environmental matters within this edition is extensive. That topic necessarily includes prevention, response, managing a potential crisis from the legal perspective, a look at cutting edge vessels and equipment, and of course, policy and regulatory issues. If you're looking to learn about the environmental side of the complicated world of workboats, then you've come to the right place.

Finally, it turns out that this edition ***is*** about cabotage issues, after all. *MarineNews* contributor Tom Ewing's look at a fledgling shortsea shipping concept for inland waters gives new light to an effort which, if it gains traction, could change the business model for inland shipping. Sure, there are many hurdles to overcome – financial, operational, logistical, regulatory among them – before that happens, but I very much like the prospect of taking 2,400 TEU's off the highways in a single river passage from Plaquemines, Louisiana all the way to Memphis or even St. Louis. What about you? The story begins on page 42.

In an era where the Jones Act regularly comes under attack in many imaginative ways, it (sometimes) takes an issue of *MarineNews* – like this one, for example – to demonstrate the progress, environmental stewardship and efficiencies that our domestic, enrolled traffic provides. That's plain enough for anyone to see. Or, is it?



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# Transportation Environmental Performance: a tale of three modes

Dagmar Schmidt Etkin of Environmental Research Consulting always has her finger on the pulse of the environmental scene, especially when it comes to transportation issues. Her recent work, entitled *"Historical Analysis of US Pipeline Spills and Implications for Contingency Planning,"* gives a robust accounting of pipeline spill performance. In this case, historical data on inland crude and refined product pipeline spills for the years 1968 through 2015 were analyzed. While that's a little out of our wheelhouse, it got us to thinking: ***how does that measure up against other modes such as tank vessels and rail?*** And, more importantly, is it an apples-to-apples comparison? The answer: *well, sort of.*

**First, the pipelines:** Over the 48-year time period, there were 6,433 crude and 4,377 refined product pipeline spills reported in inland areas of the US, involving a total of over 6.7 million barrels of spillage. Spill numbers, total volume of spillage, and average spill volume – like that emanating from tankers and barges – have decreased significantly over this time period. Nevertheless, there has been an increase in crude pipeline spill numbers in the last several years even when adjusted for transmission that should be noted. ***But who is winning the race?***

**Tank Vessels:** Separately, Dagmar's numbers – as reported previously in this space – show the progress of the oil transportation industry as it improves its footprint over time. The numbers are remarkable. Oil spills from tank vessels into US waters have reduced by 99% since the early 1970s. In the last decade alone, spillage has been reduced by 76%.

***Annual Oil Spillage from Tank Vessels into US Waters (Selected years)***

| Year | Tankers | Tank Barges | Total |
|---|---|---|---|
| **1968** | 576,488 | 7,333 | 583,821 |
| **1977** | 4,748 | 37,178 | 41,926 |
| **1987** | 35,623 | 13,044 | 48,667 |
| **1997** | 527 | 3,805 | 4,332 |
| **2007** | 339 | 210 | 549 |
| **2012** | 396 | 46 | 442 |
| **Total: 1968-2012** | **2,988,128** | **1,147,064** | **4,135,192** |

All of that said; the probability of tank vessel spills should be correlated with the amount of oil transported. Since the early 1980s, there has been a nearly 50% reduction in the volume of oil transported annually by tank vessels. That's (in part) because the Colonial Pipeline alone (connecting the Gulf and East Coast refined products supply & demand) – according to *Poten & Partners* – took the place of as many as 150 coastwise vessels. But, this does not explain the reduction in spillage. There has actually been a 94% reduction in the amount of tank vessel spillage per oil transported in the US over the last three decades. ***Again, how does that compare to pipelines and rail?***

**On the Rails:** Etkin also has closely followed (what was at one time) the rapidly escalating rail transport of Bakken crude and various forms of bitumen. In a nutshell, there are significant concerns about safety. The July 2013 crude oil train accident in Quebec, Canada, which resulted in 47 fatalities, caused significant concern about the safety of crude-by-rail (CBR) transportation of very volatile Bakken crude in particular. And, while the economics of that mode have waned in recent months, it is still a concern. That's because increased production of oil in North America has decreased the need to import oil by tanker. Underscoring that statement, Etkin reported (in 2015) that in 2010, about 55,000 barrels of crude oil were being transported by rail daily in the US – less than one unit train of 100 cars per day. By 2014, more than one million barrels of crude oil were being transported by rail – or about 14 unit trains daily. Most of this traffic was from North Dakota to refineries in the East (NJ, PA), with some crude oil going also to


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refineries in Washington and Louisiana. To the credit of rail operators, and over the last 35 years, the amount of oil being transported that then spilled was decreasing rapidly – in the early 1980s, about one barrel of oil spilled for every 1,000 barrels transported. Over the last decade, there has been a 91% decrease in the spillage rate since the 1980s – so that one barrel spilled for every 12,000 barrels transported. In the last two years, the rate of spillage per oil transported has decreased to one barrel spilled for every 23,000 barrels transported. Impressive. ***But, with the dramatic increase in the overall amount of oil transported by rail, the absolute amount of oil spilled each year has increased by 276%.***

One way to compare overall modal environmental performance is to look at the number of barrels spilled in a given era or year and then look at improvements over time, as shown below:

| Time Period | Pipelines (AVG) / bbls | Tankers (*) (AVG) / bbls |
|---|---|---|
| **1968 - 1972** | 306,612 | 297,000 |
| **2003 - 2012** | 60,374 | 4,000 |
| **PCT Change** | 80 % | 98% |
| *(*) includes tank barges and tank vessels* | | |

| YEAR | Pipelines (totals) | Tankers (*) (totals) |
|---|---|---|
| **1985 (#)** | 143 / 110,468 | 549 / 105,142 |
| **2009 (#)** | 88 / 33,100 | 126 / 448 |
| **PCT Change** | 30% | 95% |
| *(#) Depicts number of incidents / barrels.* | | |

The improvement in environmental performance for both pipelines and tank vessels is remarkable, but the pipeline improvements pale in comparison to that achieved for waterborne cargoes over the same time frames. Another way is much more telling. As depicted below, three modes – rail, water and pipelines – are all compared in terms of spillage rates per 100 barrels transported. Really, it's the only fair way to do it. And the answers are startlingly clear – five times the oil transported by rail will be spilled as that which might be carried (and spilled) on a tank vessel, and pipelines will spill twice as much as a tank vessel when comparing similar volumes transported. Our take from the *MarineNews* shop? ***It's time to get that oil back onto – and not into – the water***:

| Mode | Tank Vessels (&) | Pipelines | Rail |
|---|---|---|---|
| **Rate of Spillage (*)** | 0.001 barrels | 0.002 barrels | 0.005 barrels |
| **Data Reference Dates** | 2003 – 2012 | 2010 – 2015 | 2010 – 2015 |

***(*) Rate of spillage for every 100 barrels transported. (&) includes tankers, barges and ATB's.***


*Dagmar Schmidt Etkin has 30 years of experience in environmental analysis — 14 years investigating issues in population biology and ecological systems, and 16 years specializing in the analysis of oil spills. She has earned a Ph.D. from Harvard University, Organismic & Evolutionary Biology (ecology, statistics, population modeling), 1982, a Masters degree from Harvard University (Biology), and a B.A. from the University of Rochester in 1977. She is a welcome addition to our pages. Reach her at:* ***etkin@environmental-research.com***


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## Chief Administrative Law Judge, United States Coast Guard

Walter J. Brudzinski is the Chief Administrative Law Judge for U.S. Coast Guard. He has been a Coast Guard Administrative Law Judge since 2003 and was appointed Chief Judge in 2013. He is a graduate of the University of Maryland and George Mason University School of Law and additionally holds a Master's and Ph.D. in Judicial Studies from the University of Nevada as well as Certificates in Judicial Development from the National Judicial College. Chief Judge Brudzinski has lectured extensively on Administrative Adjudication, including presentations before the ABA's Section on Administrative Law and Regulatory Practice, the Federal Bar Association, the Admiralty and Maritime Claims and Litigation Forum, and the University of Toulon, France.

He has also authored countless articles on suspension and revocation proceedings and other relevant topics in trade journals and other venues. Initially appointed Administrative Law Judge by the Social Security Administration in 1996, he was previously an Assistant and later a Deputy Commonwealth's Attorney in Virginia Beach. He served in the Coast Guard as a commissioned officer afloat and ashore and was a Special Assistant U.S. Attorney, Eastern District of Virginia. He was admitted to practice in Virginia, Maryland, and Pennsylvania; the U.S. District Court for the Eastern District of Virginia; the U.S. Court of Appeals for the Fourth Circuit; the Court of Appeals for the Armed Forces; and, the Supreme Court of United States.

Coast Guard Administrative Law Judges hear and decide Merchant Mariner Credential suspension and revocation cases as well as cases initiated by the Department of Homeland Security and other agencies the Coast Guard supports. Without a doubt, the nation's 210,000+ credentialed mariners want to know that when their credentials come into question from the regulatory branch that these matters will be handled fairly. To that end, the U.S. Coast Guard recently implemented Policies and Procedures to, among other things, improve communications during the suspension and revocation process. These include recently issued Commandant Instructions (5830.3) which implements policies and procedures concerning permissible and prohibited communications for personnel involved in investigating, prosecuting, adjudicating, and appealing suspension and revocation cases. We caught up with Judge Brudzinski in May, and he provided a primer on the sometimes misunderstood, but he says, fair and transparent methods with which the Coast Guard goes about this critically important function.

### Tell us about the 'S&R' Process in plain language.

The suspension and revocation (S&R) process requires investigating, advocating, decision-making, adjudicating, and appealing. Initially, the Office of Investigations and Analysis oversees the investigation of marine casualties or matters pertaining to the conduct of persons applying for or holding a merchant mariner's credential. With the assistance of its S&R National Center of Expertise, it initiates S&R proceedings. The Office of the Chief Administrative Law Judge then conducts hearings and decides questions of fact or law while the Office of the Judge Advocate General provides legal advice to Coast Guard representatives. Finally, an independent entity within the Office of the Judge Advocate General reviews and prepares appeal decisions for the Commandant or Vice-Commandant's consideration.

### Communication, apparently, is an important part of these proceedings. Why?

The S&R process relies upon careful coordination of activities among those personnel responsible for adjudication to ensure it is carried out expeditiously. It is therefore necessary that those personnel communicate regularly to dis-


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cuss matters critical to the management of the Coast Guard S&R process. Those communications must also protect the due process rights of respondents from influences that are not part of the record or "ex parte" communications.

### Tell us more about these 'Ex Parte Communications.'

The law prohibits ex parte communications. The Administrative Procedure Act at 5 U.S.C. § 551(14) defines "ex parte communication" as "an oral or written communication not on the public record with respect to which reasonable prior notice to all parties is not given, but it shall not include requests for status reports on any matter or proceeding covered by this subchapter." The Coast Guard's S&R procedural regulations at 33 C.F.R. § 20.205 provide ex parte communications are governed by 5 U.S.C. § 557(d). That U.S. Code section prohibits interested persons outside the agency from making an ex parte communication to the Administrative Law Judge (ALJ) relative to the merits of the proceeding or to persons in the agency responsible for the decision making process except as authorized by law. It also prohibits ALJs or other agency employees responsible for the decision making process from making ex parte communications relative to the merits of the proceeding to any interested person outside the agency. Title 5 U.S.C. § 554(d) (1) provides the presiding ALJ shall not "consult a person or party on a fact in issue unless on notice and opportunity for all parties to participate." The prohibition of consultation found in section 554(d) (1) applies to persons inside or outside the agency concerning facts in issue. Butz v. Economou, 438 U.S. 478, 514 (1978).

### Okay – Give us some general guidelines as to how personnel should conduct themselves.

To preserve the integrity and decisional independence of the S&R process, the directive's general guidelines prescribe that personnel conducting S&R matters are not to discuss the merits of any pending S&R case between or among themselves or with persons outside the Coast Guard until after final disposition. Final disposition occurs when all appeals have been exhausted or the time for appeal has expired. The merits of a pending matter are any substantive considerations, such as a fact in issue, taken into account in deciding a case. Procedural inquiries, status reports, settlement discussions, or other communications that are administrative in nature are not discussions on the merits and are not prohibited.

### What is the Coast Guard doing about training in this important mission?

The ALJ Program does not provide training to Coast Guard units. However, it does participate in meetings to discuss legal updates affecting S&R proceedings. Representatives from other CG units may also attend. Any presentations or briefings, if in written or transmittable form, will be placed on the internet for public view at *http://www.uscg.mil/alj/general_info.asp*. The Office of Investigations and Analysis develops policies and procedures for training Investigating Officers in the field. Training Center Yorktown uses this information to develop the curriculum for the S&R and Investigating Officer training course. Personnel from components within the Office of the Judge Advocate General, the ALJ Docketing Center which is a detached unit of the Office of the Chief Administrative Law Judge, and the Headquarters Office of the Chief Administrative Law Judge may participate in the training courses in the capacity of providing an overview of their roles and missions. All Coast Guard personnel attending as instructors, lecturers, or students from all Coast Guard entities are not to discuss the merits of any pending S&R case.

### Are there specific guidelines for any pending cases?

Coast Guard personnel participating in a pending S&R case or who have developed or are developing a position in a pending case are not to communicate on the merits of that case with any ALJ or ALJ employee who advises an ALJ in that case or any factually related case except on the record. Any senior member in the chain of command of a Coast Guard member or employee participating in an S&R hearing is to avoid communicating with any ALJ or ALJ employee regarding the merits of a pending case or any factually related case. A Coast Guard ALJ's Paralegal Specialist is the appropriate point of contact for questions concerning a case's status, pre-hearing conferences, procedural issues, or other questions unrelated to the merits of a pending case. All persons may contact the ALJ Docketing Center to inquire on a case's status, procedural issues, technical questions, website assistance, as well as other questions unrelated to the merits of a pending case. The ALJ Docketing Center is staffed by two attorneys, the hearing docket clerk, two court reporter/legal assistants, and two administrative assistants. ALJ Docketing Center personnel are not prosecutors or investigators but they do provide support to the ALJs and interested parties. The Office of Investigations and Analysis exercises program oversight for investigation and prosecution of S&R cases with assistance from the U.S. Coast Guard's S&R National Center of Expertise and the Investigations National Center of Expertise. As such, there are no prohibitions on communications within and between these entities, and with Investigating Officers. The Office of Maritime and International Law, within the Office of the Judge Advocate

General, provides counsel to the Office of Investigations and Analysis in all legal matters including S&R proceedings. As such, there are no prohibitions on communications between these entities. However, there must be no discussion on the merits of pending S&R cases by these entities with other personnel in the Office of the Judge Advocate General assigned to prepare proposed decisions on appeal or review. Those preparing proposed decisions may, however, seek general assistance or guidance from the Office of Maritime and International Law, the Office of Investigations and Analysis, or other CG entities regarding current laws, recent decisions, Coast Guard policies, or marine safety practices to aid them in preparing appeal decisions as long as the merits of any pending S&R case are not discussed.

