Insights
Jan Kees Pilaar
MD, Blohm + Voss

U.S. Shipbuilding
NSRP: Navy & Industry Partner

Profile
Life, Business & Future of John Dane III

Government Update
Shipping & Sanctions

Market Report
LNG Growth Drivers

Fast Craft
Vibration Mitigation

Shipboard Waste Management
Terragon Enviro & The Next STEP

Preview
Shipping Insight 2012
GE Marine

CHANGE IS ON THE HORIZON. WE’LL GUIDE YOU THROUGH.

Commercial ships are steering toward a cleaner alternative.

GE Marine gas turbine engines are so environmentally efficient, they meet Tier IV 2016 IMO regulations today. Plus, these engines are smaller, lighter and dual-fuel capable, which means they can use alternative fuels – like natural gas or biofuel – that cause less wear and tear. So make a change now for a better tomorrow. And you won’t have to worry about costly retrofits in the future.

See what you and GE Marine can accomplish together.

GE.com/commercialmarine

GE Marine is a division of GE Aviation (Cincinnati, OH)
Meeting aggressive schedules.

Whether it’s a ship repair or new construction, vessel owners rely on the delivery timeline we provide to set their schedule. We excel at meeting demanding schedules and minimizing project risk.

Applying lean manufacturing processes has systematically boosted operational performance on a continual basis to facilitate the building of world-class vessels more efficiently. Our customers value the cost-effectiveness, higher standard of quality, and our industry-leading safety record.

From management to highly skilled craftsmen, the entire Signal team embraces a zero defect quality control program to put your vessel back to work when promised.

Our capability is demonstrated time and again through repeat business. We specialize in new construction, repair, and conversion of ships, workboats, rigs, specialty barges, modules for refinery expansion and offshore wind and wave components.

Scan here to view a case study of our most recent projects.

ISO-9001:2008 • ANAB Accredited • TRC

SIGNAL INTERNATIONAL
A Marine & Fabrication Company

Maximizing your investment.

www.signalnt.com

Signal Ship Repair
...a division of Signal International

For more information or facility tour • Rob Busby – New Construction +1.713.557.4517 • Joe Mayhall – Signal Ship Repair +1.251.544.2627

MOBILE AL • PASCAGOULA MS • ORANGE TX
Welcome to Hamburg!

The SMM 2012 sets to convene again in Hamburg, Germany in early September, and pictured here is an indelible sight on the Hamburg waterfront, the Blohm + Voss Repair in Hamburg on the River Elbe.

On the occasion of our SMM edition, and in conjunction with our “Shipyards” coverage, MR interviews Jan Kees Pilaar, managing director, Blohm + Voss, starting on page 44.

14 INTERVIEW: ANDREW MAK, COO, TRIYARDS
With yards in Vietnam and Houston, TRIYARDS is a specialist in a broad spectrum of engineering and fabrication solutions.

by Greg Trauthwein

16 SHIPPING & SANCTIONS
Economic sanctions, imposed by national and international governments for a variety of political reasons, can be snare traps for unsuspecting maritime enterprises.

by Dennis L. Bryant

18 LNG MARKET PROSPECTS TO 2016
Douglas-Westwood’s new LNG Market report examines new prospects for liquefaction & regasification (import) terminals and LNG carriers.

by Murray Dormer, Douglas-Westwood

22 EXPORT CONTROL REFORM
Inter-agency effort to reform the U.S. export control regime has resulted in specific proposals to transfer oversight to the Department of Commerce’s Bureau of Industry and Security (BIS).

by Barbara Linney & Kevin Miller, Miller & Chevalier

24 MARITIME ... OR NOT?
What constitutes a Maritime Contract under U.S. Law & why you should care.

by Thomas H. Belknap, Jr., Blank Rome

26 SHAKE, RATTLE & ROLL
Study of effects of whole body vibration on crew and passengers aboard fast craft.

by John Haynes

30 WAVE ADDED RESISTANCE
MARIN unveils some secrets of wave added resistance.

by Patrick Hooijmans

32 MARINE INSURANCE: READY FOR THE WORST
Marine insurance and making effective catastrophe plans for hurricane zones.

by Kirk Rider & Charlie Pugliese

34 TORQUE MARINE IPS
While many view investments in new technology as an expense, rules regarding emission reduction can actually pay back via fuel consumption reductions.

by Peter Pospeich

40 THE CORVUS POWER PLAY
Corvus Energy has created a revolutionary battery for the maritime market, a power source with power density, longevity and durability that has led to the company’s rapid ascension.

by Greg Trauthwein

44 ON THE COVER
Pictured on the cover is an Austal USA aluminum welder working on USS Independence (LCS 2). Thirty pages of Shipyard coverage starts on page 44.

ALSO IN THIS EDITION
10 EDITORIAL
74 BUNKER FUEL MANAGEMENT
76 MARINE ELECTRONICS
86 PEOPLE & COMPANY NEWS
94 PRODUCTS
106 BUYER’S GUIDE
107 CLASSIFIEDS
112 ADVERTISER’S INDEX

SUBSCRIPTION INFORMATION
One full year (12 issues) $73.00; two years (24 issues) $105.00 in U.S. (Canada & Mexico also)
Rest of world one year international $120.00; two years $174.00 including postage and handling. For subscription information:
Email: mrcir@marinelink.com • www.marinelink.com
Tel: (212) 477-6700 • Fax: (212) 254-6271
PSX® ONE
Isocyanate Free Single Component Siloxane

PSX ONE is PPG's new addition to the world-renowned PSX range of siloxane coatings. Building on a decade of proven performance, PSX ONE is a one-component acrylic siloxane that combines the performance, color and finish of a high quality urethane with additional durability and the convenience of a single component. This topcoat provides you with many of the benefits of siloxane coatings in an easier-to-use one-component product. PSX ONE provides a high-gloss finish in a single component, without isocyanates.

PPG, your partner for quality, protection and performance.

www.ppgpmc.com/northamerica
1-888-9PPGPMC
PMCMarkeing@ppg.com
#1 Authorized OEM Resource In The Americas

SUBSCRIPTION INFORMATION
One full year (12 issues) • in U.S.: $69.00; two years (24 issues) $98.00 • in Canada: $73.00; two years (24 issues) $105.00 • Rest of the World: $98.00; two years $152.00 including postage and handling. For subscription information:
Email: mrcirc@marinelink.com • www.marinelink.com
Tel: (212) 477-6700 • Fax: (212) 254-6271

POSTMASTER: Send address changes to: Maritime Reporter/118 East 25th Street, New York, NY 10010-1062
Maritime Reporter is published monthly by Maritime Activity Reports Inc. Periodically, postage paid at New York, NY and additional mailing offices.

SUBSCRIPTION INFORMATION
One full year (12 issues) • in U.S.: $69.00; two years (24 issues) $98.00 • in Canada: $73.00; two years (24 issues) $105.00 • Rest of the World: $98.00; two years $152.00 including postage and handling. For subscription information:
Email: mrcirc@marinelink.com • www.marinelink.com
Tel: (212) 477-6700 • Fax: (212) 254-6271

POSTMASTER: Send address changes to: Maritime Reporter/118 East 25th Street, New York, NY 10010-1062
Maritime Reporter is published monthly by Maritime Activity Reports Inc. Periodically, postage paid at New York, NY and additional mailing offices.

SUBSCRIPTION INFORMATION
One full year (12 issues) • in U.S.: $69.00; two years (24 issues) $98.00 • in Canada: $73.00; two years (24 issues) $105.00 • Rest of the World: $98.00; two years $152.00 including postage and handling. For subscription information:
Email: mrcirc@marinelink.com • www.marinelink.com
Tel: (212) 477-6700 • Fax: (212) 254-6271

POSTMASTER: Send address changes to: Maritime Reporter/118 East 25th Street, New York, NY 10010-1062
Maritime Reporter is published monthly by Maritime Activity Reports Inc. Periodically, postage paid at New York, NY and additional mailing offices.
How did KVH become No. 1 in maritime VSAT?*

*Euroconsult Report, March 2012 and NSR, May 2012

Fast
Data rates up to 4 Mbps

Global
Unified C/Ku-band network covers 95% of Earth

Affordable
Offering versatile airtime options with metered rate plans at 1/10th the cost

Reliable
One manufacturer, one network, one end-to-end solution with 99.5% uptime

Small
Antennas 85% smaller than other maritime VSATs

If you’re tired of rising SATCOM costs, come on over to the mini-VSAT Broadband world!

Get KVH’s new report
“Comparing KVH mini-VSAT Broadband to Legacy Solutions” at:

www.minivsat.com/one
60 SHIPYARDS WEATHER THE STORM (AGAIN)
Large or small, domestic or foreign, many shipyards have hauntingly familiar tales. They work in a notoriously cyclical markets which can wreak havoc on attracting and retaining top talent; and capital intensive, demanding steady investment to stay safe, compliant and efficient, no matter the health of a particular year’s balance sheet. Through it all, though, you arguably will not find a more resilient or resourceful brand of business.

44 JAN KEES PILAAR, MD, BLOHM + VOSS
by Greg Trauthwein

48 NSRP: NAVY, INDUSTRY PARTNER
by Edward Lundquist

68 ABG SHIPARD
Insights on the largest private shipyard in India
by Joseph Fonseca

46 ASRY EXPANDS OFFSHORE OPS
Bahrain-based yard invests $188m in upgrades.
by Edward Lundquist

49 SMART GROWTH AT MARINETTE MARINE
Wisconsin yard doubles size over few short years.
by Edward Lundquist

52 LIFE, TIMES, BUSINESS & FUTURE OF JOHN DANE III
by Susan Buchanan

54 THOMSON JOINS SEASSPAN AS VP, PROGRAM MANAGEMENT

56 FIRST OF FOUR GPA 688SC PSVS LAUNCHED FROM DETROIT BRASIL LTDA

58 AUSTAL USA CONTINUES BUILDING NEXT-GENERATION USN WARFIGHTERS

64 OFFSHORE INLAND: MOBILE & CAPABLE
Topside service and repair work around the world.
by Rhonda Moniz

70 NORTHEAST SHIP REPAIR
Two yards in Boston and Philadelphia

72 SHIPBUILDING WITH A VIGOR
Vigor is gearing up to double in size in the coming five years.

Digging in with a Vigor

Vigor, already a major driver in the consolidation and expansion of shipbuilding operations on the U.S. West Coast, has plans to double its size in five years.

Read Vigor’s story on page 72
Did you hear the one about the guy who fell asleep on the bridge?

It wasn't funny.

The USCG states that thousands of preventable maritime accidents are caused by operator inattention, citing this twice as frequently as the next leading factor. Understandably, the International Maritime Organization is requiring the installation of Bridge Navigational Watch Alarm Systems (BNWAS) aboard mandated vessels to monitor operator fitness.

The Furuno BR500 BNWAS is designed with a wide selection of sensors, timer reset units and cabin alarm panels. Our external processor offers flexible positioning, providing ample space to easily secure all cable connections, including operator fitness inputs from existing Furuno and other similar bridge equipment. A single cable connects the easily accessed processor to a compact control head, significantly reducing installation time and expense. That’s great news for vessel operators, as the mandatory IMO fitting dates are rapidly approaching.

If you haven’t brought your mandated vessel into compliance yet, take a look at the BR500 BNWAS Suite from Furuno!

www.FurunoUSA.com
message out. Maybe it is time for the domestic maritime industry to do the exact same thing. Typically, it is an educational advocacy group that puts this sort of policy decisions and dearth of financial support from inside the Beltway is perhaps the bigger story.

Mother Nature will, of course, have a big hand in that educational experience. But the ongoing neglect in terms of public awareness. That it must happen only as a function of the lack of available water that threatens to bring traffic on the rivers to a grinding halt shouldn’t be a surprise to anyone. Already, in some areas, traffic is being limited to one-way passage due to the rapidly dropping water levels.

Even as Mark Mestemacher, co-owner of Ceres Barge Line, was being quoted on NPR as saying that river levels near East St. Louis had deteriorated to three-foot levels all the way from 20-feet just two months, the drought that has gripped much of the nation’s mid-section showed no signs of letting up. With river levels already pushing record lows, the crisis only underscores the needed maintenance on domestic river locks, dams and other infrastructure. Unfortunately, and at the same time, the USACE’s proposed budget has been slashed by about 5 percent for the coming year.

According to some estimates, for every foot of draft lost by seven typical river barges, another similar barge must be loaded to make up for the lost cargo. And, American Waterways Operators (AWO) President Tom Allegretti recently noted that every one-inch loss of water decreases the carrying capacity of a single barge by 17 tons of cargo. Losing one foot of draft results in a loss of 204 tons of cargo capacity per barge. He added, “When you consider that a typical tow on the Upper Mississippi or Ohio Rivers has 15 barges, a one-foot loss of draft will decrease the capacity of that tow by 3,000 tons,” Allegretti stated.

Also according to AWO, the low-water levels resulting from severe drought conditions in the Midwest are a stark contrast to the historic flooding of 2011 but share the same potential for significant economic consequences. The 350-member trade association represents the nation’s tugboat, towboat and barge industries. Allegretti insists, “The implications of the drought conditions and low-water levels are a one-two punch for the economy, impacting both the agricultural community and one of the major modes of transporting agricultural and other essential products.” This, added to the already miserable condition of aging inland infrastructure is, without a doubt, the recipe for economic disaster. Sadly, few Americans appreciate the realities of the day. They may – and very soon – be in for a rude awakening.

Allegretti and his AWO staff have been working closely with the U.S. Coast Guard and Army Corps of Engineers through the River Industry Executive Task Force (RIETF) to assess the impact of the low water and find ways to keep commerce moving safely. Curiously, AWO’s efforts on behalf of its membership coincide with the U.S. Department of Agriculture’s declaration that more than 1,000 counties in 26 U.S. states are natural-disaster areas as the ongoing drought grips the Midwest. The edict from Washington means that farmers and ranchers in an area that encompasses about 30 percent of entire country are now eligible for low-interest loans to help them weather the drought and related issues caused by it. The USDA is even changing procedures to allow claims to be processed faster and easing other rules to make life easier for ranchers. To my knowledge, no such relief is being contemplated for workboat operators on inland rivers. I’m happy to be proven wrong on that point. Let me know.

The latest weather forecasts do not promise any appreciable amounts of precipitation, meaning that the massive drought impacting the nation’s heartland will continue to wither crops and dry up rivers. As consumers are warned about the impending price increases for corn and beef, little is being mentioned about the state of the transport industry and infrastructure that eventually gets this product to market. That the farming industries get relief is no surprise. Maritime businesses accustomed to seeing reduced funding from Washington for their concerns shouldn’t be surprised, either.

The worst drought in 50 years is scorching about two-thirds of the nation’s land area and has had a similar effect on the nation’s waterways. That mainstream national media outlets are giving airtime to highlight the latter condition is heartening. NBC Nightly News yesterday even dubbed the Mississippi River as “America’s Maritime Superhighway.” It only they knew the truth about how “super” it could really be, given more emphasis in Washington on a daily basis. Maybe DOT and Marad was watching last night. No, probably not.

With no relief in the weather expected for the balance of the summer, Americans are about to learn (the hard way) as to the critical nature of inland waterways, and for that matter, the greater domestic waterfront as a whole. Mother Nature will, of course, have a big hand in that educational experience. But the ongoing neglect in terms of policy decisions and dearth of financial support from inside the Beltway is perhaps the bigger story.

As we hear about the massive disaster relief getting ready to be heaped upon farmers and ranchers (and I’m happy that they will get it) I’m also reminded of a bumper sticker that I’ve seen more than a few times in my travels. The Slogan reads something like, “It will be a wonderful time when the military industrial complex has to hold a bake sale in order to make ends meet.” Typically, it is an educational advocacy group that puts this sort of message out. Maybe it is time for the domestic maritime industry to do the exact same thing.
This is how I work to make critical repairs to support my crew to support my ship. This is how I work to build my future and take command of my career with Military Sealift Command.

It’s your turn to get the career you deserve. No contracts or long-term commitments – just secure, stable employment with the federal government. Opportunity awaits at sealiftcommand.com
While it certainly is true that shipyards large and small, near and far, have been in some form of ‘struggle’ mode since the financial collapse and lingering stagnation since 2008, as always there are pockets of prosperity to be found and the truly strong shall survive. As most of you know, the pockets of prosperity today reside offshore, as in the offshore energy business. Offshore technology, more succinctly the evolution of technologies that allow oil majors to more quickly, efficiently and cost effectively discover and recover oil and gas, continues to evolve at a rapid rate. With the evolution comes a bigger, stronger and more capable breed of Offshore Service Vessel, such as the first of four GPA 6885C PSV’s designed by Guida Perla & Associates and launched in Brazil from Detroit Brasil Ltd.

Regular readers of our pages recognize that August is Maritime Reporter & Engineering News’ traditional Shipyard edition, a fitting end to the dog days of summer and introduction to the busier days and months ahead. To that end we present here more than 30 pages of coverage on shipyard activity from around the world, via personal interview with industry leaders and overviews of innovative yard of every conceivable shape and size.

In particular, I would like to extend gratitude to Jan Kees Pilaar, Managing Director Blohm + Voss in Hamburg, Germany, for taking the time to provide thoughtful insight and commentary to not only his shipyard’s endeavors, but to the maritime market as a whole. I met with Mr. Pilaar on the sidelines of the Connecticut Maritime Association’s (CMA) Shipping 2012 exhibition back in M arch, where he agreed to the interview for this edition. Seeing that this is the edition that will distribute at the upcoming SMM 2012 exhibition in Hamburg — which for those of you have never had the opportunity to attend is hands-down the largest and best shipbuilding and marine technology show in the world — it is only fitting that Mr. Pilaar’s interview serves as the informal “kick-off” to our shipbuilding coverage, starting on page 44.

While the vast majority of our shipbuilding coverage is dedicated to commercial matters, contributing editor Edward Lundquist on page 48 provides M R readers with a most insightful view of the National Shipbuilding Research Program, the program by with the Navy and the industry partner for research and the sharing of cost, risk and reward in the never-ending quest to reduce the total cost of ownership. Connie Bowling, the Navy’s NSRP Program Manager, Naval Sea Systems Command, informs M R readers with the story of a robotic welder created in a basement workshop as a modest NSRP project involving a small business and the University of Tennessee. Bowling says four shipyards are now employing the welder for use on the Navy’s DDG 1000, DDG 51, LPD 17, the Coast Guard’s National Security Cutter, and tank barges, and others are purchasing the system to introduce at their yards. “We’ve saved 88% reduction in setup time, 93% reduction in removal/disassembly time and 30% reduction in total time on the job. And that’s just the easily measured stuff.”

In conjunction with the NSRP story Lundquist was able to visit the Marinette Marine, which has been on a fast-track growth plan in conjunction with its successful bid in the Littoral Combat Ship program, among others. According to Scott A. Wellens, the company is doubling the size of its physical plan in just a few short years.

These are just a sampling of ship construction companies on the move. The historic $33B Canadian Navy ship construction contract has both Irving & Seaspan investing heavily in infrastructure, equipment and people; Vigor Industrial on the West Coast has been a major player in the consolidation of shipbuilding power, is a major player in the burgeoning Alaska market and is set to double its size in the coming five years; and India’s ABG Shipyard — the largest private shipyard in India — under the guidance of Mr. Arun Phatak is expanding, too, preparing to open a new shipyard in Calcutta, he reports to our Joseph Fonseca in Mumbai.

Read about, and better yet, report back to us on your experiences in the current market, for coverage in our pages.

Gregory R. Trauthwein, Editor & Associate Publisher
trauthwein@marinelink.com

Maritime Reporter & Engineering News
MAN Alpha
Controllable pitch propellers

MAN Diesel & Turbo’s Alpha propeller programme has been extended with two new larger hub sizes (VBS 2080 and VBS 2240) – offering power transmission of up to and beyond 30,000 kW. Today’s high-efficient CP Propellers are created on the basis of state-of-the-art design tools and the accumulated experience from more than 7,000 units. Full pitch ahead!
Find out more at www.mandieselturbo.com

Engineering the Future – since 1758.
MAN Diesel & Turbo
Fendercare’s Rowlands Carries the Olympic Torch

On Wednesday July 4, Paul Rowlands, Marketing Executive for Fendercare Marine was given the honor of being an official Olympic Torchbearer and carrying the flame through Fakenham, Norfolk. Paul was nominated to carry the torch in recognition of his fundraising efforts, following the death of his daughter, Alice at just 15 days old in 2007. Alice was born six weeks early and with a rare liver condition, neonatal haemochromatosis, at the Norfolk and Norwich University Hospital in September 2007. After just five days she was moved to King’s College Hospital in London where she died. After her death, Paul, his wife Miranda and son Sam set up the Alice Rowlands Memorial Society (ARMS) to raise money for the Ronald McDonald House Charities (RMHC), which provides accommodation for families whose loved ones are in hospital miles from home. To date the family has raised almost £50,000 for RMHC through their website www.justgiving.com/teamrowlands

The (flash) Mob Rules
Massimo Bernardo, Chairman of Cruise Venice Committee: “Our intention was not “to give a trial of strength” against those who intend to close the harbour to large cruise ships. Rather we wanted to send an urgent call to Venice as a whole. It is necessary to understand the importance of supporting over 3,000 jobs, the income of hundreds of households, but above all the cultural interest which Venice is able to raise: in Venice, a cruise begins precisely with a visit to the city itself. A flashmob to support Venice cruise industry. More than 600 people responded.

Seminar for Younger Engineers

3rd CIMAC CASCADES
Towards the Elastic Engine: Developing Major Engine Systems in the Digital Age

The Award Winner: A. Weber, Kistler.

As the marine industry professes the need to groom the next generation of top level technical talent, organizations such as CIMAC are leading the way.

The third staging of the CIMAC CASCADES seminar for younger engineers and students took place at the ETH Institute of Technology in Zürich, Switzerland earlier this summer. Organized by the CIMAC National Member Association (NMA) in Switzerland, the Division Combustion Engines of the Swiss Mechanical and Electrical Industries (Swissmem), the event was considered a considerable success by all attendees. In what may become the standard framework for a CASCADES event, the seminar itself was preceded by a visit to a member company’s facility. Wärtsilä invited CIMAC delegates to view its Diesel Technology Center in Winterthur, site of research and development on large 2-stroke diesels. The viewing of the facility was complemented by an exhibit from a further CIMAC and Swissmem Member Company, ABB Turbo Systems based in Baden, Switzerland. Rounding off the first day was a boat trip with dinner on Lake Zürich.

In total more than 100 delegates and officials from 12 countries signed up to enjoy the program of lively and topical CASCADES presentations around the central theme of the efficiency, low emissions and flexible performance made possible by state-of-the-art electronic management on modern large engines. Following welcome addresses from Yashiuro Itoh, CIMAC President and Oliver Riemenschneider, Chairman of the Swissmem Division Combustion Engines, Professor Konstantinos Boulouchos, head of the ETH’s Aeroscience and Combustion Systems Laboratory, gave an excellent Keynote Speech. His theme was the differences, but principally the unexpectedly strong similarities between large and small engines, and the consequent potential for universally valid R&D work.

As requested by the organizing committee, each of the speakers, after fulfilling their topic obligation, expounded on the challenges, motivations and rewards of undertaking vital R&D projects early in their careers. In an especially interesting aspect, speakers stressed the differences between theoretical work in an academic environment and “real world” experience where the yardstick of economic viability has to be applied to every finding and proposed engine modification. The decision regarding the Best Paper was difficult in the view of the high standard of all the presentations. The decision finally fell in favor of the paper “Interfacing Thermodynamics and Controls - The Application of Combustion Pressure Sensors” from local presenter Alex Weber, Project Engineer Pressure Sensors Engines at Kistler Instruments. He was rewarded with a Certificate and free entry to the 2013 CIMAC World Congress to be held in Shanghai, China, from May 13-16, 2013. CIMAC recognized Swissmem for organizing the 3rd CASCADES and all the presenters for their excellent contributions:

- Melanie Hubacher, ABB Turbo Systems, Switzerland
- Elias Bürlü, Design Engineer Wärtsilä, Switzerland
- Markus-Christian Mier, Engineer, Thermodynamics Department MAN Diesel & Turbo, Germany
- Nora Viktoria Sarta, Engineer, Thermodynamics and Fluid Systems Department MTU Friedrichshafen, Germany
- Marcos Gutierrez, Project Manager DJAP, Switzerland
- Kevin Whitley, Applications Engineer Woodward Governor, The Netherlands
- Alex Weber, Project Engineer, Pressure Sensors Engines, Kistler Instruments, Switzerland
- Koji Edo, Deputy Manager, Design Section, Marine Diesel Engine Mitsubishi Heavy Industries, Japan.

Presenter MC Meier, MAN Germany.
Globe iFusion® VSAT
A Fully Customized VSAT System with Unparalleled Customer Support!

- Affordable - Guaranteed Committed Information Rate (CIR) with unlimited data at a fixed monthly rate
- Global Coverage - C-Band & Worldwide Ku-Band Antenna
- Remote Access - Reduce attendance & travel costs, troubleshoot vessel network issues from shore
- Self Diagnostics - Automated VSAT recovery with no onboard/onshore intervention required
- Reliable - The highest uptime surpassing the industry average
- 24 x 7 Support - Premium Tier 3 global support structure, manned by highly skilled IT & certified VSAT engineers

Please Visit us at SMM 2012
Hall 6 | Booth No. 107

www.globewireless.com
While you are geographically diverse, what do you count as the core strength of the TRIYARDS brand?

Mak: We have several key competitive strengths that position us to take advantage of opportunities we see in our industry. First, we ensure the quality of our products and achieve the engagement of our customers through our core values of Responsiveness, Innovation and Excellence. Second, we have a leading market position in Southeast Asia for the construction of self-elevating units. We are also involved mainly in carrying out medium to heavy steel fabrication work as well as providing equipment manufacturing services to a wide range of industries. TRIYARDS Houston produces equipment such as cranes, A-frames and winches, which can be installed on the self-elevating units and offshore support and construction vessels fabricated in Vietnam.

How is TRIYARDS investing in its yard to make it more efficient?

Mak: Our strategic objective is to establish our Group as one of the leading self-elevating units and platforms, offshore support and construction vessels and offshore equipment fabrication yards in Vietnam and the whole of Southeast Asia. We plan to achieve our objective by expanding the Group’s product range of self-elevating, self-propelled accommodation and construction units, offshore support and construction vessels. We are also looking to expand into new product categories and developing our own equipment product line and brand, and constantly strive to upgrade our fabrication capabilities.

What do you consider to be the top challenges of running an efficient, profitable industrial construction business today?

Mak: The two top challenges of running an efficient, profitable industrial construction business today are keeping ahead with technology to ensure that products better meet the needs of the industry, and building an optimal organization with the right talent. With our emphasis on Responsiveness, Innovation and Excellence, TRIYARDS is at the forefront of innovation that responds to industry needs. Our Lewek Constellation will be the crowning glory of TRIYARDS. It will be one of the most technologically-advanced construction vessels in the world when ready, and will add to TRIYARDS’ track record for delivering quality products. Recruiting and retaining talent is a global challenge. In order to ensure that TRIYARDS remains a competitive employer, we have structured systems of grooming all who come through our doors. One of the most essential roles I have is to ensure that our people are trained and prepared for a rewarding career with us. This will always be one of management’s priorities. It is only with the right talent that any industrial construction business can thrive.
HARVEY GULF’S AVAILABLE VESSELS

All Certified for ABS Enviro Plus and Green Passport Notations

First US Flagged LNG Offshore Support Vessels
- Harvey Energy Chartered - Long Term
- Harvey Power Chartered - Long Term
- Harvey Liberty Available June 2014
- Harvey Performer Available October 2014

Harvey Deep-Sea Available March 2013
- Construction Vessel / Offshore Supply Vessel
- US Flagged / Jones Act Compliant
- 165 Ton Active Heave Compensated Crane
- Delivers 100 ton to 3,000 Meters
- 18,870 bbls Liquid Mud Capacity
- Accommodations for 71 Persons

BUILDING GREEN VESSELS

504.348.2466 | harveygulf.com
Economic sanctions, imposed by national and international governments for a variety of political reasons, can be snare traps for unsuspecting maritime enterprises. For the maritime industry, port calls in any nation against which sanctions have been imposed should be undertaken with caution. As this article illustrates, there are additional ways to run afoul of economic sanctions, but trading in a prohibited manner with a sanctioned nation is the most common.

From the maritime perspective, economic sanctions come in three flavors. First, there are sanctions that apply directly to the maritime industry. An example is the United States regulation that states: “No vessel that enters a port or place in Cuba to engage in the trade of goods or the purchase or provision of services, may enter a U.S. port for the purpose of loading or unloading freight for a period of 180 days from the date the vessel departed from a port or place in Cuba.” You cannot get more direct than that.

The second flavor of economic sanctions is those that apply indirectly to the maritime industry. An example is the United Nations Security Council resolution that prohibits the export to Iran of specific materials for nuclear enrichment. Involvement in such prohibited exportations would subject the vessel and its owner to potential administrative or judicial action.

The third flavor of economic sanctions is those that would not in usual circumstances apply to the maritime industry. An example is the UK regulation freezing the funds of persons engaged in the North Korea nuclear weapons program. The freezing of funds, by itself (as opposed to the actual export to North Korea of nuclear material), does not directly impact the maritime industry.

The governments that tend to impose unique economic sanctions are relatively few. The United Nations Security Council (UNSC) imposes the broadest sanctions. These apply to all persons and entities world-wide. A cruel enforcement is left up to individual nation states, but these sanctions tend to be quite effective in achieving their immediate goal (the long-term goal is often more elusive). Currently, there are UNSC sanctions applicable to the Democratic Republic of Congo; Cote D’Ivoire; the Democratic People’s Republic of Korea (North Korea); Eritrea; Iran; Lebanon; Somalia; Sudan; and individuals and entities associated with the Taliban and/or Al-Qaida. Various nations have instituted sanctions intended to implement, in one form or another, sanctions adopted by the UNSC. The European Union (EU) has adopted a number of economic sanctions. Most of these sanctions are targeted at human rights issues. A recent EU sanction, though, directly and indirectly impacts the maritime industry. On 23 January 2012, an EU Council Decision was promulgated that, among other things, prohibits (effective 1 July 2012) the import, purchase, or transport of Iranian crude oil and petroleum products by any person or entity subject to EU jurisdiction. This is a wide-ranging sanction that applies not only to the carriage of Iranian crude oil and petroleum products as cargo, but to the purchase of such items as bunkers derived from Iranian crude oil. Various bunker suppliers world-wide have been endeavoring to establish protocols to ensure that their bunkers are not associated with Iran. Ship owners and operators should institute procedures to avoid purchasing bunkers in situations where the source of the petroleum is questionable in this respect.

Australia has adopted various autonomous (or unilateral) economic sanctions. Many of these sanctions are similar to UNSC sanctions. Possibly the most unique Australian autonomous sanction prohibits the supply, sale, or transfer to Fiji of arms and related material.

Japan has various restrictions related primarily to end-use controls on militarily sensitive goods and technologies. An export license is required for exportation of such goods and technologies and will not be granted where the end user is on the prohibited list.

The United Kingdom (UK) has imposed economic sanctions that mostly control the export of arms and certain dual-use items. Financial sanctions also apply to transactions with terrorist organizations such as Al-Qaida.

The United States has by far the most extensive unilateral sanctions programs. Countries that are subject to US economic sanctions include: Belarus; Burma; Cote d’Ivoire; Cuba; the Democratic Republic of the Congo; Iran; Lebanon; North Korea; Somalia; Sudan; Syria; Yemen; and Zimbabwe. In addition, there are sanction programs related to counter narcotics trafficking; counter terrorism; non-proliferation of nuclear material; the rough diamond trade; and transnational criminal organizations. Virtually all trade with North Korea or Iran by persons subject to the jurisdiction of the United States is prohibited. Most trade with Cuba is also prohibited. Imports into the US of Burma (Myanmar) origins are largely prohibited. Most trade with the Government of Syria or anyone involved with the Government of Syria is prohibited. US persons are prohibited from engaging in any transactions or activities related to the petroleum or petrochemical industries of Sudan without prior US authorization.

One less known way to run afoul of US sanctions is to deal with a “blocked vessel”. A blocked vessel is a vessel that is owned or controlled by a nation, entity, or person that is itself subject to sanction. Persons subject to US jurisdiction should avoid buying, chartering, booking cargo on, or otherwise dealing with blocked vessels. There is a list of blocked vessels, but it is not well-publicized and is subject to change without prior notice. One of the problems regarding the sanctions programs is that there is often no advance notice of implementation. One day a particular activity or trade is authorized – the next day that activity or trade is subject to a sanction. Governments imposing the sanctions invariably do a poor job of announcing and explaining the sanctions. This is not to say that they don’t make the information public, but they often issue obscure news releases and post the information electronically on websites that are frequented only by a select group of persons. Thus, unless a particular sanction is wide-ranging, it may be an extended period before the information is well-known and understood by the maritime industry and other affected groups. If compliance (rather than punishment) is the goal of these governments, it behooves them to do a better job of disseminating useful information concerning those sanctions to all who might be affected thereby.

Members of the maritime industry must also do their part. They must work to follow developments related to economic sanctions. They also must adopt and implement programs to reduce the risk of non-compliance with applicable sanctions. Having a reasonable sanctions compliance program will go a long way to convincing an enforcement agency that any non-compliant event was truly accidental as opposed to negligent or intentional.
THE NEW DAMEN ASD TUG 3212

A MILESTONE IN ASD DESIGN

- revised hull form for higher speed
- dry foredeck due to higher bow
- operational excellence in 3 m wave height
- 85 tons bollard pull
- 14.5 knots sailing speed
- crew can see and operate everything from the main deck
- new type of render/recovery winch
- new type of towing bitt
- new super-absorbent bow fender
- lots of options, incl. ICE-class, Fi-Fi 1, aft crane and aft winch

"Damen has developed a brand new generation of tugs in the 80 t bollard pull range. The new ASD 3212 fits perfectly with current market developments where many projects are located in more open and challenging waters, such as those off Northern Australia. Tug operators need to be able to cope with higher wave heights and need more powerful tugs, given the increasing size of tankers and container vessels. With the powerful ASD 3212 customers get a state-of-the-art vessel of a proven and tested design."

COEN BOUDESTEIJN  DIRECTOR TUGS DAMEN SHIPYARDS

www.damen.com  |  americas@damen.nl  |  +31 00183 63 99 11

DAMEN SHIPYARDS GROUP IS ABOUT PROVEN TECHNOLOGY – THAT’S WHY WE BUILD 40% OF THE WORLD’S NEW TUGS
Douglas-Westwood’s new LNG Market report examines new prospects for liquefaction & regasification (import) terminals and LNG carriers, looks at the technology underlying the LNG business and presents market forecasts for activity in the sector over the 2012-2016 period.

**A Shift in Geographic Focus**

During the 2006-2010 period much of the LNG export construction activity was focused on the Middle East, in particular Qatar. The next five years will see a shift in regional focus to Asia and Australasia, where there are a number of terminals planned or under construction. Australia will dominate Australian expenditure during this period; investing around $60bn. Papua New Guinea will also see development as the country moves towards its first LNG terminal in 2014.

**Australasia**

Australia has three operational LNG facilities – North West Shelf, Darwin LNG and Pluto, offering a combined export capacity of 24 mmtpa. There has been discussion around the expansion of the Darwin and Pluto projects; however, this will be dependent on whether substantial gas discoveries are made, and therefore is not expected within the forecast period. The nearby Asian consumer markets offer the highest gas prices of any region, with an average price of $15 per million BTU. This, coupled with large coal-bed methane (CBM) reserves has led to considerable investment in Australian export infrastructure. There are currently seven facilities under construction in the country; these are expected onstream 2014-2017 and will provide an additional 49 mmtpa capacity. Notably, Australia can contribute a further 46% capacity with a number of potential projects to come onstream beyond the forecast period.

