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MARITIME REPORTER AND ENGINEERING NEWS

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April 2010

Technical Challenges, Rich Rewards

Offshore Deepwater

Deepwater Report
$167B Capex in Next 5 Years

Profile
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Trailblazer
Shell's Kent Stingl in Brazil

Workboat
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Navy
Brazil's Nuclear Sub Program

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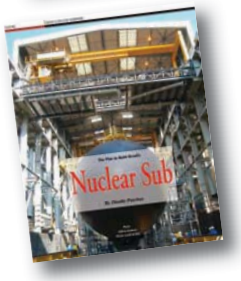

COVER STORY

OFFSHORE ANNUAL

40 Going Deep

While the world gets back to business, the offshore oil and gas industry remains a lightning rod for interest and activity. Recently there have been political moves in the U.S. to open additional drilling sites along the coasts. And globally, the push to discover and recover resources in increasingly deep waters continues.

Read our reports, starting on page 40.

(Photo courtesy Anadarko)

Pictured on this month's cover is the Anadarko-operated Independence Hub, currently the world's deepest production platform in approximately 8,000 ft of water. The project will be recognized next month as OTC's Distinguished Achievement Award for Companies, Organizations and Institutions, for its innovative collaboration in creating a coordinated infrastructure solution that provided access to ultra-deepwater reserves, previously economically unfeasible. Natural gas from the project represents a 10% increase in the supply from the Gulf of Mexico.

WRITERS Bryant, Mitchell, Tamez, Quadvlieg, Payne

ALSO IN THIS EDITION

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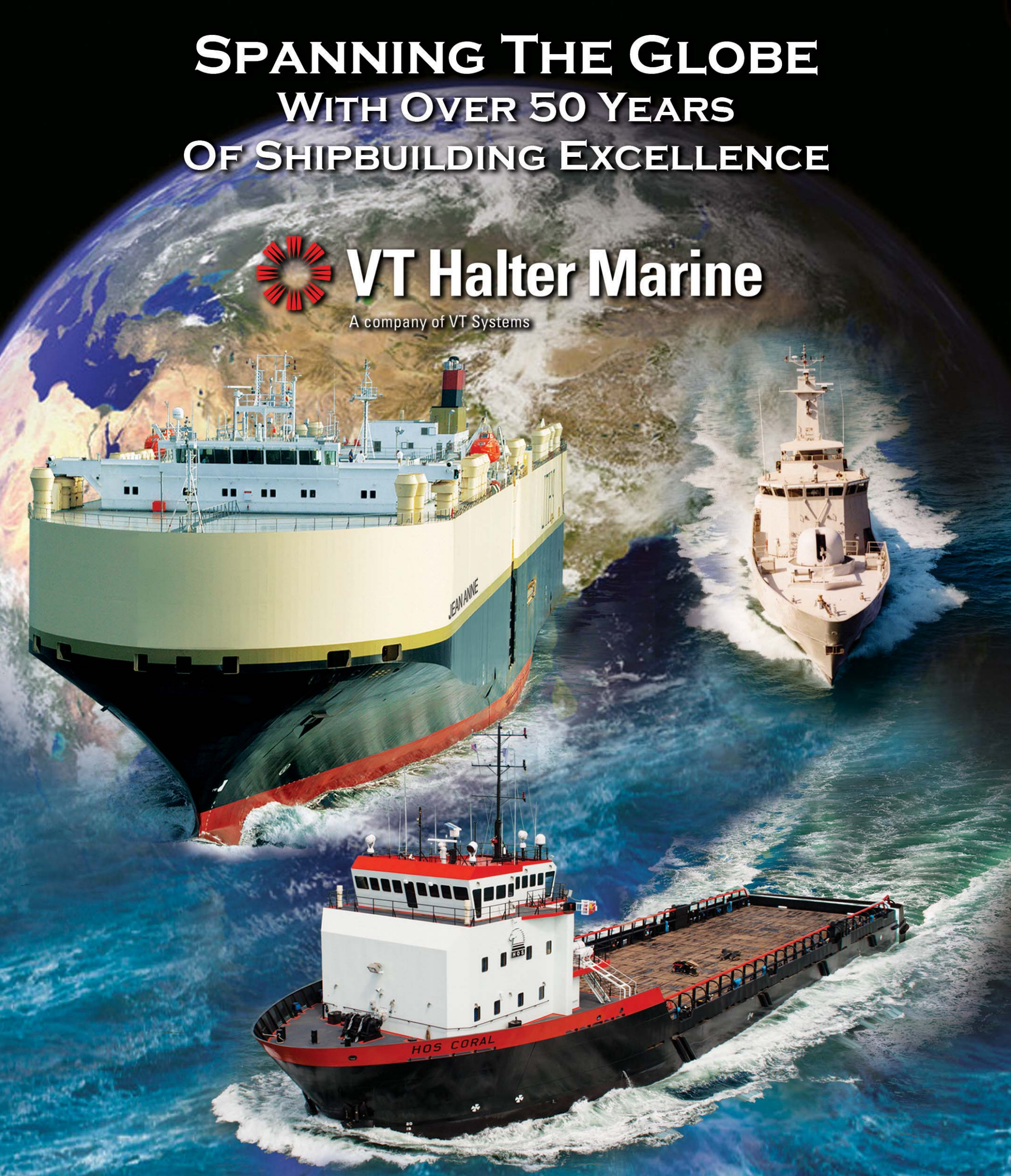

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What a difference 8,760 hours (1 year, for those of you calculating) makes. Just 12 months ago on this spot we were discussing the potential expansion of offshore oil and gas development and exploration as "contentious", based largely on the Democratic political party's historical resistance in this regard. Twelve short months ago was also viewed as the economic abyss in what is widely regarded as the most deep and broad economic meltdown in 100 years. Today the world is largely in recovery mode, with most critical economic indicators, chiefly industrial output and activity, on the upswing.

Late last month, as most of you already know, Ken Salazar, the U.S. Secretary of the interior, announced a comprehensive strategy to strengthen the nation's energy security via the **expansion of oil and gas development and exploration on the U.S. Outer Continental shelf**. The Administration's strategy calls for: developing oil and gas resources in new areas, such as the Eastern Gulf of Mexico, more than 125 miles from Florida's coast; increasing oil and gas exploration in frontier areas, such as the Arctic Ocean and the Mid and South Atlantic Ocean; and protecting ocean areas that are dubbed "too special to drill," such as Alaska's Bristol Bay. "The plan we are proposing calls for 4 more lease sales in the Gulf of Mexico by 2012 and, in the years beyond, would open up two-thirds of the oil and gas resources in the Eastern Gulf while protecting Florida's coast and critical military training areas," Salazar said in announcing the plan. MMS estimates that the Gulf of Mexico contains 36-41.5 billion barrels of undiscovered, economically recoverable oil and 161-207 trillion cubic feet of undiscovered, economically recoverable natural gas resources.

But the key phrase for many here is "we are proposing," as there is still skepticism that the plans will pass Congressional and legal muster and come to fruition. Regardless, for those who doubted the willingness to open potentially lucrative new pockets of energy exploration, recent developments have provided perhaps the first step in what will become a marathon to maximize our country's resources, and in turn deliver a historic jolt to all in the marine industry.

Industry associations that have a direct interest in the developments, including the National Ocean Industries Association (NOIA) and the Offshore Marine Service Association (OMSA), roundly applauded the move for additional access, and even noting that such developments could have a positive effect on the development of renewable energy programs offshore as well.

On a personal note, it is with mixed emotion that I report **Phil Kimball** (pictured right) has announced his plans to retire from his post as executive director of the Society of Naval Architects and Marine Engineers (SNAME). During his 12-year tenure Phil has worked tirelessly and with great enthusiasm for the benefit of the society and the industry. During my tenure with *Maritime Reporter* I have found Phil to be an invaluable resource of knowledge and insight, and a good friend as well. While I will miss our regular interaction, I wish him a long, healthy and prosperous retirement — and invite you to do the same — as he directs his boundless good spirit and effort towards matters of family, sailing and his beloved homestead in New Hampshire.

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Optimism, Skepticism Greet Administrations plan for

Expanded Offshore Drilling

There's optimism," said Ken Wells, president, Offshore Marine Services Association (OMSA) said of future increased shelf activity. "I don't know if we're far enough into it yet to know what impact it will have. One of the reasons that activity hasn't happened as aggressively yet is restricted access to capital. As we see better access a lot of things could begin to move."

Movement could begin with President Obama's announcementto reverse bans on drilling in the eastern Gulf of Mexico, along the southern Atlantic coastline and a part of Alaska.

More positive news from Washington could ease uncertainty among decision makers leery to invest in an industry, which had previously received few signals from the Administration and had to deal with perceived threats, such as cap-and-trade legislation. Some officials remain skeptical, however. "It's a frustration all of us share," said Joe Bennett, Executive VP and Chief Investor Relations Officer, Tidewater Inc. "**How long have we heard this story and what has happened to encourage more drilling in the United States? Nothing.** Nothing new is happening. It's frustrating to know the opportunities are there and the industry cannot take advantage of them."

Following the announcement, Bennett told the (New Orleans) Times-Picayune Tidewater "hopes (expanded offshore drilling) does come to pass. We'll be well-positioned if it does."

OMSA also indicated its support for the President's plan stating: "This will help America achieve energy independence and create jobs at the same time." However, some lawmakers remain doubtful of the plan, which still must clear Congressional hurdles.

"As a big advocate of increasing offshore drilling and lease sales, I hope this is a good faith effort on the part of the President," said U.S. Sen. David Vitter, R-La. "But those lease sales could still be torpedoed in the courts by environmental lawsuits unless we change regulations to expedite the drilling process."

Interior Secretary Ken Salazar plugged the President's announcement during a visit to Superior Energy Services in Gretna, La., announcing an expedited lease sale of 18 million acres in the Gulf of Mexico on Aug. 18. The August sale territory is located from nine miles to 250 miles offshore in depths ranging from 16 feet to more than two miles. Interior officials estimate the region could produce 423 million barrels of oil and 2.64 trillion cubic feet of natural gas. Also, Salazar indicated the Interior plans four more Gulf lease sales by 2012 in areas already approved for exploration.

Areas included in the President's plan to expand exploration will require a vote of Congress to drop the moratorium that currently blocks drilling through 2022. — *Matt Gresham*

Jim Dodez

Vice President, Marketing & Strategic Planning, KVH Industries, Inc.

Please give a brief introduction to KVH and its offering.

JD KVH Industries is a manufacturer of satellite television and communications systems and is also a broadband satellite communications service provider. We offer vessels a variety of reliable solutions for onboard internet access, telephone calls, and live satellite television entertainment almost anywhere in the world.

Which maritime niches do you find KVH at its strongest?

JD We excel at offering affordable, turnkey, end-to-end solutions to customers who don't have the time or staff to cobble together hardware from multiple manufacturers and those who can't afford to risk their vital communications connections. We are a broadband maritime satellite service provider that manufactures an end-to-end hardware solution. To support that solution, we also support our own global satellite network, which makes KVH the only provider offering 60cm antennas on an FCC-approved satellite network. Working closely with our technology and business partner, ViaSat, we've created a network that offers maritime customers exceptional reliability and seamless global coverage from a system that automatically switches between satellite beams, and a level of affordability and value that other maritime VSAT companies can't match.

What maritime niches do you believe hold good potential going forward?

JD Broadband communications in the maritime market have been either prohibitively expensive or, in the case of maritime VSAT, have required equipment so large that it was only practical on the largest vessels. With our mini-VSAT Broadband service, KVH has brought the size and cost of maritime VSAT down and made it suitable for much smaller vessels.

What key breakthroughs have advanced satcom in this market?

JD The first technology breakthrough came with the launch of new, high-powered satellites that deliver affordable broadband data services to maritime customers. This has changed the way ships communicate with shore offices, enabling companies to exploit the efficiency of broadband communications for everything from navigation and route planning to engine monitoring and maintenance and even improving crew morale. Inmarsat pioneered onboard broadband communications. Innovative companies adapted VSAT technology to maritime applications using stabilized antennas, which offered significantly lower cost bandwidth to the vessels large enough to carry their antennas.

The next big technology breakthrough was the introduction of spread spectrum technology, which enables satellite reception for dramatically smaller antennas. This breakthrough made maritime VSAT a practical alternative for just about any size vessel. Just as Inmarsat equipment has evolved from huge antennas to small Fleetbroadband antennas, modern maritime VSAT services no longer need large 1-meter antennas to provide fast, high quality service. New adaptive transmission technologies enable small antennas to provide continuous service, even in poor weather conditions. The advantages of smaller equipment include dramatically lower hardware prices, lower installation costs, and more options for installing antennas where they won't be blocked by the ship's superstructure.

How have the use of comms on vessels evolved in the last 5 years?

JD The biggest changes in satellite services onboard ships over the past five years has been the introduction of a new generation of smaller, more powerful technology. As a result, mariners can now enjoy the benefits of significantly lower equipment and per-megabyte service costs.

What are users demanding today?

JD Many maritime customers have been badly burned by accidental misuse of metered L-band satellite service resulting in huge bills. Inmarsat has done a great job implementing new account management services to help customers protect themselves from unbudgeted costs, which addresses part of the problem, but customers are generally looking for lower connectivity costs than L-band services are able to provide. In the maritime VSAT market, companies have grossly overpromised the amount of service they will provide for a fixed cost. Hardware manufacturers have made it so easy for new players to enter the maritime VSAT market with a small amount of satellite bandwidth by purchasing a stabilized antenna from company "A" and a standardized modem and hub from company "B". This becomes an issue when services add customers to their networks without upgrading their satellite capacity, and an ever-growing customer base must compete for a fixed amount of service. Knowledgeable customers now try to protect themselves by monitoring their own satellite services to assure they get what they pay for and aren't bogged down by over-contended services. This is a heck of a lot of effort and expense that can be easily avoided with an end to end service provider who can offer the kinds of network monitoring tools that KVH provides to mini-VSAT Broadband subscribers.

V7 installation on the M/T Priumula, owned by Vadero Ship Management, Inc., of Sweden.

How has the lingering economic downturn affected your business?

JD Short term, customers are looking to reduce their existing satellite communications costs, which has actually helped KVH to get in the door for many accounts. Our mini-VSAT Broadband service is cheaper on a cost-per-MB basis, and offers lower capital and installation costs. Although many commercial vessel operators have delayed capital investments in new satellite communications equipment, we believe that the longer-term economic benefits of better onboard communications will provide such a compelling ROI that the tougher economy will actually create an operational mandate to improve efficiency. This will happen as operators realize that they can reduce fuel costs and transit time and utilize manpower more efficiently by enabling shore-based engineers and IT professionals to work with onboard technicians to solve problems that used to require onboard experts or expensive travel.

How is KVH investing today?

JD KVH is investing to complete the rollout of the most powerful, seamless global maritime VSAT communications network available. Together, KVH and ViaSat are currently providing two-way mobile broadcast services from eight secure teleports around the globe utilizing eight full transponders on seven of the world's most powerful communications satellites. Each of our satellite hubs hosts over $1 million worth of ViaSat ArcLight technology to deliver spread spectrum services to our mini-VSAT Broadband subscribers, creating a seamless global network that covers virtually all of the world's shipping lanes. We've also just brought a new, state-of-the-art account management center online that gives customers real-time access to their billing information, and we're fielding new bandwidth management tools to assure unsurpassed quality of service that will lead the maritime industry for network reliability and customer service.

This year we're also introducing new ways for people onboard our mini-VSAT Broadband equipped vessels to access the system through crew calling and internet café cards, and even using their own cell phones. We're planning to deliver content to our customers, including real-time weather reports covering all of the world's oceans, electronic newspapers, educational materials, and even services that allow crew members to efficiently access social networks. .

Please provide your insights on business potential in regards to:

Vessel Niche

KVH's success in the satellite communications market started with the segments with where data communications has the highest value. This includes the offshore oil and gas market, which long ago proved the value of broadband communications and is now rapidly deploying systems on their smaller vessels in the tanker market, where crew retention and training are an important factor to improve a vessel's safety ratings. We've also found a niche in the homeland defense market. Our technology is enabling the benefits of broadband communications to be easily deployed, even on smaller vessels like the U.S. Coast Guard's 110' patrol boats.

Geographically

Geographically, KVH's success has favored areas where our best customers are most active. We do very well in North America, thanks to the concentration of oil and gas customers as well as our contract with the U.S. Coast Guard. We also do very well in the Middle East and paths from the Middle East to the major oil consuming nations around the world due to our success in the tanker market. We're very excited about our new Indian Ocean coverage and have opened an office in Singapore to better serve the Australian and Asian markets.

What do you count as the leading challenges today?

JD The biggest challenge we see in the SATCOM business is that it is highly fragmented with relatively low barriers, especially in the traditional large dome VSAT market. New market entrants can cobble together a stabilized antenna from one company and a TDMA modem and hub from another, then buy a small amount of bandwidth and make offers to customers that are too good to be taken seriously. There are over 70 companies claiming to meet the needs of commercial maritime companies. It's really a market where the buyer needs to beware.

VT Halter to Build Two for OSG

VT Halter Marine signed a contract with subsidiaries of Overseas Shipholding Group, Inc. (OSG) to build two 8,000 ATB tugs worth more than $21m. VT Halter Marine is the U.S. operation of ST Engineering's marine arm, ST Marine. The tugs will be built over 16 months at VT Halter Marine's Moss Point Marine shipyard with deliveries expected in the second and third quarters of 2011. Measuring 140.4 x 38 ft. each, these two tugs will be used to perform articulated tug barge (ATB) services, transporting refined petroleum products coastwise within the U.S.

Gas as Ship Fuel: A Clean Alternative?

"Gas as ship fuel" was the topic of Germanischer Lloyd's recent Class Exchange Forum which highlighted GL's approach towards the environmental concerns of the maritime industry. The forum addressed all aspects related to LNG as an alternative ship fuel. Invited speakers presented the LNG supply chain development from a ship owner's and gas terminal operator's view. Regulatory developments at IMO were explained by a representative of the Federal Ministry of Transport, Building and Urban Affairs, Germany. Details about a joint industry project on a gas-fuelled container feeder vessel were discussed by representatives of Germanischer Lloyd (GL), MAN Diesel and TGE Marine Gas Engineering, a specialist in the design and construction of cargo handling systems for ships and offshore units carrying liquefied cryogenic gases. Flensburger Schiffbaugesellschaft (FSG) evaluated first results of the research project GasPax while the issue of gas bunkering was addressed by GL. Dr. Pierre C. Sames, GL's Senior Vice President Strategic Research and Development, said there appears to be general consensus on developing gas engines that can be used on vessels operating regular or shorter routes. **Coastal shipping, which accounts for more than 33% of the world's fleet, will be subject to more stringent controls than liner container vessels.** The environmental benefits of LNG as a fuel are well-documented, with zero sulfur-oxide emissions and much lower CO2 as well as significantly reduced nitrogen-oxide and particle emissions.

Unique Ship Prototype

Stena AirMax

The 15-m long ship prototype Stena Airmax – a prototype that is part of a project in which an "air cushion" is being tested to investigate to what extent it reduces the friction between the hull and the water, to reduce fuel consumption and emissions of large tankers – was recently named in Gothenburg. Stena will invest about $6.8m in the project. Following the good results achieved in tests with small ship models, Stena Teknik developed this large-scale 25-ton model. "The results of the tests carried out are very promising. Depending on the type of ship and speed, we expect energy savings of 20-30 percent. This will now be verified in tests with the newly built prototype Stena Airmax," said Ulf G. Ryder, President and CEO of Stena Bulk.

Stena Teknik has cooperated with Chalmers University of Technology and SSPA in Gothenburg in the development project and the construction of the P-MAXair model. The Stena Airmax, powered by electric motors, will be tested in the Gullmars Fjord on the Swedish West Coast, during spring 2010 when extensive test programs will be run.

The concept involves reducing the "wet surface", i.e. the part of the hull that is in contact with the water, thus slowing down the ship. This is achieved by means of a cavity filled with air in the bottom of the hull. This means that the water is in contact with air instead of steel plate, thus reducing friction. This may seem simple, but a number of phenomena complicate the picture. These include internal wave formation in the cavity, which reduces the positive effect. A balance must also be struck between optimizing the air pressure to achieve the greatest possible reduction in resistance and, at the same time, minimizing air leakage.

Stena decided to build a 1:12 model, i.e. a 15 m long model, to verify that the results achieved also applied on a larger scale. Testing the air regulation system will also be an important part of a future project. Stena has applied for a patent for the wide and flat bulbous bow, which it says facilitates a favorable water flow below the hull.

The model consists of a steel box, containing all the equipment, surrounded by a hull made of fibreglass reinforced plastic. The flat bottom has a cavity for an "air cushion," which is almost as wide and half as long as the ship.

The model is powered by two electric engines with electricity provided by a diesel generator.

The air cavity is fed with air by fans and the air is controlled so that the bottom of the air cushion is in line with the bottom of the hull. The model will be manned by 1-2 persons. Test data is transmitted via a link to an tender boat. Personnel and boats from the Swedish Sea Rescue Society will assist during the tests.

Technical data for the Demonstrator model Stena AirMAX on a 1:12 scale

Length	15 m
Breadth	3.3 m
Draft "fully loaded"	0.9 m
Weight fully loaded	35 tons
Speed	5 knots
Propulsion	2 x 10 kW
Full scale:	
Length	182 m
Breadth	40 m
Draft "fully loaded	11.3 m
Weight "fully loaded	65,000 tons
Speed	14 knots
Propulsion	2 x 8,000 kW

The 15-m long ship prototype Stena Airmax – a prototype that is part of a project in which an "air cushion" is being tested to investigate to what extent it reduces the friction between the hull and the water.

ABOUT THE ONLY THING WE CAN'T DO ON WATER IS WALK.

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Canada Proposes Arctic Traffic Zone Rule Changes

Canada's Transport Minister John Baird said that as part of Canada's Northern Strategy, the federal government is proposing a regulated Arctic traffic zone, requiring certain vessels to report information to authorities as they pass through Canada's northern waters. They are intended to replace the current voluntary reporting system and ensure that the most effective services and information are available to manage current and future marine traffic in the Arctic. "Mandatory vessel reporting will help keep maritime traffic moving safely and efficiently," said Baird. "Knowing the positions and movements of vessels, for example, will make it easier to respond quickly to an oil spill. This information will become more important as vessel traffic rises due to development in the Arctic." **The proposed regulations would require vessels to report information such as identity and intended route before entering, while operating within and when leaving Canada's northern waters.**

Bollinger Redelivers

ATB to Bouchard

Bollinger Algiers, L.L.C., and Bollinger Amelia Repair, L.L.C., two Bollinger Shipyards, Inc. companies, have redelivered the double hull asphalt Barge B. No. 235, a 133,000 barrel (BBL) Oil Pollution Act of 1990 (OPA'90) compliant tank barge and accompanying tug, J. George Betz, a 6140-hp oceangoing tug, back into service for Bouchard Transportation Co., Inc., Melville, NY as an Articulated Tug/Barge (ATB) unit. Bouchard contracted with Bollinger Shipyards to upgrade both the tank barge B. No. 235 and the oceangoing Tug J. George Betz to better serve Bouchard's customer base, increasing the safety and efficiencies of the barge and tug as an articulated unit. The Barge B. No 235 was taken out of service and delivered to Bollinger's Amelia facility to install the Intercon connection system and upgrade the barge with a full ballast system. During the conversion process, the barge also completed its regulatory docking and permitting process prior to successfully completing builder's

trials. Returning to full service as an ATB asphalt capable tank barge, the barge measures 483 x 80 x 36.2 ft. without the tug coupled into the notch. At the same time that the Barge B. No 235 was taken out of service, the accompanying tug, J. George Betz, was delivered to the Bollinger Algiers facility to install the Intercon connection system, upgrade the vessels electronics systems as well as complete regulatory docking and permitting with The American Bureau of Shipping. When returned to service, the 127 x 37 x 20-ft., 6140-bhp tug will be able to lock into the barge sailing as an articulated unit.

Recent Ship Sales

(Source: Shipping Intelligence, New York, NY)

Date	Name	DWT	YB(age)	Price
Bulk Carriers				
02/10/10	BEAUTY JUNO	18,315	96(14)	$10.4
02/23/10	SELETAR HOPE	18,320	00(10)	$11.7
02/23/10	ATARAXIA	21,289	82(28)	$2.3
02/08/10	THOR TRIBUTE	23,120	85(25)	$3.4
02/16/10	NEERA NAREE	25,309	86(24)	$6.1
02/08/10	CLIPPER MELODY	26,500	97(13)	$13.5
02/23/10	OCEAN LEADER	26,583	87(23)	$6
02/08/10	HANJIN ISTANBUL	27,369	97(13)	$16
02/23/10	UBC SVEA	31,828	99(11)	$20.4
02/16/10	UBC SALVADOR	31,923	99(11)	$28.4
02/08/10	EAST SUNRISE GUANGZHOU	38,030	84(26)	$7.4
02/23/10	ATERMON	38,888	86(24)	$8.7
02/16/10	SILVER BIN	38,925	86(24)	$6.5
02/23/10	YICK ZAO	39,804	83(27)	$5.5
02/23/10	YICK LEE	39,925	82(28)	$5
02/23/10	AVIONA	41,634	85(25)	$8.1
02/08/10	STELLAR DREAM	44,831	91(19)	$10.2
02/23/10	VERGO	45,320	95(15)	$16.5
02/08/10	SERASIH	45,877	85(25)	$9
02/08/10	OCEAN KING	47,314	01(9)	$24.3
02/16/10	ANNIKA	52,050	06(4)	$31.7
02/16/10	MEDI DUBAI	52,523	01(9)	$25.8
02/16/10	MEGA STAR	61,636	81(29)	$6.5
02/08/10	SILVER YANG	63,800	82(28)	$6.8
02/23/10	CAPTAIN GEORGE L	63,880	84(26)	$7
02/16/10	ERMIS	64,379	84(26)	$8
02/23/10	THEODOROS P	64,954	80(30)	$4.7
02/08/10	SEALINK	65,020	81(29)	$5.9
02/16/10	ANNA A	65,077	81(29)	$5.6
02/10/10	SOUTH FORTUNE	69,071	95(15)	$21
02/10/10	MAJA VESTIDA	70,213	94(16)	$21.5
02/08/10	QUESA UNO	70,312	93(17)	$20.5
02/08/10	CEMTEX ORIENT	71,435	90(20)	$15.1
02/08/10	WAIMEA	73,049	97(13)	$25
02/16/10	FD GENNARO AURILIA	74,414	07(3)	$36.5
02/23/10	FD SALVATORE POLLO	74,475	07(3)	$38
02/08/10	ANNA	75,592	99(11)	$28.3
02/08/10	MARVELLOUS	75,746	02(8)	$32
02/16/10	ORANGE TIARA	75,846	02(8)	$22.7
02/08/10	NORTH KING	127,907	81(29)	$7.6
02/10/10	CONSTANTINOUPOLIS	128,150	81(29)	$7.8
02/16/10	MARINE CORONA	139,496	82(28)	$7.2
02/08/10	OCEAN COMFORT	149,477	92(18)	$19.5
02/10/10	LOWLANDS BRILLIANCE	169,631	02(8)	$48.5
02/23/10	CAPE OLIVE	69,963	96(14)	$27
02/10/10	ORIENTAL COSMOS	179,764	10(0)	$71
Chemical Carriers				
02/23/10	AEGINA	9,268	92(18)	$3
02/10/10	GAN-SKY	17,006	09(1)	$20
02/10/10	CHEMSTAR EAGLE	19,362	00(10)	$15.2
Containerships				
02/08/10	SHANGHAI BRIDGE	67,164	02(8)	$20
02/08/10	LONG BEACH BRIDGE	67,164	02(8)	$20
02/10/10	CMA CGM KESSEL	83,400	09(1)	$45
Gas Carriers				
02/10/10	GAS PIONEER	1,508	92(18)	$1.2
02/10/10	GAS ETERNITY	2,998	98(12)	$7.5
Passenger Ferries				
02/10/10	NEW HIYAMA	649	91(19)	$3
Reefers				
02/10/10	ALTARA CARRIER	6,404	82(28)	$1.2
Tankers				
02/23/10	ALGOMA DARTMOUTH	3,569	07(3)	$9.6
02/10/10	EISHIN MARU NO. 17	4,998	99(11)	$1.5
02/16/10	DYNAMIC EXPRESS	42,253	93(17)	$10
02/23/10	SUN RIVER	62,127	93(17)	$10.3
02/08/10	HESNES	68,157	90(20)	$8
02/23/10	WHITE DOLPHIN	72,345	03(7)	$32.5
02/23/10	TENACITY	86,549	96(14)	$14.7
02/23/10	NEW ACE	88,878	87(23)	$5.6
02/08/10	MAGNITUDE	96,136	92(18)	$6
02/08/10	VALIANT	96,136	92(18)	$6
02/10/10	TANGO	150,096	08(2)	$67
02/10/10	WALTZ	150,393	08(2)	$67
02/16/10	SHINYO SAWAKO	275,616	95(15)	$16
02/16/10	NAMUR	298,552	00(10)	$58.5
Tweendecker				
02/23/10	ARCTIC SEA	4,706	91(19)	$2.3
02/10/10	NEMTAS 3	6,266	92(18)	$4.3
02/23/10	MARINA STAR	7,264	90(20)	$2.5
02/23/10	REBORN	8,295	76(34)	$ .4
02/16/10	PIROS	17,169	80(30)	$1.8
02/23/10	TASMAN INDEPENDENCE	23,853	89(21)	$6.2

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For Offshore Unlimited a

29m Utility Cat

Incat Crowther launched the 29m Utility Catamaran Limitless, the 50th vessel built by Richardson Devine Marine which debuts the latest evolution of Incat Crowther's hull form, which during sea trials recorded a top speed of 30.5 knots. The new hull means the larger, more capable vessel that is able to travel three knots faster with a power increase of 100hp.