Communication guidelines for individuals reporting or investigating an incident of alleged ALJ misconduct must follow procedures established at:
*www.uscg.mil/alj/docs/ALJIPP_5830.1_ALJ_Program_Investigations_and_Complaints_Against_ALJs.pdf.*
The directive does not prohibit communications among the above referenced entities concerning data bases or relevant systems and procedures necessary for the efficient administration of the S&R program such as the Marine Information System for Law Enforcement (MISLE).

### Are there guidelines prepared to guide Administrative Law Judges in how they conduct themselves and handle individual cases?

Coast Guard ALJs are permitted to consult with ALJ Program attorneys on all matters including the merits of pending cases. ALJ Program attorneys are responsible for advising and assisting Coast Guard ALJs in carrying out their responsibilities. ALJ Program attorneys are also permitted to consult with other ALJ Program attorneys but are expected to avoid ex parte discussions with an ALJ Program attorney that previously assisted an ALJ disqualified from hearing that case and with decision makers responsible for preparing proposed decisions on appeal. Coast Guard ALJs are also permitted to consult with one another on pending matters but are expected to avoid ex parte discussions with an ALJ previously disqualified from hearing that case and with decision makers responsible for preparing proposed decisions on appeal or review. Taking action to address known misconduct is the ALJ's obligation under the Model Code of Judicial Conduct. To avoid communications with investigators, prosecutors, or appellate review personnel, ALJs shall report incidents of misconduct by a Coast Guard Representative to the Director of Judicial Administration who will report the incident to the appropriate authority within the Office of Investigations and Analysis or the Office of the Judge Advocate General for further inquiry. In the event an ex parte communication involving the merits of a pending case occurs, the presiding ALJ will place it in the record in accordance with 5 U.S.C. § 557(d)(1)(C).

### What about Guidelines for the Office of the Chief Administrative Law Judge?

As the advisor and special assistant to the Commandant on S&R matters and as adviser to the Judge Advocate General in the preparation of the final action of S&R proceedings, advisory communications are permitted under 46 C.F.R. § 1.01-20(c) and may include discussions of the law or case administration but not facts relevant to the merits of a pending case. In handling inquiries and requests to examine and copy records, ALJ Docketing Center personnel are guided by procedures in 33 C.F.R. § 20.903 and 46 C.F.R. Part 5 and are not to discuss the merits of any pending case or reveal pre-decisional information. When coordinating responses to Freedom of Information Act requests with CG-094, personnel in the Office of the Chief Administrative Law Judge are not to discuss the merits of pending S&R cases or reveal pre-decisional information. Personnel in the Office of the Chief Administrative Law Judge are not to discuss the merits of pending S&R cases with other members of the Coast Guard during congressional inquiries and regulatory meetings.

### What is the S&R Proceedings Working Group and what do they do?

To ensure the integrity and efficient administration of the S&R process, the Vice Commandant established an S&R Working Group consisting of personnel from the Office of Investigations and Analysis, to include the S&R National Center of Expertise, the Office of the Chief Administrative Law Judge, and the Office of the Judge Advocate General. It will meet semi-annually to discuss regulatory issues or concerns, congressional inquiries, MISLE issues or concerns, procedural issues or concerns, training, action items, and new business. S&R Working Group meetings are not to discuss the merits of any pending S&R case.

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# SCAA President Devon Grennan Weighs in, Asks the Tough Questions

*What are the biggest challenges the spill response industry faces in light of the current political and economic climate in the United States? And what is SCAA doing to meet these challenges?*

**By Devon Grennan**

Grennan

I see the primary challenge that the spill response industry – as well as SCAA's membership – currently has is to manage expectations and competing interests at a unique point in our nation's energy renaissance. There has been a historical focus on offshore/near shore prevention and preparedness regulations for large vessels and fixed facilities, and with recent economic dynamics across the globe, there has been an increase in alternative methods of exploration, extraction and transportation of oil.

Our constituency are the producers and transporters of oil and gas who currently have large pressures on them in a depressed economic climate which impacts service provider revenues; our operations are heavily (and appropriately) regulated by local, state and federal agencies at a time when proactive, sound environmental policies are under review by the current federal administration; and our response community's ability to respond is challenged by an aging and diminishing workforce and often times, unrealistic expectations by public stakeholders.

Prevention and preparedness regulations have worked well, as incident frequency has dropped to historic levels. As an unforeseen consequence of this success, we have supplanted actual response experience for simulated response experience. And with these fewer opportunities, equipment manufacturers limit investment in new technologies and response service providers lack the opportunity to develop tradesmen in the response community. New technology developments and private industry commitments require a confident and robust market to support them, or government incentivization to promote them.

We are also faced with another challenge in the coming years which is not exclusive to the maritime trade: we have more professionals exiting the industry than are coming in. And if you look at the response industry as a whole (both marine and terrestrial), we are increasingly challenged in attracting a new generational workforce with an emphasis on vocational skills versus high tech skills.

Finally, public expectations for response does not discern the significant difference between publically funded response efforts surrounding public safety priorities (such as police, fire and emergency medical services) and privately funded response efforts for environmentally sensitivity priorities (such as spill response and remediation). The immediacy and efficacy of information flow also creates unrealistic expectations on the existing response framework that is used by industry. Information (and misinformation) travels faster than we can actually respond.

We took a poll of our membership in 2016 to estimate how many emergencies our members responded to annually, and the estimated total was over 15,000 a year ranging from small land-based hazardous materials to large marine oil spills. This compellingly states the importance of our members' response posture to industry. SCAA members have also played critical roles in homeland security and public safety response (most notably in Washington DC in the aftermath of 9/11, heritage contaminated sites under NPL, the Deepwater Horizon incident, and the aftermath of Hurricanes Katrina on the Gulf Coast and Sandy on the East Coast, and the Avian Influenza response in the Midwest). SCAA members are well established, professional organizations that stand ready to respond.

## How is SCAA meeting these challenges?

As the Voice of Spill Response Professionals, SCAA represents a broad industry membership of emergency responders, manufacturers and environmental firms who collectively address industry challenges, in order to strengthen and improve our nation's response community. We have an aggressive association strategy focused on closing the gap of those challenges, as follows:

- *Future Environmental Leaders:* SCAA has a committee focused solely on the promotion and networking of young professionals within the response community, including industry and governmental partners. We are focused on recruiting into our workforce and retention efforts once they experience the dynamics of the response industry.
- *Partnership with Government:* SCAA has develop-

ment a collaborative relationship with federal agencies, most notably the United States Coast Guard (USCG), Bureau of Safety and Environmental Enforcement (BSEE), National Oceanic and Atmospheric Administration (NOAA), United States Environmental Protection Agency (USEPA) and Pipeline and Hazardous Materials Safety Administration (PHMSA). We seek out common ground and practical conversations to build appropriate relationships and expectations with the regulatory community.

• ***Advocacy of Progressive Policies and Regulations:*** SCAA is purposeful in the promotion of advancements in response technology and appropriate regulations that further prepare our industry to respond to our nations' emergencies. We believe that forward leaning ideas provide continual improvements within the response regime for our industry.

In addition, SCAA encourages further professional development of our response industry through the following efforts:

• ***Best Practices for Responder Health and Safety:*** SCAA promotes sharing of best practices within our membership through our Health and Safety Committee to ensure that our response organizations are providing the best protective approach for our response employees. We acknowledge that our personnel are the foundation of our industry, and their safety is the most critical component to responding to emergencies.

• ***Responder Immunity:*** SCAA continues to promote specific and inclusive responder immunity legislation to ensure that our response community is adequately protected when the bell rings. Professional response services acting responsibly under the oversight of the federal government should have the same level of immunity that is granted to our public response system.

Private industry provides a critical component in meeting the increasing challenge of environmental protection, environmental restoration, and homeland security and public safety response operations. One thing is for certain: Although our Association has been a constant presence in the spill community since 1973, we learned long ago that if you don't evolve with the changing times, market conditions and regulatory changes, then you won't survive. We spend a lot of time with our Members seeking input on how we can best adjust to changing conditions, so that we provide a greater value. SCAA and its members are committed and stand ready to serve, and we encourage you to collaborate with us in providing a secure and prepared future.

SCAA
SPILL CONTROL ASSOCIATION OF AMERICA
THE VOICE OF SPILL RESPONSE PROFESSIONALS

***Devon Grennan*** *is President and CEO of Global Diving & Salvage, Inc., a marine services industry provider specializing in marine casualty response, subsea construction and commercial diving. Grennan joined Global in 1995 where he has held a number of roles, including Marine Environmental Supervisor, Environmental Division Manager and General Manager. He has been in his current role since 2009. Grennan is a member of several regional and national industry associations including the Puget Sound Maritime Historical Society, the Propeller Club and The Beavers. Grennan was appointed President of the Spill Control Association of America (SCAA) in April 2017, and has served on the SCAA board since 2012.*

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# An Approach for Responding to Marine Casualties

*Maritime attorney David Russo provides a valuable primer for maritime stakeholders faced with a marine casualty. Because it isn't a question of **if**, it is a question of **when**. Will you be ready?*

**By David E. Russo**

Russo

When there is a marine incident, the vessel owner/operator has two risks of exposure: to both civil and criminal liability. These risks can arise from a number of variables, including but not limited to (a.) a pollution event, (b.) a death or Injury, (c.) unseaworthy vessels (including inadequate crew or procedures), (d.) reporting failures that can lead to direct liability; and (e.) acts of crew that can lead to vicarious liability. To address these risks, a vessel owner should take early steps, with counsel, to protect its rights.

## The First Hour

This can be the most critical time period. There are important steps that should be taken to avoid increasing negative consequences and to set the foundation for later work. Here is an outline:

- ***Stabilize the situation on the vessel, first and foremost.***
- ***Learn basic details (in private: not on the radio or in range of VDR). This information might include:***

| | | | |
|---|---|---|---|
| What happened? | Damage to vessel or property? | How many passengers? | Any Injuries? |
| Location of Incident | Identify crewmembers | Time of incident | Any oil spilled? |

- ***Was Vessel Traffic Service (VTS) called? When? If not, should VTS or the USCG Marine Safety Office be called now? An immediate call is needed if:***

| | | |
|---|---|---|
| Grounding, or allision with bridge | Loss of life | Loss of main propulsion, steering |
| Caused > $25K in damage (*) | Significant harm to environment | Injury requiring medical treatment |

- ***Tell them what happened, not why. Be brief. Educate your captains about required (and appropriate) reporting and other incident response issues.***
- ***Report spill to State Warning Center, National Response Center, etc. (maintain list with needed telephone numbers on vessels)***
- ***Is drug/alcohol testing needed? Has it been arranged?***

Alcohol testing must be done, where required, within 2 hours of the incident; drug testing must be done within 32 hours of the incident. Drug and alcohol testing is required for any "serious marine incident" (SMI). The burden is on vessel owner to make determination of need for testing. SMI's are defined as reportable marine casualties (see above re calling VTS) that:

1. *result in death, or injury requiring professional medical treatment beyond first aid;*
2. *damage to property in excess of $100,000 (increase to $200,000 pending);*
3. *the actual or constructive total loss of the vessel;*
4. *discharge of oil of 10,000 gallons or more, or discharge of a reportable quantity of hazardous substance.*

Meet counsel onboard, as needed. Advise your captain and crew not to discuss incident with anyone; only as necessary to stabilize situation.

## The Initial Day/Evening

It is very important to secure and preserve all data from the ship. This may be requested by the Coast Guard and will be important in any litigation that arises from the incident. This data includes Logs, Video from all cameras, VDR, any stored, computerized engine room data and any stored AIS data.

It is also important to identify (as possible) any passenger witnesses (names and contact information). The crew aboard the vessel may assist with this activity. Not infrequently, passengers will come forward; on their own. Early on, the vessel owner will need to discuss with maritime counsel whether separate counsel for licensed crew (because of conflicts) or criminal counsel (e.g., death, pollution incidents) is needed. This has to happen early because maritime counsel will need to put together the legal team quickly.

No on board or immediate crew interviews by Coast Guard should be permitted. Counsel will need to intercede with the Coast Guard to ensure that onboard interviews do not occur. The reasons and basis for this position are:

- *The Coast Guard has no ability to compel immediate appearance;*
- *No penalty for deferring interviews until later;*

- *Owner and maritime counsel need to assess and sort out representation issues.*
- *Counsel will address this with USCG and arrange later interviews.*

### The First 24 Hours: the Investigation Continues / USCG Issues

Within the first 24 hours, counsel will contact the Coast Guard to advise that he/she is representing the vessel owner and to assert that vessel owner is a "Party in Interest." The Coast Guard must designate as parties in interest the vessel owner, and the holder of any license or merchant mariner's document whose conduct is under investigation. A party in interest is guaranteed representation by counsel and the right to examine and cross-examine witnesses in Coast Guard hearings. Most importantly, parties in interest are entitled to unrestricted access to Coast Guard investigation records. They are provided copies of these records usually before they are available to the public. This is extremely helpful to defending against any Coast Guard charges or civil lawsuit.

The vessel owner and its counsel must determine if a CG 2692 should be submitted. This form, due within 5 days, is required for a grounding; injury requiring more than first aid; and/or property damage of more than $25,000. The 2692 should be prepared with counsel's assistance. Within the form, keep the "Description of Incident" short and without opinions – with no comment on the cause of the incident. That's because, early on, it is almost never possible to ascertain cause with certainty.

Other steps to take in this time frame include arranging a site inspection by an investigator/surveyor, with counsel, as needed (mainly property damage cases). Counsel may hire an investigator to conduct interviews of third parties (where applicable).

It is important that the investigation be conducted by maritime counsel. Why? Everything that vessel owner does is discoverable in civil lawsuit (and other proceedings). Anything your attorney does is not (includes investigation by attorney's agents).

### Coast Guard Subpoena Power

It is important to know that the Coast Guard has the power to issue subpoenas. However, they are not self-enforcing. They may be enforced only through the federal courts. Therefore, a Coast Guard subpoena can also be the subject of a motion to quash or modify the subpoena filed by your counsel. Of course, failure to comply with a Coast Guard subpoena, absent the court limiting or quashing it, may subject the license holder to the suspension of his or her license or merchant mariner's document and subject the vessel owner to other sanctions.

*"… parties in interest are entitled to unrestricted access to Coast Guard investigation records. They are provided copies of these records usually before they are available to the public. This is extremely helpful to defending against any Coast Guard charges or civil lawsuit."*


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Fortunately, the legal effects of a subpoena leave room for vessel owner's counsel to negotiate convenient dates for crew interviews. As a practical matter, this is important because it allows time to prepare witnesses and additionally provides time to gather and review evidence first. This is very important for serious incidents.

The well known Fifth Amendment Privilege against self-incrimination exists in this situation – but only where there is risk of criminal prosecution. Notably, examples of situations where that risk exists include a death (Seaman's Manslaughter Act), oil in the water (OPA-90) and situations involving dead birds (Migratory Bird Treaty Act).

### Preservation of Evidence

It is the vessel owner's responsibility to preserve evidence. Counsel will assist. The penalties for not preserving evidence

include future litigation sanctions, and adverse inferences in civil and licensing proceedings. There are also possible criminal penalties from obstruction of justice charges.