Australasian projects can be split into three categories – onshore terminals that source their gas from offshore fields, CBM to LNG export projects and Floating LNG (FLNG).

A potential downside to unconventional gas as a key feedstock is that CBM has never been liquefied into LNG on a scale as large as the one proposed. Issues with production such as cost, application or practicality may reduce the level of anticipated supply.

**FLNG**

The key drivers of the floating liquefaction sector are the desire to monetise stranded offshore gas fields and the relative high costs of an onshore liquefaction terminal. A modular design allows the FLNG vessel to be built in lower cost environments then towed to location. Positioning the liquefaction facility on field reduces the requirements for costly upstream facilities and long pipelines to shore which would be required for an onshore development.

Australasia was the first region in the world with an approved FLNG liquefaction project – Shell’s 3.6 mmtpa Prelude floater which is expected to be onstream in 2017.

Offshore gas fields and deep subsea trenches such as the Timor Sea Trench which render pipelines impractical may make this region a key focus area for FLNG project developers. Other FLNG prospects in this region include GDF Suez/Santos’ Bonaparte development; PTT’s plans to monetize its Cash and Maplee fields and Woodside’s Sunrise project.

**Japan**

Japan will see eight new LNG import terminals come onstream between 2012-2016 as the country seeks to cover the energy deficit following the shutdown of its nuclear power stations; the last of which was powered down in May 2012. As a result, the country has imported 27% more LNG when compared with May 2011. There are currently five new developments and a storage tank project due onstream between 2012 and 2016. This, coupled with the Yashirouma terminal, which came onstream earlier this year, provides an additional 18 mmtpa in import capacity.

**Asia**

**China**

China is looking to increase gas imports to sustain growing energy demand, as well as an alternative to coal in response to global pressure to reduce emissions and concerns over coal dependence and supply. Furthermore, the continued rise in the price of crude has significantly increased demand for LNG as a suitable substitute for meeting the country’s energy needs. China currently has six projects under construction; these include the first phases of the Zhuhai and Tangshan projects. China’s reward of LNG expansion projects and new developments will provide an additional 18 mmtpa in import capacity.
Ship Shape

Iridium Pilot™

All your maritime communications reporting for duty

Iridium Pilot delivers reliable, high-performance global voice and data communications, backed by an industry leading five-year warranty for peace of mind — no matter where you are.

- Reliable pole-to-pole global coverage
- Delivering email, weather, crew calling and more
- Best value installation and airtime

www.iridiumpilot.com
will give Japan an additional import capacity of 13 mmtpa. This excludes Tokyo Gas’s Hitachi project which may come onstream at the end of the five year forecast, adding around 3 mmtpa in import capacity.

Indonesia & Malaysia
Indonesia is one of the world’s largest LNG exporters and has three operational liquefaction plants – Arun, Bontang and Tangguh. The biggest challenge that the country faces is whether it is able to balance long-term declining natural gas production with a growing consumption in its major cities.

Since becoming an exporter in 1983, Malaysia has increased production to become the largest LNG exporter in the Pacific region. However, similar to demand trends in Indonesia, Malaysia has experienced rising gas consumption in its urban areas, leading it to seek LNG imports.

Russia
Russia is currently the only LNG exporter in Eastern Europe & the FSU, exporting from the Sakhalin II facility. It is currently looking to exploit LNG as a means of supplying gas to Asia, and to reduce its dependency on European gas demand.

However, LNG transport from terminals slated for the North and North West areas of the country would be hampered by ice conditions, requiring the use of specialized vessels similar to those employed on the Sakhalin-II facility.

North America - USA
Recent developments in unconventional production such as shale gas will see a significant shift in the US as the country moves from an importer to an emergent player in the LNG export market. Gas prices in the US are currently less than $3 per million BTU; arguably these prices are unsustainable, falling below the cost of production. Furthermore, exposure to global markets will reduce excess supply and could drive up domestic prices.

The US is currently set to bring the Sabine Pass project in the Gulf Coast on-stream at the end of 2016. The development involves the construction of production trains in existing import facilities, and will have a total export capacity of 8 mmtpa. The complete project will cost $3.9bn and is designed for further expansion with trains 3 & 4 due online between 2017 and 2018.

One potentially limiting factor for US exports is the stage of unconventional production. At present, the US is exploiting ‘sweet spots’; however, as these diminish and the production moves into the next phase, there could be a significant rise in costs and decline rates of wells. This could potentially limit the long-term exporting aims of the US and Canada.

Overall, capital expenditure in the global LNG market is expected to grow to $169bn between 2012-2016. Asia will be the main driver in import terminal developments, and is forecast to invest $31bn during this period.

The global LNG business will see growth and recovery in a number of sectors. Expenditure on liquefaction facilities will exhibit the highest level growth in global expenditure over the forecast period, a large proportion of which will come from Australian developments. Furthermore, growing demand for import terminals will see regasification Capex increase to represent 20% of global expenditure. Following a sharp decline through 2010-2011, the LNG carrier market will begin to recover from 2012 onwards with Capex expected to be over $30bn.

The Author
Murray Dormer sits within Douglas-Westwood's Research team where his principal activities include quantitative analytics and macro-economic analysis, competitive analysis and supply chain mapping. He has a degree in Business Administration from the University of Kent.

The Report
STRONG
DEPENDABLE
DIVERSE

PLEASE VISIT AND LET US SHOW YOU OUR NEW AND IMPROVED SHIPBUILDING AND MARINA SERVICE AND DOCKING FACILITY

WWW.HORIZONSHIPBUILDING.COM

Horizon Shipbuilding, Inc. | 13980 Shell Belt Road | Bayou La Batre, AL 36509
1-800-777-2014 | 251-824-1660, ext 222 | www.horizonshipbuilding.com | trshort@horizonshipbuilding.com
Over the past year, the inter-agency effort to reform the U.S. export control regime has resulted in specific proposals to transfer regulatory oversight of various items and technology from the Department of State’s Directorate of Defense Trade Controls (DDTC) to the Department of Commerce’s Bureau of Industry and Security (BIS). This transfer of jurisdiction is intended to be accomplished by a restructuring of both the U.S. Munitions List (USML) and the Commerce Control List (CCL).

Under the current regime, exports of defense articles, defense services, and technical data listed on the USML are regulated by DDTC pursuant to the International Traffic in Arms Regulations (ITAR), while items and technology listed on the CCL are regulated by BIS under the Export Administration Regulations (EAR). Although the ultimate goal of export reform is to merge the two lists and accomplish by a restructuring of both the U.S. export control regime and the current proposals to transfer regulatory oversight of various items and technology from the Department of State’s Directorate of Defense Trade Controls (DDTC) to the Department of Commerce’s Bureau of Industry and Security (BIS). This transfer of jurisdiction is intended to be accomplished by a restructuring of both the U.S. Munitions List (USML) and the Commerce Control List (CCL).

Under the current regime, exports of defense articles, defense services, and technical data listed on the USML are regulated by DDTC pursuant to the International Traffic in Arms Regulations (ITAR), while items and technology listed on the CCL are regulated by BIS under the Export Administration Regulations (EAR). Although the ultimate goal of export reform is to merge the two lists and create a single licensing and enforcement agency, the current proposals represent an interim step designed to relax controls on defense articles that the Administration believes no longer warrant control under the ITAR.

Of particular interest to the shipbuilding industry are the proposed amendments to USML Category VI ("Vessels of War") and Category 8 of the CCL ("Marine"). USML Category VI would be amended and restated in its entirety, and the ITAR definition of “Vessels of war and special naval equipment” subject to ITAR control would be narrowed. Amendments to USML Category XX ("Submersible Vessels, Oceanographic and Associated Equipment") also have been proposed (including transfer of submarines to this category). Simultaneously, Category 8 of the CCL would be expanded to include several new ECCNs (Export Control Classification Numbers) that would control articles previously controlled under USML Categories VI or XX.

One of the most vexing aspects of the current export control system is that all “specifically designed or modified components, parts, accessories, attachments, and associated equipment” for ITAR controlled vessels and related technical data and defense services are subject to ITAR control even if they are substantially similar to items and technology subject to the EAR that could be exported freely on an NLR (No License Required) basis. Under the current reform proposals, many such items will be transferred to the CCL and subject to somewhat more lenient export licensing requirements, but the new regulations will not completely eliminate design intent criteria.

In certain instances, jurisdiction or the level of control or both will turn on whether a vessel or other item is “specifically designed” – a term that, unlike the current “specifically designed” terminology, which was not defined, would have a common definition under both the ITAR and the EAR. The most recent proposed definition of the new term is intended by the Administration to achieve a total of nine objectives and requires a sequential analysis of up to eight standards enumerated in the definition, which in turn is modified by six to nine explanatory notes, depending upon whether a vessel or other item is “specifically designed” for a military use and not to corporate “mission systems” and certain commodities not enumerated on either the USML or CCL will be excluded from ITAR controls.

The new Category VI will cover combatants, vessels that are armed or specifically designed to be used as a platform for munitions systems, those which incorporate “mission systems” and certain other enumerated vessels, including those with nuclear propulsion systems and developmental vessels developed under contracts with the Department of Defense. Other vessels of war “specifically designed” for a military use and not enumerated on the USML will be controlled under the EAR (e.g., certain auxiliaries and unarmored and unarmed patrol craft with mounts or hard points for firearms of .50 caliber or less). As reformed, Category VI will likewise cover only a positive list of specific types of vessel and naval equipment components, parts, accessories and attachments that will continue to warrant ITAR control (such as certain hulls or superstructures, propulsion systems, and shipborne auxiliary and active protection systems). On the other hand, many specially designed systems will transfer to the CCL, including ship service hydraulic and pneumatic systems, internal communications systems, potable water storage systems, and so on). A comprehensive recitation of vessels, components and related technology that will remain subject to the ITAR or be shifted to the CCL is beyond the scope of this article, but both shipyards and their suppliers should familiarize themselves with the proposed rules to determine how their products and those of their customers and suppliers will be affected. Implementation of the new rules.
will require many shipyard suppliers whose operations currently are subject exclusively to the ITAR to familiarize themselves with the EAR in order to ensure export compliance under the new regime. However, for most suppliers, ITAR compliance will remain a priority, insofar as they will continue to require access to technical data directly related to ITAR controlled vessels and components even if their own products become subject to CCL controls. Therefore, the end result of export reform will be that many in the shipyard supply chain will be forced to master both the ITAR and EAR control regimes. Furthermore, a steep learning curve will be imposed even for those whose operations already are subject to both the ITAR and the EAR, given that the reform proposals contemplate numerous amendments to the EAR license exceptions in order to avoid the incongruous result of tighter controls under the ITAR for items previously subject to more permissive ITAR exemptions in certain circumstances.

Shifting of items to the EAR will not, however, completely eliminate current ITAR restrictions on exports and re-exports to arms embargoed countries (including China) or Congressional notification requirements.

In order to avoid the additional complexities that an immediate effective date would impose on the defense industry, the Administration has proposed a phased implementation plan. Licenses and agreements issued prior to publication of the final rule for each USML category will remain valid for up to two years from the effective date. Other transitional provisions address licenses in process at the time of publication and through the effective date of the final rule. The transition plan also contemplates interim registration fee relief for those who will no longer be required to register with DDTC as a result of the new rules – although, as noted above, as a practical matter registration will still be required in order to employ foreign nationals or engage in offshore procurement where access to ITAR controlled technical data related to the vessel is involved, even if the registrant’s own products have transitioned to the CCL. Registrants will, however, benefit from lower registration fees as licensing volume declines due to transfer of previously licensed exports to the CCL. Additional proposed rules are contemplated, but while the publication of proposed rules continues, the Administration hopes to begin phasing in transfers from the USML to the CCL. The naval vessel and marine categories will not, however, be the first categories to be revised, so it will be next year at the earliest before a more sensible – if not simpler – reformed export control approach is implemented in the nation’s shipyards.

The Authors
Barbara Linney (blinney@milchev.com) is a member of the Washington D.C. law firm of Miller & Chevalier. Kevin Miller is an International Trade Specialist in the firm’s International Department, concentrating in the areas of export controls, economic sanctions, and defense security.

Notes
This article reflects developments through July 27, 2012, the date of submission for publication. The views expressed herein are those of the author, do not necessarily reflect the opinion of the firm or other members of the firm, and should not be construed as legal advice or opinion or a substitute for the advice of counsel.

1 The author’s overview of the export reform process can be found in the May 2011 edition of Maritime Reporter (“U.S. Export Control Reform: What It Means for Shipyards”).

The author’s analysis of the challenges faced by shipyards and their suppliers under the current system can be found in the April 2009 edition of Maritime Reporter (“Complying With U.S. Export Controls”).
Here is a multiple choice question: which of the following contracts is considered to be a “maritime contract” under U.S. law?

(a) a shipbuilding contract
(b) a ship-sale contract
(c) a ship-repair contract, and/or
(d) a ship mortgage

You will be forgiven if you simply tried to apply logic in answering this question and guessed that all four are maritime contracts. If you know your maritime law, however, then you should have answered that “a” and “b” are maritime contracts whereas “a” and “b” are not. Or, at least, that is the current state of the law.

Why might this matter?

In the first place, it may impact whether a claim can be brought in the federal courts or whether it must be asserted in state court. Federal courts possess only “limited” jurisdiction, meaning they can only hear cases that are within the scope of their constitutionally defined jurisdiction. If the dispute involves a maritime contract, a claim may be brought in the federal court under its “admiralty and maritime” jurisdiction. If it is a non-maritime contract, however, then it may only be brought in the federal court if the “diversity” rules are met, meaning that the claim must exceed a certain amount and be between citizens of different states. Importantly, claims between non-U.S. citizens do not meet the diversity requirement, whereas the court’s admiralty jurisdiction has no similar “citizenship” limitations.

A second important issue is that the maritime law has relatively permissive rules allowing for pre-judgment attachment of assets in support of a “maritime claim,” which are not available to claimants on non-maritime claims. This right is principally defined by Rule B of the Federal Rules of Civil Procedure, Supplemental Rules for Admiralty or Maritime Claims. Under that rule, a party may obtain an attachment of the defendant’s property located in a district where the defendant is not otherwise “found” merely by asserting a prima facie maritime claim. This is a low pleading threshold, and Rule B can be a very powerful tool—particularly useful in an industry where the business is international and assets are transitory.

A third and related issue is whether maritime liens can arise out of a breach of a contract. Such liens can create powerful priority and enforcement rights both as against the vessel owner and third-party claimants who may be seeking to enforce their own claims against the same assets. No maritime lien can arise from a breach of a non-maritime contract.

How did this happen?

How is it that a contract to build or sell a ship is not a maritime contract whereas a contract to repair or mortgage a ship is a maritime contract? The answer goes back at least as far as 1857, when the United States Supreme Court decided People’s Ferry Company of Boston v. Beers

Other judges in the Southern District of New York declined to follow the new course charted by Kalafrana, however, finding instead that nothing in Kirby and Exxon supported the ruling that The ADA had been reversed sub silentio. And in December 2009, in Primera Maritime Ltd. v. Comet Fin. Inc., the Second Circuit thwarted a similar assault on the ship-construction contract rule, though perhaps not without providing a glimmer of hope for those aspiring someday to change the rule: “[P]laintiff is correct to point out that the conceptual approach taken in [Exxon and Kirby] suggests that modern principles disfavor per se admiralty rules based on the site of the contract’s formation or performance.” Still, the Second Circuit concluded that its hands were tied: “Until the Supreme Court declares that contracts for ship construction are maritime in nature, disputes arising from such contract will not give rise to the federal courts’ admiralty jurisdiction.”

Conclusion

It is probably just a matter of time before the right case gets before the Supreme Court that will allow it to reassess these jurisdictional questions in light of modern developments. And one might surmise that if the Supreme Court is willing to take a critical look at its earlier rulings, it would be hard pressed to defend them in light of its rulings in Exxon and Kirby and in light of the widespread criticism of the current doctrine. Of course, as we learned just recently with regard to its ruling on the heath care legislation, the Supreme Court is full of surprises. So, we will have to wait and see what happens.

The Author

Thomas H. Belknap, Jr., partner at Blank Rome, concentrates his practice in the areas of international commercial and insurance litigation and arbitration, with a particular emphasis on the maritime industry. Email: TBelknap@BlankRome.com

Maritime Reporter & Engineering News
Introducing the Sea Tel 4012. It lets you go from Ku to Ka in eight easy turns.

It's as easy as that. Unfasten eight bolts. Remove and replace the front feed, and rear assembly. Within minutes, your Sea Tel 4012 makes the optional upgrade from the current Ku Band, to GX or other Ka Band networks. The new Sea Tel 4012's completely redesigned monolithic software architecture offers IP-based, secured communication and extensive diagnostic capability. The interface allows the antenna system to be controlled from a computer browser or even a tablet or mobile device. The new frequency-tuned radome is engineered to operate in Ku and Ka Band networks. And because the Sea Tel 4012 can be controlled over the internet, you can connect to it from anywhere in the world including your corporate offices. Finally, the sturdy pedestal design is based on the industry's best 1-meter maritime antenna system, the Sea Tel 4009. The best just got better.
The professional maritime sector recognizes the need to reduce the effects of Whole Body Vibration (WBV) but this is not a straightforward process for those operating planing craft. These vessels can expose crews and passengers to high levels of repeated shock and vibration which has been shown to increase the risk of injury.

In flat sea conditions there is vibration from the engine, gearbox and shaft but the crew and passengers are not exposed to harmful vibration. All fast boat operators know that waves change everything.

Waves can be wind-blown and build up in a few minutes but WBV exposure on planing craft is usually caused by continuous ‘hammering’ from short steep seas or wind against tide conditions. Repeated shock on planing craft is usually caused by random ‘hits’ from head sea impacts, crossing seas or overtaking following seas.

Professional maritime organizations use planing craft to perform a wide range of operations. The tasks performed by personnel after a fast boat transit are often physical and include ship boarding, law enforcement, sea rescue and more recently wind farm maintenance. The consistent objective is that boat crews are not injured and passengers arrive safely at their destination ready to perform a task.

Millions of workers around the world are exposed to mechanical vibration transmitted to the whole body through industrial seating, flooring and decks. WBV can affect back, neck, knees and joints. Fast boats are a challenging workplace and the UK MCA Marine Guidance Note, MGN 353 titled ‘Control of Vibration at Work’ states that, ‘Whole body vibration may be most apparent in smaller, fast craft such as fast rescue boats, RIBs or work boats, particularly when operating in choppy conditions.’

For example anyone onboard a pilot cutter at planing speed needs to be aware of vibration at sea. Although the onboard tasks are not physical for pilots there is the ladder climb. A pilot may have difficulty climbing and will be less effective onboard ship when suffering from back pain or a recurring injury aggravated by the cutter transit in rough conditions.

Cognitive ability for navigation and decision making also needs to be considered after any open sea transit. However, the need for awareness of WBV issues is not limited to small vessels. According to Commander Chris Pratt, M BE A F NI, of UK Border Agency, ‘WBV risks can apply to many ship types and in many work areas. For these reasons, a developed professional awareness of these issues applies throughout the maritime environment. Big ship people cannot be ruled out as many large ship types now carry fast rescue craft. If anything, these people should be primary targets as they use these boats less often than the main working groups do. For these reasons, they are probably far less aware of the issues and risks.’

To highlight these issues FRC International hosted the WBV & H-SURV Seminars at the RNLI Lifeboat College, Poole UK, on 10th & 11th July 2012. These seminars attracted over 50 delegates from maritime sectors including military, SAR, government agencies, port authorities, police, and commercial operators. Boat builders, specialist equipment manufacturers and naval architects also attended. The WBV seminar is internationally recognized by The Nautical Institute and Captain Harry Gale, Technical Director of the Institute, was in attendance for both days.

FRC Director John Haynes A F NI, who introduced the seminars said, “Stopping fast craft operations is not a realistic option, but making them safer is essential. The internationally recognized FRC training and qualification structure supports competence based interoperability between both individuals and professional maritime organizations. The objective is that a genuine best practice approach helps crews to remain safe and healthy. Besides prolonging the career of boat operators this approach leads to a more effective organization.”

Dr Trevor Dobbins led the technical presentations by assessing the current situation and how the FRC WBV & H-SURV Seminar can support the fast craft industry worldwide. Throughout the two day seminar Dr Dobbins included various papers co-authored with experts from around the world. New tools developed to assist the professional sector include the HSC Motion Analysis Guide and a simple 4x4 Risk Assessment. He had recently presented new concepts to the US
Spanning the Globe
With over 60 Years
Of Shipbuilding Excellence

VT Halter Marine
A company of VT Systems

VT Halter Marine
900 Bayou Casotte Parkway, Pascagoula, MS 39581 USA Tel: 228-696-6888 Fax: 228-696-6899 www.vthaltermarine.com
FAST CRAFT & VIBRATION

Navy, at the HiPer Craft 2012 conference in Norfolk VA, and passed on what are now becoming global views on both whole body vibration and health surveillance. This evolving knowledge and genuine best practice underpinned the two day program.

Specialist manufacturers gained a lot of new knowledge from the event. David Price, from Tampa Yacht Manufacturing, said, “This is probably the best seminar on any subject I have ever been to. It has been open and very informative.” End user organizations attending the WBV and H-SURV Seminars were keen to know what steps others are taking to address the issues of WBV and health surveillance. Alan Cartwright, Head of Marine Engineering for the Port of London Authority, said, “What I found most useful about the WBV seminar was discussion with practitioners and providers, also the presentation, from Dr Tom Gunston, about vibration measurement.”

Dr Tom Gunston delivered a detailed presentation on the technical aspects of RS (Repeated Shock) and WBV (Whole Body Vibration) analysis. His in depth understanding of ISO and international measuring methods and the resulting metrics highlighted glaring errors in certain international organizations mathematics and measuring methods. There are ongoing debates from academics around the world regarding the use of rms and VDV for the assessment of vibration exposure to people on boats. Impact Count Index and the USN Ride Severity Index were discussed along with the development of ISO 2631 Part5 (Sed-8) update.

WBV is a major consideration in the US for military boat builders. Naval Surface Warfare Command will assess all future craft for operator exposure to shock levels that could cause musculoskeletal, boat-related injuries. The latest combatant craft requirements refer to the standard Sed-8, which relates to a daily exposure dose over eight hours.

The Human-Boat Interface (HBI) is the technical name for how crews and passengers come into contact with the boat. Certain designs of suspension seating have feet off the deck, but generally there are three points of contact. Hands are in contact through a handhold, or for the helmsman through the wheel and controls. Feet are in contact with the boat through the deck. The backside is in contact with the boat through the seat base. Depending on the seat height and design, it may be carrying most of a person’s body weight. Fast boat operators need to consider, what happens if the seat or suspension mechanism is damaged or broken.

It is now possible to measure vibration on boats by using accelerometers and data loggers. But how much vibration is too much vibration for the human body? That is a question that academics around the world have considered at length. The UK Health and Safety Executive (HSE) consider Exposure Action Value (EAV) and Exposure Limit Value (ELV) to be the most relevant. The Exposure Action Value is a daily amount of vibration exposure above which action needs to be taken to control exposure. The Exposure Limit Value is the maximum amount of vibration a person may be exposed to on any single day. In simple terms the greater the exposure level, the greater the risk and the more action will need to be taken to reduce the risk.

The WBV & H-SURV seminars delivered informative presentations that were enhanced by audience participation. On day one John Haynes used a SWOT analysis approach to discuss UK MCA Mariners Guidance Notes. These MGNs need to be read by operators to assist in understanding EAV (Exposure Action Value) and ELV (Exposure Limit Value) as part of compliance with the EC Vibration Directive, July 2010. The discussion showed that the numbers are difficult to comply with and many attendees were eager to know more about the metrics.

The seminar introduced various innovative concepts. Development of the suspended deck was discussed as a novel means of delivering shock mitigation to the entire deck area. This could be used to protect personnel, console, controls, sensitive equipment and payload. Integration into an existing boat design has been proven and trials are underway. James Glover, managing director of DY ENA, discussed the various hardware options that are currently available for recording vibration and acceleration. He introduced a small waterproof ‘black box’ with built-in GPS that is designed as a vibration exposure recorder on boats.

To close day two of the seminar FRC International’s Training Director Jon Hill AFNI referred to his military experience operating fast boats and said, “WBV is a global problem and the injury statistics are growing.

WBV awareness is relevant to all sectors affected by this major health and safety issue.” FRC International have developed specialist WBV Awareness Courses, recognized by The Nautical Institute, with the objective of understanding that WBV exposure affects all planing craft. These short courses define and benchmark best practice and provide a consistent approach to WBV compliance for the professional maritime sector.


The Author
John Haynes, AFNI, is Operations Director of FRC International and a presenter of WBV courses. He is a Yachtmaster Ocean and Advanced Powerboat Instructor. Subject matter expertise includes high speed craft consultancy, product development and specialist training.

Email: j.haynes@frc-int.com

Maritime Reporter & Engineering News
5 ppm is not easy

So is Clean Design possible in bilge water treatment?

Meeting DNV’s Clean Design requirements for bilge water takes more than setting the oil-in-water monitor to 5 ppm. The treatment system must actually achieve 5 ppm as well.

PureBlige is the first system to obtain the new 5 ppm DNV Type Approval certificate for 5000 l/h.

While other systems struggle to reach 15 ppm under real-life conditions, PureBlige reliably delivers 5 ppm through centrifugal separation. And with its tamper-proof BlueBox data recorder – which locks in critical data and encapsulates the whole sampling line – its performance is never in question.

The result is assured compliance. Not only with IMO MEPC 107(49), but with the wishes of all who demand a greener profile.

PureBlige – a dynamic force in bilge water treatment

See you at
SIMM
Stand No
A1.228

www.alfalaval.com
Model tests for the evaluation of ship designs should not only be performed in calm water but also in waves. MARIN’s new Depressurized Wave Basin (DWB) helps unravel some of the mysteries of wave added resistance.

A ship is usually designed with a focus on its performance in calm water. However, operational conditions should be taken into account, including added resistance due to waves because it is an important factor in the economical performance of a ship.

The sustained speed in storm conditions should be investigated but also the power increase in typical service conditions. And with the trend for an increasing ship size, the latter becomes even more important. In addition, upcoming regulations such as EEDI require a very careful correction for the added resistance during speed trials.

Using large ship models in a 240x18x8 m towing tank can make the difference when trying to understand the secrets of wave added resistance. In the DWB a large ship model of a Very Large Container Ship of about 350 m for instance, can be tested at a model scale ratio of 1 to 30.

In our Seakeeping and Maneuvering Basin (SMB) the scale ratio typically doubles, which means that a 1.5 m wave for the ship would require a 2.5 cm wave in the SMB and a 5 cm wave in the DWB. This increase, in combination with increased measurement accuracy, improves the prediction of wave added resistance in typical service conditions.

A further benefit of the DWB is that only one large ship model is used to perform calm water resistance and propulsion tests, cavitation observations, hull pressure measurements and wave added resistance tests for mild to severe weather conditions. When well prepared, all the tests can be conducted within one week.

A ship model can be chosen with large propeller models with a diameter of about 300mm, reducing significant scale effects on propeller blade cavitation and propeller thrust and torque. This provides a high level of accuracy when measuring for instance the wave added resistance. In this way MARIN expects to unveil some of the secrets of wave added resistance.

The Author

Patrick Hooijmans is project manager at the Ships department of MARIN, the Maritime Research Institute Netherlands. MARIN offers simulation, model testing, full-scale measurements and training programs, to the shipbuilding and offshore industry and governments.

Email: p.hooijmans@marin.nl

---

USCG Type Approved Fire Detection

**Elite RSM marine & offshore fire detection systems**

- Cost effective analog addressable
- Auto learn feature for automated system setup
- High quality Marine grade Apollo detectors
- 2 loops, 126 zones, up to 252 smoke or heat detectors
- IMO SOLAS also available

Contact Dave Blice: dblice@fireboy-xintex.com

---

Vessel Operators Are you providing your officers and crew with the most advanced, effective and efficient familiarization and job training possible?

The MarineLMS Learning Management System makes your existing training practices more advanced, effective and efficient.

We are here to help you make sense of e-learning, avoid common pitfalls and ensure your implementation provides the best training possible.

www.MarineLs.com 1-855 E-MARINE
PALFINGER MARINE CRANE
Strongest man on board

SMM 2012
Visit us at Booth No. A1-206
04.- 07.09.2012, Hamburg

PACIFIC MARINE EXPO
Visit us at Booth No. 114
27.- 29.11.2012, Seattle

www.palfingermarine.com

US WEST COAST + ALASKA
Mr. John C. Adams
+1-509 679 5790
j.adams@palfinger.com
F.O. Box 870
White Salmon, WA 98672

US GULF COAST DEALER
Donovan Marine, Inc.
Commercial Sales Group
+1 877 364 2366
commercial.sales@donovanmarine.com
6316 Humphrey's Street
New Orleans, LA 70123

US EAST COAST DEALER
Pine Hill Equipment, Inc.
+1 508 436 5971
sales@pinehillequipment.com
655 Pine Hill Road
Westport, MA 02790

CANADA DEALER
Pennecot Energy Hydraulic Systems
Mr. Eddy Knox
+1 709 729 3490
eddy.knox@pennecot.com
2 Maverick Place
Paradise, NL A1L 0H6

LCS 2 INDEPENDENCE
The U.S. Navy's first and only high-speed trimaran littoral combatant.

OUR GROUNDBREAKING DESIGNS MADE IT A POSSIBILITY.

Our PEOPLE MADE IT A REALITY.

At Austal, it’s not just our aluminum trimaran designs that make us stand out. We’re a dedicated Alabama workforce over 2800 strong, with international roots, redefining how the Navy builds warships. The same level of precision that goes into the construction of our advanced vessels also drives the cultivation of our outstanding team. So whatever great naval minds can imagine, Austal can achieve.

NOW HIRING
- A Class Aluminum and Pipe Welders
- Production Managers
  (Pipe, Electrical and Fabrication)
- Senior Estimator
- Project Coordinators
- Structural Designers and Engineers
- Logistics Analyst-Engineering
- Electrical Engineer
- Structure Checker

Austal is an Equal Opportunity Employer
Most every company knows it should have a plan to deal with catastrophe. That’s especially true for shipyards and vessel owners who often ply their trade in hurricane zones, where weather can rip apart a lifetime of work overnight, make confetti out of assets, and leave disarray in its wake.

Emergency plans can be simple or complex, depending on the needs of a specific business. There are a number of resources to help business owners create customized plans, including online templates, detailed guidelines and model documents. A company’s insurance agent and carrier can also serve as useful resources for businesses trying to determine what should be in a plan, and how to best position themselves to recover quickly if disaster strikes.

A plan by itself, however, is not enough. A company that makes a plan and sticks it on a shelf has taken only the first step toward preparing for a catastrophe. Based on extensive experience cleaning up after natural disasters over many years, insurance carriers have noticed that some businesses bounce back quickly while others have a difficult time recovering. Those that survive most often are the ones that have gone beyond making a plan, taking extra precautions and thinking through worst-case scenarios.

A Plan Is Only As Good As Its Execution

The story of one shipyard’s experience with Hurricane Katrina demonstrates why having a plan is not always enough. With the storm approaching, a designated crew followed the shipyard’s emergency plan, taking two spud barges and a breasting barge deep into a marshy area away from the anticipated path of the hurricane.

Upon arrival at the designated spot, the crew realized it had not brought the proper lines to secure the breasting barge. With the storm approaching and the yard an hour and a half away, there was no time to do anything other than use the worn lines that were available. The spuds were dropped into place and the breasting barge was tied between the two spud barges.

Unfortunately, the winds were stronger than the lines. Perhaps even the emergency lines, set aside but forgotten, would not have been enough. The breasting barge broke free and was blown into an interstate freeway bridge more than a mile away, causing extensive damage and disrupting traffic.

Twenty days and almost $6 million later, the bridge was once again operational. However, that was not the only expense.

When the waters receded after Katrina died down, the barge was stranded in a shallow area until a canal could be dug to get it back to where it could be floated to the yard.

“For Want of a Nail” is an old proverb that spells out the chain of circumstances when a horseshoe nail comes loose, the horse falters, a man is thrown, a battle is lost and a kingdom falls. In this case, for want of a good line, a barge was lost, a bridge was disabled and a shipyard suffered.
Beyond an Emergency Plan

So what should a company do besides have an emergency plan in place? The following are four steps that can make a difference in how a company rides out a storm.

The Emergency Drill. At least once a year, the emergency plan should be removed from the shelf, dusted off and re-viewed for its continuing suitability. In the time since the plan was made, a company may have added a different line of business, brought on new equipment to the site, or even have new people in place who have never seen the plan. By running a table-top exercise with current staff on a regular schedule, the company can famili-arize everyone with the plan’s content and determine if it still makes sense. The plan should also be incorporated as a topic into routine safety meetings and the orientation training for new hires. If a staff position has certain responsibilities in the plan, it is imperative that the person currently filling the job knows the duties in advance, so that any questions or issues can be addressed long before a storm hits.

The Right Stores. In addition to having an effective plan, a company should have the right equipment on hand to carry out the activities detailed in the plan. When a storm is approaching and everyone rushes to buy generators, ropes and ply-wood, shortages can develop. It is far better to know what is needed, buy it ahead of time and store it in a state of readiness. Particular attention should be paid to chains, lines and other equipment that face the wear and tear of daily use. Having new equipment, fresh and unused, stashed away in a designated locker that is to be accessed only in emergencies is a good way to ensure that the protections put in place will be at top strength.

Beyond the Zone. Effective emergency plans usually provide an updated list of suppliers, whether it is for manpower, fuel, equipment or water. These are often local vendors with whom the company is familiar or even those who are regularly relied on during normal business times. However, the plan should be reviewed with an eye to what happens if a disaster shuts down an entire city or region. The local vendors may have just as much trouble getting back into operational mode as the company depending on them. Instead, look farther afield – even several states away – and establish relationships in advance with alternative sources of supplies.

Manpower Solutions. One aspect of disas-ter recovery that sometimes catches companies by surprise is the lack of manpower available. This goes beyond the obvious need for employees to take care of their personal situations, such as prop-erty damage or family concerns, before they are able to focus on work. The aftermath of a storm often creates cleanup jobs with salaries that are higher than normal local labor rates. A shipyard that during the year relies on a regular crew of hourly contractors may find its pool drying up as these workers seek and take more lucrative assignments. To address this issue, a company may want to plan in advance for incentives (e.g., bonuses or temporary higher pay) or contractual language that will keep their regular workers on the job. They may also con-sider seeking out companies that special-ize in placing temporary workers and incorporate those manpower sources into the emergency plan in advance.

A few calm hurricane seasons can lull shipyards and other marine operators into forgetting about the emergency plans on their shelves. But such plans can only serve their purpose if they are current and everyone is ready to carry out their as-signed tasks. By working closely with their insurance agent and carrier, companies can learn about and implement best practices that will give their emergency plans a much better chance of helping them ride out whatever storm comes their way.
led by calls to reduce emissions (CO2, NOx, PM-values), while at the same time increasing energy efficiency with a long-term eye on the diminishing supply of fossil fuels, it is clear for all that “alternatives” — even under the aspect of higher investment costs — will pay back in the future.

Beside economic and safety-related aspects, more and more questions about environmental protection as well as health hazards due to the emission of harmful substances into the environment play an essential role in shipbuilding.

Unfortunately, hitting environmental targets while maintaining efficient operations is becoming ever more difficult with conventional drive systems, requiring costly additional components, such as exhaust after-treatment systems.

Low operating costs, precise maneuvering and a high starting torque at lowest propeller speed as well as a low-noise operation pays back in many respects.

For these reasons, today more than ever there is a call for investment in new and emerging propulsion technologies to meet all criteria.

And these mentioned facts open the chance, with an innovative propulsion concept, to ensure the competitiveness of the shipping industry, further increasing existing advantages.

Torque Marine IPS GmbH & CO. KG based in Hamburg, has developed in 2010 its High Torque Power Drive (HTP) — an innovative diesel-electric propulsion system for all kinds of vessels, from river to coastal to tugboats — which is outclassing the conventional systems with combustion engines, reduction gears and drive systems.