Limitless is capable of carrying 60 tons of deadweight. The aft deck, with a cargo capacity of 24 tons, is configurable for multiple uses. It has a large moon pool for exploration services, securing points for 2 x 20 ft. containers, a Heila deck crane (capable of lifting 6.5 tons) and a removable hydraulic 5-ton SWL A-Frame (including a reel winch). The vessel features a towing hook with a bollard pull of 15 tons. The upper deck wheelhouse feature crew and passenger seating and work stations, while the central helm seat affords good all round visibility. Two wing control stations are fitted forward on either side with a tender/rescue boat situated aft within easy reach of the deck crane. Limitless will initially be deployed in Bass Strait. Offshore Unlimited is a Tasmanian

company providing vessels to Australian waters with operations out of Dampier, WA and Mackay, QLD.

Vessel Specifications

Length, o.a.	94. 1 ft.
Length, w.l.	86.5 ft.
Beam, o.a.	27.9 ft.
Hull Draft (Typical Load)	3.9 ft.
Depth	11.1 ft.
Construction	Marine grade aluminum
Fuel Oil	7,925 gal.
Fresh Water	396 gal.
Sullage	528 gal.
Passengers	32
Crew	18
Max. Deadweight	60 tons
Speed, max.	30.5 knots
Speed, cruising	25 knots
Main Engines	2 x CAT C32 ACERT
Power	2 x 1080 kW @2300 rpm
Generators	2 x CAT c6.6 125 kW
Thrusters	2 x Side Power SP550 / Pro 60

Cargo Deck

Length	39.3 ft.
Width	23 ft.
Area	904 sq. ft.
Cargo Capacity	24 tons

FKAB Marine Design

The FKAB L2 is a 16,500 cu. m. LNG vessel design for regional distribution of LNG. In combination with the FKAB L1 design, presented in June 2009, the FKAB L2 design are FKAB contribution to the development of an efficient and sustainable sea based regional and local distribution system for LNG. The FKAB L2-design is tailor made for regional distribution of Liquefied Natural Gas (LNG). The LNG is stored in three insulated cargo tanks of bilobe type, classified by IMO as "Independent Type C". They have spherical heads. Each tank is equipped by two submerged deep well pumps for discharging, with a discharge capacity of 6 x 300 cu. m./hr. The FKAB L2 main fuel is boil-off gas and regasified LNG from the cargo tanks. This will help to reduce fuel cost when operating the vessel.

Agreement to Develop Gas-Fuelled Ships

Wärtsilä and Samsung Heavy Industries (SHI) signed a cooperation agreement to develop gas-fuelled merchant vessels. The focus of the Wärtsilä/SHI joint study will be on using liquefied natural gas (LNG) as fuel for operating vessels. This is especially relevant in Emission Control Areas (ECAs). Wärtsilä's input will be related to the propulsion machinery, with particular reference to large bore, dual-fuel engines combined with mechanical propulsion solutions. SHI will concentrate on the design of highly efficient vessels incorporating fuel storage facilities and gas-powered propulsion machinery. Merchant vessels to be evaluated include crude oil tankers, for which both optimum propulsion concepts and the performance benefits achieved using LNG as fuel, will be assessed.

Pushboats for the Amazon

Transdorada Transportes LTDA, a towboat operator on Brazil's Amazon River, has taken delivery of a number of Cummins-powered push boats. These include two 19.5-m boats with twin Cummins KTA19-M3 engines each delivering 600 hp and a single 19.5-m pushboat with a single KTA19-M3 engine. All three vessels were built at Estaleiro Rio Maguari (www.riomaguari.com.br/en). The boats will operate on the Amazon River between Belem and Manaus with the 1200 hp twin-engine boats pushing six to nine barges and the 600 hp single-screw vessel pushing four barges at a time. The round trip for both sets of vessels is about five days. The vessels carry the names Angico, Jatoba and Aroeira. The DCML Norte the Cummins distributor for Amazon River area supplied the engines. Application engineers on this installation were Adriano Batista and Fabiano Pereira.

Aker Philadelphia Launches Product Tanker

On March 10, 2010, Aker Philadelphia Shipyard launched Ship 013, the ninth product tanker in a series of 12 to be completed by 2011. The 46,000 dwt vessel was floated off of its blocks and was transferred by tug from the Building Dock to the Outfitting Dock. When completed, the 600 ft. Overseas Martinez will be sold to American Shipping Company and bareboat chartered to OSG America.

www.akerphiladelphia.com

Maersk, LR to Test Bio-Fuels

Lloyd's Register (LR) is to play a major role in a two year program to test the suitability of bio-diesel for use in powering marine engines. The feasibility study will take place on board the Maersk Line container ship, Maersk Kalmar. Collaborators in the biodiesel project are Maersk Line, Maersk Tankers, Maersk Supply Service, Maersk Drilling, Maersk Ship Management, Lloyd's Register's Strategic Research Group, and a consortium of Dutch subcontractors. The project is being part funded by the Dutch government and coordinated by Maersk Maritime Technology (MSM).

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Austal USA to Prime LCS Bid

Austal USA and Bath Iron Works (BIW) agreed to revoke its current teaming arrangement, a strategic decision which allows Austal USA to act as prime contractor in the upcoming bid for 10 U.S. Navy Littoral Combat Ships (LCS). The U.S. Navy is expected to award the contract for two LCS', including options for an additional eight vessels, by the end of U.S. FY10. In the event that Austal USA is awarded the FY10 contract, potentially worth up to $4.8b, it will continue to act as Prime Contractor for future LCS bids. General Dynamics Advanced Information Systems, which is currently the systems integrator in the program, will now subcontract to Austal USA, as it currently does in the Joint High Speed Vessel (JHSV) program, providing open architecture systems that deliver better, faster and more affordable capability. The U.S. Navy has also determined that an additional five-ship contract, to be awarded in FY12, shall not be awarded to the same contractor as the 10-ship contract. Therefore, revoking the current agreement will allow BIW to bid as the second source LCS shipbuilder. BIW will continue to act as Prime Contractor for Austal's second LCS, Coronado (LCS 4), which is currently under construction at Austal USA.

Fincantieri Continues Investment in U.S. Yards

Fincantieri Cantieri Navali Italiani S.p.A. broke ground on March 11 for the expansion of its large erection building at Marinette Marine Corporation (MMC) as part of its continued investment in its U.S. shipyards. The ceremony marked the beginning of the second phase of Fincantieri's five-year, $100m plan to modernize its United States shipyards and support the construction of the U.S. Navy's Littoral Combat Ship (LCS) and other government and commercial projects. This second phase will nearly double production square footage for MMC's two large construction bays. For contracts such as the LCS, MMC will be able to have two complete hulls and parts for two other ships completely indoors at one time. The building enhancements allow higher levels of pre-outfitting for MMC's proven modular construction process. They also enable larger sections of the ship to be erected, such as the pilothouse, prior to this ship's launch.

Kimball to Retire from SNAME

Most anyone who has any activity in the North American marine business has some affiliation with the Society of Naval Architects & Marine Engineers (SNAME) and with the organization's ubiquitous, energetic executive director, Phil Kimball. Last month Kimball announced his intention to retire from his post at SNAME – a position he has held with distinction and grace since 1998 – helping to guide the association through a particularly dynamic 12-year period in its 116 year history. *Maritime Reporter & Engineering News* recently visited with Kimball to discuss his time at SNAME.

What do you consider your greatest accomplishment?

This has been an exciting journey and I believe great progress has been made since I joined the staff in 1998. There have been numerous changes and developments over the years that have benefitted our members, but I think the greatest accomplishment has been the realization in 2010 of a number of programs that have been under development for the past six years – a collaboration of staff at headquarters and many dedicated members. Collectively, we have introduced the new SNAME integrated, Internet-based website which provides for interactive content and communication, member interaction and collaboration and e-commerce. We re-engineered the Annual Meeting and now enjoy a significantly larger number of members participating in its events. We have revitalized the Student Sections from four active Sections in 2006 to 28 today, and created many new activities for students as well as for young professionals. SNAME's ONR-funded outreach program involving subsea robotics, or SeaPerch Remotely Operated Vehicles (ROVs), has been a major success, and the program which is in its third year of a five-year grant has already directly influenced over 11,000 middle-school students in 29 states across the country. The SNAME name has reached farther and faster through SeaPerch than through any other program in its 116-year history. I could go on with many additional satisfying projects such as the SNAMeNewsLetter and the long-awaited publishing of revisions of SNAME's primary reference texts, Principles of Naval Architecture, Ship Structural Design and Elements of Ocean Engineering.

What do you consider your greatest accomplishment during your career (outside of SNAME)?

There have been many ship designs, construction programs, marine consulting assignments and court cases involving forensic investigations and testimony, but there were two projects that stand out for me. One involved the development of the U.S. Navy's Rapid Deployment Vessels, a conversion of the eight, legendary SL-7, 33-knot containerships built by Sea-Land Service in the early 1970s. To illustrate the concept we constructed an 11-foot model of the proposed roll-on/roll-off vessel, complete with a musical movement that played "Anchors Aweigh," that was on display in the Pentagon for a number of years.

Equally prominent was the design and construction of 12, 4,400-TEU containerships for Malcom McLean at United States Lines in the early 1980s. These ships were the largest containerships ever built at that time and included a number of technological breakthroughs.

How is SNAME most different today from the time you walked into the job in 1998?

At headquarters we have transitioned from a dysfunctional, compartmentalized organization to a matrix-management style with departmental teams focused on fulfilling the mission and goals outlined in the Society's Strategic Plan. We conduct regular Managers' meetings to discuss and/or resolve issues and challenges as they arise. There is more interaction and a better sense of teamwork all as a result of enhanced communication between and among departments, staffers and members.

On a day-to-day basis, what will you miss most?

I will miss interacting with members and staff to solve issues, and participating as a team member on existing projects and new Society initiatives. The Society is continually evolving and striving to meet members' new ideas, needs, desires and requirements while delivering 'value' for that membership. It is most rewarding to implement a new program and receive positive feedback from members who not only appreciate the enhanced service, but go out of their way to let you know with a simply email or telephone call. When I first came on board I felt that it would be important for me to reach out to members by visiting them and listening to their concerns and wishes. Early on I vowed to travel to as many conferences and tradeshows as practical each year to interact with members and spend time with them one-on-one. This practice has continued and I can safely say that I've attended over 100 such events in the almost 12 years at headquarters.

What are your "after-SNAME" plans?

My family and I will be moving to our home of 29 years in New Hampshire where I have continuously been adding on to the original saltbox design and preparing the house and grounds for full time occupancy. Our daughter will be a sophomore in college this year, and we are keenly interested in watching her develop and mature as she begins making her own choices both in college and in life.

Over the years as an incurable DIY'er, building everything from ship models to cabinetry, I finished the basic house, and later added a den, a garage and master bedroom, and completely landscaped the grounds creating flower gardens of perennials to reduce some of the seasonal work. Our growing season is relatively short, but I'm looking forward to starting a vegetable garden, and spending a great deal more time cruising, and possibly racing, our Catalina 22 sailboat on Lake Sunapee. It's time to work at our golf games and to do some traveling, but first we plan to explore our home state. We also look forward to visiting friends and grandchildren, and later traveling to those places and doing those things we've added to our "bucket list." Meanwhile, since it will be difficult for me to slow down, I have been given 'permission' to remain active with some marine-related consulting, but only part-time.

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Incidental Discharges from

Small Commercial Vessels

About the Author
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After a federal court directed the Environmental Protection Agency (EPA) to regulate discharges incidental to normal operation of vessels under the National Pollutant Discharge Elimination System (NPDES) program of the Federal Water Pollution Control Act (FWPCA), Congress promptly adopted a statute (Public Law 110-299) establishing a two-year moratorium on regulation of most such discharges from commercial vessels less than 79 feet in length and from commercial fishing vessels regardless of length. The legislation also directed the EPA to conduct a study to evaluate the impacts of: (1) any discharge of effluent from properly functioning marine engines; (2) any discharge of laundry, shower, and galley sink wastes; and (3) any other discharge incidental to the normal operation of a covered vessel.

The EPA has now completed a draft report to Congress summarizing its study. Comments on the 572-page draft report should be submitted to the EPA within 30 days after official notice of release of the draft report is published in the Federal Register. Such publication has not occurred as of this writing, but is expected any day. Due to the potentially wide-ranging impact of the study, the report should be reviewed by the owners and operators of all small commercial vessels and all commercial fishing vessels.

EPA Sampling of Discharges

Review of US Coast Guard records indicates that there are approximately 140,000 vessels subject to the two-year moratorium. About half of these are commercial fishing vessels, while the remainder are distributed among a variety of classes, including but not limited to passenger vessels, utility vessels (tow boats, offshore supply vessels, etc.), and barges. The EPA sampled wastewater discharges and gathered shipboard process information from 61 vessels in nine vessel classes. In all, the EPA sampled nine different types of discharges, including bilgewater, stern tube packing gland effluent, deck runoff/washdown, fish hold effluent, and graywater. The samples were analyzed for a variety of pollutants, including biochemical oxygen demand, total suspended solids, residual chlorine, oil and grease, nutrients, total and dissolved metals, volatile and semivolatile organic compounds, nonylphenols (surfactants), and pathogen indicators (e.g., E. coli and fecal coliforms).

Initial Evaluation of Environmental Impacts

Using the results of the sampling, the EPA modeled a large hypothetical harbor to evaluate the environmental impacts from the various types of discharges. The screening-level model indicated that the discharges would not, in themselves, exceed the aquatic life or human health National Recommended Water Quality Criteria (NRWQC). However, the model did not account for background loadings (i.e., the current condition of the water due to other circumstances). Certain pollutants, such as total arsenic and dissolved copper, are more likely to contribute to water quality criterion being exceeded under real-world conditions in large-scale water bodies. Additionally, many pollutants present in vessel discharges were at concentrations that exceed an NRWQC at end of pipe. Therefore, those discharges have the potential to contribute to an environmental effect in the receiving water on a more localized scale.

Like an individual house in an urban watershed, most individual vessels have only a minimal environmental impact. As in urban areas, however, the impacts caused by these vessels are potentially significant where there is high vessel concentration, low water circulation, or there are environmentally stressed water bodies. The EPA opined that targeted reduction of certain discharges or pollutants in discharges from these vessels in waters sensitive to the introduction of pollutants may result in significant environmental benefits to those waters.

Significant Pollutants

Total arsenic and dissolved copper are identified as the two most significant pollutants discharged by covered vessels. Due to the quantities involved, discharges of fish hold effluent can also significantly degrade the quality of the receiving water body. Such effluent often has biological oxygen demand and chemical oxygen demand concentrations that are several times higher than concentrations typically measured in raw domestic sewage. Studies have shown that leaching of copper from antifouling hull coatings used on recreational boats is a major source of copper pollution in several large boat basins in Southern California. Such copper leaching has created documented water quality concerns in areas such as Chesapeake Bay, Port Canaveral, and several harbors in Washington State. Similar antifouling hull coatings are used on many small commercial vessels.

Initial Exclusion of Incidental Discharges from NPDES Program

Vessels have been discharging liquids and other material into the surrounding waters as a routine practice since before they carried propulsion machinery and tanks for ballast water. In 1972, Congress adopted significant amendments to the Federal Water Pollution Control Act (FWPCA), also known as the Clean Water Act (CWA). Among its various provisions, the FWPCA amendments established the National Pollutant Discharge Elimination System (NPDES) to regulate the discharge of pollutants for which discharge was not otherwise prohibited. Shortly before the bill was enacted into law, Representative Robert E. Jones, Jr. (D-AL), Chairman of the Conference Committee that crafted the bill, stated on the record that the Conference Committee "would not expect the Administrator to require permits to be obtained for any discharges from properly functioning marine engines."

When, in 1973, the EPA promulgated the final rule implementing the NPDES, the agency excluded from the NPDES requirements "any discharge of sewage from vessels, effluent from properly functioning marine engines, laundry, shower, and galley sink wastes, or any other discharge incidental to the normal operation of a vessel." Although ballast water discharges were not specifically mentioned in the regulation, from the beginning they were included within its ambit. In the preamble to the final rule, the EPA explained the incidental discharge provision as follows: "Most discharges from vessels to inland waters are now clearly excluded from the permit requirements. This type of discharge generally causes little pollution and exclusion of vessel wastes from the permit requirements will reduce administrative costs drastically." The exclusion of such incidental discharges from vessels remained in effect, and relatively unchanged, for years.

Litigation

In 1999, several environmental advocacy groups petitioned the EPA to regulate ballast water discharges under the NPDES program. The petition was denied, with the EPA stating, among other things, that subsequent to the enactment of the 1972 FWPCA amendments, Congress had charged the US Coast Guard with regulation of ballast water discharges.

The environmental advocacy groups brought suit against the EPA, contending that the EPA rule excluding discharges incidental to the normal operation of a vessel was contrary to the statute and that the denial of the 1999 petition was improper. On cross motions for summary judgment, the Federal District Court for the Northern District of California ruled in favor of the environmental advocacy groups and held that the incidental discharge regulation was in excess of the agency's authority. After a second hearing, the court ruled that the incidental discharge exclusion was to be vacated as of September 30, 2008 (this was subsequently extended to December 19, 2008, and then to February 6, 2009). On June 21, 2007, the EPA issued a notice stating that it had begun the process of compliance with the court order. Contemporaneously, the decision was appealed to the US Court of Appeals for the Ninth Circuit, which ultimately affirmed the lower court ruling.

VGP Program for Large Commercial Vessels

On June 17, 2008, the EPA published in the Federal Register a notice stating that each of its 10 Regions proposed to issue Vessel General Permits (VGPs) under the NPDES program to commercial and recreational vessels greater than or equal to 79 feet in length to cover discharges incidental to the normal operation of those vessels. While smaller vessels were originally to be included in the overall permit program, recreational vessels were exempted by subsequently adopted legislation and small commercial vessels were provided a two-year moratorium while the EPA conducted the study discussed in this article. The NPDES VGP program for larger commercial vessels was established by means of an EPA notice published in the Federal Register on December 29, 2008. That

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Yale Loups

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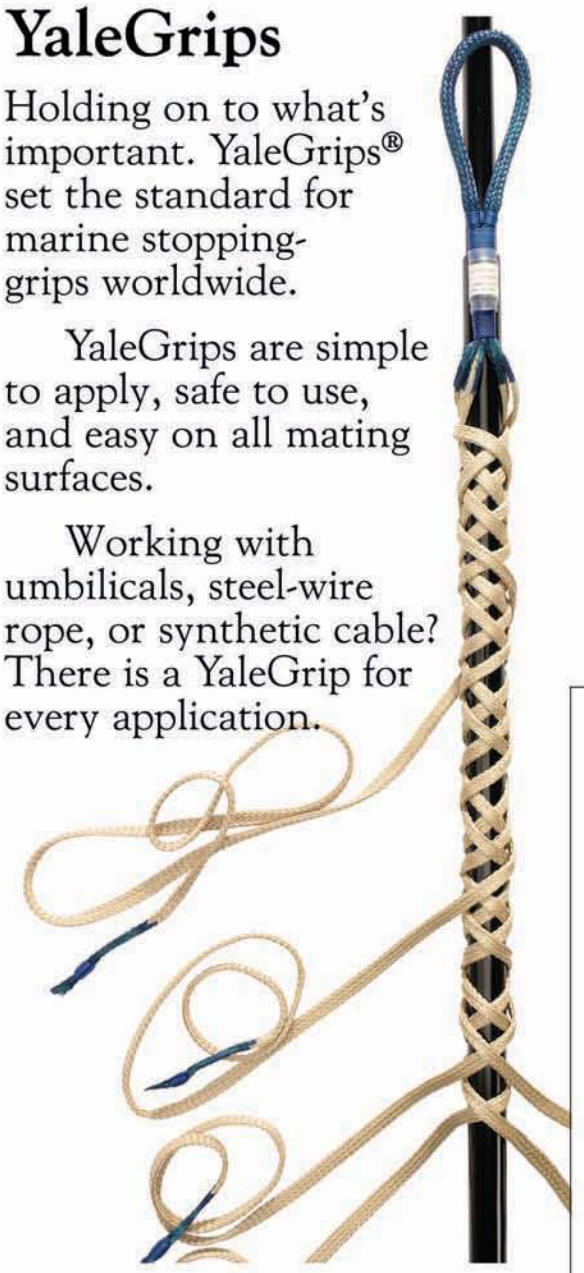

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program came into effect on February 6, 2009. Among other things, the VGP program imposes best management practice (BMP) requirements on 26 vessel waste streams, ranging from ballast water to elevator pit effluent. Many of these 26 waste streams are not found on small commercial vessels, but, as noted in the draft study, there are a number of waste streams that attracted the EPA's attention.

What next?

Assuming that there are no major changes in the draft study before it is submitted to Congress, it remains unclear where the EPA and Congress are headed. The two-year moratorium expires on July 31, 2010. While the NPDES program will theoretically apply to commercial vessels less than 79 feet in length and to commercial fishing vessels regardless of length as of that date, those vessels are not addressed in the current VGP. It is doubtful that the EPA will take enforcement action regarding discharges from these small vessels until a program specially addressing them is developed. Congress, if it acts at all, may well extend the moratorium until the EPA can resolve the issue. One should expect that the small commercial vessel discharge permitting program developed by the EPA will be more targeted than the broad brush approach found in the current VGP program. Another unresolved issue is what measures the various state and tribal governments may adopt under the NPDES program. Some of those governments utilized a provision in the NPDES program to impose additional requirements on large vessels operating in their waters. It could happen again with regard to small commercial vessels. In summation, the ultimate impact of the NPDES program on small commercial vessels in unknown, but it can be expected that this EPA study, when finalized, will be a major factor. If you are the owner or operator of a covered vessel or otherwise concerned about those discharges, the draft study deserves your attention.

USCG Districts

Have they outlived their usefulness?

The U.S. Coast Guard adopted the concept of geographic districts when it absorbed the U.S. Lighthouse Service in 1939. Previously, it had no formal segmentation of its chain of command based on geography. Rather, the chain of command was grouped around function. Cruising cutters reported to the Operations Division in USCG Headquarters. The various Captains of the Port (there were only a handful) had a separate chain of command. The lifeboat stations had a third chain. The Lighthouse Service, established in 1789 (prior to the Revenue Cutter Service), from its early days had been organized geographically into Districts, with each District responsible for all lighthouses and other aids to navigation within its boundaries. It did not take the Coast Guard long after amalgamating with the Lighthouse Service to recognize that a single geographic-based chain of command had advantages over numerous function-based chains of command. The Coast Guard therefore emulated the Lighthouse Service organization. Over time, the number of separate Districts has been reduced. There are now nine Districts, even though they are numbered One through Seventeen. The relatively new Coast Guard Sectors have rendered obsolete some of the functions formerly performed by Districts in coordinating functions performed by previously separate units. Coast Guard Areas, whose original function was solely to coordinate individual missions that crossed District boundaries, have taken control of most large assets such as high endurance cutters. Thus, the question arises whether Districts provide an added value that compensates for their costs? I don't pretend to have a definitive answer, but have no doubt that it is time to ask the question.

The preceding was posted by Dennis Bryant on his "Maritime Musings" blog at www.MaritimeProfessional.com

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Dynamic Positioning & Mariner Licensing

By Justin Mitchell and Carlos Tamez, Hill Rivkins LLP

Dynamic Positioning (DP) has rapidly become the standard required by major offshore industry stakeholders for deepwater drilling applications, semi-submersibles, mobile offshore drilling units (MODU), offshore supply vessels (OSVs) and anchor handling tug supply (AHTS) vessels as well as for peripheral applications such as pipe laying, cable laying and hydrographic surveys. As more industry stakeholders require DP systems to increase safety and efficiency in offshore applications, companies are in need of watchstanders who are adequately trained in DP operation and related safety issues. As with other technological advances offshore, the regulatory framework has yet to catch up with current industry practices for the training of DP system operators. This disconnect between newly formed industry standards and existing mariner licensing requirements has led to confusing circumstances for employers and vessel owners in the offshore sector.

In the absence of regulatory standards for the certification of dynamic positioning operators (DPOs), industry organizations provided guidance and a framework for international standards for a DPO training regime. Among these organizations the Nautical Institute launched a licensing program and training scheme for watchstanders to obtain an accredited DP Operator's Certificate. After the completion of a DP Introduction/Basic course and 30 days of logged seagoing DP familiarization, the candidate then completes an advanced DP simulator course. Upon satisfactorily completing the advanced course, logging the requisite supervised DP operations and obtaining a completed statement of suitability as a DP Watchkeeper from a vessel's Master, an accredited DP training center may issue the candidate a DPO Certificate.

Through this curriculum, the Nautical Institute set a standard that is now required by industry stakeholders, organizations and state run maritime agencies for DPO certification and training. Internationally, the Institute's training regime has been recognized by the IMO through MSC Circular 738.

Among other endorsements, the International Marine Contractors Association (IMCA) incorporated the Institute's DPO certification in its guidelines for training and experience of key DP personnel. State run maritime agencies, including the U.K. Maritime and Coastguard Agency and Norwegian Maritime Directorate, also endorsed this certification process in some cases. However, U.S. regulatory bodies have yet to regulate a DP certification process or establish a Merchant Marine license endorsement for DP. While there is no doubt that charterers, owners or managers of DP vessels and semi-submersibles should hire and train competent DPOs to industry standards, the interaction between DP certification and license requirements can be confusing.

(Continued on page 80)

Annual Update

U.S. Economic Sanctions & Export Controls

By Barbara D. Linney, Kelly Loughery and Kevin J. Miller

Since last year's annual update appeared in the September 2009 issue, the United States has continued to ramp up both Congressional and Administration efforts to tighten economic sanctions against Iran. Congressional efforts have focused on the energy sector and the plethora of industries that service and profit from it. New legislation currently before Congress is designed to prevent energy companies, vessel operators and various other businesses from supplying refined petroleum products to Iran or facilitating the country's ability to import or produce petroleum products at home. For many companies, including some major players in the affected industries, the mere threat of these sanctions has already led to decisions to terminate direct sales to Iran. In view of the significant ramifications of the impending legislation for the maritime industry, particularly for companies servicing the energy sector or involved in Iran's offshore development efforts, this year's update will focus primarily on the dynamic regulatory framework controlling trade with Iran. However, no annual update would be complete without a rundown of recent significant changes to other economic sanctions administered by the U.S. Department of the Treasury's Office of Foreign Assets Control ("OFAC") and a recap of the year's most interesting enforcement actions, so we will touch upon these developments briefly as well.

Iran

Legislative Developments. If passed into law, the new legislation, currently awaiting conference committee, will significantly strengthen economic sanctions imposed by the Iran Sanctions Act of 1996 (the "Act"). The Act currently empowers the President to impose sanctions on foreign companies engaging in certain economic transactions with Iran which could potentially enable Iran to finance international terrorism or obtain weapons of mass destruction. The pending legislation represents an unprecedented effort to impede Iran's ability to import or produce refined petroleum.