The obligation to help preserve evidence includes all electronic evidence, including the voyage data recorders. "VDR information should be preserved and obtained in a timely manner in order to avoid problems." It should be kept in mind that VDRs will not retain information beyond a set period, sometimes as short as 12 hours, so this should be acted upon promptly.

Under federal regulations (46 CFR 4.05-15(a)), the Coast Guard is entitled to the vessel's voyage records upon request (i.e., logs, VDR). However, other than voyage records, the vessel owner and master are not obligated to produce any evidence until subpoenaed by the Coast Guard. Be aware that there is no Fifth Amendment privilege for records kept in the ordinary course of business, such as ship's logs.

## Dealing with the Press

This is an especially important part of responding to and handling any marine casualty or crisis. The basic goal should be to have little or no press coverage. A secondary, goal if the first is unavoidable, is to have any coverage to be short-lived. This minimizes undue attention from the Coast Guard, politicians, or plaintiff lawyers. Use an outside professional experienced with these matters (at least for serious incidents). Equally important, there should be only one voice: instruct everyone else to refer the press to that person.

## Final Thoughts

The risks posed by marine incidents can be managed if there is a clear understanding of the goals and the means that can be used to safeguard vessel owner's interests. Coordination with maritime counsel is important to managing the risk. The foregoing primer tells us why.

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# Regulatory Growth *Drives Search for* Durable Lubricants

*Using HEPR solutions satisfies regulatory compliance, sustainability initiatives and performance demands.*

By Lauren Lionberger

*(*) all images courtesy RSC Bio Solutions*

There are numerous factors that are driving global environmental regulatory growth and the growth in renewable lubricant technologies, such as natural resource constraints, standardizing requirements due to globalization, public opinion and pressure, increase in climate change concerns, new technologies, new evidence from research and overall growing Environmental Health and Safety (EHS) concerns, and most recently the improvements in the durability of lubricants made from renewable technologies.

### *The Global View*

There are currently thousands of new environmental regulations awaiting attention from legislators and regulators around the globe. Different standards hamper growth and thus, pressure to harmonize regulations is likely to continue alongside the regional and global integration of markets.

The marine industry is one of the most heavily regulated industries and was among the first to adopt widely implemented international safety and environmental standards.

It is principally regulated by the International Maritime Organization (IMO), which is responsible for the protection of the marine environment and has, over many years, adopted a wide range of measures to prevent and control pollution caused by ships. One of the main goals of IMO is to mitigate the effects of any damage that may occur as a result of maritime operations and accidental spills, leaks and discharges. So far, IMO has adopted 51 treaty instruments for the regulation of international shipping, 21 of which are directly environment-related.

> *"With a sustainability-driven company like Höegh, any leak is taken very seriously, as are any potential threats to fleet uptime and profitability that can result from more frequent fluid replacement and changeouts."*
>
> **– Jens Dellgren, Senior Technical Superintendent at HWSM**

Separately and to address the increasing concern regarding the extent of spills, leaks and discharges of chemicals into the oceans, the U.S. Environmental Protection Agency (EPA) has developed the 2013 Vessel General Permit (VGP). Oil-based chemicals that routinely leak into the sea during normal operations include fuel oils, gear oils, hydraulic oils, marine lubricants, greases and cleaning oils. They can reach concentrated levels with serious local impacts on water quality, impacting fisheries, wildlife and recreational boating. Under the 2013 VGP, all ships larger than 79 feet must use Environmentally Acceptable Lubricants (EALs) in oil-to-sea interfaces when in the three Nautical Mile limit and in the Great Lakes unless technically infeasible.

### *What's Next? ... sVGP Looms*

Similar EAL regulations are coming into effect for smaller vessels. The EPA's Small Vessel General Permit (sVGP), which is currently pending and expected to go into effect in December 2017, will apply to non-military, commercial vessels that are less than 79 feet in length. According to the "Economic and Benefits Analysis of the Proposed sVGP" document issued by EPA, compliance with the VGP and sVGP allows vessels to meet the Clean Water Act (CWA) requirement to obtain National Pollutant Discharge Elimination System (NPDES) permit coverage for discharges incidental to normal operations. The discharges covered in the sVGP are categorized into several broad categories, which are listed in the permit, and include: common-sense requirements for general discharges, fuel management, engine and oil control, solid and liquid waste management, deck washdown and runoff and above water line hull cleaning, vessel hull maintenance, graywater, fish hold effluent, ballast water, and overboard cooling water discharges. EAL use would fall under the engine and oil control category, which includes *"all machinery and equipment, including but not limited to stern tubes, wires, and two-stroke engines, where discharges of oil to surrounding waters are likely to occur"* (as defined in Part 6 of this permit).

## Key Differentiators of EALs

| Hydraulic Environmental Oil | HETG | HEPG | HEES | HEPR | FUTERRA HEPR | Petroleum |
|---|---|---|---|---|---|---|
| Durability / Life Expectancy | Fair | Good | Good | Good | Very Good | Good |
| Viscosity Index | Very Good | Very Good | Very Good | Very Good | Good | Fair |
| Water Separability | Fair | Poor | Fair | Very Good | Very Good | Very Good |
| Oxidative Stability | Fair | Good | Fair | Good | Very Good | Good |
| Hydrolytic Stability | Fair | Very Good | Good | Very Good | Very Good | Very Good |
| Seal Compatibility | Very Good | Poor | Good | Very Good | Very Good | Very Good |
| Frictional Characteristics | Very Good | Good | Very Good | Very Good | Very Good | Very Good |
| Mineral Oil Compatibility | Very Good | Poor | Very Good | Very Good | Very Good | Very Good |
| Renewability | Very Good | Poor | Very Good | Poor | Very Good | Poor |
| Biodegradability | Very Good | Very Good | Very Good | Very Good | Very Good | Poor |
| Ecotoxicity | Very Good | Very Good | Very Good | Very Good | Very Good | Poor |
| Bioaccumulation Potential | Very Good | Very Good | Very Good | Very Good | Very Good | Poor |
| Foam | Fair | Very Good | Fair | Good | Very Good | Good |
| Operational Temperatures | Fair | Good | Fair | Good | Very Good | Fair |

Very Good
Good
Fair
Poor



### *Not Aall EALs are Created Equal*

With the VGP, drafted sVGP and other global sustainability initiatives firmly in place to regulate discharges by EPA, IMO and other organizations, two main EAL solutions have emerged for marine applications – Hydraulic Environmental Synthetic Esters (HEES) and Hydraulic Environmental Polyalphaolefin and related hydrocarbons (HEPR). While both options are globally available and meet current environmental regulations, the HEPR technology has inherent advantages that drive economic value and enable environmental leadership. While HEES products can deliver high performance, they can be prone to hydrolysis in the presence of water. That is, HEES components can decompose to form acids and alcohols which impact lubricity and can cause potential damage to metals and seals. In contrast, HEPR solutions have excellent thermal and hydrolytic stability and broad temperature range performance.

For example, RSC Bio Solutions' latest HEPR solutions pair enhanced renewability with an excellent performance profile to meet the growing global regulations and evolving market needs. The RSC FUTERRA HF series is a new Ecolabel-certified (a voluntary label promoting trusted environmental excellence) renewable hydrocarbon EAL. According to the European Commission, the EU Ecolabel helps to identify products and services that have a reduced environmental impact throughout their life cycle, from the extraction of raw material through to production, use and disposal. FUTERRA outperforms other EALs in several key areas, such as durability, water separability, oxidative stability, hydrolytic stability and seal compatibility. It

allows for easy conversion and, while some EALs are incompatible with certain types of seals, FUTERRA has very broad seal compatibility, even with traditional seals like NBR, allowing operators to use the seal that is the best choice for their specific needs.

### *Leading the Way*

The fluid choice a company makes does not only determine regulatory compliance, but also affects other factors, such as sustainability, performance and efficiency. Many companies are already seeing the benefits of switching to HEPR solutions. One such firm, Höegh Wallem Ship Management (HWSM) – a 50/50 joint venture between Höegh Autoliners and Wallem Ship Management – has begun a conversion process to RSC EnviroLogic HF 68 HP after experiencing some inconsistencies in fluid performance and some issues with leaks, which they attributed to the ester-based lubricants they were using in their stern tubes. According to Jens Dellgren, senior technical superintendent at HWSM, "With a sustainability-driven company like Höegh, any leak is taken very seriously, as are any potential threats to fleet uptime and profitability that can result from more frequent fluid replacement and changeouts. We decided to act swiftly and definitively to nip any possible problems in the bud. RSC Bio Solutions has become a trusted partner in our mission to be an environmental and business leader. We are very pleased with their products and would recommend them to anyone in the industry who wants to enhance their bottom line in a responsible manner."

Indeed, maritime professionals are looking for subject matter experts to help them navigate an increasingly confusing landscape – in terms of both reducing environmental and employee risk and increasing their company's bottom line. If you follow expert advice and equip your crew with VGP and sVGP compliant fluids and instructions on how to use them, you can focus on both sustainability and performance and prepare your company for success.

***Lauren Lionberger** is the global commercial director, marine for RSC Bio Solutions. She previously served with Chevron and brings extensive experience in the oil and gas and lubricants industries. She has a bachelor of science degree from Baylor University.*

# It All Flows Downstream

## Oil Spills, Trash, Debris, Sediment, Chemicals: *How Do We Keep Our Waterways Clean?*

By Linda Henning, Marketing Director, Elastec

If an oil spill happens on water, the Oil Pollution Act of 1990 (OPA90) has very clear rules on who is responsible for paying for cleanup costs. Most oil spills can be traced to the spiller – a pipeline owner, oil tanker, shipper, railroad or trucking company. "Pointing a finger" at the alleged party may be why this type of pollution is referred to as "point source." If the oil spill is ruled an accident and the polluter is not legally responsible, funds from the Oil Spill Liability Trust Fund (OSLTF) may be used to cover the cleanup cost. [Resource: **https://www.uscg.mil/npfc/about_npfc/osltf.asp**]

"Nonpoint source" water pollution is seemingly endless and cannot be easily tracked to a distinct source making it difficult to "finger" a perpetrator. Who are the "perps" who toss beer cans, Styrofoam containers and plastic water bottles from vehicles and vessels – and flush drugs down toilets into the water system? Who is responsible for the storm water runoff that carries silt, sediment and chemicals into our streams and rivers? Trash, debris, silt, sediment, drugs, chemicals – they all flow downstream – polluting our inland waterways, oceans and potentially our drinking water.

### Stewards of the Waterways

Who is responsible for cleaning up nonpoint source water pollution? The onus falls on municipalities – specifically, MS4 (Municipal Separate Storm Sewer System) Stormwater Managers – women and men who are often unnoticed, underpaid and under-funded for the work they do to keep our inland waterways clean. Their job descriptions are broadly and deeply detailed and can be found on the U.S. Environmental Protection Agency's website. Stewards of the waterways, these individuals have a passion for keeping our surface waters clean.

Even more overlooked are the volunteers, the "Friends

*Omni Catamaran Cleaning Chicago River*

of" groups, who spend countless hours picking up trash and debris from our streams, rivers, marinas and harbors, because they care.

Many of our U.S. municipalities have Combined Sewer Systems (CSS) which are major sources of nonpoint source pollution, especially after stormwater events. During heavy downpours, stormwater runoff can create high volumes of water that can overburden the waste water treatment plant causing sewage water to be discharged through outfalls directly into waterways. This is called a Combined Sewer Overflow (CSO).

The Metropolitan Water Reclamation District of Greater Chicago (MWRD) has spent years and millions of dollars to upgrade its water system. The MWRD is located primarily within the boundaries of Cook County, Illinois. The MWRD serves an 883 square mile area which includes the City of Chicago and 125 subur-

*"The ELASTEC Omni Catamaran is a unique way to skim trash and debris from stormwater runoff's 'first flush.' Trash flows downstream and into our waterways. Elastec's main mission is to manufacture simple solutions to protect our waterways. From oil spill response equipment to river utility boats, we develop simple and economical methods to clean our waterways."*

– Elastec Vice President of North American Sales, Shon Mosier

ban communities. The MWRD owns and operates one of the world's largest water reclamation plants and treats an average of 1.4 billion gallons of wastewater each day. The MWRD controls 76.1 miles of the Chicago Areas Waterways (CAWS), which are part of the inland waterway system connecting the Great Lakes with the Gulf of Mexico.

The MWRD receives flow from combined sewer collection systems, which means that wastewater and stormwater flow together in a single pipe. Some of the excess water is stored into the MWRD's Tunnel and Reservoir Plan (TARP) system, but too much runoff finds its way to the CAWS – and so does trash. Floating debris such as Styrofoam, plastic bottles and cigarette butts create health risks, kill marine life and cause flooding.

## Using Omni Catamarans to Skim Floatables from the River

One of the many initiatives in the MWRD plan was to skim floatables to keep the Chicago River clean. A Carmi, Illinois company, Elastec, with a core competency in oil spill recovery systems, worked with MWRD to develop two custom trash and debris skimming and collection boats, the ELASTEC Omni Catamarans. Originally characterized as a "trash boat," this 23-foot/7-meter aluminum vessel has interchangeable pods for various waterway tasks. One of the pods that can be positioned between the hulls is designed specifically for floating trash collection. Elastec also offers pods for quay wall and river walk wash down, boat sanitation pump-out, cargo hauling and an A-frame for winching.

With the deck plates in place, the Omni Catamaran is prepared to support a variety of maintenance missions. MWRD requested a simple design, with few moving parts, and easy to operate. The 23 foot MWRD boats, named Skimmy Dipper and Skim Pickens, are designed for daily trash skimming near Navy Pier and along seven miles of the river.

Elastec's Vice President of North American Sales, Shon Mosier, explains, "The ELASTEC Omni Catamaran is a

unique way to skim trash and debris from stormwater run-off's 'first flush.' Trash flows downstream and into our waterways. Elastec's main mission is to manufacture simple solutions to protect our waterways. From oil spill response equipment to river utility boats, we develop simple and economical methods to clean our waterways." To that end, Shon recently delivered a third boat to the City of Chicago as well as to the cities of Waco and Austin, Texas, and the Browns Ferry Power Plant in Athens, Georgia.

### The Watershed Steward

Separately, another ELASTEC Omni Catamaran was delivered to a very special individual, Lenny Arkinstall, who has made it his personal goal to clean up Long Beach, California's Los Cerritos Wetlands. Known as the "Watershed Steward," Lenny has spent almost 25 years protecting the unique tidal salt marsh wetlands by removing trash and debris from one of the 'most biologically productive places in the world.' (http://lcwstewards.org/)

A local waterway hero, Lenny used the Omni Catamaran to corral debris and managed to tow a couple of tons of trash across the L.A. River. The "Swiss Army Knife-like" multi-purpose waterway and marina maintenance vessel is just one work boat in an evolving line of river utility boats manufactured by Elastec. The vertically integrated company not only builds sturdy, purpose-built boats, it also manufactures the relevant cleanup tools to perform the tasks from the boats: oil skimmers, containment booms, BoomVane (a boom deployment system) turbidity curtains, trash, debris and aquatic weed barriers.