The idea of diesel-electric ship propulsion system is nothing new: Already in 1838 Professor Moritz Hermann Jacobi experimented on the river Neva in Russia with an electric driven paddle wheeler.

Ronald Schröder, Business Development Manager at Germanischer Lloyd, addresses the advantages of diesel-electrical drive applications:

- High redundancy of the entire ship operation system
- High torque already at lowest propeller speeds
- Reduction of the initial ship building costs

Torque Marine IPS
Precise Maneuvering and 26% Fuel & CO2-Saving
Gearless, diesel-electrical Torque-Drive System proves safe and reduces operating costs

By Peter Pospeich, Germany

Partners in business: Thorsten Schramm (l), owner of Schramm Group, Brunsbüttel and Claus-D. Christophel (r), GM of Torque Marine IPS.

MV ENOK is worldwide the first motor vessel with a gearless, diesel-electrical Torque-Drive System. Inset: Rudi Koopmans (64) Captain of the vessel ENOK is absolutely satisfied with the new Torque Drive.
The high art of dynamic positioning

Dynamic Positioning Systems • Joystick pilots • Autopilots • Steering gear control systems

Navis Engineering Oy
Tukkula 2 A
90170 Oulu
Finland
Tel: +358 9 260 6011
Fax: +358 9 260 6612
E-mail: headoffice@naviscontrol.com
http://www.naviscontrol.com

iShip

Turn your data into information and your information into power

Unprecedented ability to measure, manage, and control your ships and your future

iShip is a unique set of applications built on an information management infrastructure which integrates existing vessel instrumentation and automation data into useful information. iShip provides real-time operational and event data so vessel operators and engineers can visualize, analyze, distribute, collaborate and act.

Visit www.WOship.com or contact us at sales@wosupply.nl
To reduce fuel consumption and emission values, the development center for ship technology in Duisburg, were, on behalf of the German Federal Environmental Ministry, deeply engaged with the subject many years ago. The conventional diesel-electric drive could not fulfill the preconditions, e.g. weight and volume reduction. Hence new possibilities had to be developed.

“The idea to develop something new in this field kept me busy from this moment on,” said Claus-D. Christophel, General Manager Torque Marine IPS.

After extensive research and development work, together with the development center for ship technology, DST, in Duisburg, Torque Marine IPS successfully converted in 2010 a twin-propeller river freighter, MS ENOK, with a Torque Drive System. Measuring 84 x 9.5m, ENOK can load 1,500 to of cargo at a load draft of 2.86 m.

ENOK is worldwide believed to be the first motor vessel, which has been equipped with a permanent magnet motor (PM drive) as a gearless electrical direct drive. Since mid of 2010 the vessel runs in regular cargo service on European Waterways.

Rudi Koopmans (64), captain of the vessel is more than satisfied with the results:

“Within five seconds I can bring the propellers to a standstill. It’s a complete new world. Each second, we can react faster, is more safety. Since 14 years I am captain on this ship, but such an fantastic handling with this new Torque-Drive I never experienced before. The power of the shaft is steplessly available. Today we have a noise level in our cabins of measured 47 dB(A). I don’t want to have something else anymore.”

The High Torque Power (HTP) Drive-Concept

The modular system consists of, according to power requirements, encapsulated diesel engines with water-cooled, permanently excited generators in modular design and water-cooled redundant torque units, as well as weight and power optimized converters.

Hence, for diesel-electric operations modern and compact torque drives are available, which, based on their low power-to-weight ratios, offer the following possibilities:

- Propulsion redundancy
- Extremely high torque which, via a shaft thrust bearing, is direct available at the propeller,
- Low noise emission and
- Almost maintenance free operation.

For the time being driving power per shaft and propeller up to a maximum of 1,890 kWe are available. To drive gener-
ators (power producer/gensets) diesel engines are still indispensable; but already now combustion engines operating on LNG are considered for further torque drives. And also fuel cell techniques will be introduced in the future.

The installations of the genset modules are independent of the propulsion elements with the shaft drive units. Hence, further optimizations in ship building are visible, e.g. engine compartment configuration (shifting of the center of gravity) in respect of the ships shallow water characteristics, optimization of the propellers based on the higher available torque. In the case at hand, two gensets had been installed in the foreship and two in the stern main engine compartment.

Despite the fact that ENOK is an “old” vessel, meaning it did not feature an optimal hull form and its propellers were not matched to the new drive system, there were nonetheless impressive advantages: efficiency increase of around 26%, stepless rpm adjustment of the torque drive unit from 20 rpm up to maximum rpm.

The water-cooled permanent exited, PME, synchronous generator

Basically this one is predestinated for applications where low weight, a compact design and a very high efficiency is required. The particular advantages of the PME-generators compared to conventional synchronous generators are the increased efficiency, the reduced power-to-weight and -volume as well as the loss of collector rings. ENOK’s early installed generators featured “pasted on” magnets on their rotors. That was to the disadvantage of efficiency, temperature rise and finally to the performance capability.

In November and December 2011, further developed PME-generators were installed. Via so-called “buried magnets,” the generator temperature could be reduced and the efficiency, on the other hand, increased by 1.5% points – to now 97% at full load.

Results after almost two years of “Torque Operation”

The ship operation with the Torque-system has been, to date, safe and trouble-free. Since the drive-unit modification, there have not been any breakdowns or malfunctions that have interfered in the ships unrestricted operational readiness.

During a voyage from Amsterdam to Stuttgart in January 2012 the Torque-system proved its function impressively. The ship was loaded with 1,000 to soy shred. Draft at this time was 2.2m. The flooded river Rhein featured at this time a countercurrent of 7–8 km. At that the ENOK had still a ground speed of around 6 km. The average load on the diesel engines was around 70%. Since its commissioning in August 2010 around 2,000 operating hours have been recorded in the ships log-book.

Thereby 1,200 hours (60%) only with one genset, around 600 hours (30%) with two and about 200 hours with three engines. The drive system of Torque Marine fulfills all requirements of the legislators according to energy efficiency, NOx limit values as well as noise protection regulations.

The Torque-System as Torque Converter

The knowledge that ship propulsions require power for the speed is the basis for the design of the necessary driving power. But this power is used only very seldom. In some applications, river / tugs etc., this utilization is at an average of 45% of the installed power.

The classic diesel mechanical drive has its maximum torque, according to its completion, between 40 to 80% of speed. To reverse the drive system at lowest possible propeller speed, power of the engine is defined on the required torque at lowest engine speed.

As a consequence diesel mechanical drives are basically oversized.
The Diesel Engine and its Torque
Unfortunately a diesel engine requires a certain low speed (idling speed) to run independently. Below this lowest speed the engine has no torsional force: it dies! In addition, at idling speed the combustion engine supplies no torque.

But low engine respectively propeller speeds are essential for particular drive conditions. Also the very often common installation of transmissions helps somewhat to nothing. The attached power-torque-diagram of a modern ships diesel engine shows very plainly that, not until an engine speed of around 40% of the rated speed, is there a noticeable torque starting.

For many drive conditions, such as frequent lock passages, long channel passages, manoeuvring support by tugs and AHTS, high torque at lowest propeller speeds are essential.

Low Speed, High Torque
Here comes the new drive concept of TORQUE Marine IPS on the table. With this diesel electric drive, gensets and electrical drive units, the necessary low propeller speeds are reached exactly as required. The reason for the extreme low propeller speeds are based in the high torque of the permanent exited drive units. The Torque-Motor supplies its full torque already from the first rpm over the entire speed range (see diagram). This high torque is generated by the Torque-Motor directly; it is developed from reciprocation between magnets and the runner current through the stator winding. This drive system offers an almost wear- and maintenance free operation and as a specific “treat” customers receive fuel and emission reductions on top.

www.torquemarine.de
Progress with System Components.

High-quality and reliable system solutions for your application.

Components by Liebherr for maritime use:

- Portfolio comprises large diameter bearings, gearboxes and rope winches, hydraulic cylinders, axial piston pumps and motors, as well as electric motors, all from one source
- Comprehensive product range for various applications (e.g. heavy-weight rope winches for deep-sea operations, or large hydraulic cylinders for offshore cranes)
- Extensive application and engineering expertise
- Certified, proven quality and many years of experience

2012 SMM in Hamburg

04 - 07 September
Hall A2, Booth 110

www.liebherr.com
The Corvus Power Play

Corvus Energy has quickly evolved as a leader in the marine hybrid propulsion market, developing state-of-the-art battery system solutions on some of the world’s biggest projects. And this is just the beginning.

By Greg Trauthwein, Editor

**REVOLUTIONARY:**
A c : constituting or bringing about a major or fundamental change <a href="http://www.merriam-webster.com">[source](http://www.merriam-webster.com)</a>

While the world “revolutionary” is too often and liberally bandied about in the description of new products, Vancouver, BC-based Corvus Energy arguably has created a revolutionary battery for the maritime market, a power source with a power density, longevity and durability never seen in hybrid boats. An exhaustive search for a battery source that could help create the solution turned up empty; even direct appeals to battery manufacturers elicited a response which said that commercial maritime was “too niche of a market.” So Perry and his co-founders embarked on the path to design and build their own solution, and to date the company is working on projects ranging in size from 6.5kWh up to multiple megawatt scale installations, with its batteries in hybrid marine applications soon being directly on projects ranging in size from a battery perspective; we came at it from a boating perspective,” said Brent Perry, CEO, Corvus Energy.

The company started as an idea in 2006. Perry, who enjoyed a career as a boat builder on several continents, was increasingly asked by his customers for hybrid boats. A exhaustive search for a battery source that could help create the solution turned up empty; even direct appeals to battery manufacturers elicited a response which said that commercial maritime was “too niche of a market.” So Perry and his co-founders embarked on the path to design and build their own solution, and to date the company is working on projects ranging in size from 6.5kWh up to multiple megawatt scale installations, with its batteries in hybrid marine applications soon being directly responsible for emissions reductions in the range of thousands of tons annually.

**What is Corvus?**

Corvus Energy is a manufacturer of high power lithium polymer batteries used in the hybridization of heavy machinery such as commercial vessels. Similar in chemistry to the batteries found in the iPhone, these are not just any batteries. We look at the total project and help to create a total solution, where as other battery manufacturers tend to be commodity sellers.”

Brent Perry, CEO, Corvus Energy

**Building a Better Battery**

Manufacturing any product for the maritime market means engineering a solution that can take the unique rigors of working day in, day out, in one of the most demanding and corrosive environments on the planet. According to Perry, when he first embarked on the mission to find battery solutions for his boatbuilding customers that sought hybrids, he found no batteries rugged or serviceable enough that combined the necessary power and long-life capability to withstand the rigors of the marine environment.

“The conditions in maritime are harsh and unique,” Perry said, and offer many factors to consider, including:

- **Atmosphere:** Extreme weather, high salt, high humidity. “We knew it had to be a fully sealed product, capable of shedding heat as if it were fully vented.”
- **Energy capacity:** “If you don’t perform as well as a diesel engine, then you are not a true hybrid. The operator should never be able to tell a difference if they are running on diesel or battery power.”
- **Communication:** The batteries have to be able to communicate ... with each other in a network, with the operators ... to properly gauge performance.
- **Durability:** “Our casings start at 30 and go up to 100g impact. They are built to deal with the rigors maritime offers, and there are no moving parts in the battery to fail.”

In addition, they must operate well for a long time. Corvus’ shortest life battery is seven years; it’s longest 20 years.

While the solution is elegant and the reference list chock full of some of the biggest, most progressive names in maritime and growing, running a start-up does not come without challenge.

“Simply put, when you talk about making a decision (to build a company), when sitting around the table everyone can agree on the correct course,” said Perry. “The real pressure comes when you are under pressure to deliver. Maintaining the integrity of your values and corporate culture while you live and work through the initial growth - where every dollar made and every dollar spent is critical - I think is the greatest challenge. Invaluable for me was my previous experience in the maritime industry, because in the marine industry, your reputation is everything. We are lucky to have staff and partners that are focused on getting it right.”

“We don’t really sell batteries. We look at the total project and help to create a total solution, where as other battery manufacturers tend to be commodity sellers.”

Brent Perry, CEO, Corvus Energy
Move to Green

Perry agrees with the assessment that the maritime industry is inherently conservative, averse to adopting new technologies until they are well proven in the field. But there is a twist on the notion of “green.” “The marine industry is averse to new technology, and I wouldn’t have put anything in my boats that wasn’t proven for 10 years,” Perry said. But when talk turns to “green” in the marine industry, the first of mind thought is energy efficiency and emission reduction. Perry contends, too, there is a stronger “green” pull today. “But while the industry may be conservative on adopting new technology, the marine industry, too, is all about money … more accurately saving money and improving reliability. If we can prove to them that we can save them money, they will participate. I won’t take a job on if I don’t think we can improve the performance of their operations.”

In fact, Perry sees the users of Corvus Technology as not simply customers, rather as business partners, and he and his team are not simply looking to push batteries out into the market place, rather evaluate each individual company and initiative as a project on its own merits. It is this holistic, project-based approach which gives him the backing to enter only projects where the payback on incorporating the system has a payback of 5 years or less. Today he sees the ferry, tug and Offshore Service Vessel as particularly ripe for the hybrid solution, as well as a major push into the subsea market – where power consumption and integrity are the definitive limiters in the expanded use of subsea robotics – as the major forces of activity in the near term.

But while saving green (cash) is indeed nice, saving the other green (environment) offers tangible benefits, too, fitting in with the Corvus Energy mantra of looking at the whole picture rather than a few pixels. Corvus Energy batteries are the key to hybridizing heavy equipment such as harbor tugs, ferries and OSVs, which due to duty cycle and fuel consumption lend themselves to dramatic fuel reductions. These fuel reductions translate into large cost savings – particularly with the skyrocketing costs of all fuel and pending legislation that will make marine fuel significantly cleaner and more expensive by 2020 – and provide return on investment in very short time frames. In turn, the fuel saved also provides huge reductions in carbon, particulate and NOx emissions. Particulate matter is reduced most significantly as most of the fuel savings is incurred at low engine speeds when the engines are operating at least efficiency and producing most soot.

References

In any industry it seems that a company’s prowess is best told by the references it holds, and Corvus has no shortage of high-profile marine references, serving some of the biggest, most progress names in the business, including Foss, Eidesvik Offshore and KOTUG, many of which have been covered in our pages in volume, and will be briefly recapped here.
compliance. Campbell Foss was the world’s second Hybrid Tugboat, converted to hybrid power at the Foss Rainier Shipyard.

The 73.4-ft., 144-gt boat built originally in 2005 became Foss’ and the world’s second hybrid tug, following the Carolyn Dorothy, which entered service in 2009. The ongoing project entails modifying and testing the boat’s propulsion system along with other maintenance in advance of its return to service in Long Beach.

The Campbell Foss is sister to the Carolyn Dorothy, which has been bringing cleaner air and fuel efficiency to southern California ports since its 2010 arrival in Los Angeles and Long Beach. The retrofit included replacing one of the boat’s 125-kW generators with a new 350-kW Detroit Diesel Series 60 generator to support diesel-electric transiting between jobs. The main engines will not be changed, but will be used only during actual assist work. Ten Lithium-Polymer batteries provided by Corvus Energy will supply power for the boat’s lights and other systems not related to propulsion and for minor maneuvering during periods of idling. A side-by-side comparison of two Foss Maritime dolphin-class tugs—the Carolyn Dorothy and a conventional tug named the Alta June—showed significant emissions reductions, as follows: 73% reduction for particulate matter (PM); 51% reduction for nitrogen oxide (NOx); and 27% for carbon dioxide (CO2). A spin K emp and A sociates (A.K.A.) provided the hybrid electronics and control system that tie the hybrid components together.

Similarly, Corvus Energy was integral in the plan to develop a true hybrid energy system for installation on board the offshore supply vessel Viking Lady (featured on the cover of the April 2012 edition of Maritime Reporter & Engineering News) with the company providing the battery pack for energy storage. Viking Lady is unique when compared to any other OSVs. Thanks to its Norwegian heritage, which stresses both maritime innovation and environmental conservation, the three-year-old LNG-fueled vessel, which is owned by Eidesvik Offshore, was the very first merchant ship to use a fuel cell as part of its propulsion system. The fuel cell, which generates an electric output of 330 kW, was installed in the autumn of 2009 and has successfully run for more than 18,500 hours. With the Corvus-supplied battery pack in place, the ship operates using a hybrid system similar to that which has been installed in hybrid cars, and the potential emission reductions are higher and the return on investment period is shorter for ships than it is for cars. The Corvus Energy battery back in the Viking Lady will consist of four packs of 17 AT6500 modules, for a total of 68 modules—or about 1/2 of a MW.

Maximum bus voltage of 856V.

Maximum current 1000A. (total: each pack is rated at 250A, we have four in parallel.

The pack needs no cooling system due to its extremely low internal resistance. The batteries cathode is nickel manganese cobalt and has about 20-25% more power than competing lithium ion versions. The primary potential benefits of the hybrid energy system for a ship like the Viking Lady are a 20-30% reduction in fuel consumption and CO2 emissions through smoother and more efficient operation of the engines and fuel cell. The reductions of other exhaust components are even higher. Finally, Corvus Energy’s battery packs were earlier this year installed in Europe’s first hybrid tugboat, the RotorTug RT A driaan of KOTUG of The Netherlands. This diesel-to-hybrid retrofit represents Europe’s first low emissions hybrid tugboat, and the conversion features Corvus’ AT6500 48 volt lithium polymer battery packs. Completed in March 2012, the converted RT A driaan, now renamed E-KOTUG RT A driaan, has rejoined the KOTUG fleet. For example, the harbor tug RT A driaan is currently achieving a 20 percent savings after being converted to hybrid form.

Grant Brown, Marketing Director, Corvus Energy

“In under 3 years, Corvus has gone from 6 “boat guys” with a great idea and homemade business cards to almost 50 of the top minds in electrical and mechanical engineering, who now possess the key to high power industrial grade energy storage,”

http://www.corvus-energy.com
It takes competent people, innovation and flexibility to create custom-made ships

www.stxosv.com

OUR SHIPYARD IS YOUR SOLUTION

- Committed to safety
- Solid workforce
- Strategic location

WWW.CHETMORRISON.COM.MX
It could be argued that running an efficient, safe and profitable ship repair yard is one of the most difficult of all maritime jobs. First and foremost, unpredictability – in terms of planned and actual workload, as well as the very nature of the job themselves – is a recurring theme. Maintaining experienced staff in times good and bad; keeping ahead of evolving regulations, as they pertain to the local environment and the global ship market; and weathering the inevitable influx of cut-rate competition from emerging nations are but a sampling of the issues ship repair managers face every day. To get answers to some tough questions, Maritime Reporter recently spent some time with Jan Kees Pilaar, managing director of one of the world’s long-tenured and storied shipyards, Hamburg, Germany based Blohm + Voss.

**Insights with**

**Jan Kees Pilaar**

**MD, Blohm + Voss**

*By Greg Trauthwein, Editor*

Please provide a brief background on how you came to your current position.

**Pilaar** In 1992 Keppel Verolme Shipyard appointed me as their Senior Business Manager for the yard’s offshore repair and maintenance activities. In 2005, when the shipyard group ThyssenKrupp Marine Systems, a result of the merger of the HDW-Group and ThyssenKrupp Werften, was established I was appointed by ThyssenKrupp to become Managing Director for the repair activities of Hellenic Shipyards in Greece. On the decision by ThyssenKrupp to sell Hellenic Shipyards in 2008/2009, ThyssenKrupp Marine Systems offered me the position as Managing Director at Blohm + Voss Repair in Hamburg. As of May 1, 2009 I accepted this position and managed beside my daily business, the selling process of Blohm + Voss Repair, as part of the civil shipbuilding activities of Blohm + Voss, to the final closing with Star Capital Partners. Since the closing has taken place on January 31, 2012 I operate as Managing Partner at Blohm + Voss Repair.

Give us the Executive Overview of Blohm + Voss’ ship repair capabilities today?

**Pilaar** Blohm + Voss Repair in Hamburg is the premier address for ship owners and managers requiring a specialized shipyard for conversions, refits, repairs and routine drydockings focusing on passenger/cruise vessels and offshore units for the oil and gas industry. We repair anything that floats, is our slogan! Shipyard work on a passenger/cruise vessel is one of the industry’s ultimate challenges; assignments include work on the hull, hotel and public areas, machinery...
and operating systems. Blohm + Voss Repair has the facilities and expertise as well as a first class reputation for punctual deliveries of such tasks – its management and motivated labor pool make the impossible possible. Its work force is both experienced and flexible, and can be increased in numbers as well as trades at very short notice due to Hamburg’s centre pin location and far-flung infrastructure.

Blohm + Voss Repair in Hamburg on the River Elbe is easily accessed by equipment operated by the Northern Atlantic and North Sea offshore industry. Blohm + Voss Repair staff is renown for fast conversions and 7/24 repairs always working on-time and to budget. Specialist expertise includes conversions and modifications, lengthening, re-engining, refits, upgrades, lifetime extensions and repairs to offshore units, rigs, tankers, LNG/LPG gas tankers, FPSO’s as well as work on wind power and oil industry support vessels.

What do you count as the primary strength of your company?

Pilaar: We have very sophisticated project management. In combination with the long lasting experience of more than 135 years in ship building at Blohm + Voss at a glance, this will come to a very good customer focus to understand the needs and requirements in handling complex projects in the field of passenger/cruise vessels as well as in proceeding projects for the oil and gas industry.

In what areas do you see room for improvement?

Pilaar: In general, Blohm + Voss Repair is very well positioned in the market. The most challenging task is to get the “old lady” Blohm + Voss Repair attractive to the market participants. We have to work against the impression, that we are an “old” and “traditional” company. During the years, we always adapt ourselves to the requirements of the market in the field of service, management systems and customer orientation. To get this spirit alive is a task that has to be proved on daily basis. “Is not possible, does not exist!”

There are some tough economic and budgetary times: How has the recent economic slump affected your business?

Pilaar: Less projects and orders in the general ship repair business are leading to more competition in the market. And at the very end, the price is the essential point whether you will get an order or not!

In your opinion how are ship owners today most the same, and most different in their approach to procurement of ship repair and conversion?

Pilaar: Also for shipowners nowadays it is difficult to earn a dime. Export market in Europe is basically low and a heavy influence of the financial crisis is present. So, if not much is earned, not much can be spent. And we notice this. I believe however in quality and we deliver quality. I hear this again and again from our customers. And this we have to maintain, the goal for us is to offer the quality against competitive prices. So nowadays we do a lot with regular returning customers who value this.

What do you consider the biggest challenge in running your business today?

Pilaar: From my point of view, effective project controlling is most essential to run a modern and efficient repair and conversion yard these days. You must be informed how a project/order will run, actually on a daily basis. Whether you will run out of budget or you will be in budget. And this is not only for your own financial security but also as a service to your customer, since he also wants to compare against to the budget he has available.

Your Repair and Conversion Solution
along the U.S. Gulf Coast

- 10 Gulf Coast Shipyards
- 28 Drydocks
- ISO 9001:2008 Certified
- Modern, Expanded Facilities
- Hundreds of Vessels Built
- Thousands More Repaired
- In-House Engineering and Naval Architecture
- Barges, Liftboats, Offshore Supply Vessels, Patrol Craft, Specialty Vessels, Tugs
- 65 Years of Client Satisfaction

Bollinger Shipyards
985-532-2554 • Roberts@bollingershipyards.com • www.bollingershipyards.com

August 2012 www.marinelink.com
Insights with Jan Kees Pilaar, Managing Director, Blohm + Voss

A challenging repair job was the conversion of KRAKA to DAN SWIFT for Lauritzen Tankers, a project which turned an uncompleted cable layer into an ocean going, DP accommodation and support vessel.

In the face of cheaper ship repair alternatives in the Far East, what do you count as the biggest challenge to run a German-based ship repair business today?

Pilaar Stay and be focused! Select a project, evaluate if this is good project for the yard. And then work on the project until the order is there. You can only succeed if you know what you want and what route you take to get there. We know very well when we have to do a “technical sale” or a “price sale.” If we can beat the competition on our technical skills and competence we will give such a project priority.

Over your career, what do you consider to be the leading technologies or developments that have positively impacted the business of repairing ships?

Pilaar The change of mindset to what is today called “Green Shipping.” In conjunction with it, the development of new technologies and techniques to keep the environment cleaner. This applies not only for ships in operation but also for the treatment of ships being at the yard. For example the treatment of ship hulls from grit blasting to hydro blasting was generated by Blohm + Voss Repair. Together with our wastewater treatment plant, where we collect the waste water from our docks, we have made a big step even to a “green shipyard” and prove that German shipyards are advanced in regard to sophisticated technologies.

How is Blohm + Voss investing today?

Pilaar First of all, we invest in our staff. It is important, even for a German-based repair yard, that our employees will always be trained on the highest business and technical standards. Further

Repair Arab Shipbuilding & Repair Yard (ASRY)

Bahrain-based Ship Repair Yard Invests $188m in facilities; Expands offshore operations

ASRY CEO Chris Potter

of the way the yard approaches Fleet Repair Agreement with shipowners, resulting in ASRY re-adjusting its terms for mutual benefit and positioning the ASRY offering more competitively.

The decision to establish a dedicated offshore division three years ago has paid off, with ASRY Offshore Services (AOS) contributing 40% of all sales and 50% of profit in 2011. To cope with increased offshore business, not just jack-up repairs, but also the potential of AOS investment, the yard continued to invest in new facilities, notably a $8.6m desalination plant, a $2.3m eco-friendly sewage treatment plant, and a $250m expansion project, which positions the yard for the inevitable market upturn.

Shiprepair Projects

The end of June 2012 saw the Bahrain yard perhaps its major challenge to date, when the fire and explosion damaged the $188m expansion project, which positions the yard for the inevitable market upturn, and is indicative of the yard’s long term commitment investing in a down market. The $188m expansion project has seen the construction of a new deep water 1.38m Repair Quay Wall, equipped with two large rail-mounted cranes; a 200,000 sq. m. offshore fabrication area with load-out quay; and four new Azipod Stern Drive (ASD) tugs, built by ASRY itself. In early 2012 the yard continued to invest in new facilities, notably a $8.6m desalination plant and a $2.3m eco-friendly sewage treatment plant. ASRY is also investing in people, starting an apprentice scheme and also training 50 Bahraini’s to work in all departments of ASRY.

The Bahrain repairer has also undertaken measures to help the hard-pressed shipowners, resulting in ASRY re-adjusting its terms for mutual benefit and positioning the ASRY offering more competitively.

The decision to establish a dedicated offshore division three years ago has paid off, with ASRY Offshore Services (AOS) contributing 40% of all sales and 50% of profit in 2011. To cope with increased offshore business, not just jack-up repairs, but also the potential of AOS moving into the offshore fabrication sector, AOS’s offices within the yard have virtually double in size this year, not just for offices for AOS staff, but also representatives of offshore operators.

ASRY CEO Chris Potter

of the way the yard approaches Fleet Repair Agreement with shipowners, resulting in ASRY re-adjusting its terms for mutual benefit and positioning the ASRY offering more competitively.

The decision to establish a dedicated offshore division three years ago has paid off, with ASRY Offshore Services (AOS) contributing 40% of all sales and 50% of profit in 2011. To cope with increased offshore business, not just jack-up repairs, but also the potential of AOS moving into the offshore fabrication sector, AOS’s offices within the yard have virtually double in size this year, not just for offices for AOS staff, but also representatives of offshore operators.

Shiprepair Projects

The end of June 2012 saw the Bahrain yard perhaps its major challenge to date, when the fire and explosion damaged the $188m expansion project, which positions the yard for the inevitable market upturn, and is indicative of the yard’s long term commitment investing in a down market. The $188m expansion project has seen the construction of a new deep water 1.38m Repair Quay Wall, equipped with two large rail-mounted cranes; a 200,000 sq. m. offshore fabrication area with load-out quay; and four new Azipod Stern Drive (ASD) tugs, built by ASRY itself. In early 2012 the yard continued to invest in new facilities, notably a $8.6m desalination plant and a $2.3m eco-friendly sewage treatment plant. ASRY is also investing in people, starting an apprentice scheme and also training 50 Bahraini’s to work in all departments of ASRY.

The Bahrain repairer has also undertaken measures to help the hard-pressed shipowners, resulting in ASRY re-adjusting its terms for mutual benefit and positioning the ASRY offering more competitively.

The decision to establish a dedicated offshore division three years ago has paid off, with ASRY Offshore Services (AOS) contributing 40% of all sales and 50% of profit in 2011. To cope with increased offshore business, not just jack-up repairs, but also the potential of AOS moving into the offshore fabrication sector, AOS’s offices within the yard have virtually double in size this year, not just for offices for AOS staff, but also representatives of offshore operators.

Shiprepair Projects

The end of June 2012 saw the Bahrain yard perhaps its major challenge to date, when the fire and explosion damaged the $188m expansion project, which positions the yard for the inevitable market upturn, and is indicative of the yard’s long term commitment investing in a down market. The $188m expansion project has seen the construction of a new deep water 1.38m Repair Quay Wall, equipped with two large rail-mounted cranes; a 200,000 sq. m. offshore fabrication area with load-out quay; and four new Azipod Stern Drive (ASD) tugs, built by ASRY itself. In early 2012 the yard continued to invest in new facilities, notably a $8.6m desalination plant and a $2.3m eco-friendly sewage treatment plant. ASRY is also investing in people, starting an apprentice scheme and also training 50 Bahraini’s to work in all departments of ASRY.

The Bahrain repairer has also undertaken measures to help the hard-pressed shipowners, resulting in ASRY re-adjusting its terms for mutual benefit and positioning the ASRY offering more competitively.

The decision to establish a dedicated offshore division three years ago has paid off, with ASRY Offshore Services (AOS) contributing 40% of all sales and 50% of profit in 2011. To cope with increased offshore business, not just jack-up repairs, but also the potential of AOS moving into the offshore fabrication sector, AOS’s offices within the yard have virtually double in size this year, not just for offices for AOS staff, but also representatives of offshore operators.
on, we invest in our operational resources because a repair yard can not work if their equipment is not accurately maintained and on the current technical standard. Our new owner Star Capital believes in this view as well. Combine tradition with nowadays knowledge and you are top of the Bill!

What do you count as the most interesting or challenging ship repair job you and your company has ever been involved?

Pilara  The two most interesting and challenging repair jobs in the last years were the conversion of KRAKA to DAN SWIFT for Lauritzen Tankers and the lengthening of the cruise vessels BALMORAL and BRAEMAR for Fred. Olsen Cruise Lines.

When the KRAKA docked late 2007 at Blohm + Voss Repair, a long, demanding conversion program awaited the vessel, turning it from an uncompleted cable layer into an ocean going, dynamically positioned accommodation and support vessel.

Shipbuilding work included the addition of over 1,600 tons of steel, pulling of 400 km cables and the instalment of 40 km of new piping.

Accommodations for 291 were created along with all facilities such as galleys, provision rooms, messes, laundries, recreation, cinema and fitness rooms as well as a swimming pool. New ship operations kit included a new bridge, engine control centers, workshops, a HVAC plant, and fire fighting, sprinkler, CO2 and water mist systems. A mongst further sophisticated equipment, the vessel received three new azimuth thrusters, offshore gangways, a helicopter deck, dynamic positioning, integrated navigation, thruster control and power management systems. After completing the staggering program, the vessel, now renamed DAN SWIFT by its owner J. Lauritzen, left Europe to commence a new life working adjacent to fixed structures, platforms and floating units in Brazil’s new offshore oil and gas fields, where she supplies accommodation, hook-up, commissioning, start-up, maintenance, light construction and crane support.

In November 2007 the cruise ship BALMORAL (ex Norwegian Crown) was docked at Blohm + Voss Repair to be lengthened by a new mid-body section of 30.2 meters.

In January 2008 the completed cruise ship left Blohm + Voss, now with increased length and passenger capacity heading to Southampton where the cruise ship was handed over to her owner. In May 2008 the BRAEMAR (ex Crown Dynasty) was docked the get the same treatment as BALMORAL. The cruise ship was cut in two pieces in order to be lengthened also by a new mid-body section on 31.2 meters. Besides this, 18 balconies were installed and the restaurant on Deck 8 was completely renovated. What was proved with BALMORAL fits also the BRAEMAR and the cruise ship with an increased capacity of 988 passengers left Blohm + Voss Repair on July 2, 2008, within time and within budget again exactly what our clients expect from us what we deliver.
National Shipbuilding Research Program

Navy, Industry partner for research; sharing costs, risks, and rewards to reduce total ownership costs

By Edward Lundquist

America’s shipyards are fierce competitors, but they can also be close collaborators. The National Shipbuilding Research Program (NSRP) is a cooperative effort for American shipbuilders and the U.S. Navy, with the aim of improving efficiency and economy to reduce the cost of Navy ship construction and repair in American shipyards.

According to the Navy’s NSRP program manager Connie Bowling of the Naval Sea Systems Command, the program seeks to reduce the cost of building, operating and repairing Navy ships by improving productivity and quality through advanced technology and processes.

NSRP seeks to share and rapidly implement manufacturing best practices, take advantage of breakthrough technologies and processes with the entire shipbuilding industry through government and industry collaboration.

Projects have been awarded to more than 200 entities from 37 different states. Resource allocation decisions are made by the industry-led Executive Control Board, after consideration of input from Navy sponsors. “Navy and industry set the strategic focus and direction, but the initiatives have to come from industry,” Bowling says.

NSRP has a budget of about $30 million a year, split between the Navy and industry. “We require a cost share for the products,” Bowling says.

The NSRP research program is not subject to Federal Acquisition Regulations (FAR), but project funding decisions are supported by a competitive process characterized by independent third-party evaluation of project proposals. NSRP calls for the resulting work to be shared across the shipbuilding industry and not be held as proprietary to a single entity. “We can quickly award projects to the companies. Even college courses and relatively small projects can have a big impact. A relatively low-cost NSRP-supported project created a mobile, autonomous, robotic welding platform to replace manual welding processes in time, set-up requirements, safety and overall cost in naval ship construction.

The robotic welder, created in a base workshop as a modest NSRP project, involved some of our tiered suppliers, are working together to make better ships at a more affordable price,” Bowling says. NSRP is focused on more than just controlling acquisition costs, but reducing total ownership costs (TOC), as well. The program complements, and has proven successful in leveraging, other programs such as Office of Naval Research (ONR) Manufacturing Technology (ManTech) and SBIR (Small Business Innovative Research), the latter providing smaller companies and organizations the opportunity to contribute and benefit. In addition, each of the PEOs has a research and development program that is coordinated with NSRP activities.

NSRP opened the aperture for academic programs as well as small and new companies. Even college courses and relatively small projects can have a big impact. A relatively low-cost NSRP-supported project created a mobile, autonomous, robotic welding platform to replace manual welding processes in time, set-up requirements, safety and overall cost in naval ship construction.

Bowling said. “Once we determined our risks, we focus on results,” Bowling says. “Now the focus is on the greater Navy and industry collaboration. And, an annual event at the Washington Navy Yard, attended by top Navy leadership, including the Assistant Secretary of the Navy for Research, Development & Acquisition, gives the project teams the chance to showcase their work, and Navy program managers the opportunity to witness NSRP value delivery.

The shipbuilding industry is highly competitive. Risks can be high and margins low. So shipbuilders are not known for sharing their technological advancements with each other. “It took a long time for them to get comfortable with this model,” said Bowling.

But, Bowling says, the industry understands the value of working together to help the nation and the Navy spend their limited shipbuilding and repair dollars wisely. “Industry gets that. The Navy gets that. Ideas and projects are flowing in, and this program is hitting its stride.”

At NSRP’s inception, it required significant creativity to establish the mechanisms and business practices across NAVSEA/PEOs and industry to avoid anti-trust violations. “We have gained effectiveness over the past decade after figuring out the legalities and processes to do what was intended - focus on results,” Bowling said. “Once we determined our common objectives, and got through the business aspects, with proper accounting rules and audit trails in place, and established equitable meeting scenarios, we were able to become productive,” she said. “Now the focus is on the greater good. We can determine what’s broken, what needs to be improved, and how quickly we can get there.”