As currently framed, the bills passed in both the U.S. House of Representatives and Senate would expand the scope of the Act to encompass a wider range of businesses and activities associated with Iran's petroleum industry. For example, both bills require the President to impose sanctions against any person who knowingly engages in the provision of ships, vehicles or other means of transportation to deliver petroleum to Iran. In addition, the current investment threshold of $40,000,000 would be lowered, mandating the President to impose sanctions on any person making an investment of $20,000,000 or more (or a combination of investments of at least $5,000,000 each, which in the aggregate equals or exceeds $20,000,000 in any 12-month period) that directly and significantly contributes to Iran's ability to develop petroleum resources. Congressional efforts have not stopped at attempts to impede the flow of refined petroleum into Iran, as the Act also seeks to substantially curb Iran's ability to produce such petroleum domestically. Under the proposed legislation, the President must impose sanctions where any person knowingly engages in the sale, lease or provision of any goods, services, technology, information or support that would allow Iran to maintain or expand its domestic production of refined petroleum provided certain parameters are met. Specifically, the imposition of sanctions will be triggered if the value of the goods, services, technology, information or support exceeds $200,000 in any single transaction or $500,000 over any 12-month period. For government contractors, the legislation will also impose certain contractual requirements, mandating that each contract entered into for the procurement of goods or services or agreement for the use of federal funds as part of a grant, loan or loan guarantee include a clause requiring the contracting party to certify to the contracting officer or other appropriate agency official that the party does not conduct any of the activities proscribed by the legislation. Assuming the proposed legislation survives Executive scrutiny, the ramifications for the international maritime industry will be substantial, particularly for those companies serving the energy sector or supporting Iran's offshore petroleum development efforts. However, at the time of submission of this article for publication, discussions are still underway between Congress and the Administration (which favors exemptions for countries co-operating with the United States in its non-proliferation initiatives), and lobbying efforts continue on behalf of interest groups who favor tightening of perceived loopholes in existing sanctions regulations that prohibit U.S. companies from doing business with Iran but do not impose similar restrictions on their foreign subsidiaries.

OFAC Sanctions

Last year's trend of designating Iranian companies and individuals as supporters of nuclear proliferation has continued since our last update. On February 10, 2010, one individual and four companies affiliated with the Revolutionary Guard were added to OFAC's Specially Designated Nationals (SDN) List. The designations include Revolutionary Guard Corps General Rostam Qasemi, the commander of Khatam al-Anbiya Construction Headquarters, the engineering arm of the Revolutionary Guard that serves to help the Revolutionary Guard generate income and fund its operations. Khatam al-Anbiya is believed to be owned or controlled by the Revolutionary Guard and is involved in the construction of streets, highways, tunnels, water conveyance projects, agricultural restoration projects, and pipelines. Also designated were the following four companies believed to be owned or controlled by Khatam al-Anbiya, or acting on its behalf, which directly support various mining and engineering projects: Fater Engineering Institute; Imensazen Consultant Engineers Institute (ICEI); Makin Institute; and Rahab Institute. U.S. persons are prohibited from engaging in any transaction or business dealing with any person or entity on the SDN List, and U.S. banks are prohibited from processing U.S. dollar transactions that benefit such persons or entities. The maritime community

should be mindful that full due diligence on prospective parties to transactions is required in view of Iranian efforts to avoid the implications of SDN designations of individuals, entities and vessels, including name changes and other evasive techniques.

Preventing Violations In the Face of Ever-Changing Sanctions.

With all eyes focused on Iran and the increasingly tough stance the Obama administration is taking to that country's developing nuclear capabilities, the maritime community must understand and remain abreast of emerging legislation and other sanctions developments. All too often vessel charterers and operators assume that the burden of compliance lies with others – misguided thinking in an economy when few companies can afford to swallow the costly fines and business disruption consequent to any violation of U.S. economic sanctions. As always, establishment and regular updating of an effective compliance program is the first line of defense against such violations and should be a priority for members of the maritime community in today's dynamic economic, legal and regulatory environment.

Cuba

On September 3, 2009, OFAC amended the Cuban Assets Control Regulations (CACR) to ease restrictions on family travel and remittances, as well as telecommunications. It also introduced a new general license for travel-related transactions incident to authorized agricultural and medical sales. Then, on March 10, 2010, OFAC relaxed restrictions on exportation of certain services and software incident to the exchange of personal communications over the Internet (these changes also were applicable

to such exportations to Sudan and Iran) and issued a new definition of the means of "payment of cash in advance" applicable to certain shipments of authorized agricultural exports to Cuba delivered during fiscal year 2010 or timely delivered pursuant to contracts entered into in fiscal year 2010. Apart from these relatively minor modifications, however, barriers faced by U.S. companies wishing to do business with Cuba remain unchanged, although Congressional efforts to ease or remove the sanctions continue.

Recent Enforcement Actions

November 11, 2009 saw publication of OFAC's long awaited final enforcement guidelines, designed to allow greater insight into the manner in which OFAC determines an appropriate enforcement response to apparent violations of U.S. economic sanctions. In December, the announcement of the imposition of substantial penalties against Lloyds TSB Bank, plc and Credit Suisse made clear to an already skittish U.S. banking community the pitfalls of violating the ban on processing U.S. dollar transactions for SDNs and other sanctioned parties.

The U.S. Department of Commerce's Bureau of Industry and Security ("BIS") and OFAC also continued their focus on the transportation and transportation services industry, imposing significant criminal and civil penalties and denial of export privileges against two companies involved in unauthorized exports of aircraft and aircraft parts to Iran in violation of both OFAC sanctions and the Export Administration Regulations. BIS also issued new guidance for freight forwarders, reminding them of the important role they play in ensuring the security of the global supply chain.

* This article reflects developments through March 16, 2010, the date of submission for publication. The views expressed herein are those of the authors, 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. Please contact Barbara Linney (Linney@BlankRome.com) at (202) 772-5935 if you have questions or desire assistance.

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DP applications extended to relative DP

Dynamic Positioning in Spotlight

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Over the past years, MARIN's activities with multi-body hydrodynamics and in particular, multi-body Dynamic Positioning (DP) have increased significantly. This article focuses on DP, its growth and its potential. MARIN's techniques and the way DP applications are used for a variety of projects are also highlighted.

At the end of the 1980s, MARIN performed the first DP model tests on drillships and semi-submersibles. The amount of DP model tests has increased ever since and the number of applications has grown. For steering the models during model tests, MARIN uses a homegrown software package called DP-interactive. This software computes the required control settings for free sailing models online. The models are moving as a consequence of the propulsors and the new position of the model forms the input for the DP controller. Hence, it becomes a closed-loop system. In relative DP, the ship is trying to follow another ship. This is technically achieved by having a master ship and a slave ship. The master ship does its thing, while the slave ship reacts at a mutual distance between the master and the slave. The slave ship is steered in such a way that a point of the slave ship accurately follows the position of a point on the master ship.

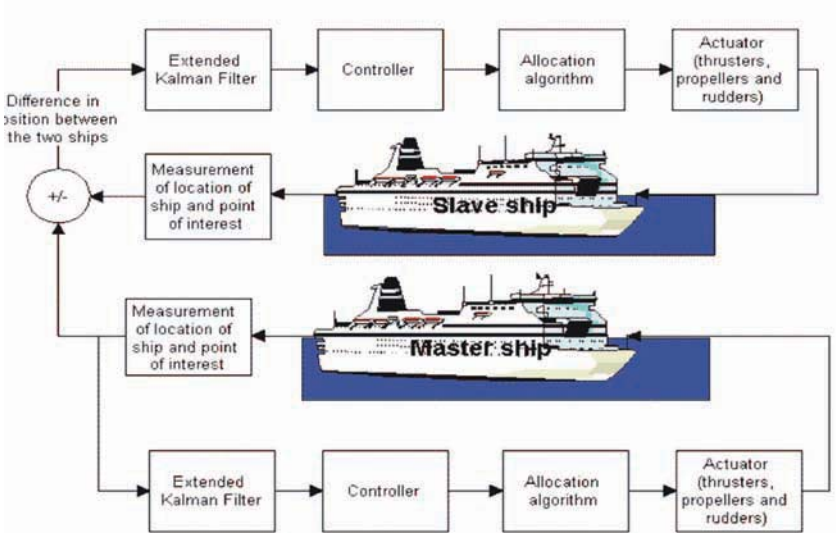

Figure 1:
DP controller for absolute and relative DP as used in the model basin.

Mimicking the real world with a DP controller

MARIN performs these tests in the Seakeeping and Maneuevring Basin and in the Offshore Basin, using actual ship

models equipped with thrusters and propellers and of course, with a fully functional, automatic DP system, just like real life. The DP system in model tests contains all the components that a real-life DP system has: position measurement systems, Kalman filter, controller and allocation algorithm. Figure 1 illustrates how the DP system works for such a side-by-side arrangement. The filter particularly, is an advanced piece of software. The purpose of the Kalman filter is to let the DP system and thrusters respond to low frequency (drift) motions of the vessel only and not to the wave frequency (oscillating) motions. Furthermore, a filter is present to assist in the case of sensor failures. Such a filter (often called an Extended Kalman Filter), is using a mathematical model of the behaviour of the ship.

Sea Basing Applications

These new techniques for DP simultaneously working on two models have been successfully applied a couple of times. This was reported in a paper presented at the Dynamic Positioning Conference in October 2008, entitled "A tighter watch circle, at higher speeds: STLVAST and the challenge of close-in precision dynamic positioning". This work was carried out for Oceaneering International Inc., under contract of the Office of Naval Research. Side-by-side operations were tested in speeds from 0 knots up to 8 knots and in an upper Seastate 4. During the tests, the DP controller was connected to Voith Schneider Propellers. Figure 2 shows two ships under DP in close proximity, in Seastate 4. Figure 3 shows an example of the results. For this specific configuration, it shows how the achieved DP radius increases with forward speed. But it also shows that achieving good performance becomes more difficult as the mutual distance between the ships decreases.

Model Basin Tests Reflect Real Life

A long list of phenomena plays a role in this arrangement: thruster-hull interaction, thruster-current interaction, thruster-thruster interaction, thruster-wave interaction, ventilation, green water, slamming, drift forces, suction and repulsion forces between the ships; wave diffraction and wave shadowing, wave amplification between the ships, the steering and maneuvering characteristics of the ships themselves, the efficiency of the propulsors at zero speed and at high speeds, the interaction between the propulsors and the ship and even the interaction of the propulsors to the other ships. An important advantage of tests over calculations is that all the relevant physical phenomena are taken into account. The physics and the DP controllers are as close to reality as possible, to create a realistic image of the performance of such operations.

Figure 2: Example of ships operating side-by-side at forward speed at relative DP (STLVAST project). The model size is between 6 and 10 meter.

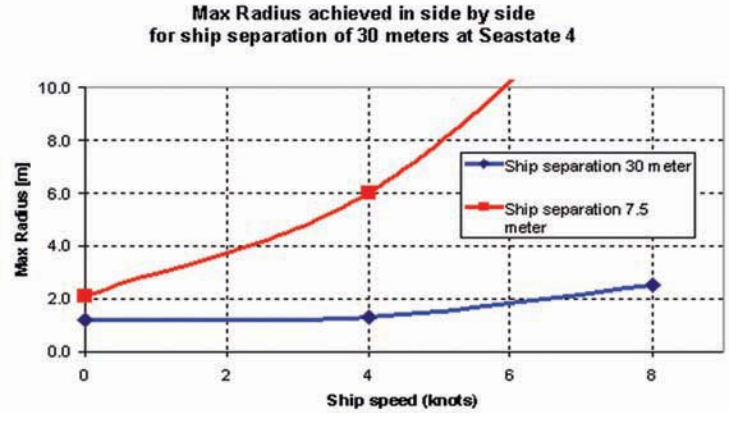

Figure 3: Example of ships operating side-by-side at forward speed at relative DP. (STLVAST project)

Moran Marks 150

Images & Article by Don Sutherland

The tugboat as we know it was barely ten years old when Michael Moran began towing cargoes through the Erie Canal. The marine towing industry was undergoing major transformations in 1860, as it is today. If Michael Moran had an advantage in those pioneering times, it was a view of the business at both ends of its spectrum. From the Great Lakes to New York Harbor, inland to ocean-going, a station on the busy Erie Canal provided the watchful eye a panorama of maritime operations. A century and a half later, the people who own and operate Moran Towing describe similar principles applied to the industry as it transforms again.

Michael Moran's scope on the business began humbly enough, with a scow drawn by a donkey on the towpath of the Erie Canal. "His family came out of the potato famine in Ireland," said Ned Moran, great-grandson of Michael and the current company's senior vice president. "Nine of them got on a boat in Liverpool, England. One was buried at sea on the way over. They went up to Frankfort, New York, because people from their home County in Ireland had already settled there as laborers to build the Canal." Frankfort being on the shore of that astonishing marine highway, already in its 35th year of business, presented a myriad of opportunities for a young man making his way.

The Canal closes in the winter, and its residents — the owners and operators of the unpowered canal boats, their spouses and children who lived aboard, their worldly goods — were towed to locales downstate, such as Coenties Slip at the East River in Manhattan. If directing large operations like that didn't broaden Michael Moran's scope enough, his brothers who served as captains of sailing lighters on Long Island Sound could fill in some blanks.

"Down in New York," said Ned Moran, "he invested $2,700 for a half-share in a boat called the Ida Miller," Michael's first steamboat. "We have no record of who owned the other half."

As significant a step as the Ida Miller was for the developing Moran Towing company, it was also a drop in the bucket against the needs of customers in those booming times. The Erie Canal opened the heartland of the United States to trade with Europe and beyond, but reaching such places as Chicago required more than one vessel en route.

Thousands of ocean-going packets required towing between Ambrose and the piers of the City, succeeded by tugs and tows that moved goods and products up and down the Hudson. Next were Eriemax vessels for a then-shallow Canal between Buffalo and Albany, steam tugs finally ousting the donkeys.

"It's awfully hard in the logistics business to have just one of anything," said Ned Moran. "You're never in the right spot. I'm told there was so much work that nobody had enough boats, so Michael formed sort of a brokerage company where tugboat owners would work for him and one another at a predetermined rate." It was better than having fistfights over getting paid, and it added the capabilities, needs, and technical insights of numerous operators to Michael Moran's scope.

The model-bow, screw-propeller vessel that became the iconic tugboat made its debut about 1850, though steamboats — paddlewheelers — had been towing unpowered craft commercially on New York Harbor since at least 1817. Few of the first were purpose-built towboats, but it quickly became apparent that even a sidewheel ferryboat could nudge a square-rigger toward a berth.

Above: Sparkling on a windblown afternoon, the 5,100 hp Linda Moran and mated 118,000 bbl barge Houston stand-by in the northern realms of Bay Ridge anchorage. Sisters Patti R. Moran and Charleston were toward the southern end that Saturday, Feb. 21. (Photo by Don Sutherland)

By the middle of the century, the archetypal harbor towboat had a large, flat, open deck both fore and aft, low freeboard, and despite the extensions of the paddle boxes on both sides, the ability to tow on the hip. Even within those broad outlines, an operator needed to understand the relative virtues of power plants, walking-beam and steeple designs being two popular variations out of several a towboat operator might consider. The adoption of the propeller tugboat added a new encyclopedia of facts and figures for the prospective owner to study. The first iron tugboat was reportedly built in 1862, steel becoming preferred about 40 years later, rivets giving way to welds. Yet

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wood tugs continued being launched until nearly the middle of the 20th century.

Old boats as new

Towboats and tugboats are made strong, and quite a few at age 40 are still in their youth. The successor to the paddle tugboat may have appeared in 1850, but there's no indication that sidewheel construction ceased overnight. It's a certainty that they continued in use through the early decades of the 20th century. A photograph in the Moran collection, dated 1892, depicts the towboat M.T. Belle with a big Roman "M" on its stack, a sidewheeler with a steeple engine. Yet by then, after 30 years of the newer style, there would have been plenty of good, used propeller tugs around too.

"I don't remember the company building new, purpose-built equipment for general commercial work until the mid 1940s," said Ned Moran, though an earlier newbuild adopted a role beyond general commercial work. This newbuild was the 121-ft, 1,900 hp single-screw diesel-electric built in 1940 by Orange Shipbuilding in Texas, as the Edmond J. Moran. Celebrated in popular wartime magazines as "The tugboat that went out to war," cruising 100,000 miles during three years under a German-born skipper in service of the American war effort, the exploits of the tug were presented as daring and heroic. Repowered, the ex-Edmond J. Moran remains in operation 70 years later, although no longer in Moran colors.

As for the real-life Admiral Edmond J. Moran, grandson of Michael Moran, his achievements included the supervision of American, British, Norwegian, and Dutch tugs, which during World War II towed railroad carfloats across the Atlantic, and constructed instant ports to surprise the enemy during invasion. It's reported that 160 multinational tugs were under the Admiral's direction.

On the lookout

The towing industry has never been static, in equipment or in clientele. It's one thing to assist a clipper ship to its berth at South Street, another to send 118,000 bbl of heating oil up the coast to keep the citizens warm. Moran's examination of emerging technologies has typically come early in the curve, sometimes before new technology has matured. According to notes from historian Brent Dibner, Moran's first foray into diesel power was the 1923 converted Eugenia Moran. From there, the company went back to steam tugs until their new canaler fleet of 1937.

Gruntwork aside, the heyday of the luxury liners in Hoboken and Manhattan's west shore gave the bold white “M” an indelible association with deluxe ship-docking. Many splendid tugs for the ship-docking fleet were built and acquired as the liner market waned, tugs increasingly destined for the cargo-carrying populations of the Kills, Port Elizabeth, Port Newark and elsewhere. All used propulsion systems more or less paralleling that first propeller tug in 1850.

"I think it was 1995 or 1996 when we started to look at the Mor Trac system to

see what that was all about," said Ted Tregurtha, president of Moran Towing. They were interesting and worked out well for us. But I think the real impetus to go to tractor boats was the opportunity to bid for the Navy ship-assist contract for Norfolk Navy Base. Starting in 1998 we built six tractor tugs and converted two others for them for use in Norfolk, and learned a lot through the process. And as we started looking at our fleet-replacements at that time, it seemed logical that our harbor tugs would be Z-drives going forward."

From the 4,000 hp tugs for the Navy, "we went to 5,100 hp, the Diane Moran being the first, a better tug for our own purposes. We've built nine of those, some with EMD engines, some with MTU engines, we've done them with Schottel, with Rolls-Royce, lots of different combinations."

The Washburn & Doughty 92-ft tug is the basis of most of Moran's recent Z-drives, though two designed for operation in Cameron, La. and the one in Savannah for Elba Island have been stretched to 98 ft and 6,600 hp. A pair of 86-ft, 5,100 hp Z-drive tugs were also built recently for Moran, by C&G Boatworks from a design by Jensen Maritime Consultants.

With supertugs and fifi-1 fire fighting systems, demanding cargoes could be handled with greater precision. "We got very involved in the LNG business starting around 2000-2001, the impetus for most of the 6,000 hp and all the firefighting tugs we built," said Tregurtha. "Our LNG Boats are now employed at five different LNG terminals, four in the U.S. and one in Mexico for Energia Costa Azul. These are probably the furthest out we've gone on Z-drive tugs so

Laura K. Moran, the second 5,100 hp 92-ft Z-drive to join the New York shipdocking fleet (following Gramma Lee T. Moran), on her way to work on February 19. Moran's Z-drive fleet nationwide well exceeds two dozen, designed by a who's who of marine architects.

(Photo by Don Sutherland)

Laura K. Moran delivers a docking pilot to NCC Dammam, inbound to Bayonne. Pilots seem to endorse the stability of a Z-drive, when taking those first steps up the side. (Photo by Don Sutherland)

The James Turecamo gets a lot of nominations for best-looking canaler on New York harbor, though the sweeping Joe Hack twin-screw design was developed for the rivers of Chicago, with a lot of low bridges across them. (Photo by Don Sutherland)

far, 32 m (105 ft) long and 6,600 hp, 85 metric tons of bollard pull. They use a Markey 700 hp line winch, which we believe to be the largest on a tugboat to-date. This is all to meet our customer requirements, operating basically in the open Pacific Ocean where we have to handle ships through meaningful swells."

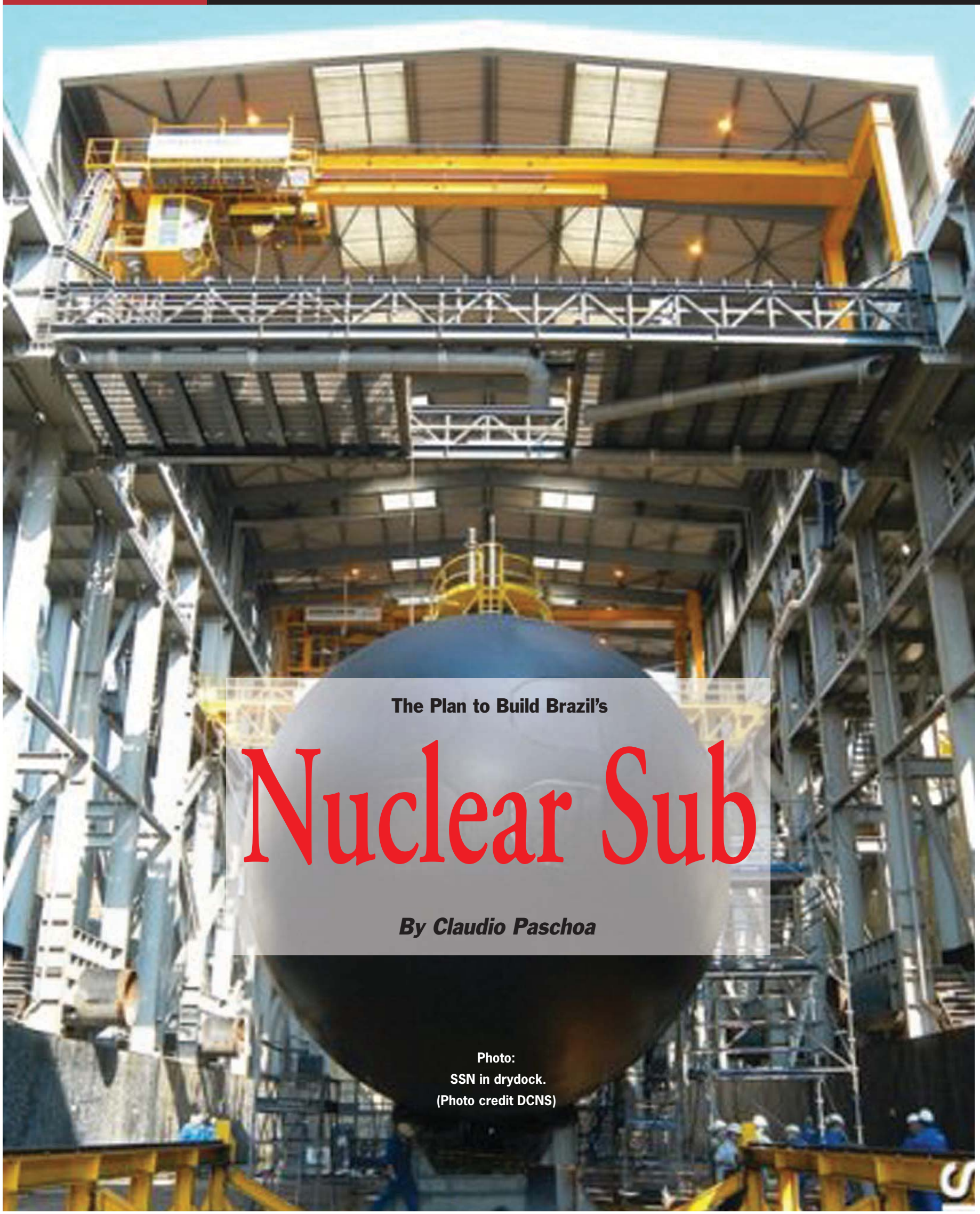
Not counting the original Mor Trac tractors, Moran has developed a fleet of two-dozen Z-drive tugs, most during the 21st century, with one currently under construction. Another four are in service for the joint venture at Costa Azul. In addition, conventionally powered vessels, including three-screw pushboats by C&G Boatworks, and the four Mor Trac tugs, have expanded the company's capacity in the past few years to serve special markets.

Barney Turecamo and sister Scott were reworked into prototypes of Moran's purpose-built ATB fleet, Bob Hill and Washburn & Doughty credited with design and construction of both sets.

Moran has long had its share of barge operations, and has looked into the prospects of container barges for short-sea shipping. And then there was the changing world of liquid product. "In 2006, we made the decision that we would no longer operate or tow single-hull equipment," said Tregurtha, "and we haven't since the end of that year. We have six ATBs now, we're in the process of doing a seventh, and we have five conventionally-towed barges that are all double-hull." The barges were built by a sampling of yards around the map — Bay Shipbuilding in Sturgeon Bay, Eastern Shipbuilding Group in Panama City, Bollinger Marine Fabricators in Morgan City La., and Gulf Marine Repair in Tampa, Fla., which is refitting the barge Virginia for ATB operation.

Architect Bob Hill developed the ATB conversions of the Scott and Barney Turecamo, and the all-new ATB tugs built by Washburn & Doughty. "We've worked with Bruce Washburn, Jensen Maritime Consultants, Robert Allen on the Costa Azul tugs — we've seen different things from each of them."

Including the talent and insights of personnel joining the company through acquisitions over the years, Moran's roster of affiliations reads like a who's who of the towing industry for a century and a half. Yet that industry has been profoundly dynamic. The wherewithal used by Michael Moran to move masses of canal boats being reinvented by the time the Admiral moved his wartime armada, all reinvented once more in the past decade of Z-drives and ATBs. The unifying factor among all has been a perceptual one at Moran Towing: the ability to assess the broad view. Scope.



The Plan to Build Brazil's

Nuclear Sub

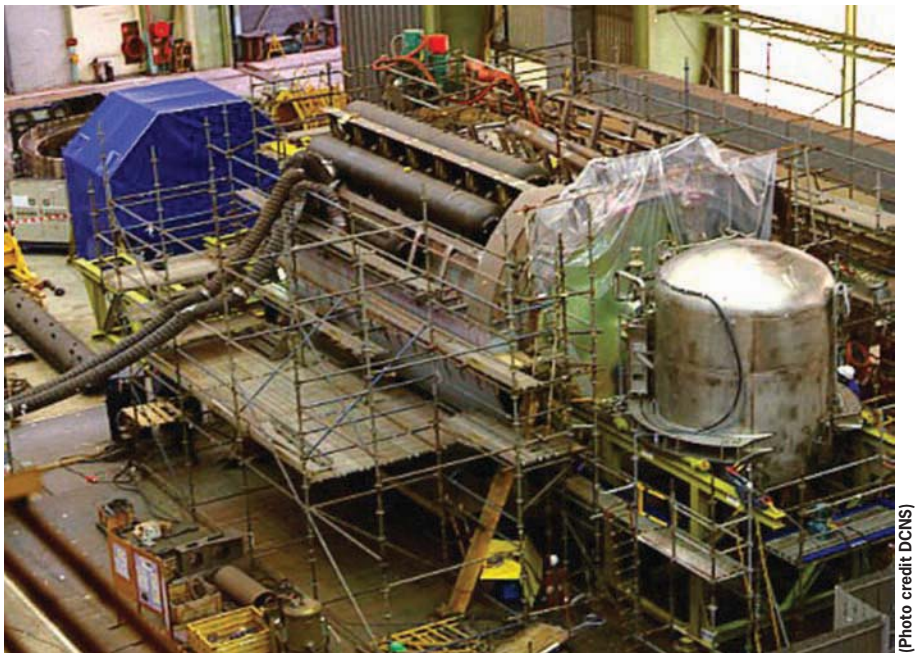
By Claudio Paschoa

Photo:
SSN in drydock.
(Photo credit DCNS)

The Brazilian Navy´s nuclear program, officially named "Programa Nuclear da Marinha" (PNM), in Portuguese, began in 1979 with very limited funds and a lot of determination by the Brazilian Navy to see it through. The Program can be divided in two parts, the first being to gain experience and knowledge in order to dominate the ultracentrifuge enrichment process for uranium. The Navy estimates it will be able to complete the full uranium enrichment process this year.

The second part was to develop and construct a small nuclear plant to generate electric energy for naval propulsion through a pressurized water reactor (PWR). The challenge now is to complete the second part, completing the nuclear plant for naval propulsion. This part is being done at the Nuclear-Electric Generation Laboratory (LABGENE). The nuclear reactor also needs to be made operational in a size that fits the hull of the planned nuclear submarine.

Along the 30 years following the first investments, the PNM has seen two distinct phases. The first 10 years of growth, which reached a peak of $90 million in investments in 1989 and the subsequent 16 years of slow decline in investments, eventually reaching a low of less than $20 million in 2005. It is widely known that from 2000 to around 2007, the second phase of the PNM had been in a vegetative state, with investments limited to maintaining the programs in existence without any major gains.