### Elastec's Inlander for Shallow Draft Work

The newest member of Elastec's river utility boats, the Inlander, will soon be introduced. It is 24 feet (7.3 meters) long, 8.5 feet (2.6 meters) wide, and can be powered by one or two engines. It has the ability to handle a cargo of up to 4,000 pounds (1,815 kg). Elastec's Don Johnson, special projects manager, who has decades of experience in boat manufacturing, noted that some inland oil spill responders were using "glorified Jon boats" designed for fishing. "Jon boats have their place, but not in oil spill response or for waterway maintenance. It's a utility as well as a safety issue," Johnson stated.

"At our fall 2016 Inland Oil Spill workshop," Don said, "we discussed with people in attendance that Elastec was thinking of building a smaller boat than our landing crafts, but larger than a Jon, and we asked them what they'd like to see." The overwhelming response: more space. Fewer built-in elements to get in the way. Lower cost. Safer. With shallow draft.

### Versatile Aluminum Landing Craft Workboats

Elastec has solutions for more challenging inland operations, as well. The firm's landing craft boats provide well-designed, stable, high-performance hulls that can be configured in a wide variety of ways. The 26- and 28-ft. landing crafts feature an open bow with retractable bow ramp that ease the transfer of equipment from land to water. Even vehicles as large as ATVs for work and RTVs for play can be accommodated. And the vessels can be used as diving platforms and marine research, as well. Elastec has built these models for years, and they're in use across North America, South America, Europe – and now – in the Middle East, as well.

### How Do We Keep Our Waterways Clean?

We can try and keep our waterways clean with passionate volunteers like Lenny Arkinstall, responsible and enforced environmental regulations, dedicated MS4 Stormwater Managers and companies like Elastec – but the real issue is not to pollute our streams, rivers and oceans in the first place. The next time you flush, toss or pour contaminants down the drain, think about how it all flows downstream – and eventually back into our drinking water.

# Delivering Flexibility & Customized Output

**Diversification is the key at Oregon-based North River Boats. Listening closely to the customer's needs recently won the day on a multi-hull U.S. Navy contract, but that's not all that's happening in Oregon.**

By Joseph Keefe

Roseburg, Oregon-based North River Boats has, over time, thrived by delivering one of the most diverse vessel portfolios in North America. Those offerings include both domestic and foreign deliveries, as well as recreational, commercial and military hulls. And, if that formula has taught them just one thing, then that metric would be that different customers need different features. And, for a firm known initially for cranking out a well-known brand of nearly identical recreational craft, it has also learned that flexibility in design and offerings can also win the day. Such was the case in North River's recent 5-year Blanket Purchase Agreement award from the U.S. Navy.

According to Mike Blocher, North River Boats' Director of Sales and Marketing, the firm will deliver two Navy hulls this year, one in September and another 4 weeks later at October. And, he says, they expect to produce two more in 2018 – pending government funding. All told, North River's contract, signed only in February of 2017, calls for options of up to eight hulls.

> *North River boats prides itself on listening to our customer's specific needs and designing work platforms that tailor to their mission requirements. Our goal is to build the right product to be used the way the customer uses the boat. Even though a lot of missions are similar, they are not all the same. This requires a different approach than building cookie-cutter boats.*
>
> **– Mike Blocher,**
> **North River Boats' Director of Sales and Marketing**

## Special Hulls for Special Purposes

The vessels are intended for special forces training (partner nation / foreign and American nationals). Based in Stennis, Mississippi the Naval Small Craft Instruction and Technical Training School (NAVSCIATTS) is a Department of Navy schoolhouse operating under the United States Special Operations Command. NAVSCIATTS trains and educates Foreign Security Force and other international students on small craft strategy, operations, communications, weapons, maintenance and instructor development. More than 10,000 students from 100+ partner nations have graduated since 1963, with an average of 400-500 students graduating each year. The vessels that they use to train on are especially critical to that mission.

Based on the popular North River Valor FP model, which is the U.S. Navy Force Protection Large vessel, North River won this contract, in part, on its willingness to make design changes to suit the client. Blocher told *MarineNews* in May, "The differences that we are going to make for their craft are increasing the side height (6 inches), which is going to allow us to increase the deck height and get more fuel to accommodate the triple outboard motors. This will be a design improvement as it will provide better seakeeping capabilities and a higher freeboard.

"North River boats prides itself on listening to our customer's specific needs and designing work platforms that tailor to their mission requirements," explained Blocher, adding, "Our goal is to build the right product to be used the way the customer uses the boat. Even though a lot of missions are similar, they are not all the same. This requires a different approach than building cookie-cutter boats. We are well-known for building one-off product with more of a customization approach. We do a great job of this and are able to provide excellent service to our customers just by making a few minor changes to overall layout of design. We de-

sign everything in Rhino 3D so we can easily make these changes without extra cost to the overall contract."

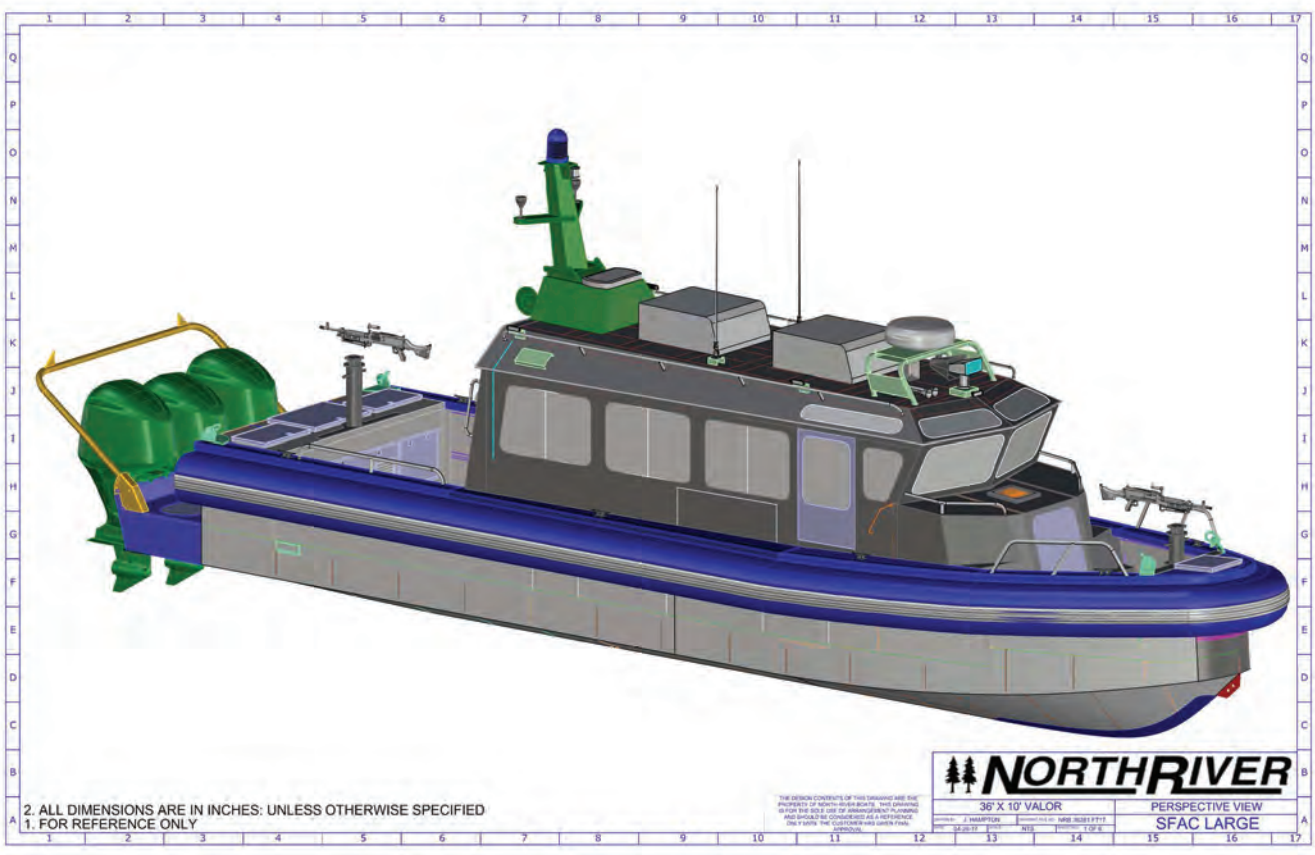
According to Blocher, the requirements for the contract came direct from the Navy. That worked out nicely, in this case. "They happened to line up nicely with our U.S. Navy Force Protection Large model. It was really only minor changes that needed to be made to cabin layout to accommodate their requirements. Those changes, albeit small, make a big difference in overall design and functionality of the craft. The boat comes with no ballistics but North River will provide mounts forward and aft for M240's. Inside the cabin will be storage for spare M240 and extra barrels."

To be sure, this isn't North River's first rodeo when it comes to military and patrol boat contracts. That's because North River Boats currently has over a dozen of the Force Protection Large craft in service ranging from Japan, Guam, San Diego and Florida. Additionally, this same hull design is built for many law enforcement and fire agencies throughout the nation.

## Exporting: the North River Way

Separately, North River Boats delivered its 13th boat to Trinidad in March 2017. The latest addition to that fleet was a 58 x 17 foot Crew Transfer Boat. Two years ago North River built their first crew transfer boat which was a huge success for both parties. This new crew boat was going to be used for a slightly different mission and in larger sea states. This required yet another new hull design to satisfy their needs.

Trinidad-based Bridge Control Services Limited (BCSL) provides marine transport services to the Trinidad and Tobago Pilots' Association and other companies in vari-




*The Customized North River Valor FP model at a glance …*

| | | | |
|---|---|---|---|
| **Customer: NAVSCIATTS** | **LOA: 36'** | **Speed: Cruising 30 KT** | **Engines: triple Yamaha 250** |
| **Max Load: 15 persons** | **Beam: 10'** | **Speed: Sprint > 40 KT** | **Collar: Wing inflatable hybrid** |
| **Seating: Shoxs (7)** | **Non-Shock Seats: 4** | **Endurance: 210 nm** | **Electronics: Furuno, FLIR, etc.** |

ous sectors. A long-time North River customer, their fleet includes jet-propelled boats capable of speeds up to forty knots, all fully certified to effectively execute a wide array of services. All told, BCSL now has 12 North River boats in its fleet, ranging in sizes from 38 feet up to 58 feet.

This new crew transfer boat has a lower crew cabin designed for 24 passengers/crew with an aft located upper pilot house designed for 3 crew. Twin Scania Di 16L diesel engines, ZF transmissions and Hamilton 403 jets can push the fully loaded, 55,000 pound boat at speeds in excess of 37 knots.

Separately, North River has signaled its intent to branch out into the commercial fishing game. Blocher explains, "North River Boats is a company that builds fishing boats with the highest percentage of these boats being used by recreational sport fishermen. We have a large fleet of charter fishing vessels in Alaska and British Columbia. The Bristol Bay fishing fleet is aging and we see a new opportunity to expand our diverse offerings."

One of the things that North River does well is to diversify into many different markets. And, says Blocher, that means being flexible when the situation warrants. "When we started looking at this project we looked at the traditional designs that are out there. Bristol Bay is a different market as the boat cannot be any longer than 32 feet. They key to being successful here is to be able to provide a boat that will be able get into the shallows and hold a lot of fish. Our design does exactly that. We decided on Pat Eberhardt with Coastwise Corporation to provide the engineering and design support for this craft. They are a very well-known design firm that has engineered many fishing vessels used in Alaska and the Northwest. That knowledge has enabled us to design the ultimate Bristol Bay fishing vessel."

## Looking Back, Forging Ahead

The new Navy contract and existing recreational work, augmented by the foray into the commercial fishing sector, ought to keep North River boats busy into the foreseeable future. In what might be viewed as a sea change, the one constant at North River seems to be its ability to adjust to ever-changing market conditions. There are possibly no two markets that could be more different than that represented by military specifications and that demanded by the recreational boating public. And, yet, this niche West Coast-based builder seems to satisfy both nicely. It's about delivering quality and flexibility, at the right price, in the right custom-designed hull. Mission accomplished.

# The Right Boat,

## *Metal Shark's Stock Boats Program Shakes up the Patrol Boat Game; here and across the big pond.*

By Joseph Keefe

If the news that Louisiana-based boatbuilder Metal Shark is ramping up production to build an inventory of stock vessels, with the goal of reducing lead times and enhancing service sounds familiar, but perhaps not on this side of the big pond, that's because the move truly represents an innovative concept for North American builders. Savvy shipbuilding stakeholders everywhere, of course, know that Netherlands-based Damen has been doing it (successfully) for years. That kind of program, however, isn't easily pulled off, nor should it be undertaken lightly.

Also not lost on industry analysts is the evolution of Metal Shark from a small, regional player into a two-yard, experienced series-build performer. Built on a series of carefully planned moves and investments, Metal Shark finds itself poised to take the next step, at arguably just the right moment.

Established in 1986, Metal Shark is a well known suppliers of custom boats for defense, law enforcement, and commercial entities. Key customers include the United States Coast Guard, Navy, Air Force, Army, foreign militaries, law enforcement agencies, passenger vessel operators, pilot associations, fire departments, and other operators worldwide. From its two fully self-contained facilities in South Louisiana, Metal Shark produces a wide range of custom monohull and catamaran vessels up to 250'.


# Right Away

## Savvy Moves, Solid Foundations

In 2014, Metal Shark opened a second yard in Franklin, Louisiana. Late last year, Metal Shark announced an expansion project of that yard which is now nearing completion at its waterfront shipbuilding complex in Franklin, La. To accommodate increased production needs – in part to satisfy the high profile NYC ferry project – Metal Shark erected a fully-enclosed 200' x 80' large vessel assembly building to enable weather-independent construction of vessels up to 180' in length. In addition, a new standalone office building will soon provide over 4,000 square foot of space for the yard's executive, engineering, project management and administrative personnel. New equipment – a new 160-ton Marine Lift transporter, for example – further facilitates the efficient movement of boats around the 25-acre yard. As part of the expansion, Metal Shark also announced that it would grow its Franklin work force from approximately 65 full-time onsite employees to more than 100 by Q2 2017.

Before that, Metal Shark in December of 2014 became one of many U.S. yards to leverage Netherlands-based Damen Shipyard's vessel designs and technical support. For nearly 40 years, Damen Shipyards Group in the Netherlands has licensed its vessel designs and technical support to yards owned by other companies. The business practice showcases not only the depth, variety and strength of the Damen portfolio, but also the reputation and reliability of its designs. The latest development, the Metal Shark Stock Boats Program, is just one more step in the right direction.