(Continued on page 50)
Smart Growth at Marinette Marine

Scott A. Wellens (right), the director of facility and process improvement for Marinette Marine Corporation (MMC), a Fincantieri company, is a member of the NSRP executive board. The Wisconsin shipyard is busy with several projects, including the Navy’s Littoral Combat Ship. That means updating the infrastructure and bringing in new workers.

“We had to grow,” Wellens says. “We will essentially double the size of our physical plant in a just a few short years. Rarely, do you ever get a chance to do everything in a short period of time. We couldn’t stop production because we had to keep building ships as we were expanding. With our process improvement efforts, we want to make the buildings work for us so we can improve the efficiency of building the ships. We needed to create a sequence that improved our flow and reduced the travel time from one stage of construction to the next. We’re balancing our work stations and leveraging the learning curve.”

“We knew we would be hiring a number of people because our existing workforce was about 600 to 700 people, and we have to grow to between 1,300 and 1,400 people,” Wellens says. “That’s more than double the work force.”

“We’ve set up programs with University of Wisconsin at Marinette for some of the drafters, designers, and those types of professional positions,” Wellens says. According to University of Wisconsin-Marinette Dean and Campus Executive Officer Paula Langteau, the school has been working with MMC for the past five years to help the shipyard meet their growing need for qualified shipbuilding designers, thanks to funding from NSRP to develop the curriculum. “In 2007 we developed a classroom continuing-education course called ‘Applications of Modern Shipbuilding Design’ for Marinette Marine,” Langteau says. “We also started offering the course online for the rest of the industry.”

Based on the initial success, UW-M Marinette developed four follow-on classes in specific disciplines, such as structure, electrical, piping and HVAC, and design for production. All five courses are now offered online in a certificate program which is available to the entire industry. “This package of courses made UW-M Marinette the first institution in North America to offer fast-track, distance-delivered courses in a full certificate program in modern shipbuilding design,” she says.

Today MMC is not just sending designers to the course. Langteau says the company has begun to send production staff through it. “We are told they can be more productive if they have an understanding of the full design concept.”

Training people for professional positions was a good project for NSRP because what works at Marinette could be applied to the shipbuilding business as a whole, she says. “Our delivery platform is unique as well,” Langteau explains, “enabling students to connect remotely from anywhere in the world to access our courses.”
National Shipbuilding Research Program & Marinette Marine Corp.

(Continued from page 48)

NSRP projects are targeted at engineering planning, production, environmental issues, education and training, facilities, technology, and regulatory compliance for shipbuilding, including new construction and repair, and more. “We’re focused on the critical factors that impact acquisition and TOC, so we can make the most out of our investment,” says Bowling.

For example, an industry proposer can recommend an industry-wide problem to be solved, or a technology that can be matured—such as in design, welding, or painting—with a cost proposal and a team to do the work. If the industry board and the government agree that the project addresses program strategic objectives the project can compete with other proposals for funding. “We’re trying to address similar problems at similar shipyards. Industry tells us collectively what they think should happen. We look to see if that recommendation could be used on a Navy ship, could meet a military specification or requirement, or further the development of a needed technology,” she says.

NSRP projects have addressed coatings, modular construction, welding techniques and processes, reduction of rework, production planning, exchange and interoperability of data, materials, standardized procedures, safety and health issues and environmental concerns, and more.

For example, a single-coat primer and coating system for voids and tanks that will last the life of the ship has been developed and tested; saving money that otherwise would have to be spent on difficult and expensive process during overhauls.

“Many of these things have a long return on investment,” she said. “But when these ideas are looked at for their total ownership costs over the life cycle of a ship, they’re no-brainers.”

Focus on Marinette Marine Corporation

Located on the Menominee River in Marinette, Wisconsin, Marinette Marine Corporation (MMC) was founded in 1942 to support the shipbuilding needs of America during World War II. The shipyard was privately held, and was acquired by The Manitowoc Company in 2000. In 2008, the company was acquired by Fincantieri Marine Group Holdings in 2008. Fincantieri has shipyards in Italy building both commercial and naval ships, from cruise ships and mega-yachts to aircraft carriers, frigates and submarines. MMC has built three of New York City’s landmark Staten Island ferries, Guy V. Molinari, Senator John J. M. archi, and Spirit of America.

A number of ships for the Navy and Coast Guard have been built here at the MMC facility on the Menominee River. The Coast Guard’s 161 juniper-class 206-ft. and 14 Keoper-class 175-ft. seagoing buoy tenders were built at Marinette, as was the 3,500 ton Great Lakes icebreaker, USCGC Mackinaw (WLBB 30), along with several of the Avenger-class mine countermeasure vessels; torpedo weapons retrievers and Yard Patrol Craft for the U.S. Naval Academy. More recently, the yard built the Improved Navy Lightering System (INLS) self-powered causeway sections for offloading elements of the sea base to the shore.

Today, Wellens says the focus at Marinette is on building LCS.

MMC is a partner on the Lockheed Martin-led team responsible for the Freedom-class variant for LCS, one of two variants being built for the Navy. The other is the Independence-class being built at Austal USA in Mobile, Ala.

MMC started construction on the first LCS in 2005. USS Freedom (LCS 1) was launched in 2006 and commissioned in 2008 at Milwaukee. Construction on Marinette’s second LCS, Fort Worth (LCS 3) began in 2009, and was delivered to the Navy two months early. The Fort Worth is scheduled for commissioning in September 2012.

In addition to LCS, two other ships are being built at Marinette now. On June 16, the yard celebrated the launch of the fisheries survey vessel Reuben Lasker for...
the National Oceanic and Atmospheric Administration (NOAA). The ship is extremely quiet so it won’t disturb marine life, and features advanced navigation systems, acoustic sensors, and scientific sampling gear to conduct research on fish, marine mammal and turtle populations. The Arctic Region Research Vessel (ARRV) Sikuliaq is currently being built alongside LCS. Sikuliaq is sponsored by the National Science Foundation and will be operated by the University of Alaska Fairbanks to conduct science mission on behalf of the University-National Oceanographic Laboratory System (UNOLS) community.

New way to train new workers

This past year, UW-Marinette again teamed up with Marinette Marine and ShipConstructor Software for the development of a new Shipyard Orientation Program course. Along with other contributors, the team created a virtual shipyard to get a basic understanding of shipyard layouts and functions.

SOP is an immersive, virtual 3-D shipyard training model for new comers and non-shipbuilders that provides self-paced instruction to achieve a basic understanding of shipyard layouts and functions. Students can go into buildings and perform tasks to learn about safety, reveal properties of ship systems and components, and become familiar with process of ship construction and maintenance.

The concept for this course was to create a 3D virtual shipyard that coupled with a shipyard orientation curriculum enables new employees to fly an avatar around to explore the virtual shipyard, click on items, and learn about the interconnectedness of processes and production, at their own pace. This time, the course was designed to be offered fully online, in a 24/7, on-demand, instructor-less platform. The virtual, 3D yard addresses the industry need for a standardized, cross-discipline orientation program that is both cost-effective and shipyard neutral. This model is generic, and represents various items seen in any shipyard and is not just modeled after one shipyard. But Langteau says the program can also be customized for any shipyard, with their particular layout, rules and procedures. There are other local educational synergies. Northeastern Wisconsin Technical College has a facility that’s walking distance from the shipyard. “The technical college system in Wisconsin is a model because they work well with local industry as to what our needs are,” says Wellens. “The State of Wisconsin awarded us a grant to develop that curriculum. NWTC has subject matter experts with shipbuilding experience—some former employees of Marinette Marine—in the areas of electrical, welding, pipe fitting and ship fitting.”

Wellens also says tours of the yard have been conducted for area high school students, and they can take vocational courses that earn dual credits leading to their high school diploma as well as the technical college. “Working with area high schools and colleges, we’re aligning the vocational curriculum through education and employment with concentrations in shipbuilding trades.”

NSRP funding available for research using two different vehicles

A Research Announcement (RA) project is a major initiative project. In general, they are higher dollar value and from one to three years in durations. A panel project is generally under $100-150k and short—up to 12 months—in duration.

RA projects also bring together a cross functional team to solve a problem and usually more time and testing to resolve or mature. The panel vice the major project (the RA) path is available to solve a more immediate problem or to determine viability of a bigger problem. “Our panel projects are key to NSRP success,” says Bowling. “We have subject matter experts from across the industry—(shipbuilders, centers of excellence, technical warrant holders, small business, etc.—who gather to solve or address a functional issue, such as welding, safety, painting or surface preparation, or education, to give a few examples.

Examples of RA and Panel projects can be found at www.NSRP.org

Energy savings through integrated solutions?

Certainly.

With fuel costs representing an increasing share of a vessel’s operating expenses, we at ABB Marine and Cranes believe that the future frontrunners in the shipping industry will be the companies that attain competitiveness through energy-efficient and environmentally-friendly ships. ABB’s global marine and cranes organization offers pioneering technologies to cut vessel energy consumption and reduce emissions. We are the leading supplier of total electric power, propulsion and automation solutions, including optimization and fleet-wide management systems. ABB provides innovative energy-efficient solutions to keep you ahead of the competition. www.abb.com/marine

Power and productivity for a better world™ ABB
Life, Times, Business & Future of

John Dane III
& his newly rebranded TY Offshore

By Susan Buchanan

The company has responded with in-house training and by coordinating with local authorities to train workers. But Dane said “that drives up our costs.”

He also said “we wish that the unemployed workers we read about in the news would consider blue-collar trades, which can be high-paying careers.” In late July, TY Offshore was looking for another 50 welders and shopfitters.

Dane gave an example of tough, new regulations. “In a recent application for a bulkhead to allow for construction of larger, offshore power barges, the Mississippi Dept. of Environmental Quality told us we couldn’t get a bulkhead permit — unless we could show we had an air permit for the start-up of gas turbines that will be mounted on the barges. We’ve never been asked before to permit for emissions on the vessels we’re building.”

When asked about safety in the Gulf since the BP spill, Dane said “I believe that all offshore company executives are stressing safety over schedules now. In conversations, it’s obvious that none of our customers want to have their names or their company appear in a news report concerning accidents or death.”

He continued “at TY Offshore, we emphasize worker safety in all that we do. Increased awareness will lead to increased safety. In that regard, you could say the industry is safer following extended publicity in the wake of the BP spill.”

Nibbling Away At the Jones Act

In other industry developments, Dane said he’s worried about continual attacks on the Jones Act. “A recent letter ruling by Justice Department allowed for foreign flag ships to deliver certain oil field products to the Outer Continental Shelf from a U.S. port. This was never allowed in the past. It’s simply an interpretation by a bureaucrat that slowly nibbles away at the Jones Act.”

He added “then we have senators like Arizona’s John McCain, who thinks we should do away with the Jones Act alto-
Dane said the nation’s marine industry needs to be diligent to protect the Jones Act. U.S. cabotage laws, known as the Jones Act, require commercial vessels transporting merchandise between ports in the United States to be built, owned, operated and manned by U.S. citizens and be registered under the U.S. flag.

Oil Industry Is Promising But Yachts Have Been A Tough Sell

Dane is optimistic about the global oil business over the next few years. “Turmoil in the Middle East and the crazy administration in Iran makes executives want to find replacement oil supplies,” he said. And the current price of oil and natural gas make alternative sources, such as solar and wind, noncompetitive on a large-scale basis. “The opening of new areas in Alaska means more U.S. activity, and can help get the United States become more energy independent,” he said. “All of this in turn could help end the recession.”

Dane said “while the oil patch is doing well, our sister company Trinity Yachts is hurting. The 2008 financial crash slowed the luxury business, and the new class warfare coming out of Washington has made owning a large yacht out of favor. Hopefully, this class warfare will change this November and maybe put hundreds of laid-off workers back to work.”

John Dane III, TY Offshore

Dane, who holds a B.S. and Ph.D. in Civil Engineering from Tulane University, began his career with Halter Marine in 1974 as a program manager and in 1980 formed his own shipyard, Moss Point Marine. Halter Marine’s predecessor, Trinity Industries later purchased the Moss Point Marine yard in 1987, and Dane was named president of Trinity Marine Group. Dane then spun the Halter Marine Group off from Trinity Industries as a new public company in September 1996. He founded Trinity Yachts in 1988 as a division of Halter Marine Group.

When asked how the marine industry had changed in the last 30 years, Dane said “everything has gotten bigger and more complex. When I left Halter Marine as a junior executive and started Moss Point Marine, we had just designed and delivered the first diesel electric 200-foot supply vessel. Now almost all boats are diesel electric, dynamic positioned with cargo capacities many multiples above what the ‘large for their time’ 200 footers in the early 1980’s could carry.”

He added “now, with the ingenuity of the offshore industry, rigs are drilling in water depths on a regular basis that were considered unattainable back then.”

Sailing Took Dane To The 2008 Olympics

Dane, a New Orleans native, is a lifelong sailor who has spent many hours on Lake Pontchartrain and won a number of U.S. and international championships. At the age of 58, he competed on the U.S. sailing team in the 2008 Olympics. “I’ve retired from the large, international sailing scene after checking the Olympics off my bucket list,” he said last month. “This July I competed in a regatta in Florida in a 17-foot single-handed boat. It was the first time this year and the rust was showing. I ended up in second place, having been beaten by my oldest son, John F. Dane. All in all in was a good regatta for the family.”

Dane’s son-in-law Austin Sperry was his 2008 Olympic sailing teammate. When asked if he plans to retire anytime soon, the 62-year-old Dane said “probably never. I like the business and the people. And with seven kids, who can ever retire?” Dane is married to Leslie Weathers, and they also have two grandchildren. Dane said “I’ve heard so many stories about someone who retires becoming lethargic and dying soon afterwards. Hopefully, you won’t see me hanging it up for a long while!”

In addition to Dane, principals of TY Offshore are Felix Sabates, Billy Smith, Wayne Bourgeois and Jim Berulis — an ownership group similar to TY’s sister company, Trinity Yachts.
Scottish Shipyard Exec Graeme Thomson Joins Seaspan as it preps for $8B Navy Contract

Seaspan is an association of Canadian companies primarily involved in coastal and deep sea transportation, bunkering, ship docking/ship escort, ship repair and shipbuilding services in Western North America. Seaspan’s three shipyards are located in Vancouver and Victoria, British Columbia (BC), Canada. Seaspan has served a variety of customers, including the Canadian Navy and Coast Guard, with construction, conversion, repair and maintenance projects on deep sea vessels and container ships, ice breakers, ferries, tugs, fishing vessels, Arctic Class and research vessels, cruise ships, barges and yachts.

On October 19, 2011, the Canadian Federal Government announced that Seaspan was awarded the non-combat vessel portion of the National Shipbuilding Procurement Strategy (NSPS). This calls for two Joint Support Ships, one Offshore Oceanographic Science Vessel, three Offshore Fisheries Science Vessels and one Polar Icebreaker.

While planning has already begun, construction on the new vessels won’t start until 2013. In the meantime, as part of the shipyard modernization project, over $200m worth of new and upgraded infrastructure is being built at Seaspan’s shipyards while vessel design work is being finalized.

Enter Graeme Thomson

Four weeks into his new role as Vice President of Program Management at Seaspan, Thomson is well-positioned to meet the challenges coming his way. Formerly a Program Director at BAE Systems Surface Ships in Glasgow, Scotland, Thomson is armed with an Electrical Engineering degree, an MBA and the experience of dealing with the UK’s Ministry of Defense as a customer.

“We’re going to be building complex ships at Seaspan, and it’s no different to the complex ships I was involved in at BAE Systems,” said Thomson. “I tend to think the projects and challenges are very much alike—getting them to be affordable, making sure we operate with the right processes, making sure we have the management and infrastructure to stay in control.”

In addition to project management responsibilities in his role at Seaspan, Thomson is overseeing the development, integration and implementation of all the Program Management processes and tools needed for the NSPS project. According to Thomson, he also is “working closely with the customer to ensure we are staying aligned at all times as we go through the various phases of shipbuilding, and that we’re consistent in our approaches and techniques for program managing the vessels.” Though on the job a short time, Thomson is impressed with the skilled and dedicated workforce, and has noticed a distinct advantage that Seaspan has, saying, “The one thing that really strikes me is the agility that Seaspan has. Looking at the type of work they do and the spread of the work they do, between the repair and construction of their own barges and repair of the tugs, to responding to the Canadian Navy or to cruise ships—it gives Seaspan a unique advantage in how to respond to the challenges that we’re about to face as we go into the NSPS contract.”

Graeme Thomson, VP, Program Management, Seaspan

“The one thing that really strikes me is the agility that Seaspan has. Looking at the type of work they do and the spread of the work they do, between the repair and construction of their own barges and repair of the tugs, to responding to the Canadian Navy or to cruise ships—it gives Seaspan a unique advantage in how to respond to the challenges that we’re about to face as we go into the NSPS contract.”

and seeks to improve its on-boarding program for newcomers. “The people at Seaspan are very keen to hear my experiences as they work to improve the program going forward,” he says.

While there may be many challenges ahead, Thomson is quick to point out that he’s standing at the doorstep of a tremendous opportunity. “The development of the shipyards in terms of creating a world-class state-of-the-art facility and the investment put into the IT infrastructure, people development and training, the organization, and growing all of that, it marries up to what appeals to me as complexity of work and challenge of work. At the same time, we’re trying to develop a strong business that’s capable of delivering what we have ahead of us, and that gives a real buzz in and of itself.”

Thomson continues, “There’s a part of participating in something that’s big for Seaspan, big for British Columbia and big for Canada—that we create a successful modern shipyard that gets respected worldwide for what it does. If this is where I end up leaving my footprint—helping shipbuilding in Vancouver, and Seaspan, be successful—and I’ve played a small part in that, then I’m delighted to do so. It’s a real honor.”
Chinese to Build Polar RV

The world’s move north to the Arctic for the exploration of energy resources has attracted global attention of Arctic and non-Arctic states. The newest player: China, which last month announced its plan to design and build its first ever Polar Research Vessel.

The plan has been organized by State Oceanic Administration (SOA), China, Chinese Arctic and Antarctic Administration (CAA) and the Polar Research Institute of China (PRIC) to build a new icebreaking research vessel to meet the country’s increased need of polar scientific research.

As would be expected, the new vessel will be equipped with advanced scientific equipment for polar oceans research, an integrated survey systems including marine geological and geophysical equipment, marine biological and ecological instruments.

For the integrated environmental science programs the vessel will have marine and atmospheric observing and sampling capabilities closely related with climate change monitoring. The marine geological and geophysical capabilities will give possibilities for seasonal polar marine geology, marine gravity, magnetic and seismic surveys. For marine biological and ecological programs the vessel will enable marine organism and ecological surveys and acts as a biological research platform.

To design the new ship China has turned to Finnish Arctic powerhouse Aker Arctic, an organization with a long and successful record in designs for the harsh Arctic environment. Aker Arctic will perform the conceptual and basic design of the new Polar Research Vessel. The value of the signed contract for Aker Arctic is more than $5m. “After sustained effort, the State Oceanic Administration (SOA) and the Aker Arctic Technology Inc., agree with all the basic design requirements of the new Polar Research Vessel of China and sign the contract,” said Mr. Qu Tanzhou, Director General, Chinese Arctic and Antarctic Administration of State Oceanic Administration. “As the first polar scientific research icebreaker for China, its successful design and build will not only push forward our polar scientific research career by achieving more successes, but also will make great development on Chinese ship construction industry.”

The polar research icebreaker for China will be designed to accommodate a total of 90 persons and will have a length overall of about 120m, a maximum breadth of 22.3m and draft of 8.5 m. The vessel will have the ability to break through 1.5 m of level ice at 2 to 3 knots speed, including multi-year ice. The vessel will be Ice class will be PC3 and the vessel will have dual classification from China Classification Society (CCS) and Lloyds Register of Shipping (LR).
April 2012 is when the Star
nav Perseus, the first of four GPA 688SC PSVs (PETRO
BRAS PSV 4500) was launched at Brazilian shipyard Detroit
Brasil Ltda., a subsidiary of Detroit Chile. Naval Architecture and M arine
Engineering firm Guido Perla & A ssociates, Inc. (GPA) provided the Basic/Class Design and Detailed Con
struction Engineering.

GPA worked closely with the yard and equipment suppliers to meet all of PETROBRAS’ requirements for these vessels, which are owned and operated by Brazilian-based StarNav Serviços M arítimos Ltda. GPA brought a high level of experience to this project, setting a high value on technical and eco
nomical benefits to both the operator and shipyard. For the PSV 4500 PETROBRAS tender, GPA developed a modern look vessel, the GPA 688SC PSV, with a special hull shape and new deckhouse styling. The design also has the capability to be easily transformed into the PSV 3000 (GPA 675 PSV), another vessel specified by PETROBRAS, by removing part of the parallel midbody section and making some modifications on the tank farm area.

This characteristic is valuable for the shipyard as it offers flexibility in production by retaining a large part of the hull for both models, thus reducing cost of production and increasing efficiency of construction. “Detroit Brazil together with its operating company StarNav has worked as a team with GPA in implementing the construction of these vessels,” said Guido F. Perla, Chairman of GPA. “This has been a team effort with the companies’ staff working together with the single

purpose of designing and building a vessel that best meets their production and operational requirements while meeting the requirements of the tender and high quality and safety standards.”

The GPA 688SC PSV, measuring 90m in overall length, has a deadweight capacity of 4500 T, thus the designation of the vessel. The vessel’s mechanical and cargo systems meet PETROBRAS requirements for four segregated liquid cargo systems with independent exclusive tanks, piping systems and cargo pumps. All of them are controlled by a fully automatic cargo management system and are capable of carrying synthetic oil-based mud (1,160 cu. m., Segregation 1), hydrocarbonated oil-based mud (290 cu. m., Segregation 2), water-based mud (590 cu. m., Segrega
tion 3), and brine (1,494 cu. m., Segregation 4). In addition, the vessels are equipped with tanks capable of carrying fresh water (172 cu. m.), dry bulk (340 cu. m.), ship’s fuel oil (261 cu. m.), ship’s fuel oil day (38 cu. m.), fuel oil overflow (55 cu. m.), lube oil (4.5 cu. m.), dirty oil (13.6 cu. m.), oily water (13.6 cu. m.), sewage (13.4 cu. m.), as well as ship’s ballast (2,060 cu. m.).

The hull is capable of more deadweight than the 4500 tons due to its large size. This large size comes from having the physical tank volume as required by PETROBRAS of having dedicated exclusive tanks of single cargo use for each of the segregations of liq
uid cargo. The vessels are optimally equipped for all conditions with the most advanced diesel-electric propulsion system, consisting of MTU engines, azimuthal propulsion units by SCHOTTEL and the Integrated Engine Control Room (ECR) (pictured) by EPD.

Running on four MTU generators rated for 1,845 kW and one MTU emergency generator rated for 176 kW, GPA sees several benefits for the operator as these generators provide a powerful and compact, robust and quiet solution. They also offer the highest cost-effectiveness and profitability due to low consumption values, long maintenance intervals, and a low-maintenance engine design. The generators are located on the maindeck, a concept GPA pioneered several years ago, fully utilizing the flexibility of the diesel-electric propulsion system. The concept increases the cargo capacity below deck by about 30% while offering a high degree of power management flexibility inherent of the diesel-electric system, allowing to bring on power in small increments matching the power demand of the operational profile of the vessels keeping the generator engines at appropriate loadings, operating at their highest efficiencies. Thus, fuel con
sumption and CO2 reject are reduced by 20-30% compared to conventional sys
tems. An additional benefit of the instal
lation of the engine room on the main deck concept is the notable reduc
tion of noise and vibration levels in the accommodation areas, achieved by adding an extra-deck level of attenuation between the accommodations and the bow thrusters and cargo machinery, two of the prime contributors to noise on
board these types of vessels.

This propulsion configuration is opti
mized by combining it with two high ef

ciciency azimuthal twin propellers combi drives rated for 2,500 kW each and two tunnel thrusters rated for 900 kW each delivered by SCHOTTEL. Combined with GPA hull shape, the SCHOTTEL units provide economic op
eration meeting the speed requirement of PETROBRAS. The ECR provided by EPD (pictured left and inset on the vessel during installation) is a com
pletely pre-tested, pre-manufactured self contained system and designed as an integral part of the ship’s structure that was first brought to market on the GPA-designed GPA 654 PSV in 2007. Since then, GPA continued to work closely with EPD, integrating the system on more than 50 offshore vessels designed by GPA. The system allows for the equipment to be installed and tested in a controlled environment. During construction, the ECR is lowered onto the vessel, secured and connected to power and control cables externally. This proven approach greatly reduces the possibility of equipment damage while in shipyard and reduces start up time. The GPA 688 PSVs, providing ac
commodations for 30 crew members, will bear the class notation ABS, +OPS,
2, +A1, Offshore Support Vessel, Circle E, +AMS and +ACCU.

The vessels are under an 8-year con
tract for PETROBRAS and will be oper
ating in the offshore fields in Brazil.
EPD is proud to be a member of the Detroit Brasil Ltda / Starnav Serviços Marítimos Ltda PSV-4500 new build project team.

“Electronic Power Design, Inc. (Houston), EPD Asia Group (China), and EPD do Brasil (Rio de Janeiro) are considered among the top design/engineering and manufacturing companies in the world for marine diesel/electric power systems. With the expansion of EPD Singapore Services (Singapore) and the new EPD South Africa (Cape Town), the EPD group of companies manufacture and support customer equipment worldwide”.

Our Range of Services:
- Engineering
- Design
- Programming
- Manufacturing
- Commissioning
- Field Service

For more information contact Sales@EPDLtd.com

Houston: +1 713 923 1191 | Asia: +86 514 8752 7700 | Singapore: +65 3156 3646 | Brazil: +55 21 3736 3070 | www.epdltd.com
Austal USA has recently
• Received Award for Excellence in Safety for 3rd year in a row from the Shipbuilders Council of America (SCA) for commitment to improving safety and health in the workplace. The industry average Total Recordable Incidence Rate in 2011 was 9.2, four times higher than Austal USA’s rate of 2.3.
• Received Navy construction contracts for 4 Joint High Speed Vessels (worth $634.7 million) and 4 Littoral Combat Ships (worth $x billion).
• Celebrated the opening of three new shipyard facilities, including: Phase 2 of our Module Manufacturing Facility (MMF) (350,000 sf), a new office complex (108,000 sf), and a new final assembly bay (59,000 sf).
• Honored 38 graduates of Austal’s 4-year Apprenticeship Program who received their certificates of completion and designation as Department of Labor Class A Journeymen. The program is governed by the Department of Labor Standards of Apprenticeship and is certified by the U.S. Department of Labor, Alabama Department of Post Secondary Education, and the Veteran’s Administration.
• Launched and christened first Joint High Speed Vessel, USNS Spearhead (JHSV 1) for U.S. Navy in September 2011, scheduled for delivery in August 2012.

Projects
In 2004, the U.S. Navy awarded a final design contract for the Littoral Combat Ship (LCS) to Bath Iron Works (BIW). Austal is the LCS 127-meter trimaran seafarre designer and builder for this contract. The first order for a prototype was awarded to the BIW/Austal LCS Team in October 2005. USS Independence (LCS 2) was launched at Austal’s Mobile, Alabama shipyard in April 2008 and delivered to the Navy in December 2009. The LCS will be the most advanced high-speed military craft in the world and is intended to operate in coastal areas globally. As a key part of the U.S. Navy fleet, they will be highly maneuverable and configurable to support mine detection/removal, anti-submarine, and surface ship warfare. The trimaran hull form provides the ship with superior seakeeping, fuel efficiency, and the capacity to carry a large, modular cache of weapons packages. A contract for a second BIW/Austal LCS was awarded by the Navy in May 2009 and Coronado (LCS 4) was launched and christened in January 2012. In December 2010, Austal, as prime contractor, received a Navy contract worth over $3.5 billion for construction of up to 10 more LCSs. Austal currently has 5 LCS under contract; 4 of which are from the new 10-ship award.

Shipyard Investments
Austal USA was created to reach the commercial and defense aluminum vessel market in the U.S., and it brings a new dimension in high-speed marine transport, using the company’s lightweight aluminum fabrication technology and capabilities. Austal builds large aluminum ships, including naval surface combatants and theater support vessels, at its 125-acre waterfront facility in Mobile, Alabama.

Austal USA aluminum welder working on USS Independence (LCS 2).
Brazil Receives its First Ocean Patrol Vessel

Amazonas, the first of three Ocean Patrol Vessels built by BAE Systems, was delivered to the Brazilian Navy in a ceremony at Portsmouth Naval Base. The delivery comes just six months after the $208m contract for the supply of three Ocean Patrol Vessels and ancillary support services was signed. BAE Systems is also providing training for more than 80 members of Amazonas crew, currently based in Portsmouth, in areas such as seamanship, electronics and propulsion. The ship left for Plymouth in July, where the crew completed their training before setting sail for Brazil this month.

First of class, Amazonas, was built at BAE Systems’ Portsmouth facility. Her sister ships Apa and Araguari were built at the company’s Scotstoun shipyard on the Clyde and are expected to be delivered to the Brazilian Navy in December 2012 and April 2013, respectively.

The Ocean Patrol Vessels are outfitted with a 30mm cannon and two 25mm guns, as well as a rigid inflatable boat and a helicopter flight deck capable of landing a medium-sized helicopter, the ships are ideal for performing maritime security in Brazil’s territorial waters, including the protection of the country’s oil and gas reserves.

Designed to accommodate a crew of up to 70, with additional accommodation for 50 embarked troops or passengers and ample deck space for container storage, the vessels are also effective for search and rescue, disaster and humanitarian relief operations.

Møkster OSV Designed for Arctic Ops

Rolls-Royce signed a $15.6m contract with Simon Møkster Shipping for a wave piercing offshore vessel with a new bow design that will go into service for Statoil in the Arctic region. “We are happy to be chosen by Simon Møkster Shipping to develop this highly innovative offshore vessel,” said Hans Robert Almestad, Rolls-Royce, General Sales Manager. “Our wave piercing designs and other highly efficient technologies are becoming increasingly popular with customers seeking to reduce their operating costs and improve the environmental performance of their fleets.”

The vessel will be built in Spain at the Gondan shipyard, and are developed specifically for missions in the arctic region, equipped to undertake oil spill recovery duties. Due for delivery in 2014, the Rolls-Royce vessel includes an extensive range of advanced equipment, such as Azipull propellers, thrusters, the latest generation of automation and control systems and a dynamic positioning system (DP2) which uses GPS systems to ensure the vessel can hold its position even in
Shipyards Weather the Storm (again)

Whether they are large or small, domestic or foreign, many shipyards have hauntingly familiar tales. They work in a notoriously cyclical markets which can wreak havoc on attracting and retaining top talent; they are capital intensive, demanding steady investment to stay safe, compliant and efficient, no matter the health of a particular year’s balance sheet. Through it all, though, you arguably will not find a more resilient or resourceful brand of business. Following are some of their stories.

St. Johns Shipbuilding is a young and growing operation breathing new life into an old yard. Five years ago Steve Ganoe and partner Michael Grandonico purchased a closed, 98-acre facility on Florida’s St. Johns River and have since renewed its infrastructure and doubled its tonnage capacity. St. Johns has a number of successful deliveries under its belt now, including tugs, barges and offshore support vessels for U.S. and foreign flags. The yard is pushing forward with still more improvements allowing it to take on a wide variety of projects. St. Johns recently delivered the OSV Sea Strength for work in the Caribbean and is nearly ready to deliver its first split-hull scow barge.

St. Johns Shipbuilding is half-way through a five-year infrastructure improvement project aimed at more than doubling its tonnage capacity. The yard sits on 98 acres along the St. Johns River in Palatka, Fla., approximately 68 miles southwest of Jacksonville. When Ganoe and Grandonico purchased the yard it had been mostly empty for several years. Since then, the owners and managers have been transforming it, updating and renewing 30-year-old facilities to support multiple new build and repair projects.

In the last year St. Johns has been busy creating more jigs, or construction areas for vessel hulls, and installing more bulkhead along the 2,400 ft. of water frontage. A second rail launch system was completed to move vessels between land and water. St. Johns is also in the process of increasing its three phase amperage and anticipates finishing the electrical power source expansion this winter. The shipyard’s goal is to build capacity for simultaneous construction of four to five vessels with room for dry docking and repair of additional vessels. With a footprint as large as St. Johns’ there is plenty of room for this type of expansion and the founding partners believes the market is ready for more U.S. shipbuilding capacity.

“We’re encouraged by the interest in new construction right now,” said Ganoe. “There are a lot of different types of projects out there.” This includes barges, excursion vessels, cargo vessels and offshore support vessels. While Ganoe and Grandonico see the offshore support vessel market as the most active, St. Johns is focused on being competitive in the overall market.

Besides its renewed infrastructure, Ganoe counts the experience of its yard supervisors and its location as St. Johns’ biggest advantages. Most of its supervisors have 20 or more years of shipyard experience. In addition, Ganoe said, “We’re on the East Coast with great access to New England as well as the Caribbean, but not far enough from the Gulf to be cost prohibitive.”

Demonstrating the yard’s ability to take on a wide range of projects, St. Johns is building its first split-hull scow barge. Ganoe described this project as technically challenging because the vessel weighs more than 1,200 tons and “represents a great deal of precision work including steel cutting and articulating pieces together.”

Irving Shipbuilding: Mammoth $25b Canadian Navy Contract

Late last year Irving Shipbuilding was awarded the lion’s share of a historic Canadian Navy shipbuilding contract, a deal worth approximately $25b which has set in motion the future transformation of a historic operation for the coming generation. “The Irving Shipbuilding team is honored to have been chosen by Canada to build the Navy’s new combat vessel fleet and we look forward to continued successful negotiations with the federal government,” said Steve Durrell, President, Irving Shipbuilding. “Irving Shipbuilding has a proven record of successfully delivering 80% of Canada’s current combat vessel fleet, including serving as prime Contractor for Canada’s largest shipbuilding Major Crown Project, the Canadian Patrol Frigate (CPF) program. In priming the CPF program in the late 1980s and early 1990s, our team met all contract requirements as well as delivered to Canada additional benefits such as production innovations, technology transfers, industrial benefits and efficiency improvements.”

Today Irving Shipbuilding employs approximately 1,300 experienced shipbuilders, who are currently working on a number of key Canadian shipbuilding programs, which include Mid-Life Refits on seven of the RCN’s patrol frigates as part of the Frigate Life Extension Program, as well as seven of nine high-tech
Mid-Shore Patrol Vessels under construction for the Canadian Coast Guard. The first of class Mid-Shore Patrol Vessel, CCGS Private Robertson V.C., recently completed successful sea trials and has been delivered.

"That current and past experience with federal, multi-ship programs prepares us well to take on both the Arctic Offshore Patrol Ships (AOPS), as well as the Canadian Surface Combatants (CSC) that will follow under the National Shipbuilding Procurement Strategy," said Durrell. "In addition, our plans for continued significant infrastructure and technology investments to modernize Irving Shipbuilding facilities will ensure the most effective, efficient shipbuilding methods will be employed for the benefit of all Canadians."

Irving Shipbuilding has already invested heavily to prepare for the NSPS opportunity, having made more than $100m of improvements and additions focused on its facilities, people and infrastructure over the last five years. Its future facilities plan involves expanding the capacity of the yard, modernizing equipment and improving the efficiency of the flow of work through the yard so as to maximize the value to the customer. "We anticipate we will implement this expansion in a number of discreet phases of construction in order to minimize disruption to the existing order book of business and still be ready for the start of the construction of AOPS," said Durrell. "Our goal is to be shovel ready by the spring of 2013 and we have already begun to issue RFP’s for engineering services related to the facility upgrades."