(Photo credit DCNS)

Autonomous submarine energy module.

Investments between 1979 and 1990 came from the Brazilian Navy´s yearly budget and from other governmental funds. After 1990 up to around 2007 the investments came solely from the Brazilian Navy´s yearly budged, which also declined during this period. There was no specific governmental budget related to the PNM. Along many of those years the PNM went through desperate times, with the Brazilian Naval Command having to skim funds from fleet maintenance and upgrade in order to simply maintain the program in a vegetative state.

We are now entering a third phase, where development investments are guaranteed, as the PNM is now considered a national interest program by the Brazilian government, said President Luis Inacio "Lula" da Silva. There is no serious risk to the programs continuity even with the upcoming Presidential elections in Brazil.

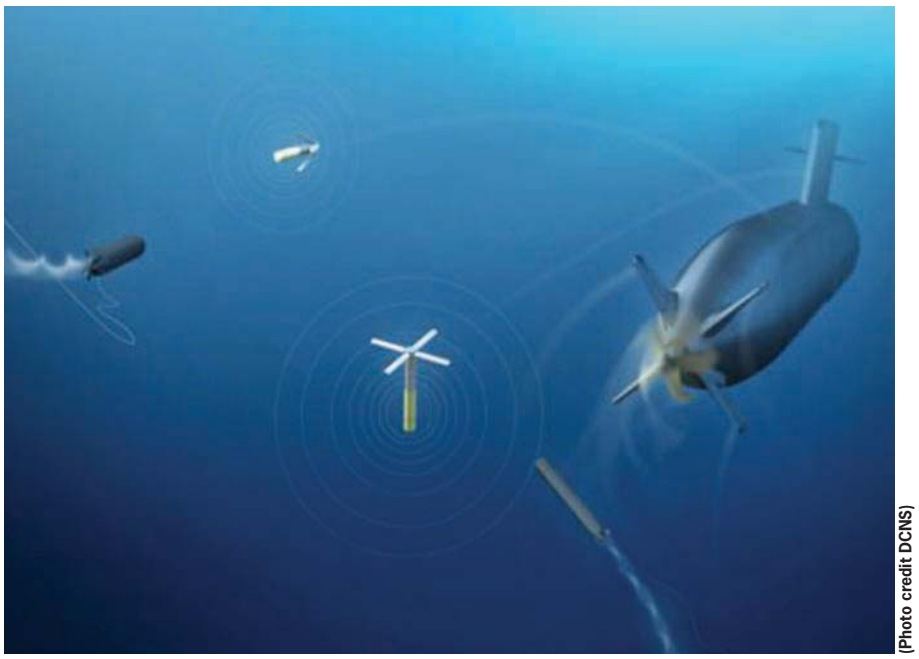
The Brazilian Navy had forecast the need for a budget between 2007-2014 of $1 billion or $130 million per year, in order to complete the PNM program by 2014 and by then have an operational reactor, sized to fit in a custom made submarine hull. The program is based on a nuclear reactor capable of generating 11MW of electricity, thus having the capacity to supply energy to a city with a population of around 20,000, consequently proving the concept of producing a nuclear reactor also useful for civilian use. This budget has been guaranteed by the Brazilian government and may even increase if there is proven necessity of extra funds, as the government acknowledges the technological advances the PNM will bring to the country and the strategic importance the PNM has to the Brazilian Navy and to Brazil. The fact is that the nuclear reactor needs to be oper-

ationally bulletproof in terms of safety and efficient in energy production. These are just some obvious examples of facts which may cause the need for supplemental funds.

In military logic, the protection of the vital O&G fields is only one of the various missions that require the nuclear submarine, albeit an important one. In this case the known existence of a nuclear submarine in the Brazilian naval fleet is expected to act as a deterrent to actions against any kind of Brazilian interests in and along the Brazilian economic exclusion zone (EEZ) or its landmass.

Since its onset, the PNM project has been headquartered in Iperó, in the state of São Paulo in southeast Brazil, at the Aramar Experimental Center, which is a complex of buildings and laboratories which houses the Navy Technological Center (CTMSP).

On December 18, 2008, Brazil's President Luiz Inacio "Lula" da Silva issued the nation's new National Defense Strategy (NDS) that had been in the making for over a year. The process for producing the NDS had been overseen by a Ministerial Committee established by presidential decree in 2007, which was chaired by Defense Minister Nelson Jobim and coordinated by the Minister of Strategic Affairs Mangabeira Unger, who has already left the government. In its work, the committee also consulted with the three branches of the armed forces and various civilian groups.



(Photo credit DCNS)

Torpedo countermeasures illustration.

Brazil's National Defense Strategy portrays nuclear initiatives as a means to enhance Brazil's development, strengthen its defensive posture and bolster its global standing. To capitalize on the potential strategic value of the nuclear sector, the NDS calls for Brazil to undertake the following initiatives:

- To further the nuclear-powered submarine program, conclude the complete nationalization and development of the fuel cycle (including gaseification and enrichment) on an industrial scale;
- Ensure that the country has the technology for building reactors for its exclusive use;
- Speed up the mapping, prospecting, and utilization of uranium deposits;
- Develop the potential for designing and building nuclear thermoelectric power plants to be under national control, even if developed through partnerships with foreign states and companies; and
- Increase the capacity to use nuclear energy within a broad spectrum of activities.

The French Connection

"The greatness and reach of this construction forces its analysis to be made in at least three main segments: the strategic segment, which establishes its reason for being; the technological segment, which means a change in status for Brazil; and its contribution to the development of the national defense industry, which will lead the country to be independent in projecting and manufacturing its own military equipment," said the CIC of the Brazilian Navy, Fleet Admiral Júlio Soares de Moura Neto speaking about the importance of the construction of the Brazilian nuclear submarine.

The process of choosing a partner to build the submarines was basically a process of elimination. The Brazilian navy had decided to build a small fleet of conventional submarines and one nuclear submarine. The partner would have to be a nation that had an industry that built both conventional and nuclear submarines. Another important aspect of the selection process was the determination that the partner would have to agree to a full technological transfer, in such a way as to permit Brazil to build its own submarines without being encumbered by restrictions from the partner nation.

After researching the market it was established that the only possible partners would be Russian or French. The potential partners who could be considered ideal, the Americans and English, do not build conventional submarines any more, which was mandatory for selection. Most experts agree that no submarine manufacturer in the world surpasses General Dynamics Electric Boats in terms of experience, quality and efficiency. However, as stated before they did not fulfill mandatory pre-requisites.

The Russian submarine market is huge and its builders do build diesel submarines, however, these have only been sold to communist countries, with the exception of Venezuela and India. Also it appears that the Russian market has interest in only selling the finished product, with no allowance for technological transfer, so the Russian option was also quickly discarded, leaving for a partnership with the French, through its renowned submarine builder DCNS.

(Photo credit DCNS)

French Navy SSBN Control Room.

The contract between Brazil and the French company DCNS for the construction of four conventional submarines and the hull, sonar and weapons systems of a nuclear submarine has been established without much fanfare. The contract, valued at around $8 billion, also includes the construction of a submarine shipyard and a submarine base in Itaguaí, Rio de Janeiro.

There have been many critics to the fact that the Brazilian construction company Norberto Odebrecht was chosen for the construction of the facilities without any tender process. The Brazilian government officially said that the choice was made by the French from DCNS.

The French Eximbank approved the financing for the project, which is expected to cover around 85% of the project cost. Initial work preparing the area for the shipyard/sub base has started in February 2010 and the construction is expected to last up to three years. Since the Brazilian Navy is experienced in building conventional submarines, having been building them with German technology for more than 10 years, it is considered feasible that the first conventional submarine to come out of the new submarine building program, may be ready to submerge in 2013.

Odebrecht began building the new submarine base and shipyard in February 2010, at the Itaguaí municipality, in Sepetiba Bay which is just off the south tip of Rio de Janeiro, according to the CIC of the Brazilian Navy, Fleet Admi-

ral Júlio Soares de Moura Neto. The base will house the new Scorpene submarine fleet and eventually the first nuclear submarine made in Brazil with French technology.

Four conventional submarines of the Scorpene class are scheduled to be constructed up to 2016, with the conclusion of the nuclear submarine scheduled for 2020. The total Navy budget for 2010 is approximately R$4.3 billion ($2.3 billion at present currency levels). From this budget R$2.3b is slated for the submarines and R$2b for investments in the fleet and fleet maintenance. In terms of national content, there are already 36,000 items listed to be supplied for the submarines by national companies and the list of potential national suppliers is still growing.

The commander of the Brazilian Navy is feeling very optimistic about the budget being guaranteed. "The government has just released the first installment of the resources for the project. We will be able to conduct our submarine program. It is a National project and a strategic partnership signed between two countries" said Fleet Admiral Julio Soares de Moura Neto.

(Photo credit Armada Chilena)

Chilean Navy Scorpene Submarine.

Scorpene Diesel Submarine fleet and the Nuclear Submarine Program

Since the 1970s, the Brazilian Navy concluded that the vastness of the Atlantic Ocean and the magnitude of Brazilian interests at sea demanded the use of conventional submarines working in conjunction with at least one nuclear submarine.

Approximately 95% of Brazilian trade (imports and exports) takes place at sea and the growing importance of the offshore oil fields to the Brazilian economy is a growing factor. There have also been historical confrontations related to fisheries along the Brazilian EEZ. This new submarine fleet and in particular the nuclear submarine, is considered of strategic importance by the Brazilian Navy due to its mobility, stealth and the versatility of its operational parameters, which permit it not only to effectively patrol close to shore but also as an advanced defense of distant marine frontiers.

It is important to remember that the Brazilian coast is over 7,000 km (around 4,500 miles) long and the Brazilian EEZ encompasses an area of 3.5 million sq. km., which may rise to 4.4 million sq. km. depending on approval of extension requests made by the Brazilian government to the United Nations. The EEZ goes out to 200 nautical miles (370 km) from the coast and there are sources that guarantee that pre-salt reservoirs will be found all the way to that limit of the EEZ and possibly beyond.

Obviously four or five submarines, even if one of them is nuclear powered, will never be enough to patrol or defend the whole EEZ, so the Brazilian Navy will also have to re-equip and upgrade its surface navy.

DCNS presently exports the Scorpene submarine to the Chilean, Indian and Malaysian Navies. DCNS is considered

a traditional supplier of high quality naval products and have guaranteed through contractual clauses to transfer technology related to submarine construction and submarine systems, including the fundamental sonar and weapons systems to the Brazilian Navy.

DCNS Chairman & CEO Patrick Boissier said on September 3, 2009: "We are proud that Brazil's highest authorities have chosen DCNS to modernize and renew their country's submarine fleet. I am aware of the responsibilities that this entails and have no doubt that each DCNS team will do its share to ensure the complete success of this ambitious project. The contracts signed today confirm our technological standing on the world market and the wisdom of our international strategy focusing on engineering services, new construction work, and the operation and maintenance of defense facilities." This is the biggest contract in the history of DCNS.

Some characteristics of the Scorpene submarine project deserve special attention. Although it is a diesel or conventional submarine, its project is not as a simple evolution of a previous diesel submarine class. Its hydrodynamic hull was derived from the Rubis class nuclear submarine, although more compact and it contains technological advances used in French nuclear submarines, such as the SUBTICS tactical integrated combat system, which combines operational efficiency, high-performance sensors and long-range weapons.

(Photo credit Marinha do Brasil)

Old Brazilian sub fleet with Sugar Loaf in the background.

The sea trials of SUBTICS systems already commissioned have demonstrated its level of performance and integration, including the capability to launch several types of weapons. Since modern submarines are increasingly used for both blue water and coastal missions ranging from anti-submarine or anti-surface warfare to intelligence gathering, land attack and special operations, SUBTICS is designed for all these scenarios. The system´s key features include:

- Outstanding sonars and other sensors, including, adaptive planar flank arrays for long-range detection, even at high speed;
- Fusion of data, from all sensors (optical, optronic, R-ESM and C-ESM, radar), location and identification of vessels;
- Advanced, sea proven automatic and interactive target motion analysis;
- Track association and fusion through interactive track management;
- Aids for tactical analysis, decision-making and action management with respect to geographical and tactical environment;
- Exchange of tactical data via datalinks;
- Engagement of targets and control of different weapons; and
- Anti-torpedo countermeasures system, named CONTRALTO-S, also deserves special attention. The CONTRALTO-S system – a new-generation solution – is designed to provide submarines with effective protection against light- and heavyweight torpedoes. It is a system fully integrated in the combat management system (CMS) that proposes an evasive maneuver to the carrier and triggers the launch of CANTO munitions.

CANTO is a wide-spectrum jammer in-

stalled on submarines. It has been designed to satisfy the need to decoy and jam torpedoes fitted with acoustic heads, and to do so throughout the frequency spectrum and irrespective of the mode used by the torpedo's sonar (passive or active). Its role is to deflect the threat while cloaking the submarine to allow it to take evasive action. As for the nuclear submarine program, some idea of the new class to be developed by the Brazilian Navy can be glimpsed from the French Navy´s new Barracuda class SSN. Although this is not the class that will be produced in Brazil, it will certainly be influential in the Brazilian design. Some differences can easily be forecast, such as the need for the hull of the Brazilian Nuclear Submarine to be wider than the Barracuda class in order to fit the nuclear reactor being developed in Brazil. The Barracuda program is scheduled to replace the Rubis-class nuclear-powered attack submarines with six new-generation submarines.

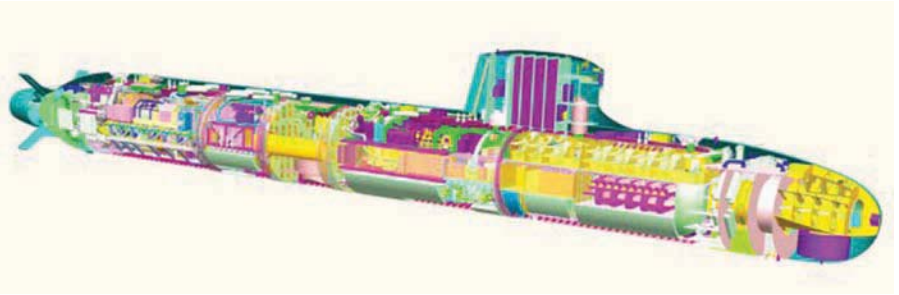
Boasting unrivalled acoustic discretion at high speed and a listening capacity unaffected by speed, the Barracuda will be designed to enjoy an acoustic advantage. It will be equipped with an extensive array of information gathering resources, and is projected to be capable of operating both alone and within an integrated naval force thanks to its discreet communications systems. Its extensive weapons payload capacity includes cruise missiles that make it a tool of considerable strategic importance for the French navy. The first Barracuda-class submarine will be delivered in 2017, and the subsequent vessels will be delivered at the rate of one every two years. Its main characteristics are:

Length .....99 m
Surface Displacement .....4,700 tons
Depth Rating .....>350 m
Speed Submerged.....>25 knots
Crew 60

From these numbers we can get an idea of the submarine which will be made in Brazil. The Brazilian class will almost certainly be longer and wider and thus will have a higher displacement and probably more crew members also. The Brazilian navy will also benefit from lessons learned by the French during their construction of the Barracuda class SSN and all the previous knowledge accumulated by DCNS in its many years of nuclear submarine construction.

After waiting more than 30 years to see its nuclear submarine program finally

SSN Barracuda -Cutaway Illustration
(Credit DCNS)



take off, the Brazilian Navy must now be prepared to overcome the many technical obstacles that are guaranteed to arise during the manufacturing and construction process of the submarine hull.

The construction of the shipyard has already begun with the participation of Brazilian construction giant Odebrecht (50% of the shares) and French shipbuilder DCNS (49%) and the Brazilian Navy, which will have special decision making powers and veto rights.

Hopefully by this time next year the construction of the first Scorpene diesel submarine will have started and it may include a MESMA AIP (Autonomous Submarine Energy Module), which is an electrical energy production module designed specifically for conventional submarines and as well as supplying electricity to the vessel and to the propulsion system, it can also be used to recharge the batteries without the need to surface. This module actually quadruples the underwater range of a conventional submarine, which significantly extends its scope of action and enhances its stealth performance, therefore increasing the strategic importance of the Scorpene conventional submarine fleet. Deterrence of a State Threat is the main goal of the Brazilian Nuclear Submarine Program. The stealth of nuclear submarines suits them to this deterrence mission, a fundamental part of the National Defense Strategy according to Defense Minister Jobim.

President Lula at Labgene with reactor vessel.
(Photo credit AgenciaBrasil-Ricardo Stuckert)

Global Market Dynamics and

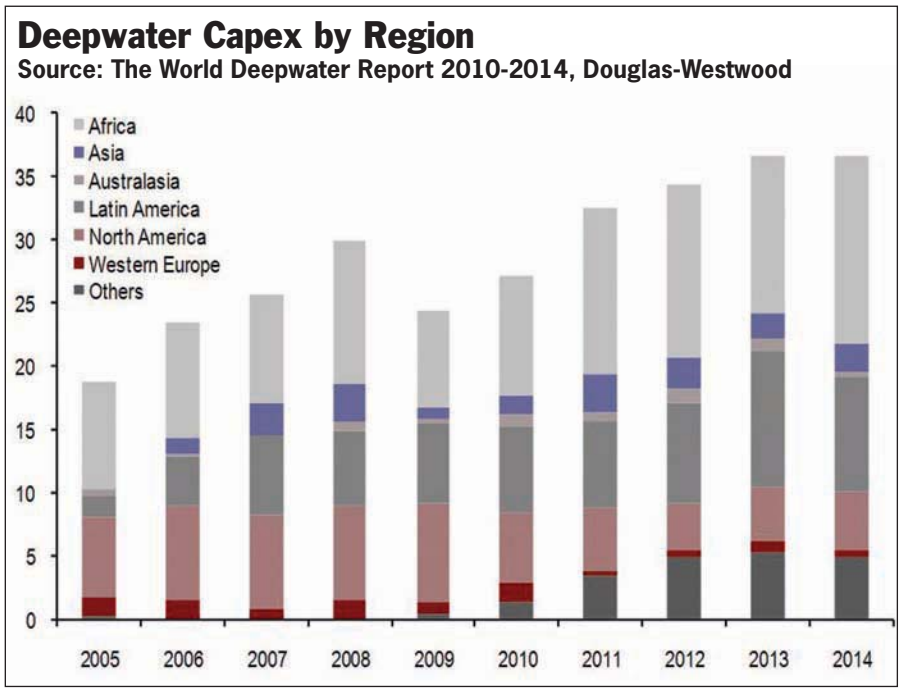
Deepwater Exploration

By Thom Payne, Senior Analyst at Energy Business Analysts, Douglas-Westwood

Despite global economic turmoil and oil price fluctuations having a marked impact on activity levels, the deepwater sector is forecast to quickly recover and resume its previous growth. Indeed, annual deepwater expenditure is predicted to reach around $35 billion in 2014, with a total global Capex of $167 billion estimated for the 2010-2014 period. Thom Payne, senior analyst at Douglas-Westwood provides an insight into the next five years within the deepwater sector as the company launches its, "World Deepwater Market Report 2010-2014."

Between 2010 and 2014, deepwater expenditure is projected to expand at a Compound Annual Growth Rate (CAGR) of 8%. The 'Golden Triangle' of deepwater, namely the African, GoM and Brazilian coastal areas, will still account for over three-quarters of global expenditure over this period. However, the emergence of Asia as a significant deepwater region should not be overlooked as it is projected to receive around 10% of the total predicted global Capex investment.

Three main elements dominate deepwater spend over the next five years: the drilling and completion of subsea development wells, pipelines and production platforms. To put this in perspective, a total of $63.6 billion will be spent on the drilling and completion of subsea wells alone. Pipelines and control lines will also continue to play a vital role in providing the necessary infrastructure for deepwater developments. The opening up of reserves further from the coast and the incorporation of satellite fields into deepwater hubs will drive expenditure on pipeline & control lines to over $62 billion, while investment in subsea wells and pipelines & control lines account for approximately 75% of all capex. Platforms are expected to account for around 15% of total deepwater expenditure over the 2010-2014 period (a total spend of $25.4 billion), compared to 17% over the previous five-year period ($21 billion).



Regional Updates

Africa

Offshore developments in Africa date back to the 1960s but the past several years have seen a dramatic transformation in the area's profile and a major deepwater oil and gas province has emerged. The first brace of deepwater 'elephants' – Shell's Bonga on OPL 212 off Nigeria and Total's Girassol on Block 17 off Angola – were discovered in the spring of 1996. **Since then, West Africa has emerged as perhaps the most significant deepwater province in the world although there have also been some high-profile failures and disappointments along the way.** The first FPS to be installed in African deep water was Total's landmark Girassol project off Angola in 2001 and this was followed by ExxonMobil's Xikomba in 2003 and then Kizomba A and B's TLPs and FPSOs. The non-conservative trend has continued with the world's first FDPSO installed on the Azurite field in the Republic of Congo. Today, Africa is by far the world's most significant deepwater region. A large number of world-class development projects are underway or planned for the forecast period and we anticipate that these will push annual regional deepwater Capex above $12 billion during much of the period.

Asia

Although there is much offshore development activity in Asia, it is not traditionally thought of as a deepwater 'hotspot'. This is because the vast majority of activity occurs in shallow water depths. Over the 2005-2009 period there were four deepwater platform installations, three of which were FPSOs. Overall, a total more than 140 subsea wells, 42 surface-completed wells and three deepwater platforms will be required over the 2010-2014 period. Total Capex in the deepwater sector during this period will amount to $11b – a 43% increase on previous five-year expenditure. Over 75% of the expenditure forecast will be related to the drilling and completion of subsea wells and the installation of subsea pipelines and control lines.

The main developments will occur off Malaysia and Indonesia such as Shell's Gumusut and Chevron's Gehem and Gendalo developments, which are scheduled to come onstream in 2012. Three deepwater platform installations are forecast for the 2005-2009 period, two of which will be FPSOs. These vessels will be installed on ONGC's D-1 field in India and Shell's Camago development in the Philippines. The third deepwater installation in the Asia region is the semisub intended for the Gumusut development.

Western Europe

Deepwater activity off Western Europe over the 2005-2009 period was dominated by Statoil's Ormen Lange subsea development, in particular the large deepwater pipeline development scheme associated with the project. Pipelines accounted for 78% of the historic spend ($4.2 billion). Over the 2010-2014 period, a number of projects are expected to go ahead that will contribute to a total capital expenditure of $3.8 billion. These include Eni's Aquila field development – which is due onstream in 2011 and includes two subsea wells tied back to an FSPO. In the UK, there are several deepwater projects under development including Total's Laggan/Tomore and Chevron's Lochnagar/Rosebank, the former of which will include subsea well tied back to an onshore processing plant; the the latter will be developed via FPSO.

North America

North America, which in deepwater terms means the U.S. GoM, saw significant activity over the 2005-2009 period, including the completion of 225 subsea wells and 32 surface-completed wells. In particular 2009 saw a peak in North American deepwater expenditure at $10.9 billion – a good proportion of this spend was attributable to the installation of pipelines associated with the installed platforms.

One of the platforms, the Atwater Valley Hub FPSS, has production from ten fields tied back to it. Overall deepwater expenditure for the 2005-2009 period passed the $36 billion mark – making it second only to Africa. **Looking forward, there is currently more than $24 billion worth of planned investment expected in the North American deepwater sector during the forecast period.** This includes the Petrobras operated Cascade development and the first sanctioned use of an FPSO unit in the GoM.

FSPO Update

Conventional fixed platforms are not feasible in water depths exceeding 400m and indeed, installations in water depths of more than 200m are rare. There are instances of 'compliant towers' being used to develop deepwater fields but none have occurred over the 2005-2009 period and none are forecast for the period to 2014. Our findings show that floating production systems, with FPSOs represent by far the most-favoured solution. Over the 2005-2009 period FPSOs represented 72% of the overall platform development Capex, with deployments ranging in scope from Chevron's vast Agbami project (where the FPSO is reported to have cost $980 million) to short, single-well deployments off Brazil using dynamically moored vessels such as the Seillean. FPSSs accounted for 18% of spend 2005-2009, with Spars and TLPs representing 4% and 6% respectively. FPSOs will account for 39 of the 52 forecast units and 80% of the forecast Capex, while there are expected to be seven TLPs, four FPSSs and two Spar installations during the 2010-2014 period. The global FPSO market was heavily impacted upon by the global economic crisis and the restricted availability of credit. Bucking this trend, however, our data shows that the deepwater FPSO market remained relatively resilient. From a total of nine projects seeking financial backing, seven were successful with one expected newbuild delayed until 2010 and the Bonga Southwest FPSO (a joint venture between Nigerian National Petroleum Company and Shell) being dropped until further notice due to unrelated circumstances. The lending behavior of large banks that historically provided capital to the FPSO sector changed considerably during 2009. Heavily constrained by the lack of capital in the global system, major lenders re-evaluated risk levels and their own potential exposure. Greater attention has now been placed on the nature of the contract between the operator and the FPSO contractor – and vigourous checks are being applied to minimize reservoir risk. The impact of these factors on the floating production systems market does appear to have been significant. Industry insiders noted an increase in up to 500% in bank lending margins that ranged from 50 to 250 basis points above the LIBOR (London Interbank Offered Rate), with required loan-to-equity ratios also dropping significantly. A general outcome has been toward industry consolidation with only leading NOCs or blue chip majors able to generate required levels of finance. It is expected that the FPSO and Floating Production Systems market will pick up in the early years of the present decade. Banks, however, are expect to remain largely risk averse and continue to apply greater diligence to lending with the sector, even if lending margins are reduced as more liquidity enters the global banking system.

Operator Budgets

Total expenditure operator budget is predicted to be over $220 billion – demonstrating the importance of deepwater development over the next decade and beyond. Partially state-controlled Petrobras will prove, by far, to be the biggest player in the sector, having laid plans to invest close to $90 billion between 2010 and 2020 – the majority of which relates to Brazilian pre-salt deepwater fields. Total and BP are expected to invest around $30 billion each on their deepwater assets over the period to 2020. West Africa continues to remain an important area of investment for both operators in addition to the employment of Nigerian fields (Total) and within the Gulf of Mexico (BP). ConocoPhillips has the smallest deepwater portfolio of all the supermajors and the company's deepwater Capex is expected to be split primarily between Norway and the US Gulf of Mexico.

E&P deepwater activities are situated at the industry's technological frontier and imply high risks and high costs. However, the potential rewards – in terms of reserve volumes, productivity and profitability – are very alluring; particularly when considered in the context of a lack of new onshore or shallow water opportunities and operator requirements to offset decline from existing reservoirs. Indeed, the requirement for techniques and hardware that can enable or improve E&P performance under challenging deepwater conditions is driving much of the innovative work currently underway in the wider industry. This has been demonstrated by significant improvements and innovations in the drilling, floating production and subsea sectors – all of which have proved especially beneficial in the exploitation of deepwater prospects.

In addition, energy is becoming more expensive as the resources we extract become more technically demanding and intensive to access. Ultimately, a future peak in world oil supply is inevitable; the only question remaining is the date that this will happen.

The World Deepwater Market Report 2010-2014 is the latest in an acclaimed series of business studies used by organisations in over 60 countries worldwide. These include oil majors, investment banks, OEMs, offshore contractors, agencies and government departments. Established in 1990, Douglas-Westwood is an independent company and the leading provider of business research & analysis, strategy and commercial due diligence on the global energy services sectors. The company has offices in Canterbury England, Aberdeen Scotland and New York USA and, to date, has completed more than 600 projects - providing products & services to 400 clients across the globe. **www.dw-1.com**

Blazing the path with

Shell Offshore

*Maritime Reporter had the chance to pick the brain of **Kent Stingl**, Shell's Project Manager for the Parque das Conchas (BC-10) project, a multi-billion heavy oil subsea development in the ultra deepwater offshore Brazil, to discuss offshore oil and gas trends.*

What are the two or three significant changes that have advanced the business of subsea technology?

Kent Stingl Subsea technology is developing so quickly it is hard to pick just two or three. There are four that come to mind. First, the use of electrically heated flowlines that precludes the need for looped flowline systems to manage flow assurance issues. Second, the use of the Shell patented Heave Compensated Landing System which allows subsea hardware including tubing head spools, subsea trees and jumpers to be installed offline of the rig with a much cheaper anchor-handling vessel. Third, the use of Surface BOP's for drilling and completions that allows the use of a much cheaper Generation type 3 rig for very deep waters. Fourth, the development and use of Multi Phase Flow Meters which allows for accurate metering and allocation which enable the commingling of production subsea and thereby reduce complexity and costs.