"Evaluating our performance against that of our competitors and against vehicle manufacturers in other sectors, long lead times stand out as a serious shortcoming of our industry," explained Metal Shark CEO Chris Allard. "In other vehicle sectors, customers can reasonably expect immediate or near-immediate delivery, yet customers in our industry must wait. We are significantly reducing this wait time by implementing a rotating inventory into our production mix."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**– Metal Shark CEO Chris Allard**

## Building on Previous Success

In the ultra-competitive, constantly changing and cyclical world of American workboat production, there is little time to sit on one's hands. Chris Allard says that means "Constant reinvestment," adding quickly, "There is no magic bullet, financing program, or subsidy that allowed us to do this. We continually reinvest our capital and utilized some towards developing this inventory program. To some extent we've already been doing this, more informally, and have kept stock inventory at the yard in varying amounts for a few years. The announcement of this program formalizes that effort, expands it, and publicly lets customers know what boats are available."

Indeed, Metal Shark has already sold two hulls out of this new program – one reportedly for export. Delivered 45 days after receipt of order, which is around 200 days faster than a normal delivery, the program is well underway. Allard explains, "We currently have seven hulls in the program. Two will be shipped shortly. I would expect it to vary mostly in the seven to ten-hull range, depending on timing."

Another (unintended) benefit of the program is that during the 'quieter' points in their yard(s) production cycles, this sort of program also gives Metal Shark the ability to keep workers who might otherwise not have work.

Addressing the employment question, Allard couches the discussion in a different light, insisting, "While not the primary purpose of this program, it's an added benefit that we may see at some future point." Beyond this, he says, building these hulls in sequence for the stock program provides a series-build economy of scale not possible with a one-off newbuild contract. "We're also batch building to leverage the economies of scale afforded by production lines that are moving swiftly, which allows us to realize greater savings than we would on a one-off build."

## Patrol Boats for All Sectors

Under the new program, the lead time for a single 38 Defiant pilothouse vessel could be reduced from 270 days after receipt of order to as little as 30 days, depending on equipment and configuration. Models currently included in the new program include Metal Shark's popular Defiant-class pilothouse models in 29, 38, and 45 feet, 28-foot Relentless center console patrol boats, and 7-meter rigid inflatable boats (RIBs) with diesel stern drives, waterjets, or twin outboard engines.

"Our primary goal is to reduce the 240 to 365-day lead times associated with scheduling and the acquisition of en-

gines and other long lead-time components," explained Allard. "We've grown the company to a point where we can now make this investment in materials and labor with an eye to the future, accelerating production cycles while still maintaining the flexibility to accommodate our customers. This move gives Metal Shark a real competitive edge." And, says Allard, a premium for that speedy delivery is charged only based on overtime necessary to expedite the vessel based on the customer's need.

As with all of Metal Shark's wide inventory – and similar to the Damen model – these stock hulls translate into many uses and can be outfitted to the customer's specification in a very short period of time, primarily because the firm is also keeping a ready inventory of engines, shock resistant seats, windows, and myriad other items that would normally involve considerable lead time.

As much as 30 percent of Metal Shark's patrol boat hulls in a given year are exported, typically through a mix of the Foreign Military Sales (FMS) program and some direct sales to foreign governments. In fact, the direct sales are trending higher as customers and countries get to know the Metal Shark product and quality. In fact, and by January of 2017, that momentum had translated into multiple Latin American and Caribbean deliveries, including the Puerto Rico Police Department (PRPD) who commissioned its first three Metal Shark 36-foot Fearless-class center console patrol boats. Powered by triple 300-horsepower Mercury Verado engines, the PRPD's new patrol boats achieve speeds up to 55 knots.

Separately, the Colombian National Police (CNP) took delivery of its first new 33-foot Relentless-class patrol boat. Special features of this welded aluminum center console vessel include a urethane-sheathed closed-cell foam Wing collar, Shockwave S2-Corbin high-backed shock-mitigating seating for five, and additional fold-away crew seating in the bow. The highly maneuverable patrol craft is powered by twin 300-horsepower Evinrude E-TEC G2 engines, which propel it to speeds in excess of 50 knots. Building on that momentum, Metal Shark was also awarded a contract to produce twelve 38-foot Defiant-class pilothouse patrol boats for the Dutch Caribbean Coast Guard. The production of these vessels began in early 2017.

In January, Allard said, "We've grown our Franklin business significantly since opening the facility in 2014. Currently we're in the middle of an 18-unit order for 45' foreign military patrol boats." And the New York CityWide Ferry contract also kept the yards busy throughout the first quarter. New projects commencing in 2017 at Franklin include a 45' pilot boat for a Caribbean operator, a multi-boat Navy contract for 50' high-speed vessels, a 64' survey boat for the US Army Corps of Engineers, a 70' supply boat for a Northeast operator and a 158' Incat Crowther-designed catamaran for a private client.

## The Right Boat, Right Away

Metal Shark Director of Marketing Josh Stickles told *MarineNews* in May, "Yes, we looked at the Damen model. This program [stock boats] is perfect for customers who want the right boat, right away." For many years, Metal Shark has provided the right boat for many customers, particularly in the smaller government patrol and municipal multi-mission arena. Now, and thanks to the financial staying power of an increasingly successful builder, customers can get that hull considerably faster.

The concept is a simple one: stack proven, popular hull forms that can be outfitted in a customized way, quickly, for customers who don't want to wait. And, the concept works – Damen has demonstrated it for years in their many international locations. Now, U.S. municipalities, foreign governments and U.S. armed forces outfits can enjoy the same expedited delivery schedules.

Not every yard can initiate this type of program, and to be fair, it is only in its infancy at Metal Shark. That said; and given the pace of activity currently enjoyed by the Louisiana-based builder, there isn't any reason to think that this endeavor won't be every bit as successful as everything else they've attempted in the last few years. You *can* get the right boat, right away. Who knew?


# PUBLIC-PRIVATE PROJECT PROMISES TO REVIVE AMERICA'S MARINE HIGHWAY

*Plaquemines and American Patriot Holdings Plan New Container Port-Vessel System.*

By Tom Ewing

Plans are underway for a new 4200-acre intermodal container terminal within the Port of Plaquemines Harbor and Terminal District. The project, a partnership (Exclusivity Agreement) between the Port and American Patriot Holdings (APH) calls for the development of a logistics system for "vessel operations comprised of deep-water docking at the Pointe Celeste Container Terminal and multiple upriver terminals." That's the Mississippi River, of course, and initial upriver terminals could be sited in Memphis and St. Louis.

The new facility would be the southern-most full service port complex on the Mississippi, located between river-miles 50 and 55. The fledgling project presents a fundamental change for inland waterways shipping. "We're building a new, modern technology port from the ground up," said Sandy Sanders, Executive Director of the Port. He added, "The new, central factor at Plaquemines is the specific focus on intermodal planning, getting the system right, not just the moving parts. This is not a retrofit, trying to force modern equipment – and ideas – into old worksites and infrastructure. It's a project out of Jeff Bezos' playbook."

## NUTS & BOLTS

The proposal has two major, complementary parts. One is the new land-side infrastructure. The second is for the facility to be the operational base for a new type of container vessel being developed by American Patriot Container Transport, LLC (APCT); an APH subsidiary. When constructed, these planned vessels could really scale up inland river freight transport – both in terms of size and speed. They will be big, approximately 772 feet LOA, with a 100 foot beam and a truck equivalent capacity up to 2400 TEUs. Draft: 10 feet. Top speed: 13 mph, with no wake. And they will be facile – assist tugs will not be needed because of azimuthing thrusters and bow pumps. [Just for comparison, a 35-barge tow (5 barges wide and 7 barges long) typically has an overall length of 1,365 feet and a beam of 175 feet. Conventional hopper barges hold approximately 30 containers per barge, according to APCT.]

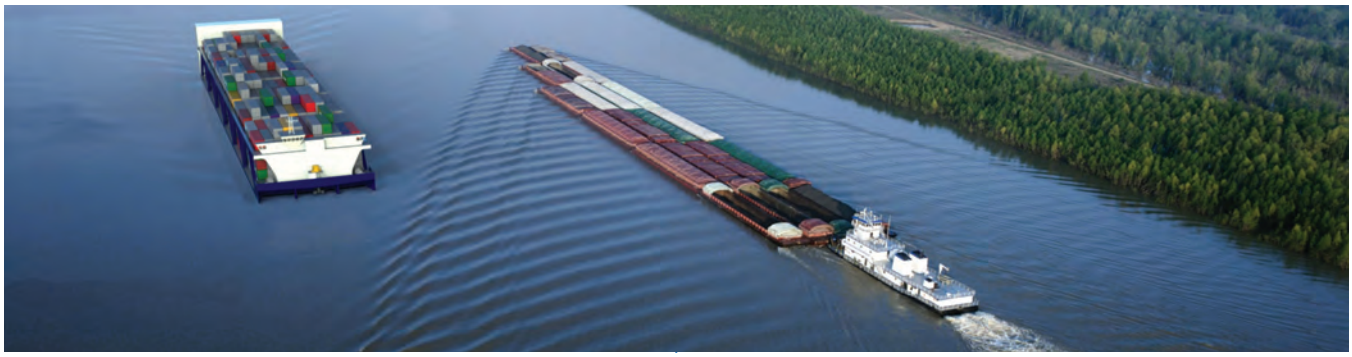
As envisioned, initial service will be to St. Louis, a roundtrip of 11 days and to Memphis, a 7 day roundtrip. APH projects actual underway times to and from Memphis at 4.5 days per round trip and 8.7 days to St Louis. In comparison, say the project's organizers, a conventional tow would be underway 9.9 days to and from Memphis and 15.9 days to St. Louis, at a maximum speed of 10 MPH (southbound). Northbound, the tow's average speed would be closer to just 5 MPH.

These days and times do not include the time needed to load and unload containers, or factor into the economics, the container count (payload) carried aboard. If a conventional hopper barge will hold about 30 TEUs, then a 10-barge tow would be about 300 TEU. The APH vessel can carry 2400 TEU.

The Port and APH predict that "landed costs" for the new port will be "significantly better" than today's comparable costs to or from mid-west markets and, for example, Shanghai and Rotterdam, using West, East and Gulf coast ports. Moreover, the APH proposal calls for staying below the locks, or in other words, operating entirely below the southernmost locks on the upper river systems so that they can provide a ratable and dedicated liner service.

Importantly, those are still preliminary assessments and numbers, determined through a "pre-feasibility" study by the Port and APH. Actual rate comparisons and costs for likely services are not included in the Port's project brief-

APH engineer incorporates patent-pending aspects allowing the LNG powered self-propelled self-docking vessels to travel without a wake. The radical technology being incorporated in the vessel design allows the loaded vessels to operate at a draught of less than 10 feet.



APH vessels are being designed in lengths of 592, 772, and 952 feet. The Vessels will carry from 1824 to 2960 TEUs and will travel north and south at twice the speed of barge lines or about 12-14 knots.

ings. When asked for details, Sanders said that "terminaling and transportation rates are proprietary and will be disclosed to shippers directly."

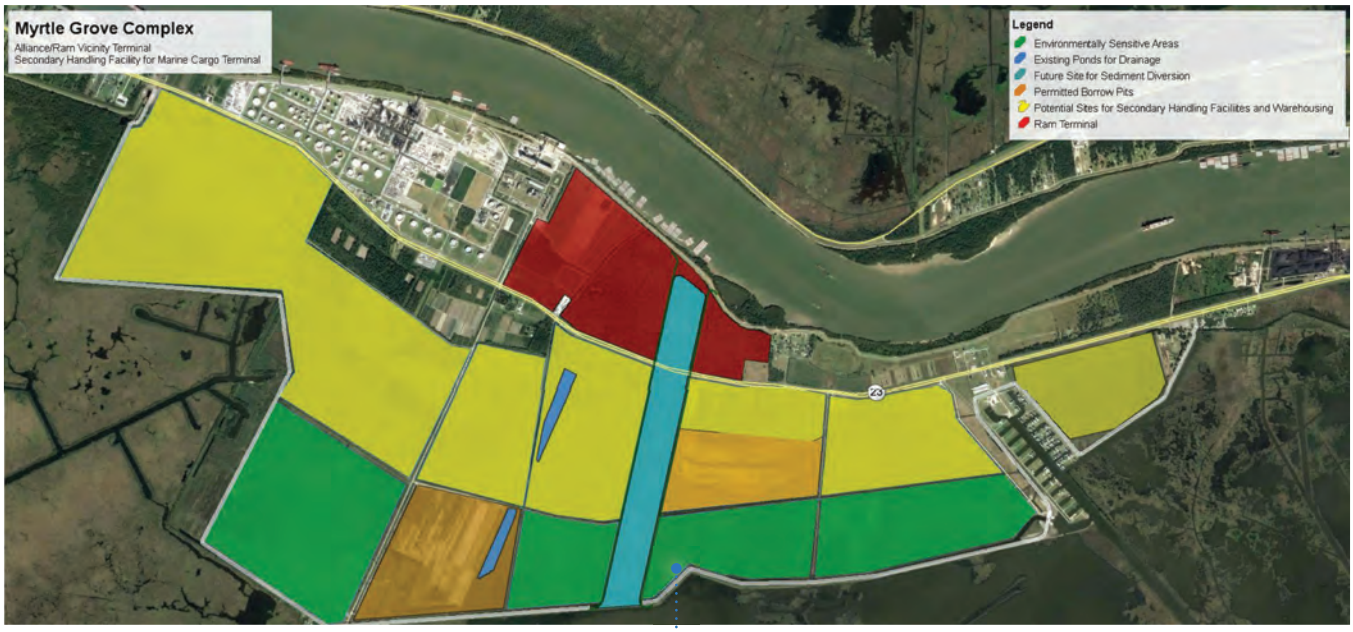
Nevertheless, officials are confident that the benefits from this big-picture analysis are valid and deserve a closer look. Sanders said they now want to start a "bankable feasibility study to have third party verification of our business case and value proposition." They want the study to help develop a financing plan. Sanders and his team are meeting with terminal operators, carriers, and related freight businesses to shop the idea and seek project investors.

## BIG IDEAS

These are big ideas – incremental change need not apply. Case in point: the new container-on-barge (COB) transport vessels. More fundamental is the hard-headed thinking about why new vessels are needed. Sal Litrico is CEO of APCT, which is working in conjunction with Naviform Consulting & Research. Litrico said this team set out to design a vessel that will be "radically innovative and technologically advanced," that would "revolutionize how containers are moved on inland waterways." Litrico notes the "failure of previous COB projects" (emphasis added) and, importantly, the need to learn from that history.

The result is the "exoskeleton hull structure" self-propelled container vessel. The new vessel seeks to maximize payload, provide high transit speed and optimal loading and unloading speeds. The new vessels will not need time for fleeting, shifting and making up tows. Reliability, safety and cargo flexibility are core performance criteria.

Importantly, the design of the new port itself will match and augment the advantages designed into the vessels (and vice versa). This will not – if




Over 3500 acres are available at Myrtle Grove for a variety of port related projects.

it comes to fruition – a marriage of tired, old infrastructure and new vessel technology. Instead, success will come from infrastructure teamwork, so to speak. The project provides an opportunity to combine the latest technology crane equipment, high speed lifts, and automation to reduce dwell time and expedite loading and unloading. "Our plan is to achieve 100 lifts per hour per terminal using three cranes," Litrico said, continuing, "These interlocking processes and technologies will maximize efficiencies. The goal is for a system in which the sum is greater than its parts."