CTruk: Success is Blowing in the Wind

Established in 2009, the CTruk team has a long collective history of working and sailing on the UK’s east coast. The company builds a diversity of vessels, with applications in the offshore wind, military, super yacht and commercial sectors at its shipyard in Brightlingsea, Essex. CTruk has applied for a patent for its flexible pod system, which enables vessels to transform in just a few hours to meet the varying demands of offshore wind support work. Using vacuum infusion to build composite boats, saving up to 40% on weight, the company has also developed a modular manufacturing process to increase production efficiency. The CTruk team has built eight catamaran vessels in two years and is currently constructing a SWATH, which will increase the current wave height limits for offshore wind farm technician transfer. CTruk recently launched its eighth vessel in a two-year period. Over the last 12 months the company has doubled in size in response to production demand and now employs 40 technicians.
Factory space has increased 100%, enabling the company to implement its modular production system, with dedicated areas and teams for each stage of the build process. These changes have resulted in a massive increase in production capacity and the company continues on a recruitment drive. A resin infusion process is used to build these composite workboats to the highest standards (surveyed to DNV), saving up to 40% on weight. Kevlar armor plating in key areas and sub-divisions provide damage stability in excess of current UK standards.

Bayonne Dry Dock & GM D Shipyard: Two Shipyards in the New York City area.
Bayonne Dry Dock & Repair Corp., Bayonne, NJ, and GM D Shipyard Corp. in Brooklyn have been a compelling story on the U.S. East Coast waterfront for more than 25 years. The ship repair company helps keep the business flowing with a strong focus on its customer service and a diverse service offering, focused on servicing larger oceangoing ships in its Bayonne, NJ facility, and the smaller workboat and coastwise trade market in its Brooklyn facility. A major client of the larger facility is the Military Sealift Command, and at press time Bayonne Dry Dock was finalizing repair work on the USNS Watson (T-AKR 310), a Large, Medium-Speed RoRo Ship. At 950 x 106 ft., Watson was a sight to behold in the Bayonne dry dock. USNS Watson entered the dry dock in late April 2012, and the maintenance included a long list of standard repair items, from blasting and coating to propeller work. USNS Watson displaces 63,644 long tons and is one of 30 ships in Military Sealift Command’s Prepositioning Program.

Bayonne Dry Dock & Repair Corp. operates a full service ship repair yard located in the Port Jersey area of New York/New Jersey harbor. Situated a few miles from the Verrazano Bridge, the Bayonne facility has no aerial draft restrictions and is suited for both commercial and government vessels. The facility’s graving dock measures 1092 x 148 ft., with a dock floor load capacity of 99,000 tons.

In Brooklyn is GM D Shipyard Corp. located within the Brooklyn Navy Yard and is the largest dry dock facility in New York City. GM D offers two 1090 x 150 ft. graving docks, in addition to 1100 ft. of wet berth, and provides 24-hour full service operational capabilities. The dockyard maintains and operates numerous cranes ranging from 15 tons mobile to 200 tons gantry. The facility is outfitted with all the equipment and services necessary to produce and perform any type of maintenance or repair, including grit blasting, ultra high-pressure water blasting, painting and steel fabrication.

The focus in Brooklyn is smaller vessels: ATB’s, Utility workboats, & Oceangoing Barges, for example, with most of the business from commercial operators, coastal trade and vessels you see in and around New York City.

Damen
One of the most successful shipbuilding businesses based in Europe and operating globally is the family owned Dutch company Damen Shipyards Group, which started in 1927 when a shipyard was founded at Hardinxveld near Rotterdam, building and repairing ships on the River Merwede that flows into the North Sea. Today, the Damen name is ubiquitous and global, largely spurred in 1969 when Kommer Damen took over the running of the shipyard, listened to his clients’ requests, and instigated the vision to expand.
of producing standard rather than custom-built vessels. This approach allowed Damen to have the more popular ships “in stock” able to be delivered in a matter of weeks rather than months or years. Today’s stock of ships in different locations exceed 150 vessels. All a customer has to do is to specify the paint livery: in some cases the electrical/electronics/navigation packages to be fitted and the ship is ready for delivery. A further and important benefit is that standardization of production means, greater efficiency and a lower manufacturing cost. No wonder this “double win” of fast delivery and competitive pricing meant rapidly increasing sales.

The standardization concept also makes it easier for ships to be sold in “kit form” whereby the steel is pre-cut to size for assembly (welding) locally in far off places. As required, a suitable workforce can be flown in to do the work, or more often, supervise and train a local workforce to build the ship themselves. On-going training to ensure a lasting business is provided on request. Where a shipyard exists, Damen will even help to create the shipyard first, then supervise building the vessels.

In the 1990’s “The Enlarged Ship Concept” (ESC) was introduced in the patrol ship designs of the Stan Patrol 4207 and 4708 vessels. The ESC extends the length of the ship without changing the beam and importantly, not loading up the additional space with heavy objects so the displacement is not greatly increased. The lengthened hull offers more suitable positioning of vital areas such as the wheelhouse and crew accommodation areas. Increasing the length without changing the functionality creates more space enabling greater hydro-mechanical optimization of the hull design. A very sharp slender bow further reduces vertical accelerations with large waves.

Early in the new millennium, complementing the ESC, the Sea Axe Bow Concept was developed offering superior motion behavior and unprecedented sea keeping attributes for certain applications. Damen was quick to incorporate these benefits into new ship designs producing greatly improved bow performance with dramatic reduction in wave resistance and offering up to 20% reduction in fuel usage.

The Sea Axe Bow is so called from the side view of the straight perpendicular bow where the keel line slopes down forward and the sheer line slopes up strongly resembling the blade of an axe. It was originally developed by a team of Delft Technical University, Damen Shipyards, US Coast Guard, Royal Netherlands Navy and MARIN for patrol boats but is widely used for crew boats and fast supply vessels. Recently a 26m Fast Crew Supplier with catamaran hull has been successfully in-

At press time Bayonne Dry Dock was finalizing repair work on the USNS Watson (T-AKR 310), a Large, Medium-Speed RoRo Ship.
Despite the economic slowdown of the last years, the Damen philosophy of standardization of supply while offering full through life support of the vessel, continues to be their secret of success. The Damen Stan Patrol 4708 as parent design. USCG Sentinel Class cutter. The “Sentinel” Class Fast Response Cutter is built by Bollinger and uses a laser scanner system, which is used for structural expertise as well as a new reverse engineering and upgrade support. The company has also expanded its electrical, electronic, and power management services capabilities lead by a strong supervision team. Geographically, OIMO has put extensive effort into expanding its deep-water service locations especially with its large facility in Pensacola, Galveston, and Port Isabel as well as supporting topside services at additional locations in Mexico, Western Mediterranean, and West Africa. Offering a strong engineering and design capabilities supporting both traditional marine overhaul needs as well as more complicated and demanding project upgrades for the oil and gas service and drill rig sector.

Moving to its offering of specialty services such as electrical, mechanical, and hydraulic services as well as high pressure and structural support are all enhanced by strong teams of scaffold builders, painters, riggers, etc. This full service offering allows OIMO to support the above service centers as well as mobilize these service teams to anywhere in the world.

In recent years, OIMO has provided these traveling shipyard teams to support our customers in over a dozen countries around the world.

In the recent past, OIMO has made several technical and geographical investments and improvements.

Technically, the company’s engineering and design capabilities has expanded to include more pipe, electrical, and structural expertise as well as a new laser scanner system, which is used for reverse engineering and upgrade support. The company has also expanded its electrical, electronic, and power management services capabilities lead by a strong supervision team.

Geographically, OIMO has put extensive effort into expanding its deep-water service locations especially with its large facility in Pensacola, Galveston, and Dos Bocas, Mexico.

These locations include full service topside marine services, full fabrication, as well as subsea and drill rig project mobilization and storage support. OIMO completes more than 500 projects each year ranging from large rig upgrades to full topside ship special survey periods, to design and build projects featuring full service offshore installations.

One project was a full service special survey period in Dos Bocas, Mexico on a jack up drill rig.

This project included large structural ballast and hull repairs, reworking several piping systems, change out of main engines, accommodation upgrade, scaffolding, diving inspections, etc. Another example of OIMO’s capabilities can be highlighted from a recent project off the coast of West Africa.

The OIMO’s team removed two deck cranes from an Atwood Oceanic Rig and replaced them with two new Seatrax cranes. This project was handled by OIMO as the full general contractor pre-fabricating all the necessary under deck structures and pedestals and providing a high impact team to handle the entire on-board change out.

In a recent letter from the Drilling and Completions Manager, Jamie Ressler, the OIMO team and the Seahawk crew were congratulated and praised for all their good work:

“To the best of my knowledge,” Ressler said, “no rig contractor/operator partnership has ever considered such an undertaking. The crane change-out would have been a significant body of work in a shipyard. The fact that the work was done in the field during rig operations without incident or disruptions was exceptional. I know of zero examples where such a significant scope of work was conducted in the field while conducting well operations.”

Despite the economic slowdown of the last years, the Damen philosophy of standardization of supply while offering full through life support of the vessel, continues to be their secret of success. The Damen Stan Patrol 4708 as parent design. USCG Sentinel Class cutter. The “Sentinel” Class Fast Response Cutter is built by Bollinger and uses a laser scanner system, which is used for structural expertise as well as a new reverse engineering and upgrade support. The company has also expanded its electrical, electronic, and power management services capabilities lead by a strong supervision team. Geographically, OIMO has put extensive effort into expanding its deep-water service locations especially with its large facility in Pensacola, Galveston, and Port Isabel as well as supporting topside services at additional locations in Mexico, Western Mediterranean, and West Africa.

Offering a strong engineering and design capabilities supporting both traditional marine overhaul needs as well as more complicated and demanding project upgrades for the oil and gas service and drill rig sector.

Moving to its offering of specialty services such as electrical, mechanical, and hydraulic services as well as high pressure and structural support are all enhanced by strong teams of scaffold builders, painters, riggers, etc. This full service offering allows OIMO to support the above service centers as well as mobilize these service teams to anywhere in the world.

In recent years, OIMO has provided these traveling shipyard teams to support our customers in over a dozen countries around the world.

In the recent past, OIMO has made several technical and geographical investments and improvements.

Technically, the company’s engineering and design capabilities has expanded to include more pipe, electrical, and structural expertise as well as a new laser scanner system, which is used for reverse engineering and upgrade support. The company has also expanded its electrical, electronic, and power management services capabilities lead by a strong supervision team.

Geographically, OIMO has put extensive effort into expanding its deep-water service locations especially with its large facility in Pensacola, Galveston, and Dos Bocas, Mexico.

These locations include full service topside marine services, full fabrication, as well as subsea and drill rig project mobilization and storage support. OIMO completes more than 500 projects each year ranging from large rig upgrades to full topside ship special survey periods, to design and build projects featuring full service offshore installations.

One project was a full service special survey period in Dos Bocas, Mexico on a jack up drill rig.

This project included large structural ballast and hull repairs, reworking several piping systems, change out of main engines, accommodation upgrade, scaffolding, diving inspections, etc.

Another example of OIMO’s capabilities can be highlighted from a recent project off the coast of West Africa.

The OIMO’s team removed two deck cranes from an Atwood Oceanic Rig and replaced them with two new Seatrax cranes. This project was handled by OIMO as the full general contractor pre-fabricating all the necessary under deck structures and pedestals and providing a high impact team to handle the entire on-board change out.

In a recent letter from the Drilling and Completions Manager, Jamie Ressler, the OIMO team and the Seahawk crew were congratulated and praised for all their good work:

“To the best of my knowledge,” Ressler said, “no rig contractor/operator partnership has ever considered such an undertaking. The crane change-out would have been a significant body of work in a shipyard. The fact that the work was done in the field during rig operations without incident or disruptions was exceptional. I know of zero examples where such a significant scope of work was conducted in the field while conducting well operations.”
Enabling Resource Recovery From Waste

Discovering Sustainability

Safely transforming waste and sludge into energy

651 Bridge Street, Montreal, Quebec, H3K 2C8
Tel.: 514.938.3772 - Fax: 514.938.0721 - mags@terragon.net - www.terragon.net

Commercial Water Makers
AER Supply Ltd, authorized distributor for Sea Recovery water makers, offers the High Seas Commercial Series.

Tasman Sea™
226 to 875 Gallons Per Hour • 867 to 3312 Liters Per Hour
The Dependable Tasman Sea Series water maker ideally suits mid-range production requirements, such as small hotels, villas, oil platforms, mid-sized commercial vessels and small cruise ships.

- Multimedia filter with feed and backflush valving
- Patented Cyncon pre-filtration
- Stainless steel high-pressure pump, piping and valving
- Corrosion proof fiberglass pressure vessels
- System salinity controller

North Sea
459 to 1833 Gallons Per Hour • 1728 to 6840 Liters Per Hour
The rugged and versatile North Sea Series water maker is the top choice of the oil industry, and can also accommodate hotels and large cruise ships.

- Dual multimedia filters with feed and backflush valving
- Patented Cyncon pre-filtration
- Stainless steel high-pressure pump, piping and valving
- High rejection/High flux R.O. membrane elements
- Product water flow meter
- Solid state temperature compensated tail-safe salinity meter

2301 NASA Parkway, Seabrook, TX 77586 USA • Toll Free: 1.800.767.7606 • Fax: 281.474.2714
Açu Shipbuilding

"The largest shipyard in the Americas"

Anyone in the maritime business has heard of or experienced the explosive growth of shipbuilding and offshore activities in Brazil ... not to mention the logistical and financial headaches inherent when doing business in the country. While there are many business hoops to jump through, one cannot ignore the tremendous level of activity, particularly the building of the Açu Shipbuilding Unit.

OSX has been building the shipyard since July 2011 in the north of the State of Rio de Janeiro, and is scheduled to begin partial operations in the first quarter of 2013. UCN Açu’s order book already includes 16 offshore units for oil and gas production in Brazil. UCN Açu is a 5th generation shipyard with technology provided by partner Hyundai Heavy Industries, generating more than 10,000 direct jobs. Its 2,400 m quay and expandable to 3,525 m may simultaneously integrate up to 11 FPSOs. Located in the Açu Superport Industrial Complex, it is 150 km from the Campos Basin.

Shipyard BAE Systems

Delivering American Phoenix; U.S-Flag/Jones Act Qualified product/chemical tanker

BAE Systems joined with Mid Ocean Tanker Company (MOTC), Mid Ocean Marine and A lterna Capital Partners to commission the American Phoenix, a U.S. Flag/ones A ct-qualified product-chemical tanker. Measuring 616 x 105 ft., American Phoenix is the largest vessel ever built and launched in the State of Alabama. It has a laden draft of 36 ft. and a cargo capacity of 49,000 dwt.

BAE Systems was contracted to complete construction of the American Phoenix and prepare it for use. The vessel is owned by MOTC, a joint venture between Mid Ocean Marine and private equity firm Alterna Capital Partners. The vessel is scheduled to conduct trade initially in the Gulf of Mexico. Operating management of the vessel will be performed by Seabulk Tankers.

A merican Phoenix is the newest vessel to come from the BAE Systems M o bile shipyard, which has a long history of ship construction and repair. The yard launched its first new construction vessel, the steam powered ship Banago, on September 19, 1918. Banago, built under the U.S. Shipping Board’s World War I emergency shipbuilding program, grossed 2,551 tons and had a wooden hull. More than nine decades later, the American Phoenix is more than six times the size. Along with the hundreds of BAE Systems employees and the MOTC team, several local Mobile and Gulf Coast helped to complete this project. Alternative Marine Technologies, ABS, US Coatings, M MIF, F & S Superb Marine, LES, Diamond Scaffolding, Insulation Inc., Jameson Metals and Machinary, L-3 Maritime Systems, R+S Stolze, MAK, International Paint, Sea Technology, Bisso Marine Company, 2/2 Houston Holloway, Universal Services, Offshore Inland, Resolve Engineering and Fire Protection Services all played a significant part in completing the American Phoenix.

Thoma-Sea: A Family Affair

Thoma-Sea Marine — founded by Robert J. Thomassie, Sr. and today still a family owned and operated small business — specializes in the construction and repair of vessels up to 100m in length. Beginning with the construction of fishing vessels, and small brown water tugs, Thoma-Sea has built a variety of successful projects, including Offshore Tugs, Harbor Tugs, Survey Vessels, Utility vessels, and PSV’s of various sizes. The company has grown from a small shipyard employing a handful of people to two Newbuild locations, employing more than 300, including a new repair/conversion facility with three floating dry-docks, with a fourth dock under construction.

Thoma-Sea Marine, in fact, has long history of investment, including:

- Repair Division - Houma, LA: It recently completed Phase I of its 32 acre Repair/Conversion facilities, with (2) – 3,500LT floating dry docks, and (1) - 2,500LT floating dry-dock. Thoma-Sea will also be adding a 8,500LT floating dry dock to our fleet, which is currently under construction in its Houma facility, to be completed late summer 2012.
- New Construction Division: Thoma-Sea: A Family Affair
Sea Marine’s New Construction Division consists of two locations, Houma & Lockport, seated on approximately 85 acres, combined – with over 170,000 sq. ft. of covered fabrication shops. In recent months, Thoma-Sea has invested in upgrading its capabilities with the installation of a new, full-service steel processing center, including: a new 20,000 sq. ft. work shop; CNC Plasma Cutting Table; 1,100T CNC Press; 20 ft. Plate Roller; and a 185T Plate & Structural Shear.

Thoma-Sea is set to soon deliver a pair of PSV’s for Gulf Offshore Logistics (GOL) of Raceland, LA. The vessel are a significant project for Thoma-Sea that has led to sales of similar vessels for the Deepwater and Ultra-Deepwater Oil exploration sector. The GOL vessels are designed to provide offshore services worldwide. They are being classed by ABB and meet all rigorous ABB ENViro requirements and the requirements of the USCG, subchapter I & L, as well as IMO, SOLAS and MARPOL international regulations. The PSVs can attain a maximum speed in excess of 12 knots. Main Propulsion installation includes 2 x Rolls-Royce US255P Azipull thrusters which are driven by 2200kW electric motors. The two CPP bow thrusters, each rated at 1000kW are also electric driven. The diesel electric plant comprises of 2x1700kW (CAT 3512) and 2x2000kW (CAT 3516) generators resulting in total installed electric power of 7.4MW. This stepped approach in using different sized generators ensures maximum loading of each generator on line for maximum efficiency.

---

Steel Cut on World’s Largest Wind Power HVDC Offshore Platform

The Middle East has been a hotbed of maritime activities, driven largely by a burgeoning offshore oil and gas exploration and production business. There is another form of offshore power however – offshore wind – which has provided a stable of work for Drydocks World (DDW).

DDW has begun construction on DolWin beta, what is reported to be the world’s largest Wind Power HVDC Offshore Platform for Aibel AS, a service company that works within the oil, gas and renewable energy sectors. The dimension of the platform is 100.1 x 74.1 m. It will be 83 m tall with accommodation and outfits and weigh 20,000 metric tons approximately. The platform can generate 900 MW power and can receive electricity from three wind farms, i.e. a total of 240 turbines. The platform will be ready for sailaway from Dubai Drydocks at the end of 2013. The German company TenneT has awarded the Contract to ABB to supply the Platform, which acts as a transmission link that will connect offshore wind farms located in the cluster DolWin in the North Sea to the German grid.
The enthusiasm, dedication and passion for ship building have helped ABG Shipyard Ltd remain in the forefront. Speaking to Maritime Reporter & Engineering News, Major Arun Phatak (right) points out that it is more important to be a responsible shipbuilder demonstrating with solid results rather than empty talk.

Unruffled by the slump in shipping freight rates, ABG Shipyard Ltd., the largest private shipbuilder in the country, has persisted on a high-growth trajectory. With a record delivery of 158 specialized and sophisticated vessels to date, the versatility of the shipyard and expertise to build a complex and wide range of vessels speaks volumes about ABG’s potential and vibrant track record.

“We managed to foray into the international market because of the quality of our product, timely deliveries and cost competitiveness,” says Maj. Arun Phatak, President and Executive Director of AGB Group. “We compare much better than the Korean and Japanese ship yards. Almost 90% of our orders in the merchant marine side today are for exports. For this we have been acknowledged by the government of India as the highest exporters in the engineering category in India and have been receiving several awards including the All India Trophy for Highest Exporters consistently from 2003-04 onwards, in recognition of our outstanding contribution to Engineering Export. We have also been felicitated with the ‘Shipyard of the Year Award’ by Lloyd List in Dubai last year.”

Major Phatak is all praise for his team of well-qualified professionals “fired with a passion for ship building”. “Our Chairman Rishi Agarwal’s visionary zeal serves as a catalyst for sustained growth,” he says. “If there is something about ship building that Mr. Agarwal does not know it is not worth knowing,” he adds for good measure.

“We have a shipyard under construction at Calcutta, on the East Coast. It will cost $ 28.9m and be dedicated solely for building smaller vessels of 150 to 160 meters in length.”

Maj. Arun Phatak, AGB Group

He elaborates about their 275 strong AGB team which represents a unique blend of skill, expertise and camaraderie along with support from contractual labor consisting of over 8000 workers. Their greatest forte is that their executives keep abreast of the latest developments. Well trained and equipped with sophisticated tools, they rise to global challenges with finesse.
ABG’s exclusive Vocational Training Program enables ongoing skill enhancement. Most importantly, diverse skills such as creative and analytical thinking, technical know-how, managerial expertise and financial knowledge are integrated to create more highly motivated customer driven teams.

More than 55% of the orders today are repeat orders from old customers with whom ABG has maintained an enduring relationship. Today, the orders in hand are worth $3,192 million for a total of 72 new buildings.

The company boasts of celebrated clients including Sea Tankers (John Fredriksen Group – World’s largest tanker operator), LY S-Line (Norway), Lamnalco, (Sharjah), Dess Cyprus Ltd, Maridive Offshore S.A.E. Egypt, and several others.

Advantage ABG

ABG has three major facilities on the Indian West coast - at Surat, Dahej and Goa. The state-of-the-art shipyard at Surat has the capacity to build vessels up to 155 meter length and 20,000 DWT. With the acquisition of Vipul yard and restructuring of the existing yard, the ship-building capacity has more than doubled at Surat.

The Dahej facility incorporates the latest manufacturing set-up with high levels of automation making it capable of building all kinds of vessels for the Indian Navy and others of up to 250 meter length and 1,20,000 DWT. Launching of large sized vessels can be undertaken by the 33,000 ton ship lift, the heaviest ship lift facility in the world designed by Rolls Royce and built entirely in-house by ABG.

A key feature of the yard is its capability to construct offshore rigs and platforms. Presently four jack-up rigs are being built. At Goa, ABG has its Western India Shipyard Ltd which is India’s largest ship and rig repair facility in the private sector. With a capacity to repair ships of up to 60,000 DWT, the yard also features state of the art floating dry dock.

On the Anvil

“We have a shipyard under construction at Calcutta, on the East Coast,” informs Major Phatak. “It will cost $28.9 million and be dedicated solely for building smaller vessels of 150 to 160 meters in length. Having a shipyard on the East coast will greatly help ship owners by providing them the logistical advantage, as there is no repair facility on that coast. Besides, a number of public sector companies are looking to outsource their ship building and repair operations on the East coast. Hence we will be able to take a major share of this.”

From 2000 onwards ABG has delivered 54 ships equaling approximately one ship every 7 weeks. The company is ready to take a quantum leap into the world’s front ranking shipbuilders as those from Korea, Japan and China. Unfortunately India’s contribution to global shipbuilding activity is only 0.1%. “The reason these three nations enjoy major global share is because of the support they receive from their governments by way of subsidy,” Major Phatak points out. “Their government recognizes this industry as an employment generator. Similarly, if the Indian government extends similar support, ship building in India can become a major contributor. It is for the government to realize that the revenue it would have acquired through taxes would actually be much more than the subsidy it would be providing.”
Meeting customer demands while providing high quality-work with a fast turn around in a competitive environment is a tall order, but an order regularly filled by Northeast Ship Repair. With dry dock facilities in Boston Massachusetts and Philadelphia Pennsylvania, the company is able to offer personalized service in vessel maintenance, repair, overhaul, and conversions for domestic, and international clientele. The Boston facility is located in Boston Harbor and is an easily accessible location with a graving dock that has 65,000 tons displacement capability, and a length of 1,150 feet. The channel draft is 40 feet with 360-degree crane coverage, and a crane capacity of 65 tons. The graving dock in Philadelphia has a 60,000-ton displacement capability with a length of 984 feet. The channel draft is 35 feet with cranes capable of lifting up to 50 tons. The company was originally established in 1995 and has undergone several changes in ownership. Currently Northeast Ship Repair is the parent company of Boston Ship Repair and Philadelphia Ship Repair. The current president who oversees both shipyards is Edward Snyder who originally worked for the founding company in 1995, and took the reign as president of North East Ship Repair in 2001. As of 2008 the Manhattan based JF Lehman has become the parent company of Northeast Ship Repair. “When we started here in 1995 it was basically a hole in the ground,” said Mr. Snyder. “We put a lot of improvements into the facility and basically built it from the ground up, from pumping water out of the dry dock, to re-modifying all the electrical systems to operate all of our equipment. Our main clientele is overhauling Naval and commercial ships. “Ships registered in the US must be inspected twice every five years.” “Some of the most common things we see are associated with the hull, the propellers and propeller systems, mechanical seals, and different types of seal assemblies on the props that get renewed. Catalytic systems along the hull of the vessel also need to be inspected. Bow thrusters and anchor chains are checked, and any steel work that has deteriorated is removed and re-installed. These are some of the common elements that need to be done with the vessel out of the water in a dry dock.”

Most of the ships serviced at the Boston facility are in excess of over 1,000 feet in length or less. One of the vessels in for repair was the United States Navy Ship the Comfort, a Medical Treatment Facility. The ship is one of only two support vessels that serve around the world in areas of distress. One of the latest missions of the USNS Comfort was in Haiti.
after the 7.0 magnitude earthquake that hit causing the deaths of more than 316,000 people, and injuring an estimated 300,000 more. The ship has a length of 894 feet with a displacement of 69,360 tons, and a patient capacity of 1000 beds with 12 operating rooms. It is the second Mercy-class hospital ship to join the Navy fleet. Some of the work performed on the USNS Comfort at the Boston facility included:

- Blasting and painting the hull
- Blasting and coating various ballast tanks
- Blasting and coating anchor chains
- Overhauling the vessels HP and LP turbines
- Overhaul of sea valves
- Ventilation cleaning
- Replacement of various doors
- Boiler overhauls
- Switchboard cleaning
- Thermographic surveys
- Pump replacement and repairs
- Life raft overhauls.

“We do mostly government work with about 80 percent being government and the balance being commercial and industrial. Most of our work is Military Sealift Command, and also military ships that are operated by commercial companies. We have also worked with various cruise lines companies as well. Dry docks this size are far and few between these days,” said Mr. Snyder. “If you tried to build a similar dry dock today it would be impossible both cost wise, and in dealing with environmental permits. “One of the main focuses of Northeast Ship Repair is in providing standards for personal safety and health at all the facilities.” “We preach safety here far and above anything else.”

Gladding-Hearn Delivers 34m Cat

A 34m Catamaran Passenger Ferry, Ava Pearl, designed by Incat Crowther and built by Gladding-Hearn Shipbuilding, was delivered to Rhode Island Fast Ferry, where it will contribute to an expansion of operations. As a long-time operator of Incat Crowther ferries, Rhode Island Fast Ferry turned to Gladding Hearn and Incat Crowther to develop and build a ferry with twin engines and propellers, with a view to more efficient operation.

Ava Pearl has entered service, replacing the former Boston Harbor Cruises vessel M Illinioum on the ferry run between Quonset Point and Martha’s Vineyard. This has freed up M Illinioum to increase its sightseeing cruise operation, which will now run daily.

Ava Pearl is powered by two MTU 12V 4000 M 53 main engines, each producing 1850hp. In recent trials, it achieved a loaded speed of 31.5 knots and has a top speed of 33 knots.

Ava Pearl features 130 seats on the main deck, configured at tables. A large bar is situated aft, with ample luggage racks and toilet spaces. The upper deck features 81 seats in forward-facing configuration, with further seats located outdoors on the aft deck.
Vigor Industrial is a comprehensive marine services provider specializing in shipbuilding and ship repair. Three years ago, Vigor initiated an aggressive growth strategy that consolidated major shipyard facilities in Oregon, Washington, and Alaska under one umbrella, and more than doubled the size of its business, and leading a renaissance of the marine business on the U.S. West Coast.

Over the next five years, Vigor has set its sights on an expansion plan that will double the current size of the company.

Shipyard Investment and Improvement

In early 2012, Vigor Industrial acquired Alaska Ship & Drydock (ASD). ASD’s strategic position in the ice-free waters of Alaska’s southern panhandle combined with a skilled Alaskan workforce, that possesses advanced expertise in the needs of arctic operations, made it a good fit for Vigor Industrial’s five year growth strategy. Since the acquisition, construction of a 70,000 sq. ft. assembly hall, with adjacent five story production center, has been completed. ASD is currently working on the first vessel to be completed in the new hall, The Arctic Prowler, a 136 ft., steel-hulled longliner for Alaska Longline Company. Vigor’s strongest investment, now and in the future, will continue to be in its people. There is no question that manufacturing success hinges upon the availability of skilled workers in a wide variety of trades. Industrial jobs matter and Vigor is deeply committed to doing its part to ensure that the well-trained workforce, necessary for the future of the industry, is available.

The Swan Island Training Center at Vigor’s Portland shipyard is a proactive step to train a new generation of welders. The training center is a public/private partnership between Vigor Industrial and Portland Community College. It was founded in 2008 with Vigor’s initial $200,000 investment and ongoing support of $10,000 to $20,000 per month. Students of the training center gain hands-on experience and graduates supply Vigor companies and surrounding manufacturing firms with the skilled labor necessary for continued success. As important as these efforts are, Vigor recognizes that a broader solution to workforce development is necessary, one that aligns the objectives of America’s education system with employer needs.

People are cornerstone to Vigor’s current growth and future success, and the company recognizes that a broader solution to workforce development is necessary, one that aligns the objectives of America’s education system with employer needs.

Projects

In February, 2012, Vigor Industrial subsidiary, US Fab, began construction of the first, Olympic Class, 144-car auto/passenger ferry in Washington State Ferries’ fleet (WSF). US Fab teams have built six consecutive ferries for WSF, the largest ferry system in the United States and the fourth largest in the world. The 144-car ferry measures 362 x 83 x 25 ft. and is being fabricated in the extensive facilities of Vigor’s Seattle yard. It is the first of four and features a steel monohull design with an aluminum wheelhouse and is being built to current USCG regulations. An integrated propulsion package features two (2) main diesel engines, gear boxes and controllable pitched propellers. US Fab’s in-house engineering staff will collaborate closely with the exceptional team at WSF throughout the entire production process.

The three 64-car, 750 passenger ferries recently constructed by US Fab prior to the commencement of work on the 144-car project won the regional, American Transportation Award for “Under Budget, Large Project.” US Fab delivered the three Kwa-di Tabil class ferries three months ahead of schedule and $7 million under budget. The 144-car ferry is scheduled for delivery in early 2014.
Horizon Shipbuilding
2012 Shaping to be a Good Year

Horizon Shipbuilding, Inc., Bayou La Batre, Ala., has recorded a busy 2012 to date, with multiple launches, facilities upgrades, and several new orders from both long-term as well as new customers.

Between vessels repairs, conversions, new vessel launches and deliveries and putting the finishing touches on its $5m facilities upgrades, Horizon has emerged as a state-of-the-art shipyard for its size in the U.S.

Recently Horizon Shipbuilding launched two new towboats in the same day, Florida Marine Transporters Dale Artigue and Canal Barge Company’s Eugenie J. Huger, using its 660 ton Travelift.

Horizon has completed a multitude of repair jobs, large and small, in nearly every material, from fiberglass to aluminum to steel. Currently eight vessels are under construction; two vessels are undergoing major repairs and another is going through a major conversion.

Florida Marine Transporters has entrusted Horizon to build for its fleet of large, powerful towboats. The U.S. Army Corps of Engineers has awarded Horizon contracts to build its two newest vessels, a 58-ft. towboat and a 114-ft. towboat.

Also under construction are a pair of 74-ft. towboats for Canal Barge Company.

Damen Patrol Boat Delivered to Albanian Coast Guard

The second of a series of four Damen Stan Patrol Vessels 4207 – Oriku – has been finalized in the Pashaliman Shipyard in Vlorë (Albania) and delivered to the Albanian Coast Guard. The third Stan Patrol Vessel (SPA) – Lisus – is presently under construction. The Spas were ordered by the Albanian Ministry of Defense for patrol duties and S&R missions in the territorial waters. The project included extensive knowledge transfer and the reconstruction of a naval shipyard. The first ship of the Stan Patrol 4207 project was built in the Netherlands and delivered to the Albanian Coast Guard in August 2008. The project also included the thorough reconstruction of the Vlorë Naval Shipyard and the building of a new assembly hall, in which vessels as large as 60m can be built. Both projects were handled by Damen Services. The operation has been carried out under the late ORET program of the Dutch Ministry of Foreign Affairs. Its objective was to support sustainable investment in infrastructural projects in developing countries. Under the Damen Technical Cooperation (DTC) concept the complete, prefabricated material packages for the construction hall and the patrol vessel were sent to Albania. The standardised material packages can be used to build a Damen-designed vessel according to the builder’s own wishes and requirements and at a shipyard in the customers’ country.
Bunker Fuel for Marine Engines

A Technical Introduction

By Nigel Draffin M.I.Mar.E.S.T.

Bunker Fuel for Marine Engines - A Technical Introduction focuses on the complicated relationship between ships’ engines and the marine fuels that power them. Complete with extensive glossary and full of photographs and technical illustrations, the book has been hailed by the highly respected industry veteran of Exxon and DNV Petroleum Services, Dr. Rudolph Kassinger, as ‘a comprehensive sequel to John Lamb’s seminal treatise Petroleum and its Combustion in Diesel Engines’. That book was first published in December 1955, and is long out of print. According to Dr Kassinger in his Foreword to Bunker Fuel for Marine Engines, Lamb’s book, ‘now has a worthy successor’.

According to Nigel Draffin, Bunker Fuel for Marine Engines provides the reader with a solid introduction to a subject which every supplier or user of marine fuels would do well to understand. Draffin believes that ‘a ship’s engine room is a place of refuge for engineers but a place of mysteries to most others’ and uses the thoroughly researched book to take the reader on a technical tour around the equipment that will be found there, from main and auxiliary engines to generators, refrigerating plant and other fuel-using machines.

For many readers, this highly illustrated book ‘is a chance to look underneath the hood and, perhaps for the first time, to recognise what makes this equipment work and why some fuel problems are more significant than others’. Dr. Rudolph Kassinger

For many readers, this highly illustrated book ‘is a chance to look underneath the hood and, perhaps for the first time, to recognise what makes this equipment work and why some fuel problems are more significant than others’. Draffin takes the reader through the complete process of burning fuel onboard, from storage of fuel to dealing with the exhaust, before looking at the different types of diesel engine and their specific fuel requirements. He also looks at gas turbines, fuel cells and developments in shore power, and covers boilers, fuel and accommodation heating and incinerators, before also looking at waste heat recovery systems. Fuel types and bunker quality standards are, of course, laid out for the reader, as are blending, storage and onboard fuel treatment, where the work of separators, purifiers, clarifiers, decanters, homogenisers, filters and other engine room kit is explained. Fuel heating, pumps, fuel measurement and storage are amply covered as are an engine’s sensitivity to fuel qualities. Importantly, the book looks at emissions and how they might be controlled, and also at unconventional fuels such as biodiesel, shale oil, liquified and compressed natural gas, liquified petroleum gas and even coal.

“... It seems to me that the more people able to access and understand the information contained in this book, the fewer fuel-related engine problems might be expected. And for seafarers ... this can only be a good development.”