What technologies have had the biggest impact on the efficiency of subsea operations?

KS The recent development of subsea fluid separation and pressure boosting technology such as that developed for BC-10 in Brazil and Perdido in the Gulf of Mexico allows us to develop much lower pressured reservoirs and heavier oils which until recently would have been stranded.

What does Shell do that sets itself apart from the competition?

KS Shell is a subsea technology leader. Shell is unique in that we take a full systems and life cycle approach to the development and maturation of subsea technologies. We strive to develop new technologies, mature those technologies and then standardize on their implementation and operation.

What are the primary drivers for your business?

KS In a word: value. It drives our business and is what our customers and stakeholders expect. We strive to safely deliver top quartile performance projects on a unit development cost basis.

Left and right:
The Espirito Santo Floating Production, Storage and Offloading (FPSO) vessel.

Kent Stingl

How does cyclical price for oil affect your business?

KS Major subsea development projects tend to take two to three to four years to execute and therefore cyclical prices usually do not affect the project once the project has been funded.

What's happening today that will affect your business for the next decade?

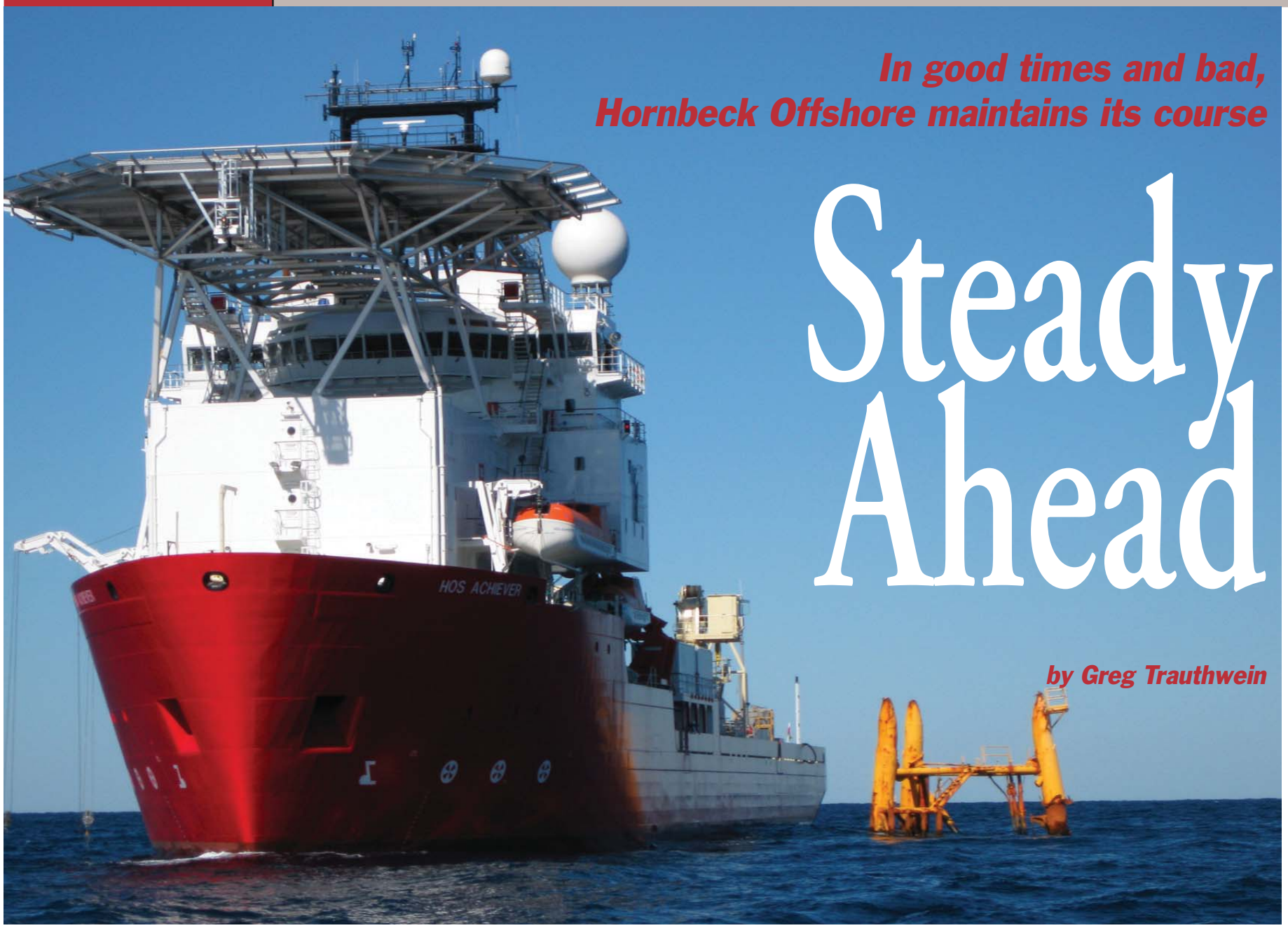
KS It appears that cheap domestic oil is gone and the direction of our business is to develop the technologies required to economically develop more challenging resources. These challenges include heavier oils, deeper water, lower-pressured reservoirs, sour crudes, etc.

What is the most significant advance during your career?

KS From an efficiency standpoint, there is no doubt that real time data transfer technology has made a huge impact. We now have the technology and ability to monitor and collaborate on subsea operations as they are taking place. For example, on BC-10, we set up real time data centers on the FPSO offshore Brazil, in Rio in our main office, and in Houston at our center of excellence to collaborate on live subsea installation and commissioning operations and thereby get the right level of import from subject matter experts to make the best decisions.

What do you consider the biggest challenges to Shell's development in the offshore arena?

KS Without a doubt our biggest challenge is the development and implementation of fit-for-purpose innovative technologies. To be the preferred operator for major international projects, we need to consistently and safely delivers top quartile quality systems.

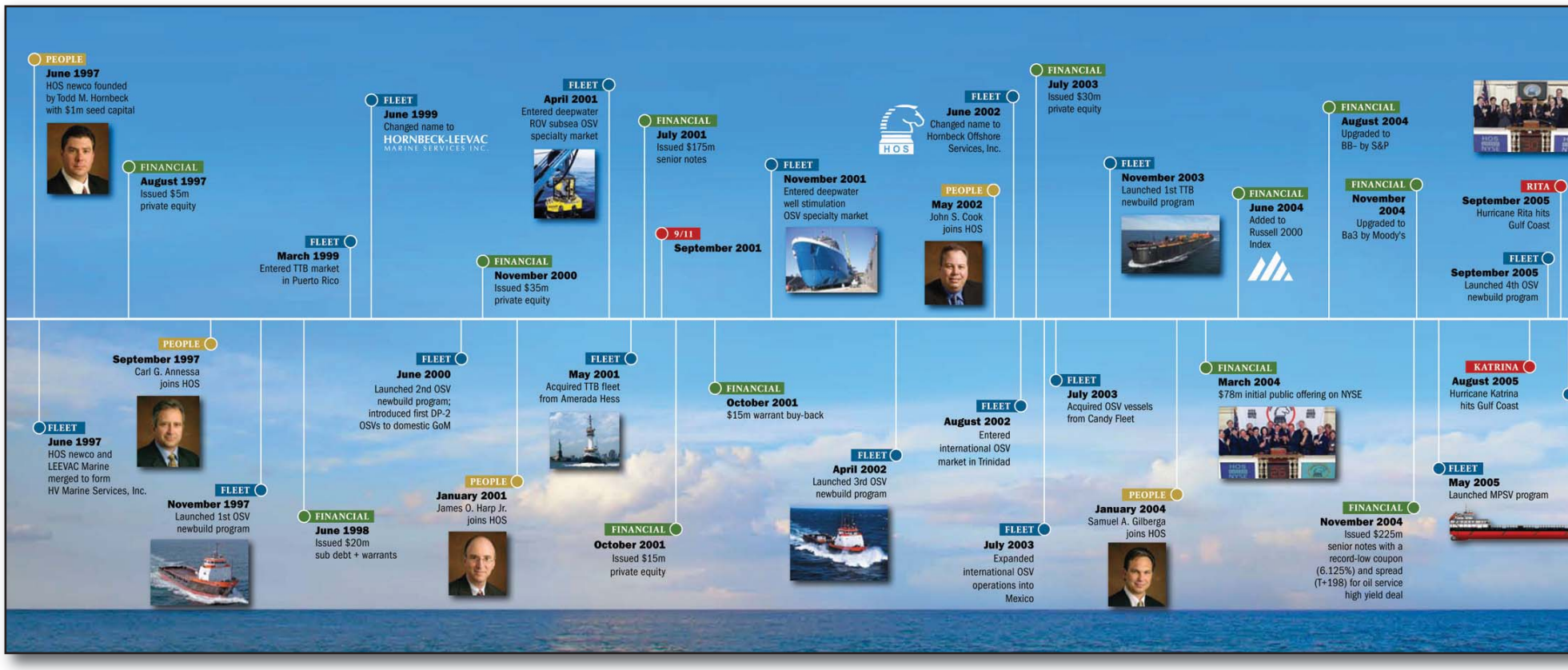


In good times and bad, Hornbeck Offshore maintains its course

Steady Ahead

by Greg Trauthwein

Hornbeck Offshore Timeline — 1997 to Present

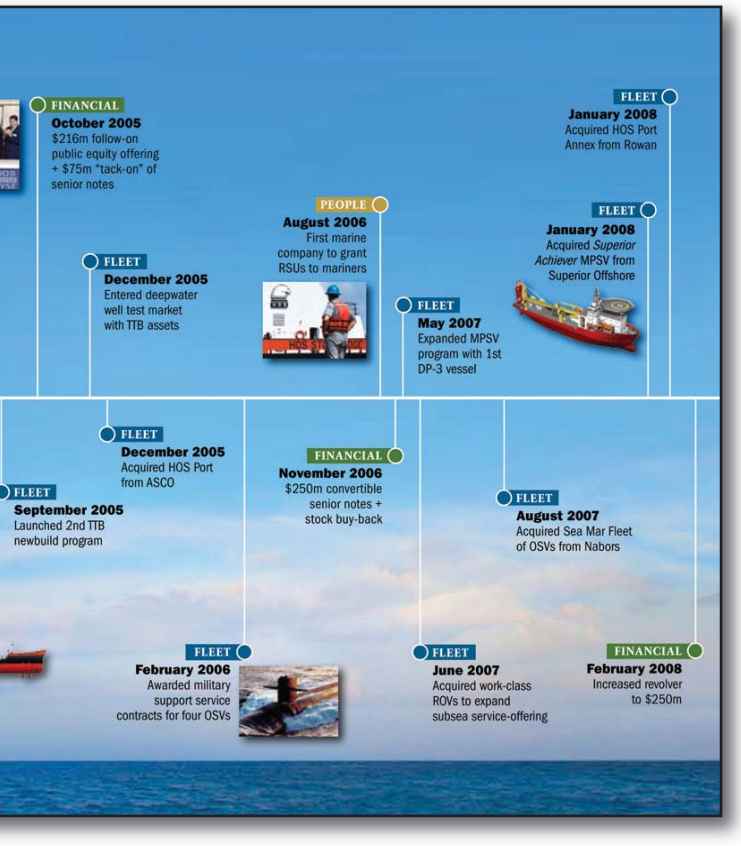


The history of the offshore oil and gas market is littered with dozens upon dozens of companies that have invested mightily in the market when it was hot, only to be toppled by debt, falling just as quickly, when it was not. At 13 years of age, Hornbeck Offshore Services (HOS) may be relatively short in its corporate history, but it is long in experience, boasting a management team the "has been in this business our entire lives; we've seen many ups and downs," said Todd M. Hornbeck, the company's ubiquitous president, CEO and Chairman of the Board. "In up markets we pay particular attention to our capital structure. Today we are in an offensive position, financially, and a defensive position from an operations (cost) standpoint," **which includes a vessel-stacking and fleet rationalization strategy that saved $32.1 million in 2009 cash operating expenses.**

Maritime Reporter & Engineering News had the opportunity to catch up with Hornbeck – the man and the company – recently at its Covington, La., headquarters, to discuss the company and its position in the maritime fraternity, including the ramifications of the culmination of its most recent newbuild program and the lingering effects of the worst financial meltdown in a generation.

Steady Ahead

To put the current market downturn in perspective, one not need look much further than HOS' most recent results, released in early February 2010. According to the company, its average new generation OSV dayrates for the fourth quarter of 2009 declined to $19,880 compared to $24,385 for the same period in 2008 and $20,915 for the third quarter of 2009. New generation OSV utilization was 73.1% for the fourth quarter of 2009 compared to 96.4% for the same period in 2008 and 71.9% in the third quarter of 2009. Effective new generation OSV utilization for the company's active fleet, which excludes the impact of stacked vessels, was 89.2% for the fourth quarter of 2009 compared to 83.2% for the third quarter of 2009.



Working aboard the HOS Achiever at the Perdido Oil Platform in the Gulf of Mexico.

While other offshore vessel operators perhaps make more headlines, the beauty of HOS is the simplicity of its mission, which is, according to its company's mission statement, to:

" … be recognized as the energy industry's marine transportation and service company of choice for our customers, employees and investors through innovative, high quality, value-added business solutions delivered with enthusiasm, integrity and professionalism with the utmost regard for the safety of individuals and the protection of the environment."

To put it simply, while the company is diversified by business sector and geography, its primary mission is to serve the offshore energy markets with a fleet of modern, technologically advanced and equipped offshore vessels. The mandate started when the company effectively opened for business in 1997, when it began a program to build new-generation OSVs based on its own proprietary designs. Since then it has built 24 OSVs, and expanded its fleet with the acquisitions of additional new generation OSVs.

In total, the fleet of 48 OSVs (projected to be 51 by the end of 2010 and the culmination of its fourth newbuild program) is among the youngest fleets in the world. It is this youth that has been instrumental in the company's strength during the recent market downturn.

The company's fourth OSV newbuild program consisted of vessel construction contracts with three domestic shipyards to build six 240 ED class OSVs, nine 250 EDF class OSVs and one 290 class OSV, respectively. Fourteen of these 16 new generation DP-2 OSVs have already been added to the company's Upstream fleet on various dates since May 2008, including the HOS Sweet Water, the sixth and final 240 ED class OSV delivered under this program, which was placed in service in the GoM spot market in December 2009; and the HOS Arrowhead, the sixth 250 EDF class OSV delivered under this program, which commenced operations in January 2010 under a multi-year charter performing military support services. The HOS Pinnacle, the seventh 250 EDF class OSV delivered under this program was placed in service during February 2010. The remaining two OSVs under this newbuild program are expected to be placed in service in May and August 2010, respectively. "Today, things have slowed down in the U.S. and globally," said Hornbeck, "but the new-generation equipment is continuing to work despite the slowdown, and the ultra deepwater work has presented consistent demand. We expect a relatively flat market over the next year, which will help to remove some additional old tonnage from the market. Overall we are very bullish on the oil market, long term, despite the recent worldwide drop in consumption."

Think Global, Act Local (& Global!)

While HOS is the second largest deepwater operator in the Gulf of Mexico, it views its market opportunities globally, evaluating opportunity wherever the search for oil and gas may be happening. Brazil is a good example of Hornbeck's approach: While Hornbeck sees Brazil as a very good potential long-term market, with HOS set to send eight new-generation OSVs to Brazil on contract in the first half of 2010 to commence multi-year charters, Hornbeck notes the company is overall guarded on Brazil, noting that it

is a difficult market with high costs (including labor and taxation rules) and a very, very long coast line to service. “We are not going to be in Brazil just to say that we are in Brazil … it has to make sense” in context of our other activities, said Hornbeck.

A particular concern in Brazil for HOS, and in fact for all offshore energy service providers, is the fact that Brazil’s infrastructure still has a long march to meet its potential, and in the meantime operators in the region have to contend with vessels and personnel that are spread out with sparse infrastructure to support.

Hornbeck is also evaluating opportunities offshore deepwater West Africa, again noting the good long-term prospects of building business in the region, but noting the level of political instability that works to subdue the potential glow of operations there. While the company eyes its prospects around the world, Hornbeck admits that the Gulf of Mexico still presents “a lot of promise for us, and we are looking to grow our footprint … our presence here is very strong.” Courtesy of its fiscal principles in times good and bad, HOS seems positioned to grow the company today, whether organically or through strategic acquisition. Hornbeck notes that, globally, there are more than 300 boat companies that service just the deepwater offshore market, and he envisions a degree of market consolidation, noting that if the deal were right, a strategic acquisition to penetrate new markets would be considered.

Challenges for All

As if building and maintaining one of the world’s youngest, most technologically advanced fleets in a tumultuous market is not challenge enough, both Hornbeck and Carl G. Annessa, HOS’ Executive Vice President and Chief Operating Officer, admit that the biggest challenges they still face resolve more around “human capital,” specifically the ability to attract, train and maintain the high quality crews that are essential today.

“The re-tooling of this industry over the last 10 years has been historic,” said Annessa. “The technology and client focus on its integration has evolved five-fold since 1997 and the advent of dynamic positioning.”

While effectively managing the incorporation of new technology is task enough, 50 percent of the equation is investing in the training and education of crew and managers to ensure that the technology is employed correctly, to direct benefit of both HOS and the client.

“We don’t have the margin of error that we did 20 years ago,” said Hornbeck. “A mistake made today in the deepwater environment is much more expensive than it was 20 years ago. Today there is much more money on the line.”

But where there lies challenge there lies opportunity, and Hornbeck is confident HOS is philosophically and realistically constituted to take advantage. “We are a strong operations company, and it all starts with a strong management team, a team that builds the company culture and technical training programs to lead us to, and keep us on top.”

Annessa admits it is much easier said than done, as some of the managers that were empowered to run the company just 10 years ago may not be set to run it today. “Ten to 15 years ago, you couldn’t have anticipated the number of technical challenges regarding the move into deepwater. We have had to adapt the way in which we are equipped and operated to be successful in the deepwater.” He said part of the problem is that different clients may employ different operating standards, “creating additional costs on the service company community when the expectation of service is not normalized.”

As with all other sectors of the marine market, owners and operators in the offshore O&G market are besieged with new rules and regulations – often formulated in the wake of a disaster – regarding the way in which vessels are build, outfitted and operated. Annessa summarized his thoughts on the matter succinctly: ““Regulatory (demands) are becoming unhinged from common sense.”

From new regulations regarding vessel air emissions and water discharges to security to crew training, Annessa contends that, in the case of STCW for example, there will be a tremendous addition of cost, but not a substantial increase in safety standards. “They’ve (oftentimes) gotten it backwards; when we need to continue our focus on human behavior aspects to prevent accidents, instead of pointing the finger to hardware solutions after the fact.”

“Regulatory (demands) are becoming unhinged from common sense,” said Carl G. Annessa, Exec. VP and Chief Operating Officer, in addressing the effects of an onslaught of new technical rules and requirements.

“Overall we are very bullish on the oil market, long term, despite the recent worldwide drop in consumption,” said Todd M. Hornbeck, regarding the long-term effects of the recent economic downturn.

Innovative Ship Pair Debuts in Aberdeen

Steph McNeill, UK VP, Subsea 7 and John Gallagher, Vice President-Technical, Shell Upstream Europe, pictured quayside at the Seven Atlantic.

John Gallagher, Peter Stephens, Aberdeen City Lord Provost and Steph McNeill pictured in one of the Seven Atlantic's saturation diving chambers.

Subsea 7, in conjunction with Shell Upstream Europe, hosted representatives from the oil and gas and civic communities to Aberdeen harbor for an event showcasing the state-of-the-art Diving Support Vessel (DSV) Seven Atlantic and the new Remotely Operated Vehicle Support Vessel (ROVSV), Normand Subsea. These vessels will service the long-term underwater services contract Subsea 7 has with Shell for inspection, repair and maintenance programs, capital projects and decommissioning works across Shell's European offshore fields and facilities. The Seven Atlantic represents a step forward in North Sea diving productivity and capacity, as it is one of the largest DSVs in the world. At 140 x 26m wide the vessel just fits into Aberdeen Harbor. It is also efficient, designed to operate for at least 60 days offshore without re-supply and will be able to operate in harsher North Sea weather conditions than has been possible previously by similar vessels. The Normand Subsea is also one of the most capable vessels of its kind with ROV launch and recovery systems and a focus on achieving year round availability in harsh environments, including ice. "These vessels represent a significant investment in the next generation of diving and diverless operations and have the capability to significantly improve efficiencies and productivity in the North Sea market," said Steph McNeill, Subsea 7's UK Vice President.

John Gallagher, Vice President–Technical Shell Upstream Europe, said: "The Shell underwater services contract is the continuation of an ongoing long-term relationship between Subsea 7 and Shell which commenced in 1984.

Investment in these two vessels is part of an ongoing capital investment program of over $1b in new assets and equipment by Subsea 7 which has seen eight new vessels join the existing fleet since 2007 — the last of which, the Seven Pacific pipelay and construction vessel, is expected to be delivered later this year. The Seven Atlantic DSV is a next generation dynamically positioned vessel specifically designed for saturation and air diving support work. The integrated saturation system has a capacity for 24 divers using a twin bell system, is built to NORSOK requirements and is configured for split level diving with advanced standards of comfort and safety for the divers. The vessel can accommodate up to 174 people (including divers). In addition, there is a twin work station integrated air-dive system for shallow diving which can also be conducted using Subsea 7's MCA certified Seven Spray air-dive support craft, deployed from the Seven Atlantic. The Normand Subsea is a dynamically positioned Life of Field vessel built to support not only the initial development of subsea oil and gas fields but also the maintenance and integrity management of these assets throughout their producing life. The vessel has six remotely operated vehicles (ROVs) onboard and is specifically designed for inspection, repair and maintenance work. The vessel is fitted with five moonpools: the main working moonpool for module deployment/recovery; two work class ROV moonpools and two observation class ROV moonpools. The remaining two observation class ROVs are deployed over the ship's side from the port side of the hangar. It has on-board facilities for a ship's complement of 90 people.

Norwegian Diesel Electric Joins Trend

In Norway the shipyard of Simek A/S delivered the diesel-electric M/S Stril Mariner to Simon Mkster Rederi AS in Stavanger, Norway. Stril Mariner, named at a ceremony on October 30, 2009, is 257.8 ft. long with a 57.7 ft beam and a molded depth to the main deck of 25.2 ft. At 3,755 dwt, the PSV has tankage for 8,127 ft. of fuel oil, 925 cu. m. of fresh water, 1250 cu. m. drill water and 1010 cu. m. each of mud, liquid mud and brine. Additional tankage includes 175 cu. m. of methanol, 150 cu. m. of glycol, 315 cu. m. of dry cargo and 1300 cu. m. for ORO. The cargo deck is 755 cu. m.

Accommodation is provided for 31 people in 11 one-man cabins and 10 two-man cabins. There is also a deck office, a hospital and a conference room.

Designed by the Havyard firm of naval architects the Stril Mariner has all tankage installed so that there is no storage of liquids that could harm the environment against the ships hull shell.

In addition to this and other provision, the vessel gains its green designation as a result of the diesel electric propulsion system. As only the engines required to maintain the task at hand need be running the resulting emissions, as well as fuel costs, can be dramatically reduced. To achieve this flexibility in the main propulsion system the Stril Mariner is fitted with four Cummins KTA50-(D)M engines each of which turns a generator to produce up to 5,164 kW of power. This can drive the two azimuthing (Roll-Royce Marine AS, Ulstein Aquamaster, model US 205 CRP) drives for main propulsion as well as a pair of bowthrusters. Engines and generators can be shut down when holding position or travelling at reduced speed thus reducing the released pollutants. Additionally the main engine exhausts have been fitted with a Selective Catalytic Reduction (SCR) exhaust gas cleaning system, cleaning the environmentally hazardous CO (carbon monoxide), NOX (nitrogen oxides) and VOC (hydrocarbons) in the exhaust with ammonia, and the nitrogen oxides of the exhaust gas becomes environmentally natural substances water (H2O) and Nitrogen (N2), thus reducing the NOX by approximately 90%.

The Stril Mariner is classed by DNV with Class Notation * 1A1 Fire Fighter I OILREC SF LFL* COMF-V(3) E0 DYNPOS-AUTR NAUT-OSV(A)CLEAN DK(+) HL(2.8).

Market Rebound

Floating Production Systems

"The downward trend in contracting for new floating production systems has reversed," according to Jim McCaul, head of offshore industry advisory group IMA. "We touched cycle bottom in 4th quarter 2009," McCaul said. McCaul bases his assessment on data in a new floating production systems report prepared by IMA. As detailed in the report, orders for nine production floaters and four floating storage units have been placed over the past four months. This is well above the long term average order pace. Order backlog of production floaters now stands at 39 units, up two units since November. The order backlog includes 28 FPSOs, four production semis, one TLP, four FLNGs and two FSRUs. According to McCaul, "the rebound is solidly based and likely to accelerate. There are 159 projects in the planning pipeline that potentially require floating production systems. IMA expects these visible projects, along with others yet to emerge, to produce orders for up to 35 production floaters annually over the next five years." He added, "with the deliveries scheduled this year, by end 2010 a total of 245 production floaters will be in service or available, more than double the number of units ten years ago. And we have not hit the inflection point on the floater growth curve. Given the need to find new oil sources and a growing number of deepwater drill rigs available for E&D, floating production installations will continue to increase at an increasing rate."

For further information visit www.imastudies.com or contact McCaul at 1-832-203-5622 or

Email: imaassoc@msn.com

Statoil Awards Rig Contract

Statoil awarded a contract to Dolphin AS and a letter-of-intent to Seadrill for two rigs which will operate on the Norwegian continental shelf (NCS). The Bideford Dolphin rig won a three-year contract worth about $421m with start-up from January 27, 2011. Statoil has an option to extend the contract by a year by November 1, 2010, increasing the value to about $553m.

Shell Discovery in Eastern GOM

Shell reported what it called a 'significant new oil discovery' in the deepwater eastern Gulf of Mexico, adding to discoveries in the area from 2009. The discovery is located at the Appomattox prospect in 2,200 m (7,217 ft.) of water in Mississippi Canyon blocks 391 and 392. Shell drilled the discovery well, located on Mississippi Canyon block 392, to a depth of 7,643 m (25,077 ft.) and encountered approximately 162 m (530-ft.) of oil pay. Shell then drilled an appraisal sidetrack to 7,910 m (25,950-ft.) and encountered approximately 116 m (380-ft.) of oil pay.

First North Sea-Compliant Floatel

Keppel FELS Limited (Keppel FELS) is on track to deliver Floatel Superior, the first of two newbuild accommodation semisubmersibles (floatels), to Floatel International. Delivered in March 2010, the DNV-classed, Floatel Superior, is reportedly the only newbuild floatel in full compliance with all the latest rules and regulations for the Norwegian sector.

Capable of operating in the harshest offshore environments, Floatel Superior features accommodation for 440 persons in one-man cabins. The unit features full health, safety and environment (HSE) compliance including strict noise level requirements, free fall lifeboats and escape chutes. In particular, the unit utilizes a telescopic gangway for the safe transit of personnel and goods to and from a rig, with the ability to be extended or shortened by +/-7.5m, allowing the vessel to remain connected in severe weather.

Facilities onboard include a galley and mess room for 220 people in one seating, as well as recreational amenities such as a cinema, internet café, games room, gymnasium and sauna.

This new generation floatel is built to the DSSTM 20NS design, developed and owned by Keppel's Deepwater Technology Group (DTG) and Marine Structure Consultants (MSC). This innovative design combines and enhances the tried and tested DSSTM series semisubmersible drilling rig and Keppel's SSAUTM 3600 accommodation semisubmersible designs, to offer a unique solution for the North Sea. Floatel Superior is equipped with both Dynamic Positioning 3 (DP3) and 8-point mooring system capabilities. The construction of Floatel's second accommodation semi, Floatel Reliance, is on track for delivery in the second half of 2010.

Right: Floatel Superior, reportedly the first and only newbuild floatel in full compliance with the latest rules and regulations for the Norwegian sector in more than 20 years.

Below: Mr. and Mrs. Jorgen Bengtsson, CFO of Floatel; Tong Chong Heong, CEO of Keppel O&M; Erland Bassøe, Chairman of Floatel, Lady Sponsor Dr. Dianne Tompkins and Mark Tompkins, VP, Operations, Drilling & Supply Chain, CoconoPhillips Australia; and Sit Peng San, CFO of Keppel O&M, onboard the rig before the accomodation block.