Plaquemines is already the 12th busiest U.S. port, handling 55.4 million tons of freight in 2016. The new intermodal facility, and the prospect of expanded regional and national import/export service, could make Plaquemines stand out even more. The new port presents additional advantages for COB service, particularly freight via the Panama Canal.

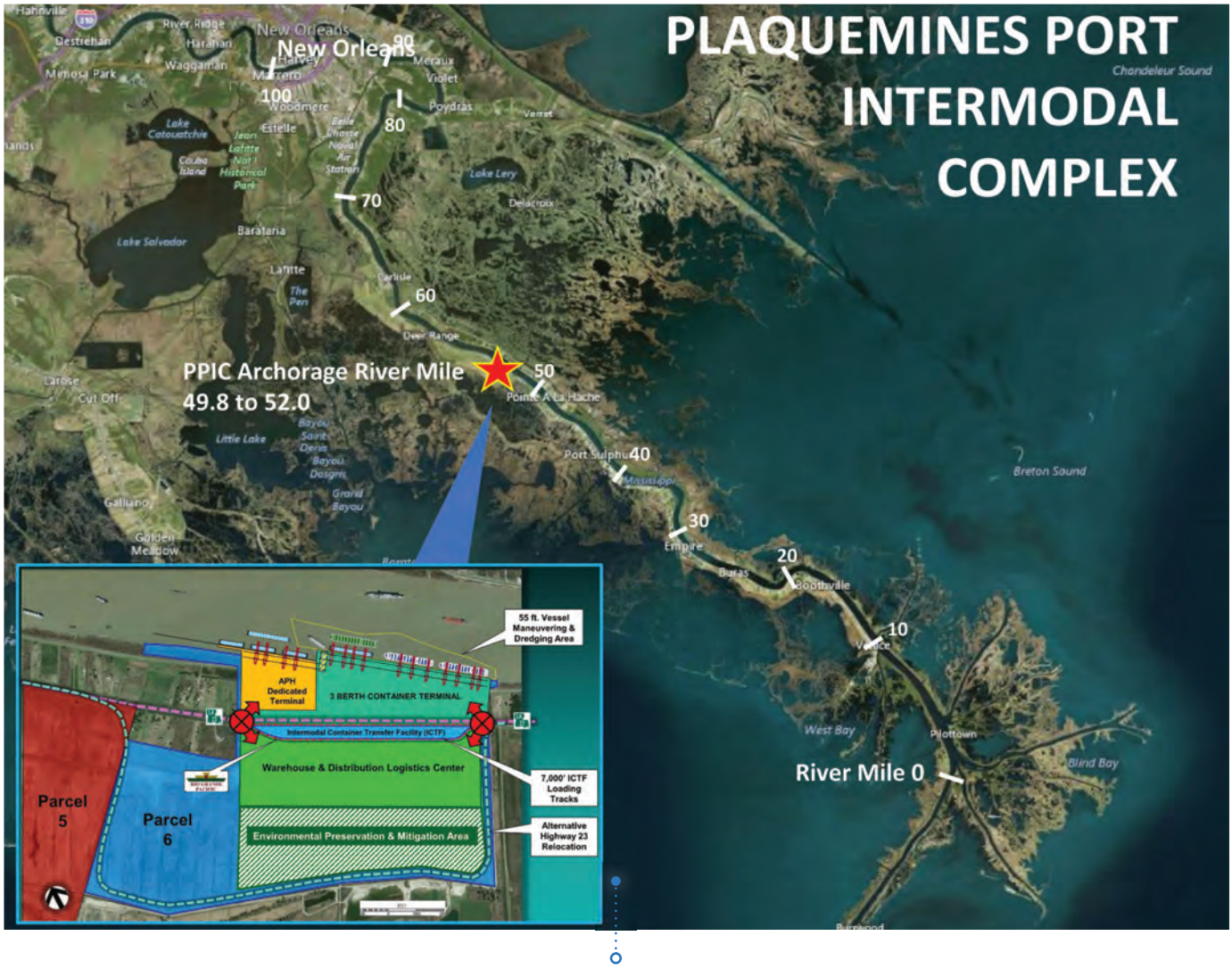
The port, as envisioned, will also have the deepest water at the widest part of the River. Berthing depths exceed 60 feet, able to accommodate the larger post-Panamax vessels. High capacity cranes will be capable of servicing the largest vessels (20,000 TEUs), although officials expect ships with 12-14,000 TEUs. Nevertheless, that's an advantage compared to the nearby port of New Orleans (NOLA), about 25 miles north of Pointe Celeste, which has a 5000 TEU limit, Plaquemines officials said.

The reference to NOLA is important. For their preliminary, competitive demand analysis, Sanders explained that because NOLA is essentially "at capacity," he and his team "excluded cargoes currently in and out of NOLA." Furthermore, NOLA primarily serves greater New Orleans and only 6-8% of the containers leave NOLA via rail or water, over 90% of the freight to NOLA is serviced by truck.

Plaquemines and APH officials believe their Port will gain a higher profile among high-volume shippers who want complete intermodal service, particularly service with the planned new vessels that are competitive in cost, volume and time compared to rail and trucks. As a destination city, St. Louis is, of course, a major Midwest market. Perhaps just as important, it's only 300 miles from Chicago. For the right cargoes and volumes, at the right price and a competitive shipping time, Plaquemines could become an even more important link in the supply chain – both ways – serving two of the nation's largest metro areas, as well as points in between.

The Pointe Celeste location saves transit costs, mitigating time in the river by approximately 10 hours per trip, according to Sanders. The very southern location reduces transit risk because ships avoid heavily congested sections of the river near New Orleans. And again, the planning of the terminal from the ground up provides the opportunities to expedite freight transfer, either for import or export.

APCT expects to attract shippers and ocean carriers by offering new cost efficiencies for agricultural products, refrigerated cargoes, dry cargoes and chemicals. The vessels will be outfitted with "substantial electrical capacity for reefer cargoes," Litrico said.




Plaquemines Port Complex is located at mile 53-55 on the lower Mississippi River.
It is the southernmost of the 5 major deep-water ports on the river.

## AROUND THE BEND

Port officials expect the project to be built in phases, involving land assembly as well as greenfield development. An initial phase will include a recently announced $8.5 billion LNG re-liquefaction facility, a break bulk terminal and a state-of-the-art container terminal expected to comprise approximately 1000 acres. "The project will be done in phases," Sanders said, "depending on investment and market conditions. The project could begin in as little as 90 days on a mid-streaming basis."

Plaquemines officials are thinking about all of this. They said that possible upriver sites "may be existing facilities or developed from greenfields and that existing terminals may need to be updated with more modern cranes to expedite loading and unloading of containers from our vessels." Paired cities will also need intermodal connectivity. Obviously, this will take cooperation – and investments – in markets and territories well beyond the control of Plaquemines officials. A vessel with 2,400 TEUs, priced for speed and timeliness, can't go to a port facility with a crane working at 10 lifts per hour.

"It is critical that the system is optimized in all locations," Sanders said, adding that "we have tentative meeting dates with upriver port management teams to discuss locations and facility amenities that could be available in these locations."

Still very much a work in progress, the partnership and proposed infrastructure investments also represent possibly the most ambitious shortsea gamble in decades. It promises shorter transit times for cargoes, cleaner air though the removal of trucks from the Interstate Highways, less wear and tear on the roads, reduced congestion for commuters and a competitively priced alternative to current freight options. There is, therefore, little to lose and everything to gain by trying.

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

# Autonomous Workboats: the Future is Now

*Sea Machines is bringing autonomous self-driving systems to the world of workboats.*

**By Joseph Keefe**

At an impressive virtual reality demonstration seen late last year and then again at a frigid, late winter visit to the Boston, Massachusetts waterfront, the future of workboat technology became all too evident for this writer. The late George Allen, former head coach of the Washington Redskins football team perhaps said it best when he coined the phrase, "The future is now." If so, then Michael Johnson, the founder of Sea Machines Robotics has brought that reality to the marine industry. The technology company targets the emerging market of autonomous marine vessels. That's not some sort of futuristic vision; those capabilities are here, now.

Johnson says that his goal is to bring "advanced technology to his space." He doesn't say that arrogantly or without a nod to what has come before. Instead, he explains, "Don't get me wrong: there are all types of great technology in our space that is progressively advancing, from structural advances, to the latest electro-mechanical equipment, and sensors and instrumentation. But when it comes to command and control systems, data communication, collection and interpretation – advances in these areas will push forward a new era of marine and maritime operations." That's already begun.

## Underway

Sea Machines Robotics (Boston) is a new technology company focused on bringing autonomous self-driving systems to the marine industries. Incorporated only in January of 2017, the operation was previously part of a Texas LLC. Currently with 10 employees, Johnson says that they will increase to 12 plus two university interns, by summer. Led by an impressive group of marine professionals – some known for their roles in projects such as the salvage of the cruise ship Costa Concordia – the company has completed one year of on-water testing in Boston Harbor and this summer is conducting collaborative multi-vessel trials with com-

Credit: Sea Machines

mercial operators in common offshore tasks such as hydrographic and bathymetric surveying and oil-spill response.

Whereas predictions for this type of technology for blue water applications say that autonomous vessels are years away, that's not so for workboats. Testing and trialing of Sea Machine's Gen 1 system will be completed in the fall. Johnson adds enthusiastically, "This includes real world trialing of the system with commercial customers in their everyday marine operations. So, we will be able to offer the system as a product in late 2017. We have patents pending in the US with more in the works. The patents range from the technology itself to future applications."

Sea Machine's first autonomous test hull is a German-built Bodan-Werft river/coastal tug, a steel hull, open cockpit boat with a 250hp air-cooled Duetz and twin Schottel Z-drives. Johnson chose the boat because many workboat operators now deploy Z-drives. "We wanted to prove to ourselves and others that we could readily convert a completely analog/mechanical control boat to electronic fly-by-wire remote command," says Johnson, adding, "Our autonomous system is developed so that it can be installed on any type of vessel." Sea Machines intends to offer the autonomous control system as a retrofit for commercial vessels to Munson, Kvichak, Safe Boats and others.

## Holy Trinity: VC, Collaboration & Technology

Talk is cheap. At the same time, high profile supporters and partners have put their money where their mouth is. In May, Sea Machines Robotics announced that it had raised $1.5 million in seed financing from lead investor Launch Capital, along with Accomplice VC, LDV Capital, the Geekdom Fund and Techstars. The company will use the funding to accelerate product development, marketing, and sales of its industrial-grade vessel control system. With regard to the new funding, Johnson said simply, "We have a good plan. We come from the marine sector so we know how things can often take longer than planned, so we plan with contingencies."

At the heart of that effort is industrial-grade control technology and close collaboration with Siemens Industrial in using their proven marine PLC and automation hardware within the Sea Machines 3X autonomy system. That relationship – and others – has been steadily evolving.

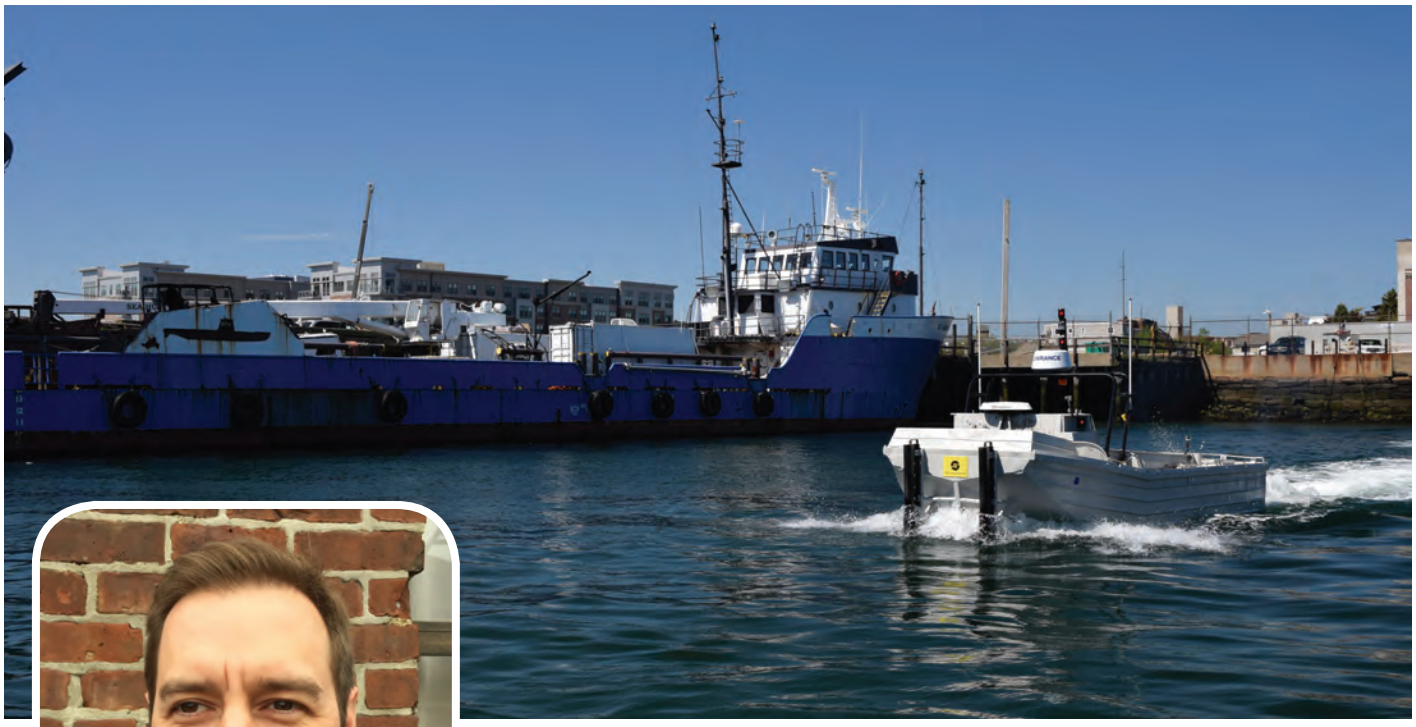
"We have a great relationship and understanding with Siemens," says Johnson, adding, "No formal partnership. We've been building on their proven marine industrial hardware and they've been promoting our works and advances. We originally approached them to specify their hybrid electric propulsion in a concept unmanned vessel that we were developing with Jensen Maritime and later they came to us and asked how they can help us further our technology. Being a start-up in a realm of tremendous potential we don't want to marry too early. Maybe we will work on formalizing something with Siemens in the future, but other technology conglomerates in this space have also been expressing interest."

Sea Machines integrates with the vessel instruments using Siemens PLC Control Software, something they refer to as being 'architecture redundant.' In a nutshell, the Sea Machines 3X system has three computers within it, one being the Siemens PLC Control Software for control of the vessel propulsion, thrusting, and steering. Multiple computers provide redundancy as the system is workable minus one computer in the case of a failure.