Dr. Rudolph Kassinger, Veteran of Exxon & DNV Petroleum Services

About the Author Nigel Draffin

Bunker Fuel for Marine Engines - A Technical Introduction is Nigel Draffin’s fifth book on marine fuels. His previous titles are:

- An Introduction to Bunkering (2008)
- An Introduction to Fuel Analysis (2009)
- Commercial Practice in Bunkering (2011)

Nigel has been involved in shipping for almost 50 years and with the commercial bunker market for over 25 years. He is a founder member of the International Bunker Industry Association (IBIA) and has served several times on its council of management and executive board. In April 2012 he became Chairman of IBIA.

Nigel is Director of the Oxford Bunker Course and the Oxford Bunker Course (Advanced), a member of the Institute of Marine Engineering Science and Technology and Past Master of the Worshipful Company of Fuellers. He is also Senior Broker and Technical Director of US-based bunker broker LQM Petroleum Services.
Best-in-Class Marine Fuel Measurement.
Micro Motion Coriolis for Bunkering and Fuel Consumption.

Accurate measurement of heavy fuel oil, in bunkering and control of fuel burn, can save thousands in operating expense, ensure accurate billing, and reduce emissions. Micro Motion® world-leading Coriolis mass flow, density and viscosity measurement devices provide the control you need for the results you want.

- Direct, mass measurement of heavy fuel oil eliminates bunker billing uncertainty and discrepancies
- Tighter control and management of fuel burned saves money and reduces emissions
- Single, multivariable meter eliminates maintenance and reduces time in port

Emerson’s Micro Motion Coriolis flow, density and viscosity devices deliver the world’s best measurement for accuracy, reliability and consistency – both on land and on sea. Learn more at www.MicroMotion.com/2wire

© 2012 Micro Motion, Inc. All rights reserved. The Emerson and Micro Motion logos are registered trademarks and service marks of Emerson Electric Co. and Micro Motion, Inc.
Boatracs

A long-tenured player in the workboat fleet management sector, Boatracs last month was acquired by Orolia, charting its path toward global expansion.

Boatracs, a San Diego-based company with more than two decades of experience supplying communications, tracking and monitoring and innovative software solutions for the workboat and commercial fishing markets, was acquired last month by the French company Orolia, a move that could significantly extend the Boatracs brand beyond its North American core.

“(Currently) 100% of our current customers are in North America,” said Irwin Rodrigues, CEO of Boatracs Inc. “This is an acceleration of our vision and everything we want to do for our customers. Orolia is an international company, and we just went from being a small company to a growing mid-size company with many more resources. For Boatracs, it gives us immediate international exposure.”

While focused on the North American market, Boatracs has built an enviable base, with more than 1000 customers and revenues of more than $5m in 2011, nearly 75% of which is from recurring software and communications services sales. While the Orolia name may not be a familiar one in maritime circles, many of its brands surely are, as Orolia is a high-technology group specialized in precise Positioning, Navigation and Timing. Since 2006 the group has established itself as a leader in PNT solutions at a global level through its brands: Spectracom, SpectraTime, T45science, McMurdo, Kannad Aviation, and Kannad Marine.

Rodrigues insists that the acquisition transition will be seamless for established Boatracs customers, as Boatracs remains laser-focused on its core mission. “Our core mission is to solve business problems for our customers,” said Rodrigues. “We call it a focus on the ‘3 Cs’: complexity, competitiveness and cost.”

“Our customers work in a complex environment, with a myriad of new regulations, the harsh weather in which they operate, and the basic communication gap (communication’s speed and reliability) that most land-based businesses take for granted,” said Rodrigues. “In addition, there are so many choices (of software and communication solutions) for them to make. We deal with this by making our solutions easy to understand, easy to adopt, and affordable.”

While the first “C” is complexity, most smaller workboat and fishing vessel customers concern themselves with the last “C”: Costs. Simply put, Boatracs delivers its product and service at an attractive and hard to match price point. “We make our product as cost effective as possible,” said Rodrigues. “For example, with OmniTRACS, you can get started for as little as $100 per month on the connectivity; that’s a cell phone plan.”

For Orolia, the purchase was a strategic initiative to expand its business into new areas, a strategy to move up the value chain by offering more complete business solutions to its customers operating critical infrastructure in remote or harsh environments. “This acquisition not only expands our product offering, but also strengthens our presence in the North American fishing and workboat market segments,” said Jean-Yves Courtols, President and CEO of Orolia, in a press release announcing the acquisition. “It has the added benefit of bringing us critical size in the application of information required to be shared between the vessel and the shore.”

Since its inception, Boatracs has provided a narrowband satellite solution with shore side fleet management software to enable vessels to communicate consistently with operations: Boatracs OmniTRACS. OmniTRACS is designed to meet the needs of those companies who have minimum data sharing needs and require simplicity and ease of use in an extremely affordable satellite solution.

“We look at our customer’s customer to help them solve problems,” said Rodrigues. “Ultimately, we want to ensure that information is captured timely and correctly; and is accessed with a simple user interface on the vessel. This makes their life and job much.”

The fleet management software can be accessed from any PC or mobile device with Internet connectivity. For those customers who operate within cellular coverage but require greater coverage and reliability, the OmniTRACS solution makes transmitting the data as cost effective as possible.

The OmniTRACS solution currently serves thousands of vessels across North America, but the number of customers with requirements for uninterrupted internet connectivity and high-speed data transmission is growing. More vessels have PCs on board utilizing a variety of software applications, and satellite broadband has become a viable option due to a steady decrease in airtime rates combined with a decrease in the size of antennas.

Responding to the market, Boatracs announced a partnership with KVH to offer the industry a Broadband Fleet Management Solution.

“KVH is a great step forward,” said Rodrigues, in evaluating this new partnership. “KVH arguably has the best total cost of ownership solution, hardware, reliability and airtime. At a little over $1MB, it is hard to find anything competitive with that in the VSAT market.”

The Boatracs Broadband Fleet Management Solution is an end-to-end combination of fleet management software with mini-VSAT broadband connectivity designed to make data collection and transmission smooth, easy and affordable. The solution combines Internet and Voice over IP with vessel tracking, two-way messaging and custom forms to satisfy the needs of customers, crew and operations in one complete package. Components include Boatracs BTConnect, a web-based fleet management software that pulls data in from any vessel hardware to display positions and messaging on one integrated user interface. Boatracs BTForms, a custom smart forms software that converts the paper forms crew and operations are adept at using into dynamic forms that standardize data transfer and

Irwin Rodrigues, CEO, Boatracs Inc.

www.boatracs.com
Globe Wireless

R6 for Globe iFusion Launched at Posidonia

Globe Wireless is a leading player in providing communications, operational and IT solutions to the maritime industry. Earlier this summer at Posidonia 2012 in Athens the company announced that it would launch its latest software release, R6 for Globe iFusion in July 2012; a free upgrade to all existing users. While software enhancements and upgrades are commonplace across the IT community, this one is significant for a number of reasons, according to Mark Witsaman, CTO, Globe Wireless.

“This particular one (software upgrade) is a pretty big leap,” said Witsaman. “GlobeWireless has been one of the trailblazers in putting GSM on commercial ships, but GSM has one drawback: You have to have a GSM phone to use it, and if you’re In port and it’s switched off for security reasons, you can’t use it. What we’ve done is extended this to the fixed lines on the ships, using the mariner’s GSM pin code. This is a massive advantage, particularly on the billing end of the service. The call will be charged to the individual mariner’s personal account, so the ship owner does not even see that on their bill.” The software will feature the following enhancements:

- **A Fixed-Multiple Voice solution for Fleet Broadband:** There is not a lot of them out there. INMARSAT has just introduced this, but with them it’s only one number. We can map multiple numbers, multiple accounts, said Witsaman.

- **VSAT Auto-Recovery Tools** or a means to more rapidly recover the VSAT, with active monitoring built. According to Witsaman, on many occasions the iFusion box can actually fix the problem and help recover the system without any action from shore.

R6 for Globe iFusion takes the existing GlobeMobile multiple voice lines, currently on over 1000 FB vessels, using it as a VoIP solution. This enables multiple calls using Globe’s unique Digital Quality Voice (DQV) technology which is very high-quality voice that Witsaman says will sound better than a standard call – on both the GSM and VoIP phones over a standard FB terminal.

In this release, the Globe iFusion Fixed-Multiple Voice solution allows up to five inbound and outbound calls over DQV, while the standard circuit switched voice line remains free at all time for the captain’s use or for emergencies, which is the fact that crews are demanding to be more connected. “A lot of the features we offer (such as GSM service) is aimed toward that.”

Key VSAT Back-up and Recovery

R6 for Globe iFusion contains additional VSAT features developed to keep VSAT terminals online, requiring less backup L-Band usage. Automated scripts monitor the VSAT system and will attempt to auto-recover the system with no intervention by technicians or crew. If auto-recovery does not work the Globe iFusion, via L-Band and backup, allows the Globe Wireless VSAT technician remote access to all the core components and systems onboard.

“This new feature assures the customer that over 95% of all outages are recovered remotely. We have found that for every one vessel that does require a visit another 20-25 vessels are brought back online remotely,” said Brad Rogers, Director, VSAT Engineering. He went on to say “With our live monitoring, typically within one hour of any outage, our engineers are already online checking the system and coverage.”

In ongoing efforts to help vessel owners monitor and contain communication costs, R6 for Globe iFusion will also include a pre-paid and sponsored email solution. Via Globe iPortal, customers can set up sponsored monthly quotas with message size limits, allowing the customer to control how much, sponsored email the crew can use. These settings can be configured fleet wide or specific for each crew member allowing officers more usage for example or as a bonus for good work.

The pre-paid account can be tied to the crew members GlobeMobile GSM account allowing them to share the pre-paid balance between GSM calls, pre-paid Fixed-Multiple Voice, email and SMS. Crew members will be able to pick up any Fixed-Multiple Voice handsets, enter a PIN and password and pay the same rate as the GlobeMobile service.

If a crew member has a GlobeMobile number and uses a Fixed-Multiple Voice line, the end user on shore will see the GlobeMobile number on their phone as the caller ID rather than the vessels phone number. If there is no GlobeMobile number associated with the crew member then no number is displayed. These features will be available on VSAT and FB terminals.

www.globewireless.com

“Ships are becoming more sophisticated, and with broadband more widely available to the ships, the IT departments are finding new ways to take advantage.”
MARKET

C-Vu 3DVTS

3D Vessel Tracking: A new course in port traffic control

Marine operators and entities have long struggled with the most efficient, effective means to monitor and manage traffic in increasingly busy ports around the world. The marine industry, unlike the airline industry, is unique in that mixed with high levels of commercial traffic is a broad and ever changing mix of personal watercraft of varying sizes, with equal variables in terms of operator experience. Thus the ability to rapidly collect, compute, disseminate and act on information is central to safe port operations. A U.K. company, GeoVS, believes that it has the answer in the form of its new 3D Vessel Tracking System.

“For the past 12 years colleagues and I have been grappling with the complex realities of enhancing situational awareness for maritime safety,” said Dr. Rafal Goralski, Director of Technology at GeoVS. “Only now do technological advances allow the integration of data from many sensors around a port to produce a real time, three dimensional traffic management and visualization tool. This research has resulted in the development of the world’s first commercial three dimensional real time vessel tracking system.”

The System

Managing large ship’s progress, usually in and out of ports and in other restricted channels, has understandably assumed a critical role in ensuring their safety. But the Cardiff based company GeoVS has produced what it is calling the world’s first commercial marine three-dimensional vessel tracking system. This brings a step change in monitoring and management of vessels in ports, estuaries and restricted waterways.

It provides a more comprehensive picture of vessel movements than existing systems, it is easier to use, enhances efficiency and improves safety. “Research in Sweden has shown that the use of three dimensional charts leads to a significant reduction in human error and a similar increase in the operator’s efficiency,” said Dr. Goralski. “The system, which we call C-Vu 3DVTS works either on its own or as a bolt on to existing two dimensional systems, and can be used by port operators, ships’ pilots and other navigators.”

Vessel Traffic Systems (VTS) are the technology that enable efficient tracking, monitoring, management, recording and analysis of vessel movements in a particular area, such as a port or confined waterway.

Vessel Traffic Systems comprise a set of sensors (most commonly radar, radio based automatic identification systems (AIS) and CCTV, often also tide gauges and meteorological stations), signal processing and storage servers and any number of co-located or distributed VTS operator stations. It presents real-time navigational data overlaid on an electronic chart system (ECS) display.

These systems are used in ports and confined waterways to monitor and control vessels for navigational safety and operational efficiency, and ensure vessels follow designated routes. Users are typically port authorities and Coastguards.

Current Practice

Currently vessel tracking systems largely rely on radar signals and present a 2D picture of vessels moving within the designated area on an electronic chart, displayed on computer screens. They allow port operators or Coastguards to see the vessels and monitor and to control their progress. But they do not identify individual vessels, and the performance of radar systems can be adversely affected by weather. And when vessels are close together, radar blips can merge.

They only show the surface picture, not hazards that lie beneath the water, and thus rely upon the operator’s local knowledge. Neither do they give tidal information, again relying on the operator’s knowledge and experience, which varies from operator to operator.

Despite these limitations, they are still a technological leap forward from the Mark I eyeball, and early radar systems which used small and difficult to interpret circular radar screens.

GeoVS’s new system, C-Vu 3D VTS, is a leap forward, according to the company. The picture it presents to operators is more encompassing, clearer and straightforward to understand.

It presents a 3D image and also gives realistic representations of all the vessels, the waterway, port installations and navigational marks such as buoys. At the click of a mouse it shows the underwater picture and hazards vessels may encounter. This includes critical real time tidal data, so the operator knows exactly the depth of water beneath the keel of each vessel. GeoVS’s system draws on information from existing radar systems, and supplements this with inputs from tidal gauges, meteorological stations, and radio based automatic identification systems, which are now mandatory for all commercial vessels. Thus it is designed to present a comprehensive real time picture of what is happening in the waterway, identifying individual vessels, in a way that is straightforward to understand. It improves situational awareness, reduces fatigue, particularly eye strain so enhancing operators efficiency. The system automatically records the picture and can store it for up to 10 years.

Tech Developments

GeoVS’s C-Vu 3D VTS has been made possible by a number of technological advances and a decade’s worth of research and development by Dr. Goralski and colleagues.

The advent of high speed data processing, electronic charts, large LCD screens, improvements to radar, and the introduction of AIS, were essential for enhancements GeoVS’s system brings.”

“The last two decades have seen unprecedented technological progress in electronics, computers and software,” said Dr Goralski. “With that progress a trend has started to emerge, it is not people who should have to learn how to operate complex technology, and keep bending themselves to its peculiarities and limitations – it is the computer systems which should be optimized to better cater for our needs, enhance our natural capabilities and compensate for our limitations. This will dramatically enhance efficiency and improve the users’ operational comfort.”

In the marine world, as a result of that thinking, the idea for the 3D chart emerged. It was sensible to remove the extra workload and concentration required to interpret two dimensional charts and instead use the natural three dimensional cognitive capabilities of the human brain.”

GeoVS’s states that C-Vu 3D VTS offers a range of benefits, including:

• Reduces operators’ fatigue.
• Built from official electronic charts.
• Hydrographic survey data, and real-time inputs from tide gauges and meteorological instruments.
• A 10-year recording capability for AIS and radar tracks.
• Fully compatible with any existing vessel tracking system.
• Can operate on its own as a fully capable primary vessel tracking display.

www.geovs.com
PortVision said that the company’s desktop Automatic Identification System (AIS) vessel-tracking service is now available in a mobile platform, optimized for the latest smartphones including BlackBerry, iPhone and Android devices. Its mobile platform is available now, at no cost, to PortVision customers who subscribe to its PortVision Plus, PortVision Advantage, TerminalSmart and Fleet Management System offerings.

As the world becomes more mobile and capable in its communications, so too grows the possibility among maritime players. “This new platform takes advantage of the latest smartphone capabilities to deliver key real-time features of our widely adopted web-based solutions, and is designed to provide remote access for any maritime professional who spends the majority of their work day away from their desk,” said Dean Rosenberg, PortVision, CEO.

The new PortVision Mobile 2.0 platform adds a number of capabilities based on extensive feedback from the company’s active mobile users. Key features include:

- Integrated terminal and fleet dashboards: Quick and easy access to key terminal and fleet information including arrival/departure data, real-time vessel locations, and terminal dock availability.
- Flexible search capabilities: Search by vessel, terminal and point of interest.
- Optimized interface for arrival/departure alerts: Simplifies creation and maintenance alerts for vessel arrivals and departures.
- Integrated mapping: Migrates the power of PortVision’s real-time mapping capabilities to a smartphone display.
- Fleet management: Includes integrated fleet traffic reporting, enabling mobile users and their customers to share traffic updates and other fleet management data in near-real time so they can actively manage fleet activities using their smartphone.
- A modern, “app-like” experience: Provides a mobile experience similar to what users expect from today’s popular smartphone apps.

Current PortVision subscribers visit:
http://m.portvision.com

For trial access visit:
http://www.portvision.com
Iridium is Flying High Again

The fight in the maritime satcom sector is somewhat analogous to the one fought by Apple and Microsoft in the early ‘80s: two tech companies, polar-opposite philosophies and a raging battle for market share.

By Greg Trauthwein, Editor

Market watchers likely have noted an increased “competitive spirit” among providers of ship-to-shore communications services. Drivers are multiple and diverse, and include:

- increased use of shore-to-ship monitoring and control;
- piracy mitigation and emergency response;
- the trend toward data versus voice;
- the need for improved connectivity.

A corporate driver for change has been Iridium, the McLean, VA-based satellite communications company with a renewed swagger and a plan to make serious market share inroads in the maritime sector. By the company’s reckoning, Iridium’s strength lies in its core philosophy, which is an open architecture approach, relying on the strength and diversity of more than 300 global partners in the creation and delivery of product and service.

“We have deliberately decided not to be too greedy about technology or market control,” said Iridium CEO Matt Desch in an interview with MR earlier this year. “We have opened up our core technical interfaces, chipsets, and technology to external partners so they can trust that our network is the one they want to innovate around.”

A corollary to Iridium’s future is the status and health of its most precious asset, the satellite network that provides its service. While Iridium’s current satellite system is aging, according to the company’s recently released 2Q 2012 report, net income increased 51% year-over-year, benefitting from a $6.6m reduction in depreciation expense due to an extension of the maturing useful life of the company’s current satellite constellation.

“We have a new constellation going up – Iridium NEXT set to deploy between 2015 and 2017 – that will be backward compatible to systems like the Pilot that we are deploying today,” said Pon. “So no one will be stranded where they would have to switch to a different frequency band, or buy new units.”

Iridium NEXT is a fully funded, approximately $3 billion plan, retaining the LEO architecture with 66 new operational satellites, as well as six “in-orbit” and nine “ground” spares.

“The new constellation will have the ability to offer higher bandwidth speeds,” said Pon. “Currently we’re thinking terms of getting up to greater than 400 kb per second, versus 134 today, so it’s a 2.5 to 3 times increase in speed.”

The new constellation also gives Iridium the flexibility to further enhance what he considers a key company strength: specifically “how to best exploit what is unique about Iridium, which is our global coverage. From a device point of view, we’re always focused on how do we make it smaller, how do we make it cheaper. That’s an advantage we have because of our overall architecture... we can go deployed on a ship at a much lower first cost basis,” said Pon. The price point advantage directly leads to what Pon considers to be another strategic advantage: the ability to carry Iridium Pilot, for example, in tandem with VSAT, as a secondary service back-up or for use when a ship exits VSAT coverage.

“Take the example of the Iridium Pilot,” said Pon. “The deployment costs of that is going to be much lower than a comparable device, so we are more cost effective for smaller ships, but even in larger ships. They may put out product and service on their ships as a complement to VSAT, so when they move out of VSAT coverage, they can switch to Iridium.”

Iridium Pilot is small and durable, with enhanced capabilities to optimize telecommunications across fleets. It is designed to provide full voice and broadband data connectivity at an affordable cost. It’s also fully compatible with VSAT technologies to even further increase the broadband tool’s value.

For Iridium, it is a complement to its commitment to the broadband market, complementing handheld service.

Iridium Pilot is the third of many products the company plans to “power by” the Iridium OpenPort Service, a strategy that is designed to provide a growth path for Iridium to expand into new markets. Significantly, Iridium Pilot is designed to be compatible with Iridium NEXT, the company’s next-generation satellite constellation.

Recently German shipping company Reederei Werner Bockstieg selected Iridium Pilot to upgrade its shipping fleet with broadband communications. Globecom Maritime, a long-standing Iridium partner, is offering Iridium Pilot as part of an upgraded “Telaurus se@COM M” communications package, and will manage the installation fleet-wide.
Krill’s Monitoring Systems on Board Arctic Vessels

Krill Systems Inc., a provider of Vessel Fuel Measurement and Monitoring Systems (VFMMS), announced the successful installation and sea trial of Krill VFMMS systems on-board three support vessels operating as part of the Shell Alaska Arctic offshore drilling project.

Installation of the Krill VFMMS systems took place in July. The Krill VFMMS systems will measure the amount of fuel being consumed by these vessels, in real time, and report the data back to company headquarters where it will be used to accurately record fuel use and, also, provide the opportunity to reduce fuel consumption, and manage emissions. Krill Systems uses Microsoft SQL server database technology to record all sensor data with 2-second resolution and storage capacity of at least one year with unlimited roll-over capacity (ROC). Any communication system including Cellular or Satellite internet access, supporting standard SMTP email protocols, may be used to transmit customizable reports and sensor data menus, in Excel format, to any number of operators, anywhere, with no monthly fees or charges.

www.krillsystems.com
MARKET

OSG Contracts for Autopilot Refit of Fleet

NP 5000 & Good Fuel Consumption

As a consequence of recent IMO regulations, shipowners are requested to improve energy efficiency of their ships' operation with regard to various factors that drive fuel consumption and emissions. The German navigation system manufacturer Raytheon Anschütz addresses these requirements with its newly developed autopilot series NP 5000. Overseas Shipholding Group (OSG) has contracted Raytheon Anschütz for retrofitting existing autopilot systems on its fleet of oil tankers with the newly developed Anschütz NautiPilot 5300. The first autopilot system was installed onboard Overseas Fran in October 2011.

"OSG are undertaking great efforts to increase energy efficiency onboard of their ships. The choice of our new adaptive autopilot system was influenced by considerations of saving fuel and thus reducing emissions," said Olav Denker, Product Manager at Raytheon Anschütz. "With OSG, we have now had the chance to prove positive effects of NP 5000 on steering performance and fuel consumption in practice for the first time."

NP 5000 helps optimize rudder movements with its integrated ECO-Mode. In Eco-Mode, the autopilot automatically adapts to the current sea-state and weather. Instead of keeping a heading with frequent rudder actions with high amplitudes, the rudder's sensitivity to periodical yawing movements caused by roll and pitch is reduced. Subsequently less rudder action is required, which leads to lower speeds of reduction and thus less fuel consumption.

The first voyage of "Overseas Fran" with NP 5000 was from Skagen to New York. To investigate the actual effect of NP 5000 on rudder steering, the heading and rudder plot of this voyage was compared with the results of the last voyage on the same route with the old autopilot system, under similar weather conditions during both voyages.

Capt. Dmitry Shatrov, Master of Overseas Fran, explains: "We can see on our print-out that rudder movement is more economic and gentle with the new autopilot system."

The effect of ECO-Mode is further supported by the new integrated heading and rudder plotter, which provides a graphical indication of heading changes and the resulting rudder angles. This graphic display instantaneously indicates the steering performance of the vessel due to the effects of changes to parameter settings such as rudder, counter rudder and yawing. The operator benefits from simplified adjustments of the autopilot's settings to gain optimized steering performance, which further minimizes rudder action and thus increases fuel efficiency.

"The newly installed autopilot system has a user-friendly interface in which you can easily adjust autopilot functionality in the prevailing circumstances, weather condition and required steering accuracy. So that we can navigate the vessel more gently and economically, taking into consideration fuel savings and safety," said Capt. Shatrov. The relevance of optimized rudder movements for fuel savings has already been highlighted by IMO as a "best practice" for efficient ship operation when developing a Ship Energy Efficiency Management Plan (SEEMP). "Since we all know that less rudder movement significantly contributes to reduced fuel consumption and emissions, we have developed and implemented unique features such as the Eco-mode and the heading and rudder plotter into the new NP 5000 autopilot series," said Denker.

In addition to its fuel-saving potential, NP 5000 is also equipped with advanced functions for high precision course keeping, for example for safe navigation in challenging sea areas near coastlines and shallow sea areas, platforms or archipelagos. Besides heading control and track control the new autopilot features a course control mode. When steering in this mode, the autopilot automatically compensates for drift and keeps the vessel on the defined course over ground line. A optionally integrated acceleration monitor provides a warning if a pre-defined cross acceleration limit is exceeded. This helps to avoid damage to cargo or discomfort to passengers due to high acceleration stresses that might occur for example during a heading change at high speed.

MISC Berhad Chooses Inmarsat XpressLink

Malaysian shipping conglomerate MISC Berhad (MISC) signed up 46 of its vessels - a grouping comprised of chemical and LNG tankers - for Inmarsat's XpressLink service. XpressLink is a fully integrated and managed combination of VSAT and FleetBroadband delivering unlimited data availability across the world’s oceans. It includes an option for MISC Berhad to double its available bandwidth at a pre-determined monthly rate when Inmarsat’s Global Xpress constellation becomes commercially available from 2014. The battle for supremacy in the maritime communication sector has been vigorous, and the MISC signing is a significant win for Inmarsat. "It is important for us to have ample bandwidth to manage our ship and shore operational systems and meet the communication needs of our seafarers at sea," said Captain S Rajalingam, VP, Fleet Management System at MISC Berhad. "During our sea trials, XpressLink impressed us with its performance (and) offered the best value proposition delivering reliable, unlimited data usage on both the VSAT and FleetBroadband services."

XpressLink combines Inmarsat’s high volume Ku-band VSAT system with FleetBroadband in a single package. In a press briefing to announce the contract, Frank Coles, President of Inmarsat Maritime, said: "We launched Inmarsat XpressLink in response to the growing need for unlimited high speed communications in the worldwide shipping market. Crew welfare and the need for increased operational efficiency are key drivers in the market, and with XpressLink, we can provide a future-proof communications platform."

"It is important for us to have ample bandwidth to manage our ship and shore operational systems”

Captain S Rajalingam, VP, Fleet Management System, MISC Berhad
At the St. Lawrence Seaway is one of the most important transportation links in North America. To maximize the efficient use of the seaway, in 2001, the Seaway authorities started to a study which would determine the maximum load ships can carry while maintaining a safe Under-Keel Clearance (UKC). Over the years the maximum draft of vessels transiting the Seaway in the MLO Montreal to Lake Ontario and the Welland Canal has been gradually increased. At the opening of the Seaway in 1959, the maximum draft for ships was set at 6.85 meters (22.5 ft.). This maximum draft is now set at (26.5 ft.). However, changes in water levels and a phenomenon called ship sinkage or "squat" made adjusting the maximum draft again more complicated.

Draft is measured prior to departure but a moving ship actually sits much lower in the water, particularly in shallow or constrained channels. How much a ship "squats" depends on factors such as the size and speed of the ship, shape of the channel, depth of the water, currents, wind, and even the presence of other ships.

Undertaken at the request of the St. Lawrence Seaway Management Corporation and industry partners that included the Canadian Ship owners Association and the Shipping Federation of Canada, the mentioned study resulted in standard squat models for the various types of vessels transiting the Seaway.

Over the past year and a half, the St. Lawrence Seaway authorities have developed a functionality description of a Draft Information System that incorporates the Seaway squat models, which was finally approved by all stakeholders in March of this year and was then issued to the public.

In accordance with this specification, TRANSA5 has developed a Draft Information System (DIS) based on the NS4000 ECDIS which allows the accurate display of the vessel’s position, real time water levels and data from highly detailed bathymetric charts.

An independent functionality verification and assessment was performed by Lloyds Register in June of this year after which the system was installed on board the M/V Algoma Spirit for final approval by the St. Lawrence Seaway authorities.

The Transas Draft Information System passed the performance tests without comments or open items. The DIS can run as a stand-alone system or in a network with the Transas NS4000 ECDIS providing a unique combination of precise navigation instruments, high definition chart data and real-time navigation information in both the DIS and the ECDIS. The Transas DIS is built on the same hardware platform as the Transas NS4000 ECDIS MFD providing for better redundancy and lower cost of maintenance.

The Draft Information System (DIS) is a program designed to calculate and display the under-keel clearance (UKC) on the basis of the following data:
- High Resolution Bathymetry data provided by the Canadian Hydrographic Service (CHS);
- Water levels; received automatically via Seaway AIS stations of a network of water level gauge stations or set manually by the user;
- Ship forward and after draft set manually by the user;
- Squat based on Seaway Squat Models for the vessel and channel type.

Boll & Kirch Filter Type 6.64
The Next Filter Generation

For over 60 years, BOLLFILTERS have improved the efficiency and prolonged the life of ships' vital equipment throughout the world. Now we have taken it to the next step.
Profile of a 2012 Fleet Optimization Conference Speaker

Dr. Henry Chen
Chief Naval Architect, Jeppesen

Dr. Henry Chen is currently the Chief Naval Architect for Denver, CO-based Jeppesen. Jeppesen is a Boeing Company that specializes in providing navigation and optimization solutions to the aviation, marine and land transportation industries. Dr. Chen has 37 years of experience working for the maritime and offshore industries. He was previously the founder of Ocean Systems Inc. and developed the Voyage Optimization and Safety system based on his Ph.D. thesis at MIT. The company was acquired by Boeing in 2008 and merged into Jeppesen. He received B.Sc. in Naval architecture from University of Newcastle Upon Tyne, Master degrees in Shipping Management, Ocean Engineering and Ph.D in Ship Systems from MIT.

Dr. Henry Chen

The term “Fleet Optimization” means many things to many people. What does it mean to you?

Dr. Chen Fleet Optimization encompasses many aspects of shipping operations ranging from finding the best deployments and schedules for maximizing the fleet revenue/profit to minimizing total fuel consumption on a particular passage given the loading conditions and forecast weather to arrive on time. Historically, such decisions are derived from years of experience with hit or miss results. The current market and regulatory conditions have introduced added complexity that if not well-managed they could result in costly mistakes. Decision support systems are therefore needed to find the best solution while satisfying these constraints. This conference is very timely as the industry is facing such challenges and looking for solutions.

You have elected to speak at the inaugural Shipping Insight Fleet Optimization Conference in Stamford in October: If you could boil it down into a paragraph, what will be the thrust of your message?

Dr. Chen The thrust of my message will be to show how such decision support systems for voyage optimization and safety have been proven over the years and how they are being increasing deployed by progressive shipping companies to manage risks and minimize fuel cost. Utilizing the advances in numerical weather/current forecast, ship performance modeling/simulation, high speed satellite communication and powerful desk top computers, voyage optimization has superseded traditional “hit or miss” weather routing methods.

Vessel owners of every size are faced with legislated challenges in terms of emissions, fuel quality and the standard array of new equipment rules, such as ballast water treatment systems. I know the threats vary greatly by vessel type and area of operation, but in your opinion, regardless of geographic locale or type of vessel in their fleet, what could/should every vessel owner be doing today to optimize the efficiency of their fleet.

Dr. Chen Regulatory challenges will only increase in the future. Owners should invest in strategic efficiency management planning, training, and decision support systems to help ship’s crew to understand the consequences of their actions in dollars and cents. Unbiased, quantitative procedures (for example, benchmark processes with valid KPIs) will reward the good performers while helping the rest to improve.

Much is read and said regarding emerging rules regarding fuel, emissions and the environment and their impact on vessels and the companies that own them. Can you put in perspective for our readers the changes we are seeing today, putting them in context with changes you have seen?

Dr. Chen Looking back over the past 30 years, the shipping industry has always been reactive to major accidents:

Double-hulls after Exxon Valdez, VDRs after the Erica accident, ECAs from green initiatives of cargo owners, ballast water treatment from marine biologists, EEDI to satisfy the environmentalists. Since the regulations often were crafted by people who do not have in-depth shipping knowledge, the operators are faced with high costs and unsafe solutions to satisfy the rules. We need to be proactive and anticipate the future requirements in building new ships. One such example is EEOI.

While it is not currently mandated, it will be a lot more cost effective to fit necessary sensors and monitoring systems in a new-build than to add the capability after ships are in service. Taking a systems approach will also enable multi-purpose use of equipment (e.g. using the same VDR for both SOLAS and SEEMP/EEOI requirements) thereby reducing life cycle costs and training effort.

Dr. Henry Chen
Berthing a Submarine

By Scott Reeve, President, Composite Advantage

Berthing a fast attack or fleet ballistic missile (Trident) submarine requires skilled vessel handling, knowledge and practice. The larger Trident subs are 560 ft. long with a beam of 42 ft. and displace almost 17,000 tons. When maneuvering them into port a deep draft camel is a crucial aide to optimizing berthing and mooring procedures. The camel creates and maintains separation between a sub and a waterfront facility. Deflecting or compressing with vessel movement, the camel prevents damage to the hull, diving planes, screws, fairings, special skin treatments and appurtenances by absorbing the sub’s energy.

Over the years factors like operational requirements, environmental conditions and pier and fender system designs have led to the use of more than 17 different types of deep draft camels built from a variety of materials at Navy waterfront facilities. When the Navy decided to standardize these camels to increase efficiency, it also wanted a design and material that would help lower operational costs and resist the ravages of saltwater affecting wood and steel camels. The Navy tapped Composite Advantage LLC of Dayton, Ohio and Whitman, Requardt & Associates LLP of Baltimore, Md., for a design-build project to develop and fabricate a composite universal camel able to accommodate all classes of submarines at any port in the world. Gregg Blaszak, a principle of Coastline Composites Inc., Lancaster, Pa., said, “A universal or one-size-fits-all deep draft camel offers greater flexibility in berthing submarines, helps reduce inventory, allows support between Navy installations and provides a cost savings by improving operational efficiency.”

“Coastline Composites is a consulting group specializing in composite products and applications. Following the Navy’s selection of Composite Advantage, the firm acted as an owner’s representative for the Navy to review the portions of the project relating to the composite materials. To effectively marry composites with steel and concrete, you need composite design and manufacturing expertise,” said Blaszak. “CA was very cost competitive but they also had the necessary design and fabrication skills to handle the unique properties of composites.” CA teamed with WR&A to develop the concept for the camel’s internal structure, “We knew they had previous experience designing waterfront infrastructure for the Navy and felt they would be a good fit with us for the project,” says Andy Loff, vice-president of CA. The Navy’s criteria for the new camel included the ability to absorb the massive amount of energy generated by a berthing submarine, freeboard, as well as list and trim angles and overall flotation stability. The flotation criteria posed a challenge.

“We were dealing with a unique shape and the criteria were somewhat at odds with each other in that if we designed to meet one requirement, issues surfaced with the other criteria,” says M athew Lambros, structural engineer for WR&A. “This was largely due to the fact that a number of properties affecting the camel such as volumes and densities can vary and must be considered to establish precise flotation calculations.”

The first design step was to determine the amount of kinetic energy the camel would need to absorb from a submarine to avoid over or under-designing the structure. WR&A used the kinetic energy standard for the Navy’s largest sub in less-than-ideal environmental conditions so that the camel could be used with any combination of sub class and port in the world. A rubber fenders had to be selected that could effectively absorb the energy without transferring too large of a reaction force on the supporting structure. Components and connection details were designed based on the magnitude and path of resulting forces. Once preliminary geometry was established along with weights of the building material, drawings and specifications were generated for CA.

“Unlike working with existing shapes and steel parameters, the advantage of using composite materials is that you can design much more specifically for the project,” says Lambros. “We were able to determine what we needed in terms of structural strength and stiffness allowing CA to mold the product to those physical and mechanical properties. The use of composites made the design-build process much more productive because of the ability to work in such close coordination with CA fabrication personnel.”