Signal Wins Rig Project

A subsidiary of Diamond Offshore Drilling, Inc. has awarded dockside shipyard work on the Ocean Baroness semi-submersible-drilling rig to Signal International, LLC. The rig is currently docked at Signal's Pascagoula Mississippi East Yard undergoing mooring chain inspection and chain locker repairs, general steel renewals, piping upgrades and ABS survey work.

Ongoing enhancements at the East Yard have enabled Signal to accommodate large semisubmersibles, such as the Baroness, that draw over 30 ft. of water depth. A 60-ft. water depth by 300 x 500 ft. hole was dredged near the dock. Additional dredging, from 35- to 42-ft. depth, was also completed along a 1,005 ft. stretch at the East Yard's dockside.

Ultra-Deepwater Contract

Transocean said that the newbuild ultra-deepwater drillship Discoverer Inspiration commenced operations for Chevron U.S.A. Inc., a wholly owned subsidiary of Chevron, in the U.S. Gulf of Mexico under a five-year drilling contract.

The DP double-hulled Discoverer Inspiration is an enhanced version of Transocean's three predecessor Enterprise-class drillships, which set deepwater drilling records in recent years, including the world water-depth drilling record of 10,011 ft. set by the Discoverer Deep Seas while working for Chevron in the U.S. Gulf of Mexico.

Discoverer Inspiration features Transocean's patented dual-activity drilling technology, which allows for parallel drilling operations designed to save time and money in deepwater well construction, compared with conventional rigs. The dual-activity technology, along with a new and enhanced top drive system, a high-pressure mud system and other features of the drillship target the drilling of wells up to 40,000 ft. of total depth. The rig has a variable deckload of more than 20,000mt and can drill in water depths of up to 12,000 ft.

RINA Classes First Offshore LNG FSRU

RINA reports it will class the first offshore Floating Storage and Regasification Unit (FSRU), and is providing studies and support for a number of additional offshore LNG projects, including the newbuilding which is likely to be the world's second offshore LNG FSRU. The OLT development will see the 138,000 cu. m. Moss-type Golar Frost converted into a 3.75 bcm per year FSRU, moored in 120 m of water off Italy's west coast port of Livorno.

Keppel O&M Wins $140m in Contracts

Keppel Offshore & Marine Limited through its subsidiaries, Keppel Shipyard, Keppel FELS and Keppel Verolme, has secured $140m worth of contracts for the conversion of a Floating Production Storage and Offloading facility (FPSO) and repair and modification of two semi-submersibles (semi). Keppel Shipyard will undertake the upgrading and conversion of a Suezmax tanker into an FPSO for repeat customer Bumi Armada Berhad (Bumi Armada). Keppel FELS and Keppel Verolme have each secured the repair and modification of a drilling semi from Stena Drilling.

Specialty Lubricants for

Open Gears @ Sea

The positioning of oil rigs and their anchors is the job of anchor handling tug supply (AHTS) ships. In all kinds of weather, these vessels drop and weigh the rigs' anchors with their powerful winches, or they tow the platforms to new positions, and they also supply the rig crews with all materials and equipment needed for offshore operation. In emergencies, they can serve as emergency rescue and recovery vessels (ERRV).

Anchor winches are required to operate with utmost reliability, which inevitably includes also their lubricants. Any anchor winch failure on an AHTS vessel can have severe consequences for the operator. Damage to the gear teeth particularly damaging, as it is almost impossible to replace a gear rim while the ship is at sea, meaning the ship would have to come out of service while replacement parts are found and fitted. In addition to the risk of equipment damage, there is the greater risk that crew members may be hurt. Ultimately, oil majors demand near seamless performance from the vessels that service its offshore oil and gas structures, and out-of-service can mean out-of-contract.

Based on years of experience and research, Klüber Lubrication has developed adhesive lubricants precisely tuned to the operating conditions prevailing in open girth gear drives. A leading Scandinavian ship equipment OEM has gained positive experience with Klüber's special lubricants for open winch drives and recommends these lubricants to its customers. This pertains to GRAFLOSCON B-SG 00 Ultra, a running-in lubricant, and Klüberfluid C-F 3 Ultra as operating lubricant up to an ambient temperature of 30 °C, or Klüberfluid C-F 3 M Ultra for temperatures above 30 °C as are typical of tropical regions.

The selection of the lubricant for open winch gears is influenced by a number of design- and application considerations. Upon manufacture, the gear flanks still show a high degree of surface roughness. This, and the fact that the gear rim and pinion are often not perfectly parallel-aligned, is the cause why the load carrying area is often no more than 50 or 60%. When in mesh, the load-bearing tooth flanks may therefore suffer partial overloading, which in turn can lead to excessive wear and tooth flank damage. Running-in lubrication plays a vital role in this context.

New girth-gear drives are usually subjected to a specific running-in process, for example with GRAFLOSCON B-SG 00 Ultra, depending on the winch design. During loaded operation, controlled micro-wear is intentionally provoked to smooth the tooth flanks. The consequence is a higher load-carrying area of approximately, 80%, which helps to avoid overloading and gear damage.

Running-in lubricants may only be applied over a

Anchor winches are required to operate with utmost reliability, which inevitably includes also their lubricants.

There are plenty of challenges in offshore oil and gas operations, perhaps none as rigorous as demands placed on deck machinery. In all kinds of weather, AHTS's for example, must drop and weigh the rigs' anchors with their powerful winches, or they tow the platforms to new positions. Based on years of experience and research, Klüber Lubrication has developed adhesive lubricants precisely tuned to the operating conditions prevailing in open girth gear drives.

limited time and must be replaced by the operating lubricant when running-in is completed. Klüber's running-in lubricants and Klüber's operating lubricants have been designed such that conversion to the operating lubricant can be done without cleaning the gears.

Challenges Encountered During Operation

- Large open winch drives on AHTS vessels are subject to strong tensile loads at the anchor chains and shock loads with a high surface pressure. As peripheral speeds are usually low, the drives run frequently under mixed friction conditions. A sufficient hydrodynamic lubricant film is therefore not generated, so the tooth flank surfaces are partly in direct contact. The consequences can be excessive wear and damage to the tooth flanks in the form of pitting. Pitting is caused when the permissible load on the gear material is exceeded locally. Microcracks form near the surface, leading eventually to spalling. This diminishes the load-carrying area of the tooth flanks, encouraging further pitting. A suitable lubricant is, therefore, one that builds up a load-bearing reaction layer also at low peripheral speeds and high surface pressure to protect the pinion and gear rim flanks reliably against wear.
- The winches are often operated only for a short time during hauling or anchor handling. The gear lubricant is applied by means of transfer lubrication, i.e. only while the drive is in motion. This has to suffice to reliably protect the tooth flanks against corrosion as the open gears are permanently exposed to the aggressive salty air and spray water. It is therefore essential that the lubricant spreads well, adheres firmly to the components and does not drop off.
- AHTS ships operate in a wide variety of climates. The lubricants used have to be pumpable by means of the lubricating systems installed at all temperatures.

Klüber Lubrication developed Klüberfluid C-F 3 Ultra for ambient temperatures up to + 30 °C, and Klüberfluid C-F 3 M Ultra for ambient temperatures above + 30 °C. The lubricants of the Klüberfluid series are transparent, highly viscous adhesive lubricants with good tooth-flank-, wear- and corrosion-protection properties aimed at a long component life. According to the manufacturer, reliable lubrication can be attained with 50% less lubricant.

www.klueber.com

Dockwise seeks to perfect the art of

Heavy Lifting Offshore

For 20 years Dockwise has been a leader in heavy, ocean transportation, primarily servicing the energy market. Today, it is combining its fleet of 20 vessels with a turnkey service. "It's not just about the vessel – it's about the solution – it's about working together and utilizing Engineering and Project Management to act as a united team to develop the best solution for customer's inconceivable needs," said Marcel Uitdewillegen, Marketing Information Manager.

One of Dockwise's unique areas has to do with floatover installations, which use its engineering capabilities and innovative installation products like the company's own designed Leg Mating Units (LMUs) and Deck Support Units (DSUs). Dockwise has been developing its float-over solutions as a reliable means of carrying out installations, especially in harsh and remote environments. With the additions of OKI and ODL, Dockwise has expanded its engineering and innovation strength to become a prequalified marine installation contractor. Using its project management and subcontracting skills, Dockwise is able to organize all aspects of logistical solutions using float-over installation technology. Energy operators are starting to realize that the integrated use of a Dockwise, semi-submersible, heavy-lift vessel, along with in-house engineering capabilities, float-over deck installation and complete logistical transportation and installation management will help to reduce integration costs. An example of this is the August 2009, floatover transport and installation of the MDPP offshore module, which Dockwise performed on behalf of the client, the Thai-Malaysian company, CPOC (Carigali-PTTEPI Operation Company). The 19,000 ton topside (MDPP deck) was transported and installed in the JDA (Joint Development Area) Block B-17 field development in the economic zone located between Malaysia and Thailand in the Gulf of Thailand.

The scope of work included feasibility studies, tug assistance and control/management during the load-out and discharge, assistance with cargo insurance, management, engineering and procurement for the vessel's deck preparation and the pre-installation of the offshore mooring system. ASL Shipyard, in Batam, was also subcontracted by Dockwise for the outfitting and reinstatement of the Black Marlin, which included the fabrication of the grillage and skid beams and the installation of winches, accommodations, raised walkways and the removal of both casings.

Steven Byle, VP Technology said, "In this regard, Dockwise is so much more than just a Heavy Marine Transport provider. Dockwise's numerous specialized and innovative initiatives are built on the kind of engineering and technical expertise which differentiate the company from other players. The current drive towards innovative initiatives is focused on investigating and solving several onerous transport problems for our key clients without compromising on safety or quality." Embarking on the safest and most innovative course is exactly the kind

MDPP offshore module on Black Marlin.

Marcel Uitdewilligen, Marketing Information Manager

Steven Byle, VP Technology

Rob Strijland, Chief Operational Officer

André Goedée, Chief Executive Officer

of dynamic that characterizes Dockwise's long-term vision. In addition to the company's ISO 9001 (quality) certification, Dockwise also attained its ISO 14001(Environment) and OHSAS 18001 (Safety) certificates from Lloyd's Register Quality Assurance. "Dockwise is in a position to lead changes in sustainable practice, especially when it comes to working together in the industry. Currently we are working on innovations in regards to existing services and core business to operate increasingly sustainable practices that will result in the reduction of environmental impacts, said Rob Strijland, COO. "Our ultimate goal is to be environmentally neutral. We must consider the environment as we plan and design for the future. The important thing is to act on vital knowledge. The heavy marine transport industry has already evolved over the years from wet-tow to the more sustainable, dry-transport method. Today Dockwise is looking even further to utilize our talented, engineering minds from the Netherlands, the United States and China to develop more sustainable operational and engineering transport solutions. Part of our vision is to give environmental protection the proper position in the planning and design. We are thinking about our reputation with our clients. We are here to serve."

Heavy Marine Transport

The commercial activities of Dockwise are spread over several direct and indirect channels with a large number of agents, brokers and representatives around the world. Partners are connecting with a segment of the market by bringing in a variety of short term and smaller cargoes. Examples of the cargoes performed via brokers are river and coastal vessels, dredging equipment, container cranes, port and offshore service equipment, as well as equipment for construction projects like bridges or caissons, in addition to many different oil and gas industry transports.

Floating Docks

Dockwise frequently transports floating docks, which can range in age from pre-World War II units to modern docks in many different conditions, which often preclude them for being mobilized from one side of the world to another in any other way than as dry transportation. Recently Dockwise assisted the Australian Marine Complex (AMC) by delivering the 99m (325 ft) by 53m (174 ft) floating pontoon weighing more than 4,000 tons to the AMC Common User Facility in Henderson, Western Australia.

Dredging Cargoes

Dredging cargoes also play an important role in the world of Port and Marine infrastructure. Dredging companies, like Boskalis, typically have a short time horizon for transport demands, so they require flexibility. Dockwise excels with these types of demands, because they can easily mobilize and synchronize a vessel with a cargo in a very short amount of time. Dredging cargoes fit perfectly aboard Dockwise's Swan and T-Class, closed stern vessels. Recently Dockwise's Black Marlin, one of Dockwise's largest heavy, heavy transportation vessels (and in the world), transported an entire load of dredgers from the Korean port, Koje to Djendjen, Algeria.

Container Cranes

The large MES container cranes were loaded on board the Tern, a Swan-class vessel, using the 'roll-on' method, whereby a steel track was placed aboard the vessel and the cranes we then rolled onto the vessel, which was moored alongside the quay. The MES cranes were rolled on in Oita, Korea and then transported across the Pacific to Los Angeles.

Bunker Barges

With the recent transport of United Tanker's bunker barges, Dockwise is providing heavy marine transportation to support the Panama Canal extension project. Since these barges are not seaworthy, Dockwise provided the safe ocean journey from the Netherlands, across the Atlantic to the Panama Canal where the barges are currently being used to provide bunkering services for extension work.

Jack-Up Lift Boats

Jack-up Lift Boats provide various types of offshore services, including the installation of wind farms. Dockwise transported two of Seajacks International Ltd.'s jack-up lift-boats – the Kraken and the Leviathan.

The Leviathan will be engaged in the installation of the Greater Gabbard wind project, which is being touted as the world's largest offshore wind farm to be located in the North Sea.

This ambitious renewable energy project is set to be completed in 2011.

Synthetic Winch Lines

Reducing Deck Loads and Equipment Footprint

As exploration and production moves into increasingly deeper waters, the challenges of subsea equipment installations, anchor handling and pipe laying increase proportionately. One of the one of the more noticeable consequences is that wire rope, which was at one time the best solution, has become more of a problem. Because of the lengths of wire rope required to go deep, its deck load becomes troublesome and the equipment required to handle it takes up precious space and power onboard.

Enter high-performance synthetic winch lines, which, when compared with wire rope of the same strength, weigh one-seventh the same strength wire ropes. These lightweight, high strength lines reduce the overall deck load significantly, and reduce the equipment footprint and power requirements of daily operation to do the same work, or they increase the capacity of existing equipment.

For example, a typical winch system with 300 metric tons of pull using 4-in. diameter lines, 150 m in length, can have a 30% reduction in the size and weight of the winch when high-performance synthetic ropes are used. That's before factoring in the weight of the rope itself.

Consider this winch line is made of steel wire: it would weigh as much as 6,300 kg or 13,860 lb.

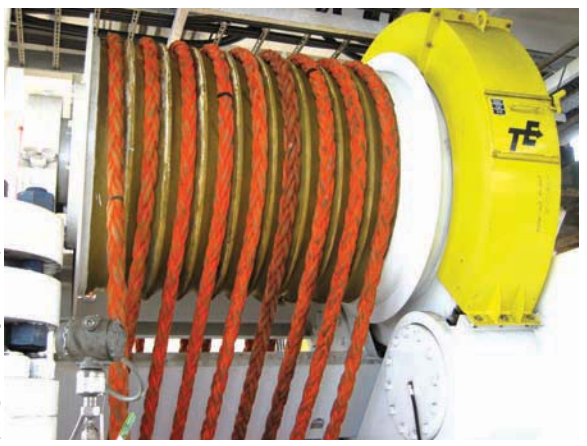
Now consider an 8-strand by three-strand winch line made of high modulus polyethylene: it would weigh 801 kg or 1,762 lb. The winch and line weight savings represent a significant reduction on the deck load.

Furthermore, wire rope has a breaking length, which is the amount of rope whose weight exceeds the strength of the rope itself, limiting its use at extreme depths. Upsizing the diameter of the wire might compensate, but power demands are also increased, as are the physical size of the winch and deck space required to handle it.

By comparison, high strength, high modulus synthetics offer reliable strength and performance, are lightweight and flexible, require far less maintenance than wire, extend service life by up to three times that of wire, have better bend-fatigue characteristics, are easy to handle and are neutrally buoyant in seawater—some constructions even float.

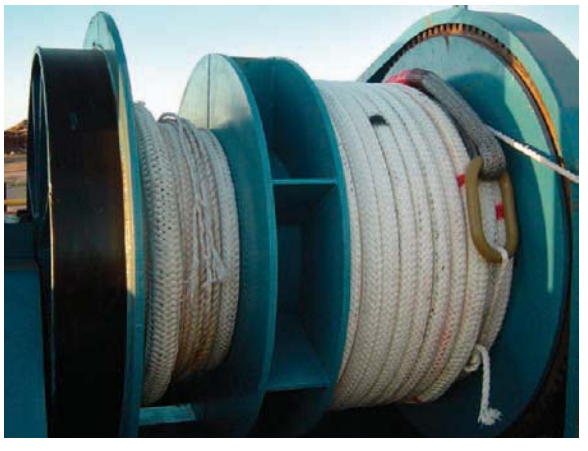
That means more of the energy required to operate winches is spent lifting or lowering the payload, not the rope.

High-performance synthetic winch lines reduce installation and operating costs by offering a longer, more reliable service life, which makes them a clear choice over wire rope for offshore applications.



(Image courtesy Samson)

High-performance winch lines are capable of solving problems posed by wire rope in offshore exploration and production.



(Image courtesy Samson)

A custom-engineered tapered high-performance synthetic winch line used on the Enfield riser column installation in 2007.

12 x 12 Sling Helps to Suspend Riser

Recently, Cortland Puget Sound Rope helped a contractor install a heavy payload offshore with Plasma 12 x 12 slings. The job required a matched pair of 580-ft. (177-m) long eye and eye slings, each with a 200-metric ton WLL. The slings were to be used to suspend a riser while a buoyancy can was installed. A pair of 5-in. diameter wire rope slings would have been needed to meet the working load requirement. The combined weight of the slings would have been over 55,000 lbs. (~25 tons), making the task virtually impossible.

Cortland Puget Sound Rope was able to meet the contractor's requirements with Plasma 12 x 12. The Plasma slings exceeded the breaking strength of the wire rope while weighing only a total of 7,200 lbs. (3.27 tons) in air, a weight reduction of approximately 87%. In water, the slings were virtually weightless. In addition, the elongation of Plasma 12 x 12 is very similar to wire rope, allowing the contractor to perform the work in a controlled precise manner.

Plasma 12 x 12 has been used in a number of lifting applications, replacing wire rope and chain slings. From BOP recovery assemblies to heavy lift slings, Plasma's high performance synthetic rope slings are being used to reduce weight, speed up rigging time and increase safety.

www.psrope.com

Electric Scientific Winches to New PRV

STX Finland Oy and the South African Department of Environmental Affairs signed a contract for construction of a Polar Supply and Research Vessel. The ship has a value of approximately $156m. The ship will be built in the Rauma shipyard and it will be delivered in spring 2012. The ship will function as a multi-purpose vessel, serving, among other things, as a supply vessel, research vessel, icebreaker, expedition vessel, as well as a passenger ship. The Polar Supply and Research Vessel will be used to carry scientists and research equipment for the South African National Antarctic Program in the sea area between South Africa, the Antarctic islands and the Antarctica. Rapp Hydema is happy to announce that we are the suppliers of the following deck machinery to this new Polar Research Vessel:

- CTD Winches
- Plankton Vertical Winch
- Plankton Towing Winch
- General Purpose Towing Winch
- Deep Sea Corer Winch
- Undulating Winch
- PTS-Pentagon monitoring Systems

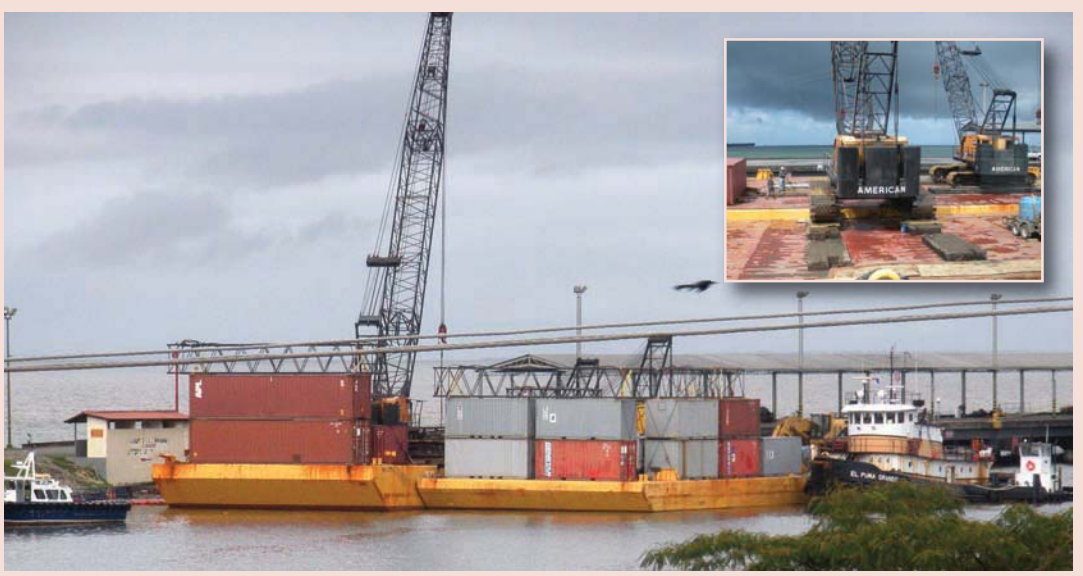
Mobro seeks to be
Equipped for Any Task

Mobro Marine Inc provided crane and barge service as well as port facilities for mobilization and offshore marine transportation via tugboat and barge charter for its' construction project in Chiriqui Grande, Panama. The primitive conditions in Panama made the job of constructing the foundation for bulk crude oil tanks difficult and tedious. Morbo was able to assist US contractor Hayward Baker in equipment deployment which let to the success of the project.

Mobro Marine has a plethora of knowledge in the marine business accompanied by a diverse fleet of equipment and personnel. Since 1962, Mobro Marine Inc has been meeting the needs of contractors for both domestic and international projects.

Mobro's rental fleet includes over 100 barges, crawler cranes, barge mounted ringers, inland push boats and U.S. Flag offshore tugs.

www.mobromarine.com



Getting to the bottom of

Brazil's Deepwater Challenge

"The future of the oil industry lies in the deepwater subsea market," said Øystein Bondevik, Cargotec's sales director for offshore load handling. "This sector is much less likely to see over-capacity than relatively shallow waters. There are currently only six vessels being built for construction activity in 2,500m-plus water depths, and just 25 percent of existing fleets are capable of laying pipe in water more than 2,000m deep. Around 60 percent of existing fleets are not capable of working at water depths beyond 1,000m.

"A deepwater lift is a complex operation and creates a number of challenges. Cranes are near their size and operational depth limits, and giant cranes are difficult to manufacture. All of this dramatically adds huge increases in costs as large cranes require large vessels."

Traditional offshore cranes are limited, in part, by the weight of the steel lifting wire itself, which reduces the net hook capacity as more and more wire is deployed to reach greater depths. A 150-ton single-line crane effectively 'loses' 25 tons capacity for every 1,000m of wire deployed. At a depth of 3,000m, for example, it will only be able to lift 75 tons, although the crane winch is handling the full 150 tons and the need for active heave-compensation is substantial.

"We can combat this problem with our MacGregor ultra-deepwater lifting system (UDLS) which uses new multi-component fiber ropes that weigh nothing in water," Bondevik says. "By using this system, the 150-ton capacity crane would be able to deploy its full load of 150 tons down to a depth of 5,000m, for example. The weight of thousands of meters of submerged rope does not have to be subtracted from the crane's total load capacity, and the UDLS can access unlimited depths."

The UDLS has been developed from existing field-proven solutions and employs the crane's existing steel wire winch to make active heave-compensated seabed landings. Handling landing heave-compensation with a winch operation using traditional steel cable eliminates wear and tear on the fiber rope during this critical phase, and spooling and bending the critical fiber rope is avoided. Eliminating these strains on a fiber rope is essential as it is more vulnerable to mechanical stress than traditional steel cable.

The multi-component fiber ropes are prepared

The MacGregor ultra-deepwater lifting system uses new multi-component fibre ropes that weigh nothing in water.

and spooled in required lengths. The UDLS uses a side-mounted frame fixed to a vessel which allows the crane to lower a load to a depth of 1,000m using a steel wire. The load is then transferred to fiber rope, the crane hook is returned to the surface and reattached to the upper end of the fiber rope, and a new length of rope is deployed. This hook-moving sequence is repeated until the desired depth is reached. The UDLS is available as a 150-ton capacity or 250-ton capacity system and can be supplied ready for various lengths of fiber rope. It can also be offered as a reduced version, prepared for future upgrades for even deeper locations. "The UDLS is ideally suited to crane applications in Brazil's Campos Basin," said Bondevik, "as it enables much easier access to extreme depths in this relatively-untapped sector." A range of specialist deepwater technology is showcased in Brazil. Key equipment from Cargotec includes MacGregor AHC offshore and subsea cranes, launch-and-recovery systems for remotely-operated vehicles (ROVs) and remotely-operated tools (ROTs), module-handling systems, and advanced rescue and deck-handling equipment. It also offers towing winches, anchor-handling winches, mooring systems and winches for other applications.

"The essential function of AHC technology – a standard for all MacGregor offshore equipment – is the ability to land and retrieve subsea installations to and from the seabed with precision and accuracy, while minimizing the impact caused by the motion of the vessel," Bondevik said. "The expansion of the operational weather window is assured by products with AHC. It also allows smaller vessels to perform critical operations during mating of loads onto the seabed, especially in rough seas and harsh weather conditions." Cargotec offers AHC technology with up to 600-ton high speed single-wire winches that are available in active and semi-active hydraulic and electric versions. In extreme operations, MacGregor AHC products have proven compensation performance far better than 95 per cent with large systems smoothly controlling a load even in high seas.

"Customers expect equipment suppliers to be able to tackle all of these challenges and each must be done in an environmentally responsible manner and at increasing depths, without technical difficulties that result in a vessel having to go off-hire when it should be performing critical tasks," Bondevik said. "Guaranteeing and optimizing this capability is our aim."

Brazil-based Services Strengthened

Brazil's growing position in the offshore market is accompanied by an increased need for service support. Cargotec has strengthened activities in this region through its recently-expanded Brazil service branch in Rio de Janeiro.

Guy Duriau, branch manager of Cargotec's Brazil basesaid says: "Our new premises are only five minutes away from Rio de Janeiro's port entry."

The company's new site has a general workshop area, including a hydraulic testing room and office space with a dedicated training room. It also has a fully-fitted service vehicle and trailer which allow engineers to carry out services in all ports in the states of Rio de Janeiro, Espirito Santo and Sao Paulo.

"Our expanded site enables us to provide a much better service to our international customers," Duriau said. "We will be able to play a more important role in developing services in the rest of Latin America. Training is also important and – in co-operation with our European head office training center – we plan to organize regular training sessions in Rio de Janeiro for all Cargotec agents and offices based in South America.

"To ensure spare parts availability and stock for Brazil, we operate a customs-bounded warehouse. This means that we have stock available for key customers who have their vessels on a regular schedule in Brazil and South America. On top of this we also keep some frequently-demanded parts in stock, as it is important to have the spare parts close to where our worldwide customers operate their fleets – and in particular for our offshore customers".

Cargotec has facilities dedicated to both its MacGregor and Kalmar brands in Brazil, with MacGregor support based in Rio de Janeiro and Kalmar in Santos. Cargotec offers a wide range of maintenance and service solutions for fleets operating in Latin America. Besides its Brazilian customers, the branch also provides services for any visiting ship in the area.

Markey Machinery: Specialized Winch for ECO

In 2008 Markey Machinery was approached by Edison Chouest Offshore to produce a specialized dual-purpose hydraulic winch for installation on one of its Voith-Schneider offshore tugs. The resulting winch designated as model DYSDS-52WF-250MT was installed on the tug in 2009, and it boasts an anchor-handling drum and a ship-assist/escort drum arranged in a classic waterfall arrangement. The lower anchor-handling drum has a capacity of 200M of 10-in. circumference soft-line or 550M of 2.25-in. diameter wire and can produce 250-tons of line-pull at line-speeds of up to 22 m/min. The brake can resist up to 600-

tons of line pull. The anchor handling drum features a drive consisting of four hydraulic motors installed on a modular, removable gearbox for ease of maintenance. The escort drum is a completely independent, modular winch powered by two additional hydraulic motors and is capable of 10.3-tons of line-pull and speeds up to 85 m/min. The escort drum's controls feature Markey's exclusive hydraulic Render/Recover system for ease of maneuverability during operations, as well as Markey's high-speed freewheel mode for safety.

www.markeymachinery.com

Ezra Orders MacGregor Subsea Knuckle-jib Cranes

Cargotec will deliver two large offshore cranes to Singapore-based Ezra Marine Service Pte Ltd in 2010 and beginning of 2011 respectively. The cranes will be fitted to a deepwater anchor-handling towing/supply vessel (AHTS) and to a self-propelled accommodation barge.