On the waterfront, where the Sea Machines vision is taking shape, Johnson also has close ties to Denmark-based Jonas Pedersen, co-founder of boatbuilder Tuco

*Jonas Pedersen, co-founder of Tuco Marine*

Credit: Tuco Marine



Credit: Sea Machines


*"I want stakeholders to know that autonomous is not synonymous with unmanned. While companies like Rolls Royce are projecting about the unmanned ships of the future, we see it somewhat differently and foresee a world where autonomous control increases the capability, safety, and productivity of manned ships."*

**– Michael Johnson, founder of Sea Machines**

Marine. "Jonas and TUCO are now offering the Sea Machines system as an option on their vessels. We will set up a demonstrator system within a TUCO boat this year," Johnson told ***MarineNews*** in May. Separately, Pedersen said, "We have been working with Sea Machines during 2016 to establish a corporation where our ProZero series of Fast Boats for professionals in the best way can be offered as autonomous vessel with all the operational benefits such can offer our clients." Depending on the actual vessel and fitted systems, Pedersen gave a rough price of around 50,000 Euros per unit. This veteran builder has developed and delivered a myriad of different types of workboats for industrial use.

## Dull, Dirty and Dangerous

The possibilities for this type of technology in everyday use are virtually limitless. While the autonomous boat has real utility in military applications such as Coast Guard persistent surveillance, where the unmanned vessel could broadcast back to mother ship such data as video, audio and/or Sonar data, that's not where Johnson is headed first. "There are definite defense applications for autonomous marine systems," he concedes, adding, "but we are really focused on the commercial market."

The marine industry is filled with repetitive back-and-forth operations. For example, seismic, dredging, close in patrol operations and says, Johnson, in the near future, supply services. Right out of the gate however, Sea Machines will focus on the often repeated axiom is that robotics and automation provide intrinsic value in operations that are Dirty, Dull, and Dangerous. "That fully describes the response to an offshore oil spill. Lots of small

boat operations, lots of moving parts make it quite dangerous for personnel, direct exposure to oil, pollutants, and toxins makes it even more dangerous and dirty, and the continuous sweeping through spill zones collecting oil for skimming can be monotonous or dull." But, not if the vessel – or multiple vessels, towing spill booms – is autonomously controlled.

The "limiter" on the range is not the system or communication link. Johnson explains, "The line-of-sight range is designated by the operations plan and the PIC (often times the master aboard a mothership or control vessel). We commonly test with broadband radios with ranges up to five miles but there are more powerful units available with ranges listed at 12 miles, other radio types (and mast heights) and of course satellite data links can provide any range necessary."

## Looking Ahead

Michael Johnson says that technology is now trying to push beyond controlled areas into the open roads, open skies, and in our world; the open seas. Technology for technology's sake alone won't be a selling point for budget conscious, bottom line driven commercial operators. That's why Johnson refers to the autonomous boat concept as a 'force multiplier.' "An example of force multiplication today is when a survey company conducts a multi beam bottom survey using one manned vessel. By deploying autonomous unmanned vessels to work in conjunction with the manned vessel, the operator can gather more survey data with nearly the same number of personnel," says Johnson, adding for emphasis, "Force multiplication increases productivity and efficiency."

Tuco's Pedersen says that he has clients in different sectors who are looking into using his boats autonomously, including the defense sector, seismic and ROV operations, where autonomous control can make operations more effective when it is no longer necessary stop to change out crew. Like Johnson, Pedersen said the oil recovery business is very interested in this option for the towing of spill booms and other similar tasks.

Pedersen looks ahead to his growing collaboration with Sea Machines by saying, "We definitely see this is as a major part of the future of workboats, but also think that this will come in steps as regulations and trust in these systems is still a barrier. The first step of users that we see is the 'within the horizon users' where the user and operator actually have visual contact with the vessel during the operations and therefore have a more simplified approach to the questions of who is in control of the boat."

Johnson has his own vision. "I want stakeholders to know that autonomous is not synonymous with unmanned. While companies like Rolls Royce are projecting about the unmanned ships of the future, we see it somewhat differently and foresee a world where autonomous control increases the capability, safety, and productivity of manned ships."

# Advanced Greases Can Handle Today's Deck Equipment Challenges

*By Ben Bryant, Marine Market Manager at Klüber Lubrication NA LP*

Anchor winches, cranes, level winders and other equipment exposed to the elements on the deck of a vessel ay look good with a thick, consistent layer of grease, but appearances can be deceiving. In fact, several problems may be lurking below the surface of commonly used greases. For example:

1. **Premature wear can occur if the grease is not up to the design loads and speed of the equipment.**

   • *Today's deck equipment is being pushed much harder over a wider range of operations, resulting in higher loads on gears and bearings that are rotating faster. Advanced, high-performance grease formulations are designed to handle today's more demanding conditions.*

2. **Obsolete formulations can't match the advantages of new lubricants. For example:**

   • *Commonly used thick asphaltic grease will slide off the vertical face of the slewing gear on deck cranes. Alternatives can provide a thin layer which stays in place, improving component longevity and safety on deck.*

3. **Improper selection of lubricants can occur in an automatic lubrication system. Consider these factors:**

   • *A softer grease used in an automatic lubrication system often performs better than older grease types. A lubricant must either separate contact points with a film or deliver additives that maintain anti-friction benefits even when squeezed out at the point of contact. Modern greases with high viscosity base oils and advanced additives can achieve both objectives.*

   • *Temperature changes can affect grease performance; a grease which is good for the tropics may not flow through the auto-lube system in northern climates. Synthetic base oils in specialty lubricants have a greater operational temperature range.*

4. **Stocking different lubricants for different applications can get complex.** While some high performance lubricants are designed for a narrow set of applications, others perform over a wide range of conditions. A lubrication engineer can sort through the requirements of each application and help rationalize the lubrication inventory while keeping an eye on your operational objectives.

5. **Material incompatibility can occur.** A recent investigation of seal failures on water tight doors led to a finding that the standard grease being applied softened the seals causing them to tear when the WTD was operated.

6. **Eco-friendly characteristics are required when lubricants eventually wash out to sea.** This necessitates formulations that are as good in performance in deck equipment as they are for the environment.

Modern lubricants have been formulated to maintain lubrication in today's challenging marine applications. Key to selecting a specialty lubricant is an understanding of the operating conditions for the application such as load, speed, temperature, type of friction, materials and environmental conditions. In addition, identifying specific operational objectives to be achieved or business issues to be resolved will justify the investment in a specialty lubricant. A lubrication engineer can review lubricant types, formulations and performance parameters to recommend the best lubricant to meet the desired objective or outcome.

Image Credit: Klüber

# ELASTEC'S INLANDER RUB: A VERSATILE SPILL RESPONSE WORKBOAT

The Elastec Inlander river utility boat (RUB) is a unique concept. But, Elastec already manufactures many other response and utility craft for this market. What prompted the internal effort to create such a craft was that while on oil spill deployments with customers, Elastec personnel began to notice quite a few response organizations using "reconfigured" recreational watercraft (fishing boats) to perform tasks. Those boats, according to Elastec, were not well suited to the tasks they were doing, both in terms of safety and operational utility. In particular, low freeboard, thin hulls, and working around the original design of the boats caused may problems with deployments. In response, Elastec created a design that would be both operationally and economically attractive to oil spill responders, municipalities, marinas and waterway maintenance service contractors.

Conceptualized and designed in-house, the final specifications for the general arrangement were worked out in coordination with Specmar Inc. out of Scappoose, OR. In a nutshell, the Inlander's shallow draft hull is designed to accommodate a broad spectrum of tasks. It can be outfitted for search and rescue, oil spill response, boom deployment, fisheries research (shocking), construction, and (in barge configuration) equipment hauling. The targeted mission for the Inlander is rapid response to an oil spill scenario. The boat can be outfitted with boom, skimmer, HPU and portable bladder to contain, skim and store the spilled hydrocarbons. Beyond this, the vessel and its contents are easily trailered to get to a spill site where over-the-road travel is more advantageous. Elastec will deliver the boat with an 8400 dual axle galvanized trailer with disk brakes.

The standard model Inlander will include port and starboard davit receivers at the bow and 800 pound davits are available. Significantly, the rectangular straight sheer allows for multiple hulls to be lashed together to form work platforms of varying configurations depending on the need and number of hulls available. Hence, one or more municipalities could each purchase a single hull and then coordinate with neighboring governments to form mutual aid arrangements that would work as a force multiplier. The console, fuel tank, and battery storage are designed into a pod that is removable from the hull to facilitate stacking for shipment of multiple hulls or to transform the hull as a barge. The open design of the hull allows for different General Arrangement configurations depending on the customer's needs.

Notably, the sheer line of the boat is a straight rectangle with the boat and transom of the vessel the same width. This will allow for multiple boats to be lashed together to form a work platform of sorts with no "gaps" to cause injury. They could also be lashed corner to corner (4) to create a sheltered dive opening or construction zone, using specially placed cleats.

Some customers might decide to buy a second Inlander RUB to use as a 'barge' with no propulsion. And, that second hull could be easily fitted for propulsion and controls within one work day. With the prototype hull complete, Elastec is working on the "Control pod" and hope to be lake testing by the beginning of this month. After that, Elastec will utilize the boats at the 2017 Elastec Inland Oil Spill Workshop held every year, the first week in October. The first few boats, of course, will be built to in-house specifications, however, that is all dependent on the customer. According to Elastec, an Inlander fitted with twin 90 hp Suzuki's and a tandem axle galvanized trailer will retail "in the mid-forties to low-fifties, depending upon options."

***The Inlander at a Glance …***

| | | |
|---|---|---|
| Hull: Modified vee hull, 60 deadrise | Beam: 8'5" | Draft (w/4,000 pounds cargo): 27" |
| LOA: 22' (24' with motor guard) | Sides: 36" | Freeboard (w/4000 pounds cargo): 24" |
| Draft (w/motors & 2 Crew): 21" | Speed: Up to 35 knots | Propulsion: twin 90 hp Suzuki (or jets) |

## Harvey Gulf Delivers Large Capacity Jones Act Compliant MPSV

Harvey Gulf International Marine announced the delivery of the first of two, large capacity Multi Purpose Support Vessels (MPSV), significantly enhancing the domestic Jones Act Fleet. The first vessel, the M/V HARVEY SUB-SEA, is a "best in class" Jones Act-qualified vessel that has the technical capabilities to efficiently, effectively and safely perform high quality field development activities that are currently being performed by a foreign fleet. Contrary to claims from foreign operators that U.S. vessels lack the capability to perform foreign-flag vessels for subsea construction, inspection and maintenance activities, the delivery of the M/V HARVEY SUB-SEA clearly demonstrates the capacity and capability of Jones Act qualified vessels to immediately perform the necessary work.

***The M/V HARVEY SUB-SEA at a Glance ...***

| | | |
|---|---|---|
| Flag: USA (Jones Act compliant) | LOA: 327' | Berthing: 150 |
| Crane: 250-ton knuckle boom | Beam: 73' | Deck Space: 13,000 ft2 |
| Certificates: ABS DP2, SPS Code, MLC 2006 | Draft: 29' | Moon Pool: 24' x 24' |

## SAFE Boats, COTECMAR to Co-produce Vessels for Colombian Military

SAFE Boats International announced that it has broadened its previously signed Memorandum of Understanding (MOU) with COTECMAR into a multi-year, definitive Association Agreement to co-produce many of its products already Colombia. The agreement includes co-production of SAFE models already in use in Central and South America such as the Defender, Apostle and Full Cabin Jet Boats along with its most recently introduced Multi-Mission Interceptor (MMI). The agreement encompasses program management, training, factory production training and subassembly and integration by COTECMAR in Colombia. COTECMAR, a Colombian government shipyard created in 2000, has proven experience delivering large ships and marine services to both Colombian and International users, and is a manufacturer of large Offshore Patrol Vessels, Coastal Patrol Vessels, Defense craft, BAL-C Logistics and Humanitarian Craft along with many other commercial and riverine vessels produced for the Colombian Navy, Marines and Coast Guard along with training and other services.

## Lake Assault's Fire & Rescue Boats


Lake Assault Boats, a manufacturer of purpose-built, mission-specific fire and rescue boats, recently displayed two vessels at the Fire Department Instructors Conference (FDIC) Exhibition in Indianapolis, Indiana. On view were the Lake Assault's nimble 21-foot rescue boat and a 28-foot fireboat that is capable of pumping 1500 gpm. The 21-foot Lake Assault rescue boat features an innovative hull design with removable side railings that enable emergency responders to quickly and more easily rescue someone off the side of the boat. That vessel is deployed on the epic Mississippi River that runs through the department's response area. A second Lake Assault craft on display featured a 28-foot hull length, a 9-foot 6-inch beam, and a carrying capacity of 4,000 lbs. Manufactured from high-strength marine grade 5083 and 5086 aluminum, the hull and superstructure are MIG and TIG welded throughout for added strength and long life. It includes twin Mercury Verado 250 hp outboard engines along with the exclusive Mercury Joystick Piloting and Skyhook Digital Anchor systems for unmatched boat control, and enhanced safety and performance. Other features include a Darley fire pump rated at 1500 GPM, a 76-inch tall pilot house, a full suite of Garmin electronics, a 63-inch hydraulically operated bow door and LED underwater lights integrated into the front lip of the bow door.

# U.S. Coast Guard Cutter Powered by GE Marine Gas Turbine


GE's Marine Solutions announced that the United States Coast Guard commissioned Munro, a new National Security Cutter (NSC), on April 1 in Seattle, Washington. All of these new Legend class cutters use the same reliable Combined Diesel and Gas turbine (CODAG) propulsion system featuring one GE LM2500 gas turbine and two diesel engines. Munro is the fourth NSC to be homeported on the West Coast in Alameda, California. In March, the U.S. Coast Guard's seventh NSC Kimball was christened. The LM2500 gas turbines used for the NSCs were manufactured at GE's Evendale, Ohio, facility. Worldwide, more than 1,400 GE gas turbines log over 14 million hours serving 35 navies on 500 naval ships for 100 military ship programs ranging from patrol boats, destroyers and cruisers to corvettes, frigates, amphibious ships and aircraft carriers.

# *Horizon Delivers 120' Retractable Towboat to FMT*

Horizon Shipbuilding recently delivered the M/V Victoria Pasentine, a 120-foot towboat with a retractable pilot house, to its home port of New Orleans, LA. This is the twentieth vessel delivered to Florida Marine Transporters by Horizon and ninth year doing business together. The M/V Victoria Pasentine has an ABS Load Line Certificate to operate in the waters between Chicago to Burns Harbor for fair weather voyages. It is also outfitted for service in certain areas restricted to overhead clearances and draft limitation. Sleeping accommodations and facilities are provided for eight (8) persons and sound dampening systems have been implemented throughout the main deck house.