Testing revealed an unexpected challenge. The large structure equipped with rubber fenders weighed in at 70,000 lbs. with an additional 35,000 lbs of ballast required to meet flotation requirements established by the Navy. “We had to look at how the camel could be lifted during maintenance or installation in a manner that was structurally efficient, yet maintained safety measures and easy handling for base personnel,” says Loff.

CA and WR&A developed specialized lifting methodology able to accommodate the unique characteristics of the composite material and loads. Steel bars were integrated in the composite panels along the top edges of the camel. Pockets were formed around the bars at four locations so that lifting slings could be attached instead of traditional lifting hooks or pad eyes at discreet points. Specially lifting bars distribute the camel’s extreme self-weight along the length of the steel rod instead of focusing forces at single discreet points. Flotation and structural strength were also aided by the use of TYCOR, a fiber-reinforced foam core inside the composite panels creating a “sandwich” cross section. The patented material reduces the weight of the panels and its unique architecture enhances strength. “The core, incorporated with fiberglass fabric and infused with resin, contributes to flotation which eliminated the need to add extra flotation foam,” Loff says.

Following fabrication, composite sub-assemblies were assembled on-site at SUBASE New London in Groton, Conn., in October 2010 and the camel was installed in the water in November 2010 for a flotation test. “When we designed the camel we developed the ballast to consist of a combination of concrete mass and steel plates,” says Lambros. “The steel plates are movable inside the camel so that if the camel flotation trim is a few degrees off, then the ballast can be adjusted by moving the plates. Each plate weighs just 50 lbs. so they can easily be moved by a person.” Following completion of the flotation test, the camels were delivered to the Navy for installation on their newest submarine pier.

The set of universal composite camels has been successfully used by berthing submarines at New London for over a year. “Feedback from Navy facilities engineers and port operations is very favorable,” says Loff. “Elimination of recurring maintenance is a major operational benefit and multiple bases are now looking at the composite camels for future use.” According to Loff the Navy also is looking at using the technology for CVN aircraft carrier camels as well as ship separators to provide standoff distance between the ship and the pier or ship-to-ship. The standoff distance for the separator is adjustable.

The composite ship separators offer applications at commercial ports for sea-going vessels that include cruise ships and cargo ships. The composite technology and construction CA developed for vehicle bridges also is suited for waterfront infrastructure such as piers, wharves, walkways and piers.
Rüdiger Fuchs is the New CEO of P+S Werften

Rüdiger Fuchs (46) will become the new CEO of Germany’s P+S Werften. He takes over from Dr. Dieter Brammertz, who is leaving P+S as planned. Dr. Dieter Brammertz (63) was Chairman of P+S Werften from February 2010 and planned and designed the speedy restructuring of the former Hegemann-Werften-gruppe. The merger of the shipyards at Stralsund and Wolgast into P+S Werften, and the reppositioning of the company as a specialist shipbuilder, are the substantial milestones he achieved.

“I represent a new start at P+S Werften,” said Fuchs. “It’s my aim to lead P+S Werften to long-term success as a specialist shipbuilder with a clear product profile. My first steps will be to win back the trust of customers, employees and suppliers as well as banks and guarantors in the company, and to work out a truly realistic company concept. To this end, we need a thorough and clear analysis which begins this very day. This will form the basis for a comprehensive restructuring plan which we will present to the European Commission by the end of 2012.”

A flyer studying aviation and space technology at the University of Stuttgart, Fuchs began his career in the space industry, subsequently taking on management roles in the defense and rail industries. In 2001 he moved to Airbus as a specialist shipbuilder, are the substantial milestones he achieved.

Ulrichs Appointed MD of Rickmers-Linie

Rickmers-Linie, part of Hamburg’s Rickmers Group, promoted Ulrich Ulrichs to the position of Managing Director. Ulrichs joined Rickmers-Linie in 2005 when he took over responsibility for Line Management. In 2008 he became Director of this division before being appointed Deputy Managing Director in August 2011.

Ulrichs will work alongside Rüdiger Gerhardt, who has held the title of Managing Director since July 1, 2011 as well as Head of Logistics Services for the Rickmers Group.

Bayley to Lead Celebrity Cruises

Royal Caribbean Cruises, Ltd. said that Michael Bayley has been promoted to President and CEO of Celebrity Cruises, replacing Dan Hanrahan, whose departure was recently announced. Bayley will report directly to Richard D. Fain, Chairman and CEO of Royal Caribbean Cruises, Ltd. Bayley has been with Royal Caribbean for over 30 years, most recently as Executive Vice President of Operations. Prior to this role, Bayley served as Executive Vice President - International, where he oversaw the international expansion for the company. In a related move, Lisa Lutoff-Perlo will be promoted to Senior Vice President of Operations for Royal Caribbean International, reporting to Adam Goldstein, President and CEO of Royal Caribbean International. Lutoff-Perlo is a 27 year veteran of the company who has served in a variety of roles within both Celebrity Cruises and Royal Caribbean International.

New MD for Damen Shipyards Singapore

Marten Jongen has been appointed Managing Director of Damen Shipyards Singapore (DSSI) from March 2012. In his new role, Jongen will focus on marketing, services and further improving efficiency at the yard that has been building Damen vessels since 2000. DSSI has been part of the Damen Shipyards Group since 2000.

New CFO at Eagle Bulk Shipping

Eagle Bulk Shipping Inc. said that Arik Katzav, formerly Managing Director of Financial Reporting, has been promoted to CFO. Katzav succeeds Alan S. Ginsberg, who is leaving to pursue other professional interests. To facilitate an orderly transition, Ginsberg agreed to oversee a transition of his responsibilities through mid-August 2012.

GL Noble Denton Appoints Stoddart

GL Noble Denton appointed Arthur Stoddart to lead its operations in the Americas. Stoddart will become Executive Vice President for the region, based in Houston. Stoddart brings nearly 30 years of hands-on oil and gas engineering experience to GL Noble Denton’s Americas Region.

Huang Jins A/S Dan-Bunkering

A/S Dan-Bunkering said that Sarah Huang, 29, joined Dan-Bunkering’s Shanghai office as Marketing Executive as of June 2012. Huang was born in China and moved to Denmark as a child, but is now back in China.

Kübler Lubrication North America Promotes Bryant

Kübler Lubrication appointed Ben Bryant as marine market manager. Bryant is a graduate of the Massachusetts Maritime Academy and holds a 1,600 ton master’s license with experience on oil tankers, offshore supply vessels, tug and barge units, and various small power and sail vessels. Prior to joining Kübler, he worked as an environmental consultant in the oil spill response industry. His primary focus at Kübler is to launch a new portfolio of environmentally acceptable lubricants for the marine industry. Bryant holds a master of marine policy from the University of Rhode Island and a master of business administration from Boston College.

Savisaari: MD of Atlas Elektonik Finland Promotes Bryant

Jaanro Savisaari, 56, was appointed new Managing Director of Atlas Elektonik Finland Oy, a subsidiary of Atlas Elektronik, a supplier of naval electronics. In previous positions, Savisaari has been an officer in the Finnish Navy, most recently as a military attaché in the USA. He succeeds Sami Sohlberg.

GAC Bunker Fuels Strengthens HQ Team

GAC Bunker Fuels Limited has appointed two new UAE-based bunkers traders as part of its regional expansion plan. Georgia Paravallou will trade and broker marine fuels in her new role. An economics and management graduate, she joins GAC Bunker Fuels from A&P A Ltd, where she worked as a shipbroker, coordinating the marketing department and developed business in the UK and
SinoPacific Signs Deal to build Six OSVs

Jaya, IHC Asia Sign Agreement

South China.

Anthony Inglis is charged with expanding GAC’s bunker business in the Middle East and developing bunkering operations in Sub-Saharan Africa. He joined GAC Bunker Fuels from Weatherford International, where he served as a Procurement and Logistics Co-ordinator for the same market.

Thuraya Appoints VP

Thuraya Telecommunications Company reported that it has appointed T. Sanford Jewett as its new Vice President, Marketing.

Jewett brings his expertise in international markets to Thuraya and will play a major role in leading the expansion of Thuraya’s global marketing strategies.

During the start-up of Iridium Satellite in the late 1990s, Jewett worked in the marketing department, where he led the development and global marketing of the Iridium satellite pager product. More recently, he ran Operations and Business Development for WorldCell.

W & O’s Emmermann Earns Propeller Club Award

W & O employee Tammy Emerson was recognized as the Propeller Club of Jacksonville’s 2011-2012 Maritime Member of the Year. W & O announced that long-time employee Tammy Emerson, Senior Outside Sales Representative, was recognized as the Propeller Club of Jacksonville’s 2011-2012 Maritime Member of the Year. Emerson received this distinction as a result of her commitment to the club and its mission to promote the maritime industry. Emerson was a key player in securing new sponsors for the Propeller Club, and made a number of noteworthy contributions to the club’s fundraising event efforts. She was recently elected as the club’s 2012-2013 Vice President of Sponsorship. Her goals with this position are to further increase sponsorships and continue advancing the maritime industry in Jacksonville through corporate and community outreach.

IHC Merwede Signs Agreement with Jaya

“IHC Merwede, signed an agreement with Jaya Shipbuilding and Engineering Pte Ltd, which enables IHC Asia Pacific’s high-specified offshore vessels to be produced by Jaya at its yards in Singapore and Batam, Indonesia. As part of the wide-ranging terms, IHC Merwede will also provide engineering support services to Jaya.”

Oakwell Buys Into FORAN

Oakwell Shipyard Co., Ltd., part of the Oakwell Group Company, has started operations in its shipyard facilities at Satun, Thailand. Today, Oakwell Shipyard has an order’s book that includes seismic vessels and split hopper barges, among others. A key piece of the new operation is its Computer Aided Design (CAD) Toolset. Oakwell Shipyard has selected the FORAN System.

Marine Bunker Measurement Solution for Progressive Barge Line

W & O and Emerson Process Management announced that a Micro Motion MID-Certified (Measurement Instrument Directive) Marine Bunker Measurement Solution has been installed on a barge operated by Progressive Barge Line, Inc., in the Port of New Orleans, La. Emerson’s bunkering solution is designed to provide accurate, transparent bunker fuel deliveries. This installation by W & O on the 27,000-ton Progressive barge PBL 2402 is the first in North America.

SinoPacific Signs Deal to build Six OSVs

The SINOPACIFIC Shipbuilding Group signed a newbuilding contract for four SPP35 platform supply vessels (PSV) and a Letter of Intent on two large SPP50 PSVs with SLOK Nigeria Ltd. The six vessels are scheduled to be delivered by the end of 2014, and are significant for the yard as they mark the first time that independently designed offshore supply vessel (OSV) products of SINOPACIFIC direct selling to the African market. Reportedly, the two newly contracted types will be built at SINOPACIFIC’s Dayang Shipyard. “Dayang has been focusing on efficiently building bulk carriers. This time,
the building of high value-added OSVs is a major strategic initiative taken by SINOPACIFIC to transform and upgrade Dayang in the downturn of the current shipbuilding market,” said Wang Jianding, GM, Dayang Shipbuilding. “In the future, Dayang will continue to build upon the Group’s design and market advantages to adjust our product mix accordingly, fully leverage our strength in production capacity and manufacturing efficiency, to ensure it to become one of the manufacturing bases which SINOPACIFIC will use to carry out its OSV strategy - leadership in niche market.”

Raytheon Anschütz Opens in Rio de Janeiro

Raytheon Anschütz established a new subsidiary Raytheon Anschütz do Brasil Sistemas Marítimos Ltda., headquartered in Rio de Janeiro. With the new company, Raytheon Anschütz do Brasil can offer tailored and surveillance and security solutions on a commercial-off-the-shelf basis.

Raytheon Anschütz do Brasil, Sistemas Marítimos Ltda., Avenida das Américas 7899, Bloco 2, Sala 508, Barra da Tijuca, CEP 22793-081, Rio de Janeiro, Brasil

www.raytheon-anschuetz.com.br

Seaspan Selects IFS Applications to Support $8B Contract

IFS North America said that Seaspan has selected IFS Applications as its Shipbuilding materials requirements planning (MRP) solution. IFS Applications was chosen because it provides a powerful project-based solution (PBS) with the ability to control cost and schedule in real-time, enhancing Seaspan’s ability to efficiently meet customer requirements.

www.IFSWORLD.com

Wilhelmsen Ships Service (WSS) is helping clients execute voyages through the Northern Sea Route (NSR) as this new trade lane begins to open up new opportunities for shipping. WSS is working with Russian Arctic shipping specialist Rosatomflot for ice-breaking assistance and has developed a program to assist clients with technical, legal and insurance preparations they must satisfy to make the journey safely.

The NSR is currently open between 1 July and 1 November but holds out the long-term prospect of a faster route between Northern Europe and North Asia/Alaska, cutting the journey time on an Europe-Asia voyage from 34 days to 22 days. This has the potential to provide substantial savings in fuel consumption and emissions, as well as hastening the development of oil and gas reserves in the Arctic. In 2011, 34 voyages carried more than 820,000 tons of cargo via the NSR, a figure likely to rise to 1m tons in 2012. Summer sea ice levels on the route have decreased about 12% over the last decade and the warming climate ice could bring ice-free summers by 2050, according to Norwegian Polar Institute estimates. The average cost for a single NSR passage is about 10% greater than a Suez canal transit, however this is negotiable for multiple transits. Each transit is considered a separate project as to preparations, such as application for permission to the Russian authorities, equipment and crew training. Issues that owners need to be aware of before navigating the NSR include amendments to the terms of their P&I and hull and machinery insurance cover. In addition, paper charts and publications are in Russian only and ice pilots do not always speak languages other than Russian.

To make the journey, all vessels must comply with Russian rules for the NSR, including its guide and regulations for navigation and pilotage as well as requirements for vessel design and construction, ice operations and knowledge of tariffs for icebreaking services. At present it takes two to three weeks to get a ship accepted to transit the NSR and the vessel nominated must be the highest, 1A ice class.
Wärtsilä for Nine Kuwait Oil Tanker

Wärtsilä will supply the main engines for a series of vessels being built for Kuwait Oil Tanker Co. (KOTC), a Subsidiary of Kuwait Petroleum Corporation. Four VLCCs (Very Large Crude Oil Carriers), one Aframax tanker and four medium-range tankers that are being built in South Korea at Daewoo Shipbuilding & Marine Engineering (DSME).

The VLCCs will be fitted with 7-cylinder Wärtsilä RT-flex 82T engines and a Waste Heat Recovery System. The Aframax vessel will be powered by a Wärtsilä 6-cylinder RT-flex 58T main engine, and the medium-range tankers by a Wärtsilä 7RT-flex50D main engine. All engines will be built by the Engine & Machinery Division of Hyundai Heavy Industries Co., Ltd. (HHI-EMD), which is a Wärtsilä licensee.

MHI Licenses Deck Machinery Tech To Imabari

Mitsubishi Heavy Industries, Ltd. (MHI) signed an agreement with Imabari Shipbuilding Co., Ltd. in Imabari, Ehime Prefecture, Japan, under which MHI licenses production and marketing of deck machinery. The production of licensed machinery is scheduled to be started in April 2013. Imabari Shipbuilding is the Japan's largest shipbuilder, based on new shipbuilding tonnage and ship sales. The licensed deck machineries consist of various configuration types and are capable for use in all ships. Hydraulic pumps and motors, which drive machines, will be supplied by MHI. Imabari plans to build the deck machinery at the shop in Dalian, China. Deck machinery consists of anchor windlasses, which are used for anchoring and anchor hoisting, and mooring winches, which are used to moor a vessel to a pier or berthing facilities.

MHI manufactured its first deck machinery in 1962. The company's deck machinery has built up a solid delivery track record and has won high reputation from customers for their high reliability, and durability.

Parker Hannifin Acquires Kittiwake Group

Kittiwake Group has been acquired by Parker Hannifin Corp., a leader in motion and control technologies. The transaction is designed to offer greater value with a comprehensive and innovative range of products and solutions and includes the acquisition of the entire Kittiwake Group, including Kittiwake Developments Ltd, Kittiwake Procal Limited, Kittiwake Holroyd Limited and Kittiwake Incorporated. Kittiwake, with annual sales of approximately $20m and employing 95 people, will be integrated into Parker’s Filtration Group and the sales will be reported as part of the International Industrial Segment. Parker Hannifin employs approximately 58,000 people in 47 countries and its sales revenue was more than $12 billion in fiscal year 2011.

For more information, go to www.cnav.com

Visit us at SMM Hamburg, Germany - Sept 4th - 7th, 2012
Hall A1, Stand #502

C-Nav
WORLD DGNSS

- Easy to use
- GPS/GLONASS
- Dual networks
- Updated QA/QC
- Precise-Stable-Reliable
- 5cm accuracy worldwide

CONTACT US AT:

LAFAYETTE: CORPORATE · +1(337) 216.0000 · HOUSTON · +1(713) 348.1536 · BRAZIL · +55(21)2490.0500
EUROPE · +44(1284)373.800 · SINGAPORE · +6596295.9730 · SOUTH AFRICA · +27(11)705.2741
ANAGUA · +504221330202

TUBE-MAC INDUSTRIES

Forums - pipe filling - weld filler

BENEFITS of a TMI Non-Welded Piping System versus Welded System

- Actual flaring or swaging time in “seconds” vs. “hours” for a welded joint.
- No special skilled labour required vs. qualified welder.
- No special hot work permits
- No fire watch personnel required.
- No leaks from stress fatigue in welds.
- No x-ray required vs. time and money to x-ray welds.
- No acid flush chemicals and neutralizers required.
- No environmental costs or issues regarding the disposal of chemical wastes.
- Commissioning is fast with reduced downtime.

Toll Free CANADA 1-877-643-3823
Toll Free Central USA 1-888-285-9243
Europe +39 (91) 810 50 50
Rio de Janeiro, Brasil +55 21 3328 0809
www.tube-mac.com
ExxonMobil Expands Supply Capability of Mobilgard

ExxonMobil Marine Lubricants completed the first bulk delivery of Mobilgard 570 cylinder oil in the Port of Shanghai in May. The bulk delivery of Mobilgard 570 was made by Hai Gong Yoo 30, the first double-hulled marine lubricants-delivery barge to operate in Shanghai. Built and owned by China Marine Bunker PetroChina Co. Ltd (Chimbusco), the IMC-compliant barge is 278 dwt and is equipped with state-of-the-art flow meter technology and a 1.5 metric ton crane. Mobilgard 570 is formulated with high-quality, heavy neutral base stocks, which have less thermal and oxidative stability. To optimize the oil’s performance, ExxonMobil balances individual additive components instead of using an additive package. One of these additives is a patented synthetic thickener technology to increase viscosity, important for engine designs that incorporate higher combustion gas pressures and temperatures, higher stroke/bore ratios and reduced cylinder oil feed rates. The oil also contains proprietary performance-enhancing detergents, dispersants, anti-oxidants and anti-corrosive additives. In addition to helping extend piston overhaul intervals, Mobilgard 570 helps increase engine reliability, providing outstanding thermal stability and acid-corrosion protection. It also promotes cleanliness and reduces the amount of waste cylinder oil requiring disposal, thus allowing ship operators to be more environmentally responsible. Mobilgard 570 will be replaced by Mobilgard 560 VS later this year. New Mobilgard 560 VS is an advanced variable-sulfur cylinder oil that is formulated to deliver outstanding performance and engine wear protection for slow-speed diesel engines. It is designed for use with residual fuels spanning both high and low sulfur levels.

Bulk delivery of ExxonMobil's Mobilgard 570 cylinder oil in the Port of Shanghai is now available by Hai Gong Yoo 30, the first double-hulled marine lubricants-delivery barge to operate in Shanghai.

Harris PYE, H&W Repair FPSO

Harris Pye has completed planned maintenance and upgrades on Husky’s Searose Floating Production and Storage (FPSO) vessel, the first to be drydocked in the UK in 12 years. Working for H&W at their Belfast Repair Dock, the Harris Pye team worked 24/7 to complete all works in under 28 days. The 272 x 45m-wide FPSO is operated by Husky Energy at the White Rose oil field, 350km off the Newfoundland coast.

Prime Contractor H&W dedicated its Belfast Repair facility and resources, so that the vessel could undergo an FPSO Off Station Program (OSP), where planned maintenance and upgrades were completed in dry dock. H&W awarded Harris Pye the contract to carry out all major topside works, which included specialist piping and turret system upgrades. Having previously completed similar projects, they were also tasked with additional works such as the installation of a new deepwell pump system and the refurbishment of the turret lower bearing’s and utility swivel seals.

www.harrispye.com
the inaugural appointment to this chair
Professor Ronald W. Yeung has received
Ocean Engineering in the Department of
bureau of Shipping Endowed Chair in
Electric & Hydraulic Deck Machinery:

Rapp Hydema U.S., Inc.
Tel: +1 206 285 5858
Rapp Hydema AS, Norway
Tel: +47 75 55 01 00
Rapp Ecoceo Ltd., UK
Tel: +44 (0) 1779 480044
www.rappmarine.com

A V E V A M A R S has received Napier Turbochargers
Large bore engine sales and service company, Resource Power Group (RPG) has received Napier Turbochargers’ au-
thorization as a service, repair and spare parts center. This move compliments RPG’s existing capabilities as a medium speed engine, turbocharger, and fuel equipment service and sales company.

Wärtsilä for Three New Statoil PSVs
Wärtsilä contracted with K leven Maritime AS to supply the ship designs for three new platform supply vessels (PSVs). Two of the vessels will be owned by Atlantic Offshore and the other by Remøy Shipping. All three ships will be operated by Statoil.
The two PSVs for Atlantic Offshore will also feature Wärtsilä power and propulsion, electrical and automation systems, including the Wärtsilä Low Loss Concept (LLC). The diesel-electric sys-

tem provides additional reliability for continuous operation in various failure modes. The vessels will attain the highest reli-
bility as a service, repair and spare parts center. This move compliments RPG’s existing capabilities as a medium speed engine, turbocharger, and fuel equipment service and sales company.

Wärtsilä’s equipment deliveries will begin in autumn 2013, and all three ves-
sels are scheduled to be operational by the end of 2014.

Caley Davits for Japanese FPVs
Caley Ocean Systems has supplied davits for four Japanese Fisheries patrol vessels. The davits will allow the rapid deployment and retrieval of a range of high speed workboats, even in Sea State 6 conditions, during patrol operations. The all-weather Caley davits enable rigid inflatable boats (RIBS) to be held in readiness and launched in seconds. Crew safety is paramount to the davit’s han-
dling system which features anti-pendu-
lation control for pitch and roll damping and reduction of pendulum swing. Dur-
ing boat recovery, the towing boom posi-
tions the boat under the davit, eliminating boat yaw, while light auto tension winch control eliminates snatching during re-
cover.

www.caley.co.uk

Rolls-Royce Power Drillsips
Rolls-Royce won orders worth over $110 million to supply large thrusters for offshore drilling vessels. These orders, which include options for additional thrusters, are from a variety of customers who are expanding their drillship fleets and are driven by greater demand in oil and gas exploration in deep water and harsh conditions.

August 2012 www.marinelink.com
When the U.S. Geological Survey (USGS) approached Great Lakes Shipyard in Cleveland last June, the government research agency had a tall order: Build two new, 70-ft. aluminum vessels for delivery before September 2011.

For the USGS, the $8.2m contract meant the agency would replace two of its oldest research vessels in its Great Lakes fleet, floating laboratories equipped with state-of-the-art instrumentation designed to improve the understanding of deep-water ecosystems and fish species in Lake Erie and Lake Ontario. One boat is moored at USGS Lake Erie Biological Station in Sandusky, Ohio; the other at the USGS Lake Ontario Biological Station in Oswego, N.Y.

For Great Lakes Shipyard, a division of the Great Lakes Towing Company located on Cuyahoga River’s Old River Channel just off of Lake Erie, the order posed the ship designer and fabricator’s biggest challenge in recent history – designing and fabricating not one, but two aluminum ships; something the company had never done.

### Aluminum Specs
USGS approached Great Lakes with basic preliminary designs, specifying to build the vessels out of 5083 aluminum alloy after performing a feasibility study, said Christopher C. Peifer, Great Lakes assistant vice president of engineering and the company’s safety officer. “The three biggest factors that drove them to choosing aluminum were draft, speed, and weight,” he explains. “Lake Erie is the shallowest of all the Great Lakes and minimizing the vessel’s draft is crucial for access to certain regions. The speed allows the owner to reduce transit time between sampling locations and the weight determines where the vessel can be pulled out of the water for the winter months.”

According to Peifer, all these factors are closely related to each other and made the determining factor on the USGS’ choice of material.

“The aluminum was a big change for us. We had worked with it a bit on smaller jobs, but we had not built an entire boat from it,” Peifer said. “But we were up to the challenge of learning the ropes while we worked on such a tight turnaround.”

### Design Considerations
The USGS order required the shipyard to design and build two ships in just over a year, a taxing time-frame for those experienced in building aluminum boats. In order to build these vessels, Peifer and other on-site engineers received 3D preliminary drawings from the USGS and then turned these drawings into 2D layouts in which all materials and sizes of plate are indicated on the drawings. Each part in the layout is assigned a piece number and is sent to the material provider, who then cuts the pieces and sends them back to the shipyard with a set of assembly drawings.

“We used those assembly drawings, to tack the pieces together and weld it out from bow to stern,” said shipyard general manager, Joseph J. Craine. “Actually we do more than just weld it out. We do all of the ancillary work, as well, including electrical, piping, insulation and more. It’s a turnkey process.”

### Reshaping a Welding Department
Taking on the project required the ship-
yard to invest in new welding equipment, said Ryan Cooper, technical sales representative with The Lincoln Electric Company in Cleveland, who assisted the shipyard in making the transition.

“For this kind of work, they needed to weld out of position with a solid aluminum wire (GM AW - Gas Metal Arc Welding [MIG]),” Cooper said. “Welding on aluminum is different than welding on steel. The crew was used to welding in position with older power sources using cored wire. To get the out-of-position weld on aluminum, they needed to learn how to use a pulsing power source to get a good bead and the penetration needed for this kind of job.”

During a trial period Lincoln Electric showcased its Power Wave 355M with Power Feed 25M and the Python Plus Push-Pull gun combined with Lincoln Electric’s SuperGlaze 5356 wire, the company’s most popular aluminum welding wire for shipbuilding.

The Power Wave features some of Lincoln Electric’s most sophisticated welding technologies and processes combined into a single, highly efficient inverter-driven power source designed for advanced semiautomatic welding. Lincoln Electric’s Waveform Control Technology is at the heart of Power Wave 355M performance, enabling processes such as Pulse-On-Pulse and Power Mode. Precise control of process parameters permit welding on a variety of materials, including steel, stainless steel and nickel alloys, as well as the aluminum alloy Great Lakes Shipyard was required to use to meet USGS specifications. Programmable optimization of the arc for each material type, welding wire type, wire diameter and shielding gas mix delivers consistent welds time after time.

“At the end of the two weeks, everyone was certified in aluminum welding,” Craine said.

On the Job
To keep pace with the requirements of both the materials and the job deadlines, the Great Lakes fabrication team worked 10-hour shifts, six days a week on both of the vessels. “Aluminum is much more difficult to work with than steel,” Craine says. “It moves around, warps, flexes. It’s definitely not as predictable as steel, and there’s less margin for error. Because it is delicate and also oxidizes quickly, you can’t grind a weld out on it like you can with steel. You have to start over with a fresh component. And, in steel fabrication, once you cut it, you can just tack it and weld it. With aluminum, you have to clean it and then weld it almost immediately after cutting.”
**New Automatic Air Carbon-Arc Gouging System**

Arcair introduced the Arcair-Matic N7500, an automatic gouging system that is said by the manufacturer to offer five times greater productivity and 10 times faster clean-up compared to manual carbon arc gouging. It can gouge with carbons up to .75" in diameter at 1600 amps at 100% duty cycle and gouge with an accuracy of 0.025". Slag removes easily and the bottom of the gouge exhibits minimal carbon deposits. Compared to the previous Arcair-Matic system, the new N7500 offers:

- A digital pendant that improves consistency through a pre-set parameter menu (view video) based on carbon size and gouge depth.
- An extended front end that provides operators with a better view of the seam, making it easier for them to keep the torch on track.
- A rough machining mode that compensates for out-of-round rolls or pitted areas by enabling the operator to stall the electrode feed.
- Safer operation; it uses the power source’s remote contactor switch and keeps the system electrically cold until the start button is pressed. Also enhancing safety are “no current” detect and low voltage functions that shut down the system when these conditions are present.

www.victortechnologies.com

**Phoenix Product’ LED Berth & Mirror Light**

Phoenix Products Company, Inc. launched the LEDBM Series, an LED berth and mirror light fixture designed to replace less energy-efficient fluorescent lamps. Conformal-coated circuit boards, stainless steel hardware, and corrosion-resistant, low-copper content housing are among the design features that help protect the fixture against water and vibration damage.

The LEDBM is ideally suited for marine applications. The premium-brand LEDs are rated for 50,000 hours. A convenience outlet and on/off rocker switch add to the functionality of this fixture. The LEDBM is also ETL/cETL certified to UL 1598 and is 1598A Marine Listed.

www.phoenixproducts.com

**Stauff ACT Clamp**

In order to complete the product portfolio and fulfill customers’ requirements, the Stauff ACT Clamp – recently awarded by the U.S. American NACE International association with a prestigious Corrosion Innovation of the Year Award – will also be available in the Twin Series design from the fourth quarter of 2012 on. The new twin clamp allows for the simple, fast and secure fastening of two parallel running pipes with standard diameters from 6 mm to 25.4 mm (from 1/4 inch to 1 inch). Clamps for the installation of pipes with alternative or even two different outside diameters are also available upon request. It has been designed in accordance with DIN 3015 (Part 3). Thus, it can be used in combination with all the regular mounting hardware of the same series.

**Jobtron AS Launches Tron AIS TR-8000**

Jotron presents the new Tron A1S TR-8000, the latest generation AIS Class A. After several months with dedicated development, this new ship-born AIS Class A has been designed with special features to optimize easy installation and to secure safe operation onboard all types of ships. Jotron’s long tradition in working close with the marine industry has resulted in the new Tron AIS TR-8000 to be filled with several innovated solutions. The AIS has been designed with a separate transceiver unit including junction interface and a 7-IN. touch display unit. The separate transceiver unit has been developed to simplify any ECDIS interface while the design of the display unit will meet “stand-alone”, flush- and panel mounting. Tron AIS TR-8000 has been approved according to the latest specifications. It has a GPS antenna included in the device, so plug and play. Tron AIS TR-8000 will comply with the new inland waterways requirements.
MAHLE OPS BWTS Contract

MAHLE Industriefiltration GmbH, a systems specialist for water treatment, received the order from Hyundai Heavy Industries (HHI) to equip six new 9600 TEU ships operated by Hamburg Süd with the OPS (Ocean Protection System) ballast water treatment system. These container ships are each fitted with an OPS 800 system that treats a ballast water flow rate of 800 cu. m./hr., with the proven MAHLE technology in accordance with the applicable IMO D2 standard. The OPS comprises a prefiltration system, a main filtration system, and a low-pressure UV irradiation facility for disinfection. Even the more stringent requirements applicable in the USA (USCG standards) can be fulfilled as the values obtained in both the land and sea tests fell significantly below the IMO thresholds.

USCG Approval: SeaCor and SeaDrain Plus Plastic Piping Systems

GF Piping Systems received U.S. Coast Guard (USCG) certificate of approvals on its SeaCor and SeaDrain Plus Plastic Piping Systems. Both of the piping systems approved by the USCG meet IMO A753 (18) Part 5 for low flame spread and IMO A753 (18) Part 2 for low smoke and toxicity and are permitted for installation in concealed spaces in accommodations, service and control spaces. The systems need not meet the additional requirements of 46 CFR 56.60-25 (A) (2).

The SeaCor Piping System is available in sizes from ½” through 12” with a complete selection of approved fittings. The SeaDrain Plus Piping System is available in sizes from 1-1/2” to 6” with a wide range of Drain, Waste and VENT (DWV) approved fittings.

The Mastiff RIS supports pulling and cutting of 15m (50-ft.) sections of 36-in. (and larger) conductor pipe, inner casing and cement, a significant improvement over casing jack systems which usually work with 1.5m (5 ft.) sections. The substructure has also been designed to accommodate a wide range of platform layouts to achieve a ‘turn-up and assemble’ capability, without the need for platform modification. In addition, the RIS is designed to be quickly dismantled into standard shipping containers.

WANTED
USCG LICENSED

FEDERAL PILOTS (AGT)

NW GULF

NW GULF OF MEXICO REGION
Send Resume to: P.O. Box 20065, Beaumont TX 77720-0665
Email: grant@nwgulffedpilot.com
Initially looking for smart ambitious professional mariners with a USCG Federal Pilot license (AGT) for the NW Gulf of Mexico region ship channels; able to work part/full time as independent contractors with share-of-ownership opportunity.
For more information, go to website: www.nwgulffedpilot.com

STAY AHEAD with the best

Maritime Associates, Inc.
Marine & Offshore Signage Experts
St Clarkson
We Design, Produce and Install all signs and complete sign systems
775-832-2422
www.marineSigns.com
maritime@MarineSigns.com
Put the power of our experience to work for you

ANCHORS
CHAINs
 MARINE
LARGEST INVENTORY OF NEW & USED IN THE U.S.A.
FAX: 713/644-1185
WATS: 800-233-8014
PHONE: 713/644-1183
P.O. BOX 58645
HOUSTON, TX 77258
www.anchorsmc.com

SLM
SUPERIOR LIDGERWOOD
MUNDY
THE LATEST TECHNOLOGY IN COMMERCIAL DECK EQUIPMENT

www.jotron.com

www.marinelink.com
MAN Diesel & Turbo said its first super-long-stroke, 90-cm bore Mk 9 engine has completed test bed trials at Hyundai Heavy Industries Engine & Machinery Division successfully. The S90M E-C9.2 covers the new trend in container shipping demanding smaller bore, super-long-stroke engines with lower propeller speeds.

Physically it is the largest two-stroke engine ever designed by MAN Diesel & Turbo and will deliver a torque of 8.5 million Nm at 84 rpm.

It has a total output of 69,720 kW. The engine has been built by one of world’s major two-stroke engine builders, Hyundai Heavy Industries, and it will be installed on a container vessel built at Samsung Heavy Industries for Orient Overseas Container Line (OOCL).

The engine is in fact partly due to the global economic implosion of 2008 and continued economic malaise today, a development which has hit the container shipping sector hard.

With this, shipowners continue to investigate operating cost reductions, through measures like low-load optimization of engines, slow steaming and operation with turbocharger cut-out. These tendencies led MAN Diesel & Turbo to offer possibilities supporting optimized propulsion efficiency by way of lower propeller speeds by using longer-stroke engine designs. In the midst of economic turmoil, shipowners are expected to clean up their act, literally, as a mounting array of international initiatives, led by the new Energy Efficiency Design Index, EEDI, which has helped manufacturers such as MAN Diesel & Turbo to develop the MAN B&W super-long-stroke S90M E-C9.2.

Developed specifically for container ships, the S90M E-C9.2 is based on the VLCC-optimized S90M E-C8, which in the meantime also found applications in a number of container ships.

Furthermore, the G series of engines with even larger stroke to bore ratios, has been made available, with G40, G45, G50, G60, G70, and G80 type engines supporting the tendency of using lower propeller speeds with a super-long stroke for all ocean-going ship types.

By using the low propeller speed supported by the S90M E-C9.2 engine, the engine is delivered with the following three different MCR optimizations:

1) High-rated MCR with part load optimization
2) De-rated MCR optimization with part-load tuning
3) De-rated MCR optimization with low-load tuning.

First S90ME-C9.2 unit tested at Hyundai Heavy Industries Engine & Machinery Division in Korea

**FAST. SAFE. RELIABLE.**

Vessel & Rig Repair

Are Stray Currents Destroying Your Machinery?

- Shore SHAFT GROUNDING (EARTHING) BRUSHES are used on propeller shafts, turbines, generators, electric motors, gears, pumps, etc. Failure to properly ground (earth) rotating shafts can result in expensive damage to seals, bearings, and other critical components.