The order comprises two large active heave-compensated subsea knuckle-jib

MacGregor 150-ton active heave compensated subsea crane.

cranes. The first is for an ultra-deepwater AHTS. This 150-ton SWL crane has an under-deck mounted winch with a 3,000m wire. The second crane is a 150-ton SWL version being installed on a DP self-propelled accommodation barge.

Cargotec will manufacture vital components for the two cranes at its state-of-the-art unit in Kristiansand, Norway and at the recently modernized manufacturing, assembly and testing plant for offshore load handling solutions in Singapore. "Ezra is a major player providing integrated offshore support solutions for the oil and gas industry, and its choice of MacGregor offshore cranes for these newbuilding projects recognizes Cargotec's offshore capabilities," said Øystein Bondevik, sales director for offshore load handling at Cargotec.

Containers Stuffing in DCT Gdansk terminal

DCT Gdansk container terminal purchased a "ACTIW LoadPlate" unit, being used for cargo stuffing into standard containers. It is designed to ensure the efficient loading of a wide assortment of

Eliminate Line Chafing

Fluoron, Inc. of Elkton, Md., has developed a new approach to the prevention of line chafing. This new patentable technology is designed to cover old, worn deck equipment; with potential applications such as the bull nose, H-bit, side bit and fairlead rollers. The covers are designed to extend the life cycle of synthetic lines by reducing friction and chafing. They would also eliminate the need for maintenance such as painting and could be applied in different colors. **Email: nick@fluoron.com**

cargoes. The technology of ACTIW LoadPlate system reportedly eliminates the restrictions of loading cargoes considered to be difficult for containerization, or susceptible to damage while using the conventional load methods. It concerns such cargoes as: steel constructions, machinery, steel pipes, steel sheets, bars, steel profiles, structural sections, as well as many others. This device is also designed for loading unitized cargoes, such as pallets, big bags, etc., so the maximum utilization of cargo space in the container can be achieved. Using ACTIW LoadPlate platform is designed to improve the efficiency of general cargo handling operations, accelerates the container's cargo stuffing and supports to road transport in direct trans-shipments.

DCT Gdansk is the first container terminal in the Southern part of the Baltic Sea equipped with ACTIW LoadPlate technology, which was produced by the Finnish company Actiw Oy and delivered to DCT Gdansk terminal in the beginning of March.

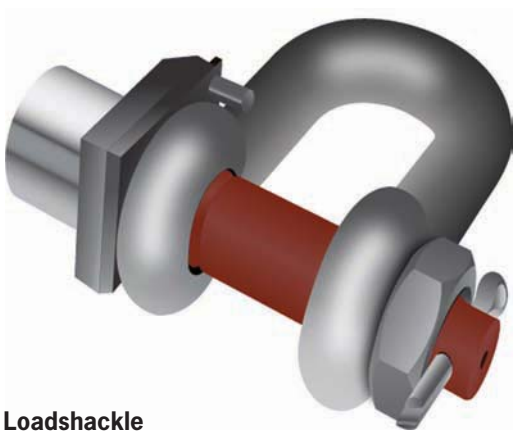
Crane Scales & Load Monitoring Devices

In today's offshore industry, escalating costs of equipment and downtime through failures are putting a new perspective on lift and load monitoring technology. Oil industry players are re-evaluating their practices in light of several incidents that have caused production and equipment losses far exceeding the original equipment purchase cost. Offered is the Straightpoint range of wireless and cable controlled devices built in the UK and in use in offshore oil fields globally. The demands and environmental factors of the offshore industry dictate the very best of design, materials and testing in this hostile field. Over the years, Straightpoint has built experience in this area and offers load measurement solutions. Straightpoint offers real product solutions with the performance required for specific applications, from splash zone to total submersion for up to 30 years. Typical Applications Include:

- Vessel Mooring Tension Monitoring
- Buoy Mooring Tension Monitoring
- Vessel Towing Tension Monitoring
- Crane Safety
- Module Weighing
- Sub-sea Ploughs
- Cable Recovery Systems

The Straightpoint range of loadcells include the Radiolink plus, Loadlink plus and also include a range of Loadshackles and Loadpins.

www.straightpoint-inc.com



Loadshackle

MHI Licensee in China Completes First Deck Crane

Nantong Masada Ship Machinery Co., Ltd., a Chinese company located in Nantong, Jiangsu Province, to which Mitsubishi Heavy Industries, Ltd. (MHI) licensed its marine deck crane technology, has completed production and delivery of its first MHI-licensed product. (Nantong city is situated on the northern bank of the Yangtze River approximately 110 km northwest of Shanghai.) Delivery was taken by Jiangsu Hantong Ship Heavy Industry Co., Ltd., a major local shipbuilder. Nantong Masada aims to increase deck crane production in response to rapidly growing demand arising from a sharp increase in local construction of cargo ships, including bulk carriers. MHI is looking for its partnership with Nantong Masada to play an important role in launching its deck cranes into the expanding Chinese market. Nantong Masada Ship Machinery was jointly established in 2005 by Nantong Universal Machinery Co., Ltd., an industrial machinery manufacturer in Jiangsu, and Masada Ironworks Co., Ltd., a winch manufacturer in Osaka, Japan.

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Deepwater Challenges in Brazil

From seismic data analysis to intelligent wells, the challenges facing deep water O&G production in Brazil are being faced. Upcoming O&G events in Rio

Just five years ago, many of the technologies we now take for granted in subsea systems development, would have been considered improbable, at best. Although, these same technologies have been under development by players and specially by the major subsea systems providers for a decade and in many cases quite a bit longer than that.

There is no doubt in the subsea industry that most deepwater subsea system experiments started in the North Sea and some old deepwater projects in the GOM, with few early projects being conducted in the very peculiar Brazilian Deep.

Some of the early project in Brazil are very important, such as the Marlim Field in the northeast Campos Basin, which is still the World´s largest deepwater subsea development.

The Marlim field covers 130 square km with water depths up to 1000m. In this area there are 83 production wells and 46 water injectors, including 36 horizontal wells. FMC Technologies has been the Petrobras longstanding partner in this development. Today, with the increasing push into ultra-deep field developments, we have challenges such as operators being capable of controlling these ultra-deep wells or a system of interconnected wells, in real time on site in FPSO or from remote bases.

Other challenges relate to the choice and development of specific drilling fluids, in order to address problems such as well cementation.

Multiphase pumping systems, specially electric systems are showing good results as is the use of intricate subsea separation systems, which increase lifting efficiency and decrease the need of pipe interventions.

At extreme depths even ROV interventions can become critical due to equipment fatigue due to strong currents, low temperature and high pressure found in ultra-deep waters.

These are but a few of the challenges facing deep and ultra-deep O&G field developments in Brazil.

Posted by Claudio Paschoa on 3/18/2010 11:26:40 PM

Dedicated Wind Turbine Installation Crane Ordered

Huisman, the Dutch-based specialist in lifting, drilling and subsea solutions, secured a new contract with Centrica and MPI Offshore Limited to supply and install a new 600mt Wind Turbine Installation Crane onboard the Wind Turbine Installation Vessel MPI Resolution. The crane will be built, installed, commissioned and tested at the Huisman facility in Schiedam, The Netherlands. The Wind Turbine Installation Crane is custom-designed for the installation of offshore wind turbines. It features low overall crane construction weight (580mt), reduced minimum radius operating ability (12.5m) and minor tail swing. The new crane will replace the existing 300mt main crane onboard MPI Offshore Limited vessel to prepare it for larger wind turbine component handling requirements for long term vessel charterer Centrica Renewable Energy Ltd (CREL). In the first quarter of 2011, the upgraded vessel is scheduled to be deployed for turbine installation operation upon CREL's forthcoming 270MW Lyncs wind farm project situated off the UK's Lincolnshire coast.

www.huismanequipment.com

Efficiency Around Propellers

There are several appendages of all shapes and sizes that can be positioned near the propeller or rudder with claims of improved propulsion efficiency. Two such devices are offered by Kawasaki, Japan. One is the Semi-Duct Systems with contra Fins abbreviated to the SDS-F, the net result is a reported improvement in efficiency of three to seven per cent. The other device is the Rudder Bulb System with Fins (RBS-F). It is built on to the rudder and is used to reduce swirl loses coming off the propeller. It is Installed on more than 100 ships, and claims a two to seven per cent reduction in power requirement. Another patented system is called the Sanoyas Tandem Fin (STF) where fins stabilize the bilge vortices, presenting the propeller with less turbulent flow and claiming an energy saving of up to six per cent.

There are several appendages of all shapes and sizes that can be positioned near the propeller or rudder with claims of improved efficiency. In the majority of cases these devices are patented and being offered by major companies.

Two such devices are offered by Kawasaki, Japan. One is the Semi-Duct Systems with contra Fins abbreviated to the SDS-F, consisting of a fixed semi nozzle-like duct in front of the propeller with fins fitted. The semi-duct improves flow of the bilge vortices in front of the propeller and restricts flow separation at the stern. The fins create reverse rotational flows to the propeller thereby reducing the swirl emerging behind the propeller. The net result is a reported improvement in efficiency of 3 to 7 percent, and when used with the RBS-F device, improvements are claimed to increase. It's in use on five oil tankers so far.

The other device from the same company is the Rudder Bulb System with Fins (RBS-F), also patented, it is built on to the rudder. It is a streamlined bulb attached to the rudder leading edge, just behind and in line with the propeller hub. In addition there is a pair of "wings" in the shape of an airfoil section emerging from the bulb and is used to reduce swirl loses coming off the propeller. This system has been installed on LNG carriers, LPG carriers and bulk carriers totaling more than 100 ships. No wonder, as Kawasaki claims a two to seven per cent reduction in power requirement.

Another Japanese ship builder Sanoyas Hishino Meisho Corp produces a patented fin arrangement mounted in tandem on the stern part of the ship's hull, ahead of the propeller. Called the Sanoyas Tandem Fin (STF) the principle is that the fin stabilizes the bilge vortices, presenting the propeller with less turbulent flow. Claiming to reward the owners with an energy saving of up to six per cent, so far it is fitted on two ships and will be monitored to see how much the theoretical efficiency will be borne out in practice.

Posted by Keith Henderson on his "Marine Propulsion Report" Blog on 3/18/2010 1:54:48 PM

Technical Shipping

Employment Report

The market for technical shipping jobs has improved considerably

Global shipping recruiter **Faststream** has published its latest maritime employment review focusing on the market for technical shipping people. The market for technical shipping jobs has improved considerably in the first quarter of 2010 with greater confidence from both candidates and employers. The company's survey of candidates placed in a wide range of technical roles for shipping companies, oil majors, flag states, classification societies and consultancies shows that salaries have remained steady and that experienced and well qualified candidates remain hot property. Full details including salary comparisons and candidate nationality statistics can be found in the attached document. Please click the link below to view pdf:

http://img.marinelink.com/mp/faststream_technical_march2010.pdf

Posted by Jocelyn Redfern

The Vulnerability of Malacca Straight

The complete disruption of global trade is just one sunken tanker away.

The Straits of Malacca link Asia with the Middle East and Europe. If there was any east-meets-west maritime point, it is this 900km mile stretch of waterway.

Around 40 percent of the world's trade passes down this narrow strip.

For Beijing, the congested strait is a major artery in its economic heart. More than 80 percent of China's crude oil imports travel from the Middle East through the Malacca Strait. It is the same for Japan and Korea.

For Singapore, its very survival depends on the 50,000 vessels that pass by each year. The city-state is the largest ship refueling port around and boasts the world's busiest container terminals. Close the strait and Singapore would be hurt badly.

So it is hardly surprising that recent warnings by Singapore's navy of possible attacks on oil tankers in the strait were taken very seriously.

Intelligence received by the navy a couple of weeks ago saw the alert level raised in the city and security beefed up along the waterway. Patrols and air surveillance were quickly stepped up.

No terror group was identified in the warnings.

While it may not be the easiest thing in the world to sink an oil tanker, to do so in the Straits of Malacca at the right point would be like dropping a wall across the waterway.

At its widest point, the straits are 350km across, but it is narrowest between Singapore and Sumatra where the strait is just three kilometers. To make matters worse, it is 25m deep at its shallowest point.

Drop a tanker in that small space and it could be tricky for vessels to wiggle past.

Fortunately, the straits do not suffer from the piracy problem plaguing the Sea of Aden that could be exploited by terror groups. The littoral states of Malaysia, Indonesia, Thailand and Singapore also provide joint security that protects shipping along the world's most important east-west trade corridor.

Posted by Greg Knowler on 3/17/2010 12:23:31 AM

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Nuclear Proplusion & Merchant Ships

Lloyd's Register's recently announced a research program into nuclear propulsion of ships. After the 1960's Savannah and Otto Hahn there were only two more commercial ships produced with nuclear propulsion: there were also nuclear ice breakers built by the Soviet Union. Opposition to nuclear power in the light of the problem of greenhouse gases is changing opinions. Nuclear propulsion technology has continued to develop but the high initial cost has to be paid up front. Radioactive waste is an unresolved problem, yet there are few problems man is unable to solve when the necessity is strong. The greatest nuclear benefit is in zero exhaust emissions.

Late last year Lloyd's Register announced a research program revisiting the technical challenges of nuclear propulsion for tankers, bulk carriers, container ships and cruise ships, as well as refueling and waste-disposal issues.

After the experiments in the 1960's of the Savannah and Otto Hahn there were only two more commercial ships produced with nuclear propulsion. There were also some very capable nuclear ice breakers built by the Soviet Union some of which are now carrying paying passengers on specialized cruises, for example the 50 years of Victory being one of the few ships able to punch its way through the ice to the North Pole.

Major accidents such as Three Mile Island and Chernobyl encouraged strong opposition in the past to nuclear power production for power stations but in the light of the problem of greenhouse gases opinions are changing.

Meanwhile nuclear propulsion technology has continued to develop and be used successfully in large warships and submarines of several nations.

One of the factors that makes nuclear propulsion less attractive for commercial applications is the high initial cost where the "fuel bill" for the next 5-20 years has to be paid up front. This is a financing dilemma but there are many models available whereby long term costs can be spread over many years and it provides a constant cost, rather than a variable one, which most businesses prefer. If the price of oil drops then the cost calculation is upset – but can we really expect the oil price to drop in the decades ahead?

Yes, there is the, as yet, unresolved problem of radioactive waste, yet there are few problems man is unable to solve when the necessity is strong. How often today, with modern techniques and materials, are we able to solve problems that were unsolvable in the past?

The greatest nuclear benefit is in zero exhaust emissions, not only underway but in harbor suggesting that cruise ships would be ideal candidates. There is however the prejudice hurdle with history repeating itself. "Never before in history, society was confronted with a power that is so full of possible danger and at the same time so full of promises for the future of humankind and for peace in our world ….." The statement was made in the Congress of the United States in 1875 and they are not talking about nuclear power, but the internal combustion engine!

Posted by Keith Henderson on 3/11/2010 11:36:27 AM

Manufacturers moan as

S. China's Minimum Wage "Takes a Hike"

China is raising its wages at a pace that should enable the US to compete for manufacturing in the year 2525, if man is still alive.

There's some good news and bad news from China last month. The good news is that the minimum wage in Guangdong Province will rise by 21 percent from May. The bad news is that the minimum wage in Guangdong Province will rise by 21 percent from May. It all depends on which side of the factory's wage table you are standing on at the end of every week.

Guangdong is home to the Pearl River Delta, or PRD, that is the manufacturing heartland of China. Factory owners in the PRD, tens of thousands of them from Hong Kong, are bleating that they cannot afford such a huge wage hike.

"We can't transfer the extra costs to buyers – that will make us less competitive," they complain.

It is indeed a sad day for the margins of Hong Kong's billionaire tycoons that have been churning out cheap junk for the world for years. Down in the exclusive private clubs of Hong Kong where people still wear smoking jackets and smoke cigars indoors they are weeping into their 100 year old Henri IV Dudognon Heritage cognac (I had to look that up. At US$2 million a bottle it is beyond the means of even a Maritime Professional).

But before you shed tears for the cash-strapped tycoons, let's add some context.

Here are the minimum wage increases announced this week by the Guangdong Labour and Social Security Bureau. In Guangzhou, the provincial capital, the minimum wage will be US$150 a month; Zhuhai, Foshan, Dongguan and Zhongshan US$134 a month; Shantou, Huizhou and Jiangmen US$118 a month. Nowhere will employers be allowed to pay less than US$96 a month.

The new average wage – the one that factory owners are warning will remove their competitive edge – will be US$100 a month. How laborers can exist, and even send money home, on a salary of US$100 a month is a complete mystery.

The entire outsourcing/offshoring model is built on cheap Chinese migrant labor that for years have been vulnerable to ruthless bosses. No wonder U.S. manufacturers get all worked up about it. Even after a 21 percent raise, laborers are still working six days a week for US$1,200 a year.

For the last couple of years, Beijing has been trying to upgrade manufacturing along the coastal areas and push the PRD up the value chain. The idea is to force the producers of low value, labour intensive and high polluting goods inland to develop the western provinces.

So now that the Chinese government is belatedly beginning to address working conditions it would be helpful if factory owners shut up about increased costs and spared a thought for the workers who keep filling their coffers.

If it is too expensive to continue making cheap and disposable goods in the PRD, go west, old boys, and don't let the doors hit you on the way out.

Posted by Greg Knowler on 3/19/2010 3:56:37 AM

Wärtsilä Powers New Carnival Vessel

(Photo courtesy Wärtsilä)

Wärtsilä received an order to power the new cruise vessel of Carnival Corporation, carrying the preliminary name Carnival Dream 3. The vessel will be built by the Fincantieri Monfalcone shipyard in Italy and its launch is scheduled for August 2011. Carnival Dream 3 will enter service in the spring of 2012. Wärtsilä's scope of supply includes six Wärtsilä 46 engines. The 12-cylinder Wärtsilä 46 engines with diesel-electric configuration have a rated output of 12600 kW at 514 rpm each. The electrical power generated will be used for propulsion, for bow and stern thrusters, air conditioning, lighting and auxiliary services. Able to carry up to 3,690 passengers, the new 130,000-ton cruise vessel will have an overall length of about 1,004 ft, a breadth of 121.3 ft and a maximum draft of 27.9 ft. The deadweight at a draft of 26.9 ft will be some 10,500 tons.

www.wartsila.com

MTU Engines for Turkish Landing Ships

The Tognum subsidiary MTU Turkey will supply 16 MTU Series 4000 engines to power eight Turkish landing ships for transporting tanks and vehicles. The supply scope of the order placed by SSM, the Turkish government authority, with MTU Turkey also includes the gearboxes and Bluevision, MTU ship automation systems for propulsion control. Turkey fully directed development of the landing ships, each of which will be powered by two MTU 16V 4000 M70 diesel engines with a total output of 4,640 kW (6,222 bhp), capable of accelerating the ships to a speed of 20 knots. The ships are being built at the Turkish ADIK shipyard in Istanbul and the engines are to be delivered between June 2010 and the end of 2012. The technical training of crews, maintenance, and logistical support for the marine propulsion systems will be provided by MTU Turkey.

MAN B&W Tier-II Engine Ready for Delivery

The first Tier-II compliant MAN B&W engine has finished production at HHI-EMD (Hyundai Heavy Industries Engine & Machinery Division) in Korea and is ready for delivery. The low-speed, two-stroke MAN B&W 6S50ME-C7 type engine will power a shuttle tanker (hull number 1749), currently under construction by Samsung Heavy Industries Co., Ltd., and ordered by Teekay, global provider of marine services to the oil and gas industry. Ship delivery is planned for July 2010.

Under the terms of the contract, the 6S50ME-C7 engine is intended for Teekay's Amundsen class of ships. This milestone is related to MAN Diesel's decision in June 2008 to relaunch its product portfolio, making all its engines compatible with the limits established by the International Maritime Organization (IMO) in its Tier-II regulations. The historic relaunch was designed to pre-empt the January 2011 implementation of the new IMO NOx emission limits and clearly flags the company's environmental credentials.

OTC Confers "Technology" Awards in Houston

Each year the Offshore Technology Conference (OTC) recognizes individuals and organizations that have made outstanding contributions to the offshore industry. The awards will be presented at the annual OTC Awards Luncheon on May 4 at Reliant Park in Houston, Texas. OTC 2010 will be held May 3 – 5.

Aker Solutions *Booth # 3917*

MH MDDM 1000 AC

The Aker Solutions' MH MDDM 1000 top drive is a true modular derrick drilling machine (MDDM) that meets sixth generation drilling requirements. The machine is designed to meet the specifications of 99.9% up-time per annum. Its allows easy access to replace individual modules, reducing the critical path of the operation and repair time.

Expro *Booth # 4241*

FlowCAT Wireless Safety Valve System

Developed with the support of Petrowell Ltd, FlowCAT is a new wireless controlled safety valve system that can be retro-fitted into a well using conventional slickline intervention equipment and procedures.
The unit is controllable from surface and consists of a fail-safe closed design. The valve system also offers a retro-fittable solution where no hydraulic control line is installed, and where a capillary string may need to be installed for foam injection purposes it can free up the hydraulic control line.

FMC Technologies, Inc. *Booth # 1941*

Self Configuring MPM - Multi Phase Meter

The MPM Multi Phase Meter employs tomographic technology to improve measurement accuracy and measurement range for multiphase meters for topside and subsea applications. The self calibrating feature implemented in the MPM meter is a step change from conventional multiphase meters. This new feature is achieved through implementing salinity measurement functionality in combination with the in-situ fluid property verification.

Halliburton *Booth # 5263*

GeoTap IDS

The new InSite GeoTap IDS sensor from Sperry Drilling services enables reservoir fluid samples to be recovered with LWD technology. The sensor delivers timely down-hole capture, surface recovery and identification of multiple samples of formation fluids with minimal contamination. The GeoTap IDS sensor can acquire multiple fluid samples within hours of drilling the formation.

MacDermid Offshore Solutions

Booth # 322 (outdoor) and # 4320 (indoor)

Ultra-High Temp Subsea Control Fluid

MacDermid Offshore Solutions has developed a subsea hydraulic control fluid, Oceanic XT900, capable of reaching a down-hole temperature of 220 degrees C. Production control fluids deliver power to operate down-hole safety valves, allowing the flow of oil and gas from hydrocarbon reservoirs. The fluid has been qualified in accordance with the industry standard for subsea control fluids, ISO 13628-6 Annex C.

Rapp Hydema Marine *Booth # 5041*

Rapp Hydema Liquid-Cooled Electric Motor

The Rapp liquid-cooled electric motor for deepwater powering applications is specifically mounted on a Rapp-manufactured gearbox working with a variable-frequency converter. The motor is cooled by a water jacket in a housing and circulates the water through the rotating components of the motor.
It is designed to work only in a tandem mode with a minimum of two units mounted on the gearbox design.

Reelwell *Booth # 5141*

Reelwell-Telemetry System

Reelwell has developed a new type of real time drillpipe telemetry system. The system enables two-way high speed data communication to down-hole MWD/LWD tools. It also has the ability to transfer large amounts of electric power to down-hole tools. The system is based on dual concentric drill strings and comprises a stab-in connector design that is mounted in the drillpipe toolboxes and an advanced transceiver technology.

Schlumberger *Booth # 4331*

SenTURIAN Subsea Landing String Electrohydraulic Operating System

The Schlumberger Senturian subsea landing string electrohydraulic operating system is designed to operate from dynamically positioned vessels in subsea applications. The system is an in-riser system designed and certified in accordance with the International Electrotechnical Commission's IEC 61508 SIL 2 reliability specifications for safety-related systems.

Schlumberger *Booth # 4331*

subC-racs

The subC-racs riser annulus condition surveillance system, a joint development from Schlumberger and Total, is an automated system for the monitoring of flexible riser integrity and of vented emissions. The main functions of the system are to measure free (dry) volume of the annulus, and gas and water vapor flow rates. The system provides continuous surveillance of the vent flow and is readily installed in-line with topsides vent systems.

ShawCor *Booth # 3355*

Thermotite ULTRA

A program to develop offshore pipe insulation systems based on styrenic alloys was started in 2007. The challenge was to develop micro-balloon free systems with improved thermal properties, suitable for subsea deployment using all lay methods. The program led to a new family of Bredero-Shaw proprietary styrenic formulations for subsea thermal insulation known as Thermotite Ultra.

TSGroup *Booth # 5241*

TST CFU - Compact Flotation Unit

TS Technology (TST) introduced a new generation Compact Flotation Unit (CFU). The CFU is a vertical pressure vessel which is designed to deal with the mixture of oil and gas and water, from all stages in the treatment process to ensure low oil in water content before being either discharged or re-injected.

Topaz Announces $65M Profit for 2009

For 2009, Topaz posted revenue of $448m, EBITDA of $127m and net profit of $65m, demonstrating year on year growth of seven percent, 14 percent and 38 percent respectively. Topaz Energy and Marine is an oil & gas focused marine services and engineering company with a regional footprint across the Middle East and the Caspian. In 2009, Topaz achieved record results for the ninth consecutive year and brought its total asset base on the balance sheet to $874m while maintaining a gearing ratio of 0.89.

"This is an outstanding achievement in a volatile economic climate and reflects the inherent strengths of our business," said Fazel A. Fazelbhoy, CEO of Topaz Energy and Marine. "Facing great adversity, we have demonstrated our business to be one that grows shareholder value in a measured and responsible fashion in any economic cycle. Topaz's recession resilience is a result of a considered blend of long and short-term contracts, exposure to geographies of strategic importance to global energy markets and our refusal to jump on the bandwagon of speculative vessel new-buildings at the peak of the market."

With oil prices having stabilized, Topaz sees very strong growth prospects for 2011 and beyond. This optimism arises from the company's view that major investments will have to be made by international and national oil companies in offshore E&P and general hydrocarbon infrastructure, not only to replace the ageing infrastructure but also to keep pace with ever growing energy demand driven principally by China and India. Topaz builds new offshore support vessels exclusively against medium to long-term contract awards and market-specific niches.

Photo courtesy Topaz Energy and Marine

"Certain strategic acquisitions made in the Caspian and the Middle East in recent years, and subsequent additions to the offshore support vessel fleet are providing us consistent returns and cash flows. The strong balance sheet together with a splendid operating performance saw us navigate comfortably through the financial crisis" said Pramod Balakrishnan, CFO of Topaz."We raised $150m in debt financing in 2009 thanks to the support of our global and regional bankers. In 2010 we have already exceeded this figure in the first quarter."

Evergreen Marine Executive Appointments

Evergreen Marine Corp. (Taiwan) Ltd. announced the promotion of its President Jack Yen to Vice Chairman. Captain C.J. Wang, Chief Executive Vice President, has been appointed President. Anchor Chang, Executive Vice President of International Business Division, was promoted to Chief Executive Vice President.

Jack Yen joined Evergreen in 1978. He has broad international experience having served the company in several significant locations including Germany, the UK, the U.S., and Hong Kong. His senior positions have included President of Evergreen Star Hong Kong Ltd where he had major responsibilities for the mainland China market, and president of Evergreen Deutschland GMBH. He was promoted to President of Evergreen Marine Corporation (Taiwan) in 2007. Captain C.J. Wang started his carrier in Evergreen as third officer in 1976 and was promoted to captain in 1986. During the past 34 working years with Evergreen, Capt. Wang spent 11 years shipboard as crewmember and the other 23 years in shoreside offices. When coming ashore permanently, he was transferred to Los Angeles and Taipei. Captain Wang was promoted to top management of Evergreen Container Terminal (Thailand) Limited in 1997. With background in both marine and management jobs and his broad company experience, he was transferred back to Taipei to take more responsibilities from 2000 to 2004 as Junior Vice President and Senior Vice President in various positions. In 2004 he became Executive Vice President of Corporate Operation Division and promoted to Chief Executive Vice President in 2009.

Anchor Chang joined Evergreen Marine in 1986 in sales. From 1993 to 2003, he was assigned to New York, Dallas, London and Taipei in positions from deputy manager to Junior Vice President. From 2003 to 2006, he transferred to the Project Division in Taipei to assume greater responsibilities and was promoted to Senior Vice President. From 2006 to 2007, he transferred to the International Business Division and was promoted Executive Vice President, a position he held until his promotion to Chief Executive Vice President.