***The M/V "Victoria Pasentine at a glance …***

| | | |
|---|---|---|
| LOA: 120'-0" | Engines: two CAT 3512 @ 2011 HP, 1600 RPM | Gross Tons: 387 |
| Beam: 35'0" | Gen Sets: (2) 175kw Tier 3 John Deer 6090 | Gears: Twin Disc |
| Draft: 11'-6" | Construction: All Steel | Max Air Draft: 17'-8" |

# Rohr-Idreco Delivers New Mobile Dredge

Rohr-Idreco recently completed installation of a RISD350-M 14" (350 mm) electric dredge for application in the sand & gravel market. The dredge has a digging depth of 90 feet with production capacity in excess of 400 tph. The dredge is equipped with a state-of-the-art GPS and sonar system that provides the operator virtually real time information on where material has been dredged and where virgin material still lies through an intricate mapping system. In addition, the customer requested Rohr-Idreco install a remote plant monitoring screen for plant personnel to view key operating data from the dredge. The dredge is equipped with a RISD350 14" (350 mm) high efficiency Rohr-Idreco dredge pump, which is one of the most efficient and modern dredge pumps currently available in the market. It reduces wear and increases production with less energy consumption.


Bjuve


Cox


Lawrence


Credit: GLDD
Petterson


Curtis

## Volvo Penta Names Bjuve as VP

Volvo Penta of the Americas announced the appointment of **Martin Bjuve** as vice president for customer support and training. He will provide strategic direction and management for support and product training for dealers and customers across the United States, Canada, Mexico, Central America and the Caribbean. Bjuve has served as vice president and CFO at Volvo Penta of the Americas since 2013 and previously earned a Master of Business Administration from the University of Karlstad.

## Matson Appoints Cox as Chairman

Matson announced the appointment of company President and CEO **Matthew J. Cox** to the position of Chairman of the Board. Cox retains his duties as Chief Executive Officer. Cox joined Matson in June 2001 as Senior Vice President and Chief Financial Officer. Additionally, the Board of Directors designated **Jeffrey N. Watanabe** to serve as Lead Independent Director of the Matson Board. **Ronald J. Forest**, SVP Operations, has been promoted to President of Matson with continued responsibility for all of the company's operations. **John P. Lauer**, SVP Ocean Services, has been promoted to Chief Commercial Officer of Matson with continued responsibility for sales, marketing, customer service, pricing and government services for the ocean transportation division.

## McDermott Names Lawrence as VP, Treasurer & Investor Relations

McDermott International announced that **Ty Lawrence** has been appointed Vice President, Treasurer and Investor Relations, replacing **Kathy Murray** who has been appointed Vice President of Finance for Project Execution and Delivery. Previously, Lawrence was Senior Director of Finance for McDermott's Americas, Europe and Africa Area (AEA). He joined McDermott in 2013.

## Petterson Named CEO at GLDD

Great Lakes Dredge & Dock Corporation (GLDD) announced that **Lasse Petterson** assumed the role of Chief Executive Officer (CEO) on May 1, 2017. In his over 35-year career, Petterson gained extensive experience in the engineering, construction and maritime industries. Most recently, Mr. Petterson served as a private consultant to clients in the Oil & Gas sector. He holds both master's and bachelor's degrees from the Norwegian University of Technology.

## TSGI Welcomes Kyle Curtis

The Shearer Group, Inc. (TSGI) announced that **Kyle Curtis** joined TSGI as a naval architect. Prior to joining TSGI, Kyle worked for Versabar as a marine engineer and a structural engineer. He received a B.S. in Ocean Engineering from Texas A&M University.

## New Management for Rohr Dredge

**Kurt Syverson** has been promoted to Manager of the Rohr Dredge North America operation. Kurt earned a B.S. in Mechanical Engineering in 2003 from St. Cloud State University. He has been a member of Ellicott Dredge Technologies' engineering group since August of 2003. Kurt is now responsible for all facets of the operation, from sales through field assembly.

## NETSCo Announces Management Additions, Promotions

NETSCo announced the promotion of **Jan Flores** to Vice President. Jan's primary responsibilities include directing the engineering and consulting efforts of the company to meet the commitments made to NETSCo's clients. In 2014, Flores joined NETSCo as Senior Business Development Director with more than 20 years in the maritime and offshore industry. Prior to joining NETSCo, he directed the FSO Group at OSG and was responsible for Business Development in the offshore market. Separately, **Trish McIntyre** has joined the firm as Engineering Manager. Trish comes to NETSCo after 26 years of experience in the design, installation, functional testing and inspection of marine machinery installations. Prior to NETSCo, she held the principal engineer position at ABS for the machinery group. Trish holds a degree in Marine Engineering from Texas A&M University and has served on the ABS Rule Development and Technical Committees. **Matt Davidson** recently joined the Florida office at NETSCo as


Syverson


Flores


McIntyre


Nicholls


Fridline

Jr. Naval Architect / Marine Engineer. Prior to NETSCo, Matt was Project Engineer for OSC Ship Management over-seeing the engineering requirements for 24 tankers and ATB's. At DNV GL, he was responsible for the structural verification of offshore constructions including semi-submersibles, TLPs and topside structures. Matt has a BS in Ocean Engineering and Naval Architecture from the Memorial University of Newfoundland.

## Nicholls Elected President of ADCI

U.S. Underwater Services, LLC announced that **Bryan Nicholls**, President and COO, was elected President of the Association of Diving Contractors International (ADCI). The ADCI is a professional association that promotes best industry practice with respect to the health and safety of commercial divers and underwater operations. Nicholls has served on the board of the ADCI since 2009, and was Second Vice President and Chairman of the Safety Committee from 2014-2017. "I am proud to have served the ADCI for the past 8 years, and I will continue to contribute what I can to improve upon the best industry practices that our association and its membership have already established," said Nicholls.

## Fridline receives SUNY Chancellor's Award

**Dan Fridline**, associate professor of mechanical engineering, received a Chancellor's Award for Excellence


Reed


Hirono


Fireman


Butler

in Scholarship and Creative Activity from the State University of New York. Fridline's research focuses on monitoring the structural health of offshore structures and he has been successful both in securing external funding for his studies and in including undergraduate students in his work. Separately, Richard Burke, ABS professor of naval architecture and marine engineering, received the Chancellor's Award for Excellence in Service.

## Reed to Manage Maritime Sector for WSP Parsons Brinkerhoff

**James Reed** has been named maritime manager for the Pacific Northwest at WSP | Parsons Brinckerhoff. Reed has more than 34 years of experience as a civil engineer and project manager. A licensed professional engineer in Washington state, Reed received an M.S. in civil engineering from Johns Hopkins University and a B.S. in civil engineering from Montana State University.

## Hirono Honored by Propeller Club

The International Propeller Club of the United States announced that Senator **Mazie K. Hirono** (Hawaii) was honored at the Club's annual Salute to Congress dinner in May. Hirono was recognized for her support of the United States maritime industry. Past recipients of the award include then-Speaker of the House Thomas P. "Tip" O'Neill and then-Senate Majority Leader Trent Lott in 1997.

## ABS CTO Shares Insight on Smart Shipping

ABS Chief Technology Officer and University of Michigan alumnus **Howard Fireman** addressed students, professors and guests at the university to share his vision of the future of shipping. In a lecture titled *"A Brave New World,"* Fireman outlined the challenges introduced by the marine industry's transformation to autonomous vessels, explaining how data, systems and software will evolve to self-sufficiency on the vessel as navigational control and operational decision-making become more centralized.

## Wago Welcomes Regional Sales Manager

Wago Canada continues its growth with the addition of **Patrick Butler** as Regional Sales Manager in Southwestern, Ontario. Butler is an Ontario native, and previously spent 16 years with Phoenix Contact as a District Application Specialist, a Regional Sales Manager, and Regional Channel Manager.

## Great Lakes Towing looks to ABS for SubM Compliance

ABS has been awarded a Third Party Organization contract by The Great Lakes Towing Company (GLT) to support compliance with the United States Coast Guard (USCG) Subchapter M regulations. The contract with GLT, which is a member of the American Waterways Operators (AWO), establishes ABS as the company's Third Party Organization (TPO), providing surveys for its fleet and audits of its Responsible Carrier Program (RCP).

## Vigor to Acquire Third Drydock for Seattle Shipyard

Building on its ongoing investments in infrastructure and fulfilling a promise to expand West Coast drydock capacity, Vigor has entered into an agreement to purchase a drydock from a Korean seller. At 640 feet long with a clear width of 116 feet, the new dock will be the third, and largest, at Vigor's Harbor Island shipyard. "The purchase of another drydock in Seattle allows Vigor to better service valued customers like Washington State Ferries, the U.S. Coast Guard and U.S. Navy," notes Adam Beck, Vigor Executive Vice President of Ship Repair.

## Louisiana to Use Grants for OSVDPA Assessments

The Offshore Service Vessel Dynamic Positioning Authority, Inc. (OSVDPA) announced the Louisiana Workforce Commission (LWC) has approved use of Incumbent Worker Training Program (IWTP) grants to cover the cost of OSVDPA Phase 4 Assessments. OSVDPA Executive Director Aaron Smith noted, "It's great to see the Louisiana Workforce Commission recognize the OSVDPA's assessments as an important part of the professional development of mariners. Allowing those funds to be put towards OSVDPA assessments is a tes-


Harbor Island Shipyard


Smith


Allegretti

tament to Louisiana's commitment to having the safest and most competent mariners in the industry." In addition to two classroom courses and two periods of on board experience gathering, the OSVDPA requires every mariner to pass an OSVDPA Assessment before being issued his or her OSVDPA DPO Certificate. These practical assessments can be completed on board a vessel or on a simulator.

### Lloyd's Register Approved as Third-Party Auditor for AWO's RCP

The American Waterways Operators (AWO) has approved Lloyd's Register as a third-party organization authorized to conduct audits of AWO member operations as part of its Responsible Carrier Program (RCP). RCP is a safety management system that provides a framework for the U.S. tugboat, towboat and barge industry to continuously improve safety and environmental performance. In order to be in compliance with the RCP, member companies must undergo recurring management and vessel audits by an approved independent third-party entity. AWO President & CEO Tom Allegretti said, "One of AWO's core missions is to ensure that its member companies operate according to the highest safety and environmental standards, and the success of the RCP in accomplishing this objective depends on utilization of high-quality auditors like Lloyd's Register."

## Lamor Boosts Guam's Oil Spill Recovery Capacity

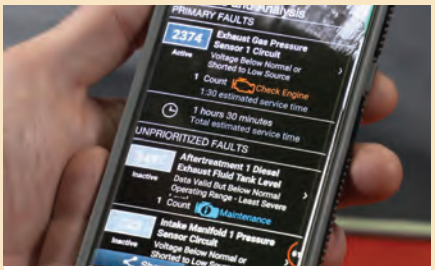
Lamor recently commissioned their LSC 4C Side Collecting Oil Skimming System for Guam's Oil Spill Response Operations Company (OSROCO) and T&T Marine Salvage (T&T) making it the largest skimming system in the region. The LSC 4C Side Collector is permanently mounted to the dedicated response barge "Tabangao," increasing the region's Estimated Daily Recovery Capacity (EDRC) by an additional 12,000 bbls per day.

www.lamor.com

## Damen InvaSave Port-Based BWMS

The containerized InvaSave 300 ballast water management system (BWMS) is barge-mounted, quickly connected to the vessel using standard hose connections. Ballast water is then pumped out of the ship and passed through InvaSave for treatment before being discharged. The IMO-approved Damen InvaSave is an external ballast water treatment unit designed for use in ports. It can be operated dockside or onboard a vessel.

www.damen.com




## Cummins Guidanz Mobile APP Improves Customer Uptime

Cummins customers can read prioritized engine fault codes and key engine information within minutes wherever operating with the new Cummins Guidanz mobile app. Available as a free, the Guidanz mobile app arms customers with critical information about Cummins engines that they can email to managers, service providers or a Cummins Care representative directly from the app to initiate the service process.

www.cummins.com

## Sea-Fire Protects Offshore Comms Hub

SeaRoc Group's monitoring, voice and data communication solution links operations to offshore petroleum platforms via satellite, fiber and data services. An engineered fire detection and suppression system from Sea-Fire protects sensitive and valuable electronics inside these unmanned SeaHubs. Sea-Fire' engineered solution meets IMO and SOLAS requirements. The system includes smoke and heat detectors, an extinguishing release panel and cylinders containing 3M Novec 1230 fire suppression fluid.

www.sea-fire.com

## Jotun's NORSOK Approved Offshore Coating System

Jotun's Maintenance coating system offers offshore operators protection, durability and ease of application while reducing costs. The Barrier Smart Pack - Jotamastic Smart Pack HB and Hardtop One – will be the first NORSOK approved solution for brush and roller application on power tooled and water jetted surfaces. Jotamastic Smart Pack HB delivers the benefits of two-component high quality polysiloxane coatings, in a single component polysiloxane coating.

www.jotun.com

## JonRie InterTech's Double Drum Escort Winch

JonRie Marine Winches commissioned its Container Master Series "220" Double Drum Escort Winch on the ASD Tug Independent. Designed for larger capacity rope, it features JonRie's Constant Tension systems and has the capacity to spool 600' of 9" Hawser, 18 Ton line pull and a line speed of 100 FPM, with an auto abort system and a backup 24 VDC system if power is lost on the tug.

www.marinewinch.com

## Hempel's Advanced "splash zone" Coatings

Hempel's advanced coatings protect vulnerable "splash zone" areas of offshore structures. The "splash zone" is the area of an offshore asset just above the waterline and suffers from the dual impact of atmospheric and immersion-type corrosion; as well as physical damage such as abrasion and impact. Hempadur Multistrength 35840 and 35842 are Hempel's new coatings that will revolutionize the way the "splash zone" is protected.

www.hempel.com

## Simrad Launches NAIS 500 Class-B AIS

The Simrad NAIS 500, essential for navigating busy, congested ports, includes a dedicated compact, lightweight waterproof GPS-500 receiver. Offering low power draw and multiple connections for networking with any NSS, NSO or GO series chartplotter/multifunction display and Simrad RS VHF systems, it meets regulations set for Class-B AIS transponders. The NAIS 500 ensures that a vessel is displayed – reducing the risk of collisions.

www.simrad-yachting.com

## Imtra Offers Next Generation Helm & Operator Chairs

IMTRA's NorSap 1600 Standard, NorSap 1800 Active and NorSap 4000 Impulse models are ergonomic and high-quality helm seats and operator chairs. The NorSap product line offers an array of options to accommodate a wide variety of environments with modular designs and enhanced ergonomics to meet the most challenging conditions. Ergonomic settings can be saved in memory for quick recall of individual operator preferences.

www.imtra.com

## MobileOps Platform Serves Tug & Barge Fleets

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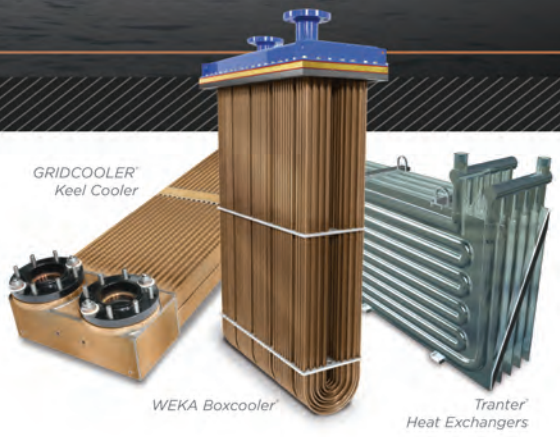


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