- Self Cleaning. Operate dry or with oil. Gold/silver composite bristles.

- Working parts removable during operation without contacting adjacent parts.

TOOTHBRUSH Types “LW”, “L” & “S” (SCHEMATIC)

- Brush internals are insulated from casing.

- Provision to raise brush from shaft during operation and to inactivate if contact is not desired.

- Brush is suitable for transmission of instrument signals from the rotor without the need of special slip rings.

- Voltage and current monitors available.

- Little or no maintenance.

© 2006 SOHRE TURBOMACHINERY® INC. ABS TYPE APPROVAL B-568026

SOHRE TURBOMACHINERY® INC.
MASHOON, MASSACHUSETTS, USA 01057
TEL (410) 667-0590 FAX (410) 667-0592
TSOHRE@SOHRETURBO.COM WWW.SOHRETURBO.COM

FAST. SAFE. RELIABLE.

Vessel & Rig Repair

Serving the Galveston-Houston area, Malin International Ship Repair & Drydock is a full service topside repair facility ready to handle your scheduled or emergency repairs.

- Rigs, Drills, OOS’s • GOM Offshore Repair/Riding Crews
- Full service machine shop • 7000 SF fabrication shop

info@malinrepair.com www.malinrepair.com

A Lorton Marine Company
ABS Nautical Systems

SEEMP & Improving Energy Efficiency

With the evolution of ship efficiency mandates comes the requisite host of “solutions” offered from companies known and unknown. As shipowners face mounting pressure to keep ships running efficient and environmentally sound, it is comforting to evaluate solutions from tried and trusted partners such as ABS and ABS Nautical Systems, which recently began offering its own innovative solution to improving vessel energy efficiency per the Ship Energy Efficiency Management Plan, or SEEMP. Here’s how.

SEEMP, made mandatory by the International Maritime Organization (IMO), is a tool for shipowners and operators to use in outlining a program that continuously improves the energy efficiency of their ships. Starting as early as January 1, 2013, shipowners and operators must identify and develop ship-specific energy efficiency measures for vessels. The ship-specific plan can serve as an element when developing a broader Company Energy Efficiency Management Plan (CEEMP), which incorporates all measures of efficiency company-wide, both onshore and offshore.

Breaking it down, SEEMP is a digest containing best practices that can be implemented on a vessel to improve its energy efficiency. Each ship-specific plan will be monitored, updated and improved throughout the life of the vessel. As ships and the companies that own and operate them vary wide by market sector and geographic region, ABS provides owners and operators with an understanding of the guidance offered by many industry organizations for developing an SEEMP; identifying options to assist in their efforts.

Drafting an energy efficiency plan follows a four-step process:

1. Planning & Energy Efficiency Assessment
2. Implementation
3. Monitoring the Implemented Measures
4. Self-evaluation and Improvement

ABS supports the development and implementation of the SEEMP and CEEMP by preparing the initial assessment and facilitating workshops, helping to choose proper energy efficiency measures and provide help in setting efficiency goals. While implementation and plan monitoring is managed primarily by ship operators, ABS can work in close collaboration to provide guidance.

Geislinger

Geislingers new SAE couplings

Geislinger designed a one-piece skeleton holding the springs (patent pending), giving its new coupling a very slim outline. Available in four different stiffness series, the coupling adapts to the customers’ requirements. Towards the flywheel the SAE J620 standard connection interface is used, but optionally also metric or non-standard bolt patterns can be ordered. The inner connection features a spline connection to handle the axial misalignments and provide the possibility for blind assembly. To connect to various designs, tailor-made adapter pieces with spline on one side and flange, keyway or conical taper are available as an option.

The Geislinger SE steel spring coupling can be combined with a Geislinger support bearing housing to obtain combinations with misalignment couplings or cardan shafts. Geislinger has chosen an oil filled design to maximize engine compatibility. The coupling design is optimized for the maximum oil volume to ensure the highest oil quality within the exchange intervals. The composite membrane allows for the thermal expansion of the oil and also provides the chance for a very quick and easy oil exchange.

http://www.geislinger.com
SMM 2012 September 4-7, Hamburg, Germany

The Next “STEP” in Shipboard Waste Management

In February 2012 Maritime Reporter introduced to you Terragon Environmental Technologies and its vision to transform solid and liquid waste handling operations on ships and rigs. Recently we caught up with Dr. Panayotis (Peter) Tsantrizos, President, CEO and founder of Terragon, to discuss the next “STEP.”

---

“One STEP Back

MAGS, or Micro Auto-Gasification System, is Terragon’s solution to solid waste management that today is available commercially. The system, now in its sixth iteration, has been involved in some broad based real-life field testing, including MAGS’ V4 installations onboard the commercial vessel M a'ersk L aser and the Canadian Navy’s HMCS Protecteur, while its V5 installations include the U.S. Marine’s Camp Smith base on Hawaii, as well as an onshore oilfield operation for Saudi A ramco. V6 models are shipping this year to a diversity of users, land and sea-based. To put it succinctly, MAGS accomplishes its mission to “cook” a wide variety of waste using Terragon’s Auto Gasification Process, a patented technology which thermally breaks down hydrocarbons into solid carbon and synthesis gas, and uses the synthesis gas to fuel the process. The result? A small pile of “Bio-Char” that is many magnitudes less volume than the original waste.

The WETT technology – under development for four years with support from the U.S. and Canadian Navies – is the system to handle liquid waste onboard ships. WETT removes suspended solids and contaminants, and produces clean water that is safe for discharge or reuse. This technology – which today is targeted to both land and marine applications, specifically habitats with fewer than 300 people – is approximately a year behind the MAGS technology. It is currently in field trials aboard A melia, a 108.2 x 14.94 m, 4,433 GRT Lloyd’s classified bulk carrier owned by Transport Desgagnés. Together MAGS and WETT are transformational: together – as STEP – they begin that will mate the solid waste handling systems into a homogenous unit – or STEP – identifying and addressing the challenges to make it a safe, efficient, sustainable and cost-effective means to handle trash on the high seas.

Two STEP’s Ahead

The System for Total Environmental Protection (STEP) is the current mission focus of the Terragon Environmental crew, as they seek to identify and eliminate the challenges inherent in marine operations. Terragon’s intention is to integrate the solid and liquid waste handling systems into a homogenous unit using MAGS and WETT technologies, where you can take all the waste of the ship and end up with only clean water, thermal energy and Bio-Char. According to Dr. Tsantrizos, there are many questions that still need answers, including:

• What do you do with the extra water?
• What do you do with the thermal energy generated?

The easy answer is to send it overboard, but in sticking with his mission toward sustainability, Dr. Tsantrizos would like a solution which puts it to use on the ship, as potable water or utility water.

The Canadian Coast Guard Ice Breaker Pierre Radisson will be the first to host the STEP demonstration in December 2012. STEP will be installed within its ISO container (see picture page XX) on the deck of the ship for six months, treating bilge water, solid waste and used oils generated by the ship, as well as most of the gray water. Black water will not be treated for this demonstration, but will be incorporated on subsequent STEP demonstrations. Ultimately, the success of the system in the maritime realm is a story to be told years from now, as trash handling rules become more oppressive to ship owners and innovative solutions must be found. Regardless of its ultimate fate, by focusing its efforts on creating sustainable trash handling practices with residual benefits for communities large and small is surely a STEP in the right direction.

A containerized schematic of STEP, the combination of the MAGS & WETT systems. STEP will be installed in December 2012 onboard the Canadian Coast Guard ice breaker Pierre Radisson. The WETT system is now being installed for field evaluation onboard the bulk carrier Amelia, owned by Transport Desgagnés.

---

See Terragon Environmental at SMM Hall B2.2G, Booth 221

---

“The Next “STEP” is the current mission focus of the Terragon Environmental crew, as they seek to identify and eliminate the challenges inherent in marine operations. Terragon’s intention is to integrate the solid and liquid waste handling systems into a homogenous unit using MAGS and WETT technologies, where you can take all the waste of the ship and end up with only clean water, thermal energy and Bio-Char. According to Dr. Tsantrizos, there are many questions that still need answers, including:

• What do you do with the extra water?
• What do you do with the thermal energy generated?

The easy answer is to send it overboard, but in sticking with his mission toward sustainability, Dr. Tsantrizos would like a solution which puts it to use on the ship, as potable water or utility water.

The Canadian Coast Guard Ice Breaker Pierre Radisson will be the first to host the STEP demonstration in December 2012. STEP will be installed within its ISO container (see picture page XX) on the deck of the ship for six months, treating bilge water, solid waste and used oils generated by the ship, as well as most of the gray water. Black water will not be treated for this demonstration, but will be incorporated on subsequent STEP demonstrations. Ultimately, the success of the system in the maritime realm is a story to be told years from now, as trash handling rules become more oppressive to ship owners and innovative solutions must be found. Regardless of its ultimate fate, by focusing its efforts on creating sustainable trash handling practices with residual benefits for communities large and small is surely a STEP in the right direction.

A containerized schematic of STEP, the combination of the MAGS & WETT systems. STEP will be installed in December 2012 onboard the Canadian Coast Guard ice breaker Pierre Radisson. The WETT system is now being installed for field evaluation onboard the bulk carrier Amelia, owned by Transport Desgagnés.
GEA Westfalia Separator
Hall A3, Booth 212

At SMM 2012, with the new Ballast-Master ultraV solution, GEA Westfalia Separator Group demonstrates once again its development of new products that are customer-oriented and in line with market requirements: with this solution, the necessary cleaning processes can be completed entirely without the use of chemicals and solely on the basis of filtration and irradiation with UV-C light. As ultrasound is used for the self-cleaning of the lamps, no disinfection by-products occur.

The Ballast-Master ultraV has a modular structure and is therefore suited both to use in the construction of new ships and to retrofitting. The system has already been certified under IMO regulations and is being presented for the first time at SMM in Hamburg.

Conrac
Hall B6, Booth 207

An new product is a fully integrated Marine Panel Computer with a diagonal of 13.3-in. (33.8 cm) specially designed for ship automation and control applications. Products launched at SMM will be a Marine Panel Computer with a screen diagonal of 7 in. (17.8 cm) with touch function. Moreover, Conrac will present its latest series of Marine Grade Panel Computers. Designed for 24/7 operation, the new Marine Panel Computer series is specified to run all marine applications, from automation and control to ECDIS and Navigation. The integrated high performance industrial PC with advanced low-power embedded technology ensures an optimum performance, superior graphic performance and utmost reliability. As a special feature, CONRAC integrated a proprietary system monitoring application called SysMon which is used to control various settings and to obtain exact information on a multitude of parameters.

Shell “Breakthrough”

Shell launched Shell Alexia S4, a product it dubs a ‘breakthrough’ and its most innovative marine engine oil in a generation. It is designed for use across a wide range of vessel and engine types, fuel specifications, loads and climates—from the Antarctic to the Amazon to the Suez Canal, essentially meaning vessels no longer need to carry multiple oils. It is designed to work effectively at any vessel speed, including slow and ultra slow.

The new formulation went through testing at Shell’s Marine and Power Innovation Center in Hamburg, Germany. Tests in laboratory engines under simulated slow steaming conditions demonstrated that Shell Alexia S4 provided up to a 20% improvement in overall engine wear, compared to Shell’s existing cylinder oil. It was also extensively tested during more than 25,000 hours of field trials, by customers and the original engine manufacturers MAN and Wärtsilä. Here it proved its ability to protect engines running on distillates and residual fuels containing 0.2% to 3.75% sulfur content in a range of locations and climates, including the Antarctic, the Middle East and South America. With technical support and a switch to Alexia S4, one specific trial showed a 33% reduction in oil feedrate. Alexia S4 became available commercially this month.

http://www.shell.com/home/content/marine_products/alexia/animation/
Wärtsilä provides a complete offering of marine solutions for ship owners, shipyards and operators, continually focusing on helping its customers to find their “shorter route to bigger profits.” Its portfolio of marine products, solutions and services is divided into four key areas:
- operational efficiency,
- environmental excellence,
- fuel flexibility and services.
At SMM 2012, Wärtsilä will present its complete product and service offering in the marine industry and its customized approach to each of our customers distinct requirements. Wärtsilä will explain how its tailored solutions are dedicated to optimizing lifecycle value, using a wide scope of services to extend the life of vessels and enhance its value as an asset.

Moxa

Moxa’s rugged marine computing solutions integrate ECDIS, radar and conning systems to facilitate navigation. To facilitate the lives of ship and vessel crews, Moxa offers comprehensive solutions for ship networks, including marine panel PCs, ECDIS displays, embedded computers and marine certified Ethernet switches. At SMM, Moxa will present its new x86-based ECDIS computer MC-5157-AC/DC, a high-performance, fanless marine computer. The Intel Core i5 520E CPU features a 3 MB L2 cache that can easily satisfy the heavy computing loads demanded by ship-board automation systems. In addition to its computing power and rugged design, 2 PCI slots make hardware extensions simple, while the 8 built-in NMEA ports allow users to easily connect gyros, speed logs, wind sensors and other specialized maritime hardware without the headache of configuring additional NMEA converters.

Hatz Diesel

Hatz Diesel is a manufacturer of single- and multi-cylinder air-cooled diesel engines up to 53 kW (78 hp), that are found mainly in industrial applications. In the seagoing and inland waterways sector, Hatz has also been supplying diesel engines for decades for power generators, pumps and compressors as well as for the
main propulsion in marine vessels and small fishing boats.

In the maritime business, a robust and reliable quality and a high flexibility in terms of installation options plays a major role. The Hatz products meet these requirements with ease and due to the low complexity of the air-cooled design it is easy to integrate into existing systems. At SMM Hatz displays a complete drive unit which consists of a Hatz 4 cylinder diesel engine 4L41C Silentpack including driving control, shaft and propeller. Besides a power generator with noise insulation a fire pump which uses Hatz D-Series engines will be shown. The later product was developed jointly with a partner, especially for use on ships.

Colfax Fluid Handling
Hall A2, Booth 213

Each pump can be equipped with Allmind. The shown “AM 101” Master Module at cooling water pump is the central “brain” of the system.

Colfax Fluid Handling will exhibit its enhanced product Allmind (pat. pending) at SMM. Colfax’s Allmind pump upgrade is designed to reduce total cost of ownership through diagnostic capability and variable speed drive control. The concept of Allmind developed from a single leakage control device to become an intelligent condition monitoring and variable speed control unit. Allmind is comprised of interchangeable modules, giving the system the flexibility needed to adapt to highly individualized processes. The system offers the ability to handle everything from relatively simple condition monitoring to sophisticated monitoring and control activities involving multiple pumps. And it does it all with a single unit.

Baytek Monitors & IPC
Hall B6, Booth 108

Baytek will be present innovative new products for the maritime sector: Maritime monitors & IPC with LED display technology, multi-touch function, glass fronts and bonded displays. New monitors use multi-touch control, monitor lines are gradually being switched to LED displays and the company will soon meet a frequently expressed customer wish for fully enclosed glass-fronted monitors. The maritime monitors & IPC from Baytek come with ECDIS and radar certification where applicable, or are ECDIS-compliant.
Models and information of some top products like the BARKE and TIMON rudder as well as the Van der Velden COMMANDER rotary vane steering gear will be showed and provided at the booth.

Imes
Hall B6, Booth 513
German cylinder pressure measuring specialist Imes GmbH has launched two new cylinder pressure sensors. The HTT-05 and CPS-02 cylinder pressure sensors from Imes both feature integral signal conditioning units, hence allowing much simpler on-engine installation. With its M14 x 1.25 thread, the HTT-05 is the direct successor to the widely used and well-proven HTT-04 sensor, of which Imes has supplied over 30,000 units to engine builders and operators. Specifically targeting medium and high speed engines, the CPS-02 is a slimline “pencil” sensor, featuring a narrow body and M10 x 1 mm thread.

MTU
Hall A3, Booth 305
Combined propulsion systems of diesel engines and gas turbines (CODOG, CODAG and CODELAG) are used in military vessels and yachts. The TF40, TF50 and LM2500 gas turbines with a power output of up to 30,110 kW enable ships to achieve maximum speeds of over 50 knots. MTU supplies and installs complete propulsion plants that offer an optimal combination of compact power and low weight. Pictured: CODAG propulsion system

New England Ropes
Towing and Mooring Lines

Improve your productivity and safety. Make the switch from wire to synthetics.

New England Ropes are made using the finest first-class fiber, world-class manufacturing, and innovative design and engineering. Driven by excellence, our products provide the strength and durability necessary for your application. Choose the rope that is synonymous with quality and performance. Choose New England Ropes.

New England Ropes • 848 Airport Road • Fall River, MA 02720
508-730-4524 • bshakespeare@oneropes.com • www.oneropes.com

SAM Electronics
Hall B6, Booth 310
SAM Electronics and its associate L-3 companies will feature extensive ranges of systems and products for automation,
communications, navigation, positioning, propulsion, energy generation and distribution for improving ship operating efficiencies. Highlights include live demonstrations of the latest NACOS Platinum series of scalable navigation, automation and control systems featuring standardized components and operating networks which are already providing fully integrated functionality for vessels of all types and sizes. Displays will be complemented by a bridge simulator with three large screens and NACOS-type consoles. Aiso featured as an integral part of demonstrations will be an L-3 Valmarine multifunctional VALMATIC Platinum automation assembly as well as a new integrated Platinum dynamic positioning and control system developed by L-3 Dynamic Positioning & Control Systems together with SAM and Lyngsø Marine.

New exhibits on display for NACOS Platinum systems consist of a Remote Service software package for supporting vessel maintenance and for shore-based fleet control operations, a centralized data monitoring facility for evaluating key performance indicators, FleetPilot.

Lankhorst Ropes
Hall A1, Booth S10
Ease of rope handling and optimizing rope performance are the themes of the Lankhorst Ropes booth at this year’s SMM. In addition to the Lankhorst A3 rope splice, the booth will also feature the industry leading, Tipto Winchline and innovative Challenger coated Lankoforce rope - simultaneously improving abrasion resistance and making the rope easier to handle.

The A3 splice has 100% efficiency, which means there is no loss in rope strength due to splicing. It also makes rope handling easier as there is no doubling of the rope or splice stiffness in the mainline commonly experienced with traditional rope splicing.

The A3 splice is a standard feature of the Tipto Winchline - a dedicated floating winchline, developed especially to be used on single drum, self tensioning winches. The load-bearing 7-strand core combines high strength and low elongation. The Tipto Winchline has a breaking force of 785 kN with the A3 splice, compared to 682 kN without the A3 splice.

The Sea Switch Two
Smart Electronic Level Switch with No Moving Parts
The Sea Switch Two was designed and patented for all tank applications. The Sea Switch Two offers a reliable solution for liquid level detection and control for cargo, ballast, and storage tanks, without any moving parts.

The Sea Switch Two uses a fully static system that is based on the propagation of an acoustic wave into a metallic rod. A piezo-electric sensing element produces a wave along the rod. As the liquid reaches the sensing element the oscillation stops and the alarm is activated.

The Sea Switch Two sensor detects high, high-high, or low level in any liquid with an alarm output given by a dry contact or current loop change 6-18 mA.

- Easy installation  • Self-test built-in
- Fully static system  • no moving parts

More than you expected
Alfa Laval

The SMM trade fair takes place in Hamburg, on 4–7 September 2012. Alfa Laval will be showcasing a wide range of solutions designed to address the big issues for the marine industry, such as boosting efficiency and reducing operating costs.

Fuel strategies and ways to cut fuel bills are important priorities for all ship owners and operators today. Alfa Laval will be showing some innovative new solutions that tackle these issues. Saving energy and reducing CO₂ are high on the agenda, and our key environmental products will be on display. Excellent support is of course essential for maximizing performance, and our parts and service offering will also be featured.

This year’s SMM will be the launch pad for three new products. PureSOx introduces cost-effective exhaust gas cleaning. PureDry introduces waste fuel recovery and a paradigm shift in separator design. The wide temperature and pressure range of the AlfaNova fusion-bonded plate heat exchanger meets the demanding applications set by today’s modern fleet.

Vulkan Couplings

Hull A3, Booth 302

Vulkan Couplings extended the range of the enhanced performance ACOTEC couplings with the RATO R+. The drive specialist, which is based in Herne, is launching the initial sizes of the development and presenting it to specialists for the first time at SMM. ACOTEC (Advanced Compound Technology) is a holistic approach to optimizing all relevant areas of influence, in order to be able to offer the best possible products and services. The basis for this is that VOLKAN Couplings combines all competencies in-house, from application technology and torsional vibration calculations to the construction and development, the elastomer and vulcanization technology right up to the test centre, condition monitoring and service. The couplings manufactured and tested with this technology form the ACOTEC coupling range of the company, which are characterized by extreme resilience and reliability and which are labeled in the respective type designation with an additional plus sign following the brand name.

Danfoss

Hall B1, Danish Pavilion

Danfoss will exhibit its marine portfolio, including our frequency converter-family that holds eight marine approvals. Visitors will also be introduced to a variety of sensors, such as our cylinder pressure sensor that reduces fuel consumption and increases engine life.

VLT frequency converters are available in protection classes up to IP 66, making the products ideal for the refurbishment of older vessels. Danfoss VLT frequency converters for marine applications are certified by eight authorities within the maritime and off-shore area, including DNV, RINA, Lloyd’s, CCI and others.

Cylinder Pressure Sensor – reduces fuel consumption

The new high quality pressure sensor allows 2-stroke and 4-stroke engines to operate with a higher output than is the case today. Owners benefit from reduced fuel consumption, lower maintenance costs as well as longer operating life.

Survitec Group

Hall B1.OG, Booth 600

During SMM, visitors to the Survitec Group stand will have the first opportunity to observe the new remote life raft launch feature for the world-leading SurvitecZodiac M15 (Medium Inflatable Slide) Escape Slide System. The innovative feature of the new SurvitecZodiac system enables a second liferaft to be remotely launched after the double track escape slide has been deployed and its first 150 person liferaft has been automatically inflated. By pulling a painter line on the ship, the new development allows the second liferaft to be deployed. Previously it was necessary for a crew member to descend into the first liferaft, from where the second could be inflated.

The development of a remote inflation capability now eliminates the need for any crew to leave the ship ahead of passengers and permits the almost immediate deployment of a second liferaft as soon as the first has been activated. This is expected to save valuable seconds of vessel evacuation time for passengers and crew.
SNANE 2012
Annual Meeting & Expo
& Ship Production Symposium
Where Industry & Technology Meet

October 24-26
Providence, Rhode Island
Rhode Island Convention Center (RICC)
& Westin Providence Hotel

REGISTER NOW

You won't want to miss:
- 40+ Hours of Technical Sessions
- Four Special Panel Discussions
- YP & 50 Year Member Panel
- Expo of the Latest Technologies
- Courses for PE Credit
- Cutting-Edge T&R Sessions
- NSRP Ship Production Symposium
- Training Seminars
- SOCP Technical Session
- Networking Events

For up to the minute information visit http://www.sname.org/2012AnnualMeeting/Home/
This directory section is an editorial feature published in every issue for the convenience of the readers of MARITIME REPORTER. A quick-reference readers’ guide, it includes the names and addresses of the world’s leading manufacturers and suppliers of all types of marine machinery, equipment, supplies and services. A listing is provided, at no cost for one year in all issues, only to companies with continuing advertising programs in this publication, whether an advertisement appears in every issue or not. Because it is an editorial service, unpaid and not part of the advertisers’ contract, MR assumes no responsibility for errors. If you are interested in having your company listed in this Buyer’s Directory Section, contact Mark O’Malley at momalley@marinelink.com.
The U.S. Navy is currently seeking qualified marine engineers to serve as Port Engineers for ships in their Surface Fleet.

Naval Port Engineers act as the owner’s representative and serve as the subject matter expert on ship’s systems/equipment and are intimately familiar with the operational and maintenance requirements of their assigned ships to ensure their mission readiness.

They are active participants on a Maintenance Team responsible for one or two ships and serve as the Commanding Officer’s primary representative for all off ship maintenance and modernization. As their assigned ship’s life cycle manager, the Port Engineer is expected to be the most knowledgeable person on the material condition of their ships and are responsible for ensuring their ships safely meet their expected service life. Port Engineers engage with senior Navy leadership, government program offices, sailors in the fleet, and shipyard contractors so effective communication and interpersonal skills are essential.

Travel is minimal and all shipyard availabilities are conducted in the home port. All Port Engineers are encouraged to visit their ships during deployment in order to plan work packages and to get underway with them as their schedule permits.

Candidates must have the following qualifications: possess and maintain SECRET government clearance, bachelor’s degree in Engineering, minimum USCG Third Assistant Engineer License, and at least 5 years of sailing experience in the merchant marine or Navy. Prior Port Engineer experience, involvement with ship repair industry, and knowledge of the Navy’s current maintenance practices is desirable. Candidates must be physically able to enter confined space (i.e. tanks and voids), climb ladders, and masts aboard their assigned ships while in port or at sea in order to validate maintenance requirements.

To apply please visit:

Human Resources
Camber
6992 Columbia Gateway Dr.
Suite 150
Columbia MD 21046 USA
Email: tmickens@camber.com
The Naval Shipbuilding Team: The Navy, Shipbuilders and Suppliers Working Together

There will be a reception for speakers and MMA members from 6:00 p.m. to 7:30 p.m. on Monday, September 17th, 2012.

Attendees at the meeting must be U.S. citizens or permanent residents and employees of companies performing contracts for the U.S. Navy.

September 18 & 19, 2012 • Holiday Inn By the Bay
88 Spring Street • Portland, Maine 04101
www.marmach.org • 703-791-4800

Dry-Dock Repair Services Wanted

Woods Hole Oceanographic Institution (WHOI) is seeking east coast shipyards interested in providing dry-dock maintenance and repair services for R/V Atlantis, owned by the US Navy. Please respond by Aug.30, 2012 to receive a pre-bid qualification questionnaire. An RFP will be issued to qualified contractors on or about Sept.14, 2012. It is expected that Atlantis will be available for dry-docking on or about Nov.1, 2012. It is anticipated that the required work will consume approximately 67 days. Interested firms can receive more information by contacting Sandy Sherlock via e-mail: ssherlock@whoi.edu.
<table>
<thead>
<tr>
<th>Page#</th>
<th>Advertiser</th>
<th>Website</th>
<th>Phone #</th>
</tr>
</thead>
<tbody>
<tr>
<td>93</td>
<td>Smith Berger Marine</td>
<td><a href="http://www.smithberger.com">www.smithberger.com</a></td>
<td>(206) 764-4650</td>
</tr>
<tr>
<td>29</td>
<td>Total Marine Engineering</td>
<td><a href="http://www.totalmarineengineering.com">www.totalmarineengineering.com</a></td>
<td>(281) 877-5700</td>
</tr>
<tr>
<td>10</td>
<td>American Water &amp; Wastewater Solutions</td>
<td><a href="http://www.aww.org">www.aww.org</a></td>
<td>(301) 864-3336</td>
</tr>
<tr>
<td>89</td>
<td>Tube-Mac Industries Ltd.</td>
<td><a href="http://www.tubemac.com">www.tubemac.com</a></td>
<td>(888) 285-9243</td>
</tr>
<tr>
<td>42</td>
<td>Tersa Marine</td>
<td><a href="http://www.terasa.com">www.terasa.com</a></td>
<td>(800) 436-1928</td>
</tr>
<tr>
<td>41</td>
<td>MarineLink</td>
<td><a href="http://www.marine-link.com">www.marine-link.com</a></td>
<td>(877) 236-4673</td>
</tr>
<tr>
<td>79</td>
<td>Marine Propulsion Systems</td>
<td><a href="http://www.marinepropulsion.net">www.marinepropulsion.net</a></td>
<td>(888) 542-5344</td>
</tr>
<tr>
<td>56</td>
<td>Maritime Reporter</td>
<td><a href="http://www.maritimereporter.com">www.maritimereporter.com</a></td>
<td>(707) 446-8344</td>
</tr>
<tr>
<td>73</td>
<td>Marine Supply Store</td>
<td><a href="http://www.marinesupplystore.com">www.marinesupplystore.com</a></td>
<td>(800) 446-6250</td>
</tr>
<tr>
<td>35</td>
<td>MARINE LİNK</td>
<td><a href="http://www.marinelink.com">www.marinelink.com</a></td>
<td>(707) 446-8344</td>
</tr>
<tr>
<td>28</td>
<td>Marine Equipment &amp; Supply</td>
<td><a href="http://www.marineequipmentandsupply.com">www.marineequipmentandsupply.com</a></td>
<td>(800) 446-5265</td>
</tr>
<tr>
<td>27</td>
<td>MAN Diesel &amp; Turbo</td>
<td><a href="http://www.mandieselturbo.com">www.mandieselturbo.com</a></td>
<td>(281) 877-5700</td>
</tr>
<tr>
<td>26</td>
<td>Marine Dealer</td>
<td><a href="http://www.marinedealer.com">www.marinedealer.com</a></td>
<td>(800) 446-5265</td>
</tr>
<tr>
<td>25</td>
<td>Marine Dealer &amp; Supplies</td>
<td><a href="http://www.marinedealerandsupplies.com">www.marinedealerandsupplies.com</a></td>
<td>(800) 446-5265</td>
</tr>
<tr>
<td>24</td>
<td>Marine Dealer &amp; Supply</td>
<td><a href="http://www.marinedealerandsupply.com">www.marinedealerandsupply.com</a></td>
<td>(800) 446-5265</td>
</tr>
<tr>
<td>23</td>
<td>Marine Dealer &amp; Supplies</td>
<td><a href="http://www.marinedealerandsupply.com">www.marinedealerandsupply.com</a></td>
<td>(800) 446-5265</td>
</tr>
<tr>
<td>22</td>
<td>Marine Dealer &amp; Supply</td>
<td><a href="http://www.marinedealerandsupply.com">www.marinedealerandsupply.com</a></td>
<td>(800) 446-5265</td>
</tr>
<tr>
<td>21</td>
<td>Marine Dealer &amp; Supply</td>
<td><a href="http://www.marinedealerandsupply.com">www.marinedealerandsupply.com</a></td>
<td>(800) 446-5265</td>
</tr>
<tr>
<td>20</td>
<td>Marine Dealer &amp; Supply</td>
<td><a href="http://www.marinedealerandsupply.com">www.marinedealerandsupply.com</a></td>
<td>(800) 446-5265</td>
</tr>
<tr>
<td>19</td>
<td>Marine Dealer &amp; Supply</td>
<td><a href="http://www.marinedealerandsupply.com">www.marinedealerandsupply.com</a></td>
<td>(800) 446-5265</td>
</tr>
<tr>
<td>18</td>
<td>Marine Dealer &amp; Supply</td>
<td><a href="http://www.marinedealerandsupply.com">www.marinedealerandsupply.com</a></td>
<td>(800) 446-5265</td>
</tr>
<tr>
<td>17</td>
<td>Marine Dealer &amp; Supply</td>
<td><a href="http://www.marinedealerandsupply.com">www.marinedealerandsupply.com</a></td>
<td>(800) 446-5265</td>
</tr>
<tr>
<td>16</td>
<td>Marine Dealer &amp; Supply</td>
<td><a href="http://www.marinedealerandsupply.com">www.marinedealerandsupply.com</a></td>
<td>(800) 446-5265</td>
</tr>
<tr>
<td>15</td>
<td>Marine Dealer &amp; Supply</td>
<td><a href="http://www.marinedealerandsupply.com">www.marinedealerandsupply.com</a></td>
<td>(800) 446-5265</td>
</tr>
<tr>
<td>14</td>
<td>Marine Dealer &amp; Supply</td>
<td><a href="http://www.marinedealerandsupply.com">www.marinedealerandsupply.com</a></td>
<td>(800) 446-5265</td>
</tr>
<tr>
<td>13</td>
<td>Marine Dealer &amp; Supply</td>
<td><a href="http://www.marinedealerandsupply.com">www.marinedealerandsupply.com</a></td>
<td>(800) 446-5265</td>
</tr>
<tr>
<td>12</td>
<td>Marine Dealer &amp; Supply</td>
<td><a href="http://www.marinedealerandsupply.com">www.marinedealerandsupply.com</a></td>
<td>(800) 446-5265</td>
</tr>
<tr>
<td>11</td>
<td>Marine Dealer &amp; Supply</td>
<td><a href="http://www.marinedealerandsupply.com">www.marinedealerandsupply.com</a></td>
<td>(800) 446-5265</td>
</tr>
<tr>
<td>10</td>
<td>Marine Dealer &amp; Supply</td>
<td><a href="http://www.marinedealerandsupply.com">www.marinedealerandsupply.com</a></td>
<td>(800) 446-5265</td>
</tr>
<tr>
<td>9</td>
<td>Marine Dealer &amp; Supply</td>
<td><a href="http://www.marinedealerandsupply.com">www.marinedealerandsupply.com</a></td>
<td>(800) 446-5265</td>
</tr>
<tr>
<td>8</td>
<td>Marine Dealer &amp; Supply</td>
<td><a href="http://www.marinedealerandsupply.com">www.marinedealerandsupply.com</a></td>
<td>(800) 446-5265</td>
</tr>
<tr>
<td>7</td>
<td>Marine Dealer &amp; Supply</td>
<td><a href="http://www.marinedealerandsupply.com">www.marinedealerandsupply.com</a></td>
<td>(800) 446-5265</td>
</tr>
<tr>
<td>6</td>
<td>Marine Dealer &amp; Supply</td>
<td><a href="http://www.marinedealerandsupply.com">www.marinedealerandsupply.com</a></td>
<td>(800) 446-5265</td>
</tr>
<tr>
<td>5</td>
<td>Marine Dealer &amp; Supply</td>
<td><a href="http://www.marinedealerandsupply.com">www.marinedealerandsupply.com</a></td>
<td>(800) 446-5265</td>
</tr>
<tr>
<td>4</td>
<td>Marine Dealer &amp; Supply</td>
<td><a href="http://www.marinedealerandsupply.com">www.marinedealerandsupply.com</a></td>
<td>(800) 446-5265</td>
</tr>
<tr>
<td>3</td>
<td>Marine Dealer &amp; Supply</td>
<td><a href="http://www.marinedealerandsupply.com">www.marinedealerandsupply.com</a></td>
<td>(800) 446-5265</td>
</tr>
<tr>
<td>2</td>
<td>Marine Dealer &amp; Supply</td>
<td><a href="http://www.marinedealerandsupply.com">www.marinedealerandsupply.com</a></td>
<td>(800) 446-5265</td>
</tr>
<tr>
<td>1</td>
<td>Marine Dealer &amp; Supply</td>
<td><a href="http://www.marinedealerandsupply.com">www.marinedealerandsupply.com</a></td>
<td>(800) 446-5265</td>
</tr>
</tbody>
</table>

The listings above are an editorial service provided for the convenience of our readers. If you are an advertiser and would like to update or modify any of the above information, please contact: productionmanager@marinelink.com
Propulsion Controls for Fixed and Controllable Pitch Propellers

A World Leader in Propulsion Controls

PRIME MOVER CONTROLS INC.

3600 GILMORE WAY, BURNABY B.C. CANADA V5G 4R8
TEL (604) 433-4644  FAX (604) 433-5570  www.pmc-controls.com
Karl Senner, Inc. supplied Golding Barge Lines two (2) REINTJES WAF 763, 4.625:1 reverse reduction gears, including internal shaft brakes and Rexroth electronic controls for this addition to the Golding Fleet.

Shipyard:
Sneed Shipbuilding
Channelview, TX

Owner:
Golding Barge Lines
Vicksburg, MS

Contact Us

NEW ORLEANS Karl Senner, Inc. 25 W. Third St. Kenner, LA 70062 Phone: (504) 469-4000 Fax: (504) 464-7528
WEST COAST Karl Senner, Inc. Seattle, WA Mr. Whitney Ducker (425) 338-3344
E-MAIL US service@karlsenner.com sales@karlsenner.com parts@karlsenner.com

www.karlsenner.com