SSP Offshore Appoints Illingworth

Paul Illingworth will join SSP Offshore as CEO. Illingworth has more than 30 years experience in the offshore oil and gas business, prior to which he served seven years in the British Navy. Since 2001, Illingworth has served as Senior Vice President in charge of global business development and as divisional President for one of the leading international companies engaged in the FPSO and FPDSO industry.

Schreiber Joins ABB Marine

Schreiber

ABB Inc. announced that Eric W. Schreiber joined its ABB Marine group in the role of Senior Manager, Marine Solutions; effective March 15, 2010. Schreiber brings with him over 15 years of combined experience in the marine industry. For the past 13 years, he worked for one of the largest cruise lines, Royal Caribbean Cruise, Ltd. His customer based experience will bring valuable insight and knowledge to further strengthen ABB's response to customers and service offerings.

He has a MBA from the University of Miami, School of Business, a BS in Electrical Engineering, specializing in Power Engineering from Northeastern University, College of Engineering, and numerous technical and executive education certifications.

Stave Named Sales Manager at Ulstein Verft

Stave

Håvard Stave has been appointed the new sales manager at Ulstein Verft. For the past five years he was design manager at Ulstein Design, which became part of Ulstein Design & Solutions at the turn of the year. Before joining Ulstein Design, Stave worked nine years at Rolls-Royce Marine's Propulsion department at Ulsteinvik, the last years as technical manager. Before that, he worked in Kongsberg Group.

Kvichak Appoints Parker

Kvichak Marine Industries in Seattle, Wash. announced the appointment of Art Parker as Sales Manager with a focus on North American business development. Parker has 30 years experience in the aluminum boatbuilding business and has been with the Kvichak sales and marketing team for 15 years.

Billett Manages New AWT Office

Applied Weather Technology, Inc. (AWT) hired a European sales manager, Bob Billett, and opened a new London office. AWT's ship routing and voyage optimization technologies enhance safety by helping ship Captains and fleet managers to avert severe weather and sea conditions, and reduce fuel consumption and carbon emissions by identifying the most fuel-efficient routes to their destinations.

BMT Promotes Lewis

Lewis

BMT Scientific Marine Services said that Jeffrey Lewis has been promoted to the position of Vice President of Operations. He has been with the company since 1992 and has been involved in hundreds of data acquisition and control projects, and has extensive knowledge of data acquisition including sensors, communication protocols, data acquisition software, HMI (Human Man Interfaces), data processing, analysis and data management.

River Ministry Pioneer Wilkinson Retires from SCI

Wilkinson

The Rev. James (Jim) R. Wilkinson retires this year in April after over 11 years of service to the nation's inland waterways community as their first full-time, fully-dedicated chaplain. In 1998, the Seamen's Church Institute (SCI) called Wilkinson to head up Ministry on the River, a first-of-its-kind endeavor offering pastoral care to river mariners and their families in the United States. Wilkinson's congregation of mariners spanned thousands of miles of moving waters from Pittsburgh, Pa. to Greenville, Miss. Wilkinson visited mariners, often traveling with them on their vessels, and established a network of clergy and churches who serve as a resource to mariners traveling through their communities.

Crowley Announces Passing of Molly Murphy Crowley

Molly Murphy Crowley, 71, of Piedmont, CA, Crowley Maritime Corporation board member, past Portland, OR, real estate mogul, philanthropist and competitive amateur golfer died March 21, 2010, following an illness surrounded by her family at her Indian Wells, CA vacation home. Mrs. Crowley was born Nov. 27, 1938 in Portland to Dorothy and Peter Murphy. Mrs. Crowley met her late husband, Thomas Crowley, Sr., chairman, president and CEO of Crowley Maritime Corporation, on a ski vacation in Switzerland. She was a longtime member of Crowley's board of directors and oversaw the growth of the 118-year old maritime and logistics services company into nearly a $2 billion a year company. Her stepson, Tom Crowley Jr., is the chairman, president and CEO today. Mrs. Crowley was preceded in death by her parents, Dorothy and Peter, and her husband, Thomas Crowley Sr.

Atlantic Marine Wins Navy Deal

Atlantic Marine Philadelphia, LLC, Philadelphia, Pa., won a $12.7m firm-fixed-price contract for a 70-calendar day regular overhaul of Military Sealift Command fleet replenishment oiler USNS Joshua Humphreys. Humphreys, which deactivated and joined the Navy's Inactive Ships program in 1996, is being reactivated this summer by the direction of U.S. Fleet Forces Command to support counter-piracy and global war on terrorism operations in the U.S. 5th Fleet area of operations where the ship will serve as a duty oiler to U.S. and coalition warships. Work performed will include tank inspections; ballast tank preservation; main engine cylinder head inspection and overhaul; underwater hull cleaning; and paint and propeller system maintenance. This contract includes options which, if exercised, would bring the cumulative value of this contract to $15.4m.

Maersk Line Introduces Third U.S. Flag Tanker

Maersk Line, Limited (MLL) announced the pending delivery of a third tanker to its U.S. flag fleet. Samho Moonstone will become Bro Hawaii when the reflagging process completes in mid-April. Bro Hawaii will operate in Asia spot markets targeting U.S. preference cargoes. Yesterday, MLL won a nine-month time charter of Bro Hawaii to support U.S. Department of Defense requirements in the region. MLL will supplement U.S. preference cargoes by leveraging its affiliated companies,

Maersk Tankers and Broström, to serve commercial customers in Asia. Samho Moonstone is a small-sized tanker of 5,664 dwt and capacity of 6,136 cu. m. The 344 ft. vessel was built in 2009.

Tug Assists Disabled Containership

Crowley Maritime's tugboat Hunter, the state-funded emergency response tug stationed at Neah Bay, Wash., was dispatched to assist the 712-ft container vessel, Horizon Tacoma, after the vessel experienced engine problems.

The Horizon Tacoma was a few miles north of Neah Bay when it elected to shut down its main engines following the engine problem, though it continued to have full use of its thrusters and directional navigation. After notification by the U.S. Coast Guard (USCG), the Hunter rapidly got underway and arrived at the ship in less than 30 minutes where it immediately connected a towline.

Campbell Shipping, Heavy Industry Agreement

Bahamian shipowners Campbell Shipping signed an order with Zhong Chuan Heavy Industry Shipbuilding Co. Ltd. of Zhoushan for two 32,000 dwt double-hull bulk carriers, with an option for two more. The ships will be classed by ABS and fly the Bahamas flag, and will measure 600 x 92 with a 33-ft. draft and a service speed of 14 knots. Their prime movers will be MAN B&W 6S46MC-C8 diesels, making them among the first vessels to order MAN's new Tier-II compliant engines.

Floating Dry Dock Officially Named

(L-R) Hon. Brendon Grylls MLA, Leader of the Nationals WA and Minister for Regional Development and Lands, Hon. Troy Buswell MLA, Minister for Commerce, WA, Mike Bailey, Paul Booth (Project Manager, Australian Marine Complex).

The Australian Maritime Complex along with Landcorp announced the name of the 99 x 53 m Floating Dry Dock at the official naming ceremony. The Floating Dock was given the traditional Nyoongar name Yagan by the South West Aboriginal Land and Sea Counsel in consultation with Nyoongar Elders. Yagan, the Nyoongar word for tortoise, metaphorically refers to the amphibious functions of the floating dock.

With fully automated ballast and maneuvering systems the dock has the capacity to lift 12,000 ton vessels for service and maintenance work. The 99m long by 53m wide structure is a technologically advanced dock and capable of providing the land transfer of docked vessels up to 3,500 tons

www.strategicmarine.com

T&T Bisso, Foss Reach Agreement

T&T Bisso announced an exclusive cooperative services agreement with Foss Maritime Company. "Foss's extensive network of sister companies and partners positioned in North America and around the world will compliment T&T Bisso's global strategies in providing professional, safe and results-oriented services conducted on or around the water," said Tim Dickensheets, director of vessel response services for T&T Bisso. T&T Bisso will use several Foss facilities throughout North America to position lightering and marine firefighting packages as part of the company's strategy to comply with the United States Coast Guard Salvage and Marine Firefighting Regulations. T&T Bisso is working with Foss to revise the company's vessel response plans, listing T&T Bisso as the primary provider to meet the salvage and marine firefighting services requirements under the new regulations.

JRC Wins PDVSA Bridge Deal

Japan Radio Company (JRC) won a contract by Estaleiro ILHA S.A. (EISA) shipyard of Rio de Janeiro, Brazil to supply a full Integrated Bridge System and communication suite for two new 47kDWT clean product carriers being built for PDVSA.

The contract includes an integrated bridge system based on JRC's most advanced marine technology to date. The IBS will consist of the JMA-9100 series high performance radars, JAN-901B electronic chart display and information systems (ECDIS) with integrated multi-functional conning display, JLR-7800 high accuracy differential GPS systems, a type-approved track control system, and ergonomically designed bridge control console.

Also, the ship will be fitted with a JRC Remote Maintenance System. Connecting the JRC's primary nav/comm equipments into the JCY-1800 VDR, JRC's service center can remotely download the failure status data from each piece of

Keppel Shipyard Joint Venture in Azerbaijan

Extending its presence in the Caspian Region, Keppel Offshore & Marine Limited has teamed with State Oil Company of Azerbaijan Republic (SOCAR) and Azerbaijan Investment Company (AIC) to develop and manage a new 52-ha shipbuilding and shiprepair facility in Baku, Azerbaijan, strategically located along the East-West energy corridor of the Caspian Sea region. The new SOCAR-Keppel Shipyard will be developed for approximately $386m over a two to three year period. The new yard will be designed to build a variety of vessels ranging from offshore support vessels to tankers, as well as ship repair and conversion.

Illustration courtesy Keppel Offshore & Marine Limited

STX Europe New Shipyard in Brazil

STX Europe expanded its shipbuilding capacity for Offshore & Specialized vessels by setting up a new shipyard in Fortaleza, in the Ceará state of Brazil. STX Europe has, since the acquisition of the Niteroi shipyard in 2001, delivered more than 20 vessels in the range from PSVs to AHTS', ROV and pipelaying construction vessels. The yard has recently won orders for three new advanced PSV offshore vessels, and has now eight vessels in the backlog for delivery up to 2013. To meet the increased demand for building of more complex vessels in Brazil, STX Norway Offshore AS (subsidiary of STX Europe AS) intends together with its Brazilian partner PJMR to invest approx $100m over a period of three years. The project is expected to benefit from domestic financing on favorable terms, supported by governmental resources.

GPA Wins ACP Contract

Guido Perla & Associates, Inc. (GPA) was awarded a contract by Servicios Industriales de la Marina (SIMA) PERU S.A. to deliver the Design and Class Package, and Detailed Construction Engineering for two identical pusher tugs. The tugs will be owned and operated by the Panama Canal Authority, which selected SIMA to build the tugs to GPA's design in a competitive procurement process. Both tugs will be built at SIMA's Chimbote shipyard, in Chimbote, Peru, with construction for the first tug expected to commence in late 2010. The 29.7-m tugs, destined to support dredging operations in the Panama Canal, are equipped with two GE medium speed 12V228 main engines rated at 2,630 hp each and two ship's service generators at 135kW each. Two stainless steel propellers in Kort nozzles produce 55MT bollard pull (ahead), while bollard pull astern will be 36MT.

equipment through the ship's satellite communication terminal. The downloaded data shall be monitored and used for inspection, failure analysis, and determination of service intervention measures by JRC's accredited engineers.

Mascoat Opens New European Office

Mascoat Products formed a new European office located in Waalwijk, The Netherlands. This location will be responsible for European sales and support. The office opened in February 2010 and has a large of stock of Delta T Industrial Thermal Insulating Coating, Delta T Marine Thermal Insulating Coating and Delta~dB Sound Damping Coating to expediently supply to customers throughout the region.

Email: info@mascoat.com

Radio Holland wins VSAT/Connectivity Contract

Radio Holland USA won a multi-year contract for supply of VSAT and airtime services for the Alaska Marine Highway System (AMHS). The fleet, a division of the Department of Transportation and Public Facilities, State of Alaska, is made up of 11 vessels; transporting people and vehicles to 34 locations along the Alaska coastline and along a 1000 mile stretch of the Aleutian Chain to the Bering Sea. The route goes through the Inside Passage and passes through islands with high mountains and steep fjords. Due to the extreme northern latitudes and the rugged terrain, Radio Holland USA and Radio Holland Connect have teamed to design a private network for shared access to the vessels. The vessels will all eventually have public phone systems, ATMs, and WI-FI services for their passengers.

EMD Receives IMO Tier 2 Emissions Certification

Electro-Motive Diesel (EMD) received emissions certification — commonly referred to as IMO Tier 2 — for its 710GC-T2 engine family. EMD's two cycle medium speed G7C-T2 engine has been certified to meet this new requirement. In addition to IMO Tier 2, EMD engines are US EPA Tier 2 certified as well as being certified by ABS, DNV, BV, Lloyds, CCS, and KR classification societies.

Wärtsilä Wins CNOOC Honor

Wärtsilä received an award for supplier excellence from CNOOC, the China National Offshore Oil Corporation. The project for which Wärtsilä received the award involves the construction and commissioning of the deepwater pipe-laying and crane vessel named Hai Yang Shi You 201 (HYSY 201).

Delta Wave Lanches dTrac

Delta Wave Communications launched a new web-based dTrac asset tracking solution to support a variety of satellite communications technologies for global asset tracking requirements. Customers may track assets using their existing Inmarsat and Iridium satellite terminals, or any of Delta Wave's line of tracking products.

www.deltawavecomm.com

Wärtsilä, Raytheon Partner on Nav Systems

Wärtsilä signed an agreement with Raytheon Anschütz extending the scope of Wärtsilä's offering of integrated system solutions to include navigation systems, which can now be offered by Wärtsilä on a global basis. "The co-operation between Wärtsilä and Raytheon is in line with our strategy of staying at the forefront of systems integration within the marine sector," said Jaakko Eskola, Group Vice President, Wärtsilä Ship Power.

Wärtsilä intends to make these integrated packages, combining navigation and automation systems, available for all types of vessels.

BCGP Debuts 37-ft. Justice Model

Brunswick Commercial and Government Products (BCGP) introduced its 37-ft. Justice, the largest Boston Whaler model ever built. The 370 Justice features a center console design for unobstructed 360 degree access to all areas of the boat. Its deep-V hull is designed to yield a smooth ride, even in rough seas. Reverse chines serve to deflect spray for drier rides while also providing quicker recovery between waves and additional lateral stability. Like all BCGP Boston Whaler models, the 370 Justice features unsinkable Unibond construction and fortified laminate schedules for commercial and military applications.

"In a triple outboard configuration, the 370 Justice has the horsepower for border and coastline patrol, drug interdiction, and offshore homeland security activities," said Jeremy Davis, BCGP sales manager.

Marlink Extends WaveCall Service

Marlink extended its WaveCall VSAT service which will now cover West Africa and the South West and South East Pacific. WaveCall is Marlink's own, always-on VSAT system, based on shared Ku-band and used by coastal commercial vessels, fishing boats and large leisure yachts which require a more regional service than the global C-band provided by Marlink's Sealink system.

Chemical Carrier Modified to FPSO

Major modifications have been completed on the first floating production storage and offloading (FPSO) conversion in Mexico. The ECO III, classed by ABS, originally was built as a chemical carrier before being purchased by MARECSA (Maritima De Ecologia, S.A. de C.V) for conversion to a FPSO at the DEMERSESA Shipyard in Tuxpan, Mexico. The FPSO's crew quarters, helideck and on-deck piping were installed in the Mexican shipyard before it went to the US for drydocking and installation of other modules and the dynamic positioning system. The FPSO then returned to the Tuxpan shipyard for the final phase of the modifications.

APT Enters the Marine Sector

Alternative Petroleum Technologies S.A. (APT) and its partner, ITI S.r.l., completed a demonstration of various versions of its products on board a commercial container ferry using an emulsified diesel marine fuel. The emissions were measured by ISMAR Chimica Spa, an independent ISO17025:2005 certified laboratory.

The engine load was measured using the ship's instruments. The emulsified fuels gave a reduction in PM 10 emissions of 34% (for 13% water) and 43% (for 18% water) and a reduction in NOx emissions of 16% (for 13% water) and 27% (for 18% water). A fuel efficiency advantage of more than 5% was recorded.

www.altpetrol.com
www.itimpianti.it

Alu Design Contract with STX

Alu Design & Services has been contracted by STX Norway Electro for delivery of pilot chairs and deck rails to STX's YN 725. Delivery is scheduled for March 2010. This is the company's second order with Alu Design and a third order is already underway.

New Head Office for GL

The Hamburg staff of Germanischer Lloyd (GL) - more than 1,600 total - have moved to the new Head Office at Brooktorkai 18 in Hamburg's HafenCity district.

With this relocation, the company is bringing 14 separate sites in Hamburg together all under the same roof.

The new GL Head Office spans two construction sites offering an office space of 45,000 sq. m.

New address: Germanischer Lloyd AG, Brooktorkai 18, 20457 Hamburg, Germany. The telephone and fax numbers as well as e-mail addresses will remain the same.

New Wilhelmsen Office in St Petersburg

Wilhelmsen Ships Service has relocated its St. Petersburg offices to upgraded premises. The new location offers a modern, safe and accessible environment for staff, and provides a convenient

Strategic Success in Singapore

Strategic Marine recently purchased the lease of its Singapore yard and its existing 1260 sq. m. covered shipbuilding hall, enabling the company to fully develop the yards potential via infrastructure developments to be completed by 2011. Strategic Marine Singapore recently signed a contract to build four electric powered water taxis for Singapore tourism company Russell Rocks Pte Ltd. With a seating capacity of 24 passengers, the vessels have been designed specifically for the client's scenic taxi service operations. The boats will be fitted with a single electric main propulsion motor, with an output of 12hp and reaching a speed of 6 knots.

This contract has, in addition, enabled Strategic Marine Singapore to start construction on a 40 m Offshore Utility Vessel on speculation, a boat scheduled to be completed in the Autumn of 2010.

Farrell Lines 2 Additional U.S. Flag Vessels

Farrell Lines added two U.S. flag RoRo vessels into its fleet, the Alliance Beaumont and Alliance Charleston. These ships complement the Alliance St. Louis and Alliance Norfolk, which have been U.S. flag vessels since February 2008. The Farrell Lines fleet now consists of four RoRo vessels.

The Alliance Beaumont was brought under the U.S. flag on February 21 in Dubai, and this vessel will participate in the Maritime Security Program (MSP). The Alliance Charleston was reflagged on February 12 in New York. Both vessels have 710,000 sq. ft. of total stowage capacity, representing 7,900 car equivalent units and over 250,000 sq. ft. of deck space for military cargo.

Bergen Oilfield Services Extends Veripos Contract

Veripos has been awarded an extension to its existing master services contract with Bergen Oilfield Services (BOS), one of Norway's seismic survey contractors operating worldwide. The extended contract covers continuing supply of a range of positioning services and equipment for BOS's three specialist seismic exploration vessels, BOS Angler, BOS Arctic and BOS Atlantic.

location for receiving customers. Wilhelmsen Ships Service will share the office space with its sister companies Wilhelmsen Ships Equipment and Wilhelmsen Marine Personnel. The new office address is: 10th Krasnoarmeyskaya, 22 A, Business Centre Kellerman, 190103, St Petersburg, Russia.

Containership Delivered to Danaos

Danaos Corporation last month took delivery of a newly built containership, the CMA CGM Musset, expanding its operational fleet, following the sale of the 30 year-old Eagle Express, to a total of 42 containerships aggregating 177,229 TEU. The CMA CGM Musset has a carrying capacity of 6,500 TEU, built at Sungdong Shipbuilding & Marine Engineering and was delivered on schedule. It is 984 x 131 ft. and has a speed of 25.6 knots.

Maersk Contract

Maersk Line, Ltd, Norfolk, Va., won a $8.6 firm-fixed-price contract for a nine-month time charter of tanker MT Samho Moonstone, currently a foreign-flag vessel, which will be re-named and U.S.-flagged upon delivery to the government. The ship's primary mission is to move petroleum for the Department of Defense between ports in the Far East.

Almaco Modernizes M/S Kristina Katarina

Almaco Group was awarded by Kristina Cruises the contract to modernize passenger cabins and public areas on the owner's new flagship M/S Kristina Katarina. The work will be done in Kotka, Finland, and will be completed by the end of July 2010. Almaco's Accommodation Systems division will refurbish all 195 passenger cabins and the corresponding bathrooms. The scope of work also includes the modernization of cabin corridors and passenger staircases, the renovation of the conference room and children's play area as well as modernization and modifications done in the buffet and a la carte restaurants. The ship was built in Poland in 1982 and measures 452.7 x 72.2 ft. It has operated in the 1990's under the name Konstantin Simonov between Helsinki and St. Petersburg. For the last nine years she has been operated as M/S Iris under the flag of Malta, mostly for international cruising in the Eastern Mediterranean.

Tyco Telecomm Renamed

Tyco Telecommunications, a business unit of Tyco Electronics, announced it is now operating under a new corporate name: Tyco Electronics Subsea Communications (TE SubCom).

In 2010, TE SubCom will complete cable installations and upgrade projects in Asia, the Middle East and the North Atlantic. The company's management team remains unchanged and TE SubCom maintains the existing company headquarters, research and development laboratories, manufacturing facilities, ships and depots located worldwide.

MarineCFO Nominated

MarineCFO has been nominated for the Louisiana Governor's Technology Company of the Year Award. The Governor's Technology Award honors organizations for their innovation and progress in the past year. With a strong Microsoft relationship, all MarineCFO products are built with mainstream MS technologies.

http://www.MarineCFOLive.com

Tognum Opens New U.S. Plant

South Carolina engine plant in to replace assembly plant in Detroit

Tognum is expanding its production network via a new engine assembly and manufacturing plant for Tognum's MTU brand in Aiken County, South Carolina. The new facility replaces an existing assembly plant in Detroit, and offers Tognum the opportunity to produce engine parts in the U.S. dollar region, develop new markets and respond more flexibly to changing market requirements. Production is scheduled to begin at the end of 2010.

The new plant in Graniteville in Aiken County means that the Tognum Group has now implemented the plan that had been announced in autumn 2008, but put on hold due to the global economic crisis. The company has now purchased an existing building and the associated premises for this purpose from the drive component manufacturing company SKF. In addition to the assembly of engines, the plant will be used for the manufacture of engine components such as cylinder heads and high-volume engine attachments and fittings. The premises also include the possibility of increasing production capacity if warranted by market requirements and the order situation.

"By manufacturing parts in the USA, we are less vulnerable to exchange rate fluctuations between the U.S. dollar and the euro, have production facilities located close to the customer, fewer parts in an advanced stage of manufacture to be transported from Europe to North America and will subsequently reduce high import duties. The higher value added in the USA also increases our chances when competing for public contracts offered by U.S. authorities," said Volker Heuer, Chairman of the Executive Board and CEO of Tognum AG.

In the medium term, the Tognum Group will be investing $45 million in the 100 acre site, which includes a 270,000 sq. ft. production building, and in assembly, inspection and production facilities.

New HQ for OMM

Offshore Marine Management (OMM) has moved to new larger headquarters following a period of exceptional growth. As well as its headquarters in Bristol, OMM has an operational office in Cambridge and international bases in Germany and Singapore. The company is planning to open offices in the USA and Middle East later this year.

There will be an official opening event for the new offices on April 9. New address: 14th Floor, Colston Tower, Colston Street, Bristol BS1 4UB; ; Tel: +44 (0) 844 921 0001

www.offshoremm.com

Jotun Reports Record Results

Jotun reported an operating profit of $181m in 2009 as compared with $148m for the previous year. In liters and kilos, Jotun sold two percent more paint than it did in 2008. There were large variations between the markets and geographically. Key markets such as China, South Korea and the Middle East reported strong figures. Europe performed poorly, and the Norwegian market, for example, was weaker than in many years. The group's results were the best ever.

President & CEO Morten Fon said that Jotun has also maintained a relatively high investment level in a challenging period for the global economy. Last year, for example, a decision was made to invest in a new factory in Sandefjord valued at more than $82m, Jotun's largest investment ever. There are plans to establish factories in Libya and Russia. The construction new factories in China, Malaysia and the US is also underway, and new factories were opened in Saudi-Arabia and South-Korea in 2009.

MOL Charters LNG Vessels to ExxonMobil

Mitsui O.S.K. Lines, Ltd. (MOL) has been awarded two long-term charters by an ExxonMobil affiliate and its co-venture partners in its Papua New Guinea LNG Project. The charters are for MOL's two existing 177,000 cu. m. capacity LNG carriers with the tri-fuel-diesel electric propulsion systems built in South Korea at Hyundai yards in 2010 and co-owned by Itochu Corporation (Itochu) (MOL 70% and Itochu 30%). The vessels are to be operated by MOL. Simultaneously, MOL has entered into two heads of agreement, one with the PNG LNG Project and one with an ExxonMobil affiliated company in the Gorgon Project, with the intention for MOL to construct and long-term charter a total of four LNG vessels to the projects, all of which are planned to be built in the People's Republic of China.

Deliveries will commence between 2014-2016.

DNV to Open Global Cruise Center Miami

DNV plans to open of a Global Cruise Center in Miami, Fla., to enable DNV to respond more quickly to local customer demand and serve as a hub for a network of DNV cruise ship service centers around the world.

According to DNV maritime's COO Tor Svensen, the new facility will enable DNV to respond more quickly to customer needs.

"The increasingly global nature of our customers' operations is a key driver behind our decision to establish a stronger presence in Miami," he said.

"The Global Cruise Center will enable us to enhance our customers' experience of DNV's global performance and delivery toward the cruise segment."

Carnival Glory: More Efficient via Promas Lite

Carnival Cruise Lines (CCL) selected the Rolls-Royce propulsion system Promas Lite, combining propeller and rudder, for its cruise vessel Carnival Glory, as preliminary analysis of speed/power trials measurements indicates an increased propulsive efficiency improvement by 11-13 %. Rolls-Royce worked closely with CCL, a cooperation which included extensive lab testing at Rolls-Royce Hydrodynamic Research Center in Sweden. The result: an optimized Promas Lite design tailor fit for Carnival Glory. A new twin 5.8-m Promas Lite propulsion system has been installed during the ships regular dry docking at Grand Bahama Shipyard in February 2010. The new propeller – rudder system replaces the old five bladed mono-block propellers with modern four bladed Rolls-Royce propellers with bolted blades, hub caps and rudder bulbs, optimized to suit the actual operational profile that utilizes lower speeds than the vessel was built for. The new propeller design is optimized for maximum fuel efficiency and emission reduction. Extensive full-scale testing on Carnival Glory as well as Carnival Freedom has been performed before and after installation of the new Promas Lite propeller system. The preliminary analysis of speed/power trials measurements indicates an increased propulsive efficiency improvement by 11 to 13%.

Eagle Bulk Shipping Takes Delivery of Imperial Eagle

Eagle Bulk Shipping has taken delivery from Japan's IHI Marine United of Imperial Eagle, a Future-56 class, 56,000 dwt Supramax dry bulk vessel. The vessel has entered into a one-year time charter tied to the Baltic Supramax Index (BSI).

MAN Diesel, Voith Propulsion for Tugs

MAN Diesel Spain has been active within the tug segment recently, having played a key role in three orders that contract the company to supply 18 MAN Diesel L27/38 engines to Boluda Corporación Marítima, Spain, the international marine group and shipbuilder. The engines are destined for nine newbuilding tugs; 10 engines were already delivered in 2009 with the remainder due in 2010/2011. The three orders encompass two engines for the V.B. Bravo, owned by Boluda Corporación Marítima through its subsidiary AUXMASA; 12 engines for six tug boats owned outright by Boluda Corporación Marítima; and four engines for two tug boats owned by the Shetland Island Council. As originally stipulated, all nine tugs will be constructed at Boluda Shipyards - Unión Naval Valencia in the Port of Valencia, one of the biggest private shipyards in Spain and part of Boluda Corporación Marítima. Boluda Corporación Marítima's core activity is tug operation. It's Towage and Salvage Division has a fleet of over 200 tugs. Typical tug-boat operations include ship towage, marine safety, assistance in high-seas and fire fighting. Of the seven tugs bound for the Boluda Towage and Salvage fleet, the first, the VB Bravo, has already entered service. Two others – the VB Titán and the VB Trón – were launched at Boluda-UNV shipyard in October 2009 and will shortly enter service. Delivery of the remaining six vessels is scheduled for 2010 and 2011 as follows:

Hull Nº	Type	Owner	Delivery Date
C-473	Voith Tractor TUG 70t UNV 870 VS	Boluda Corporación Marítima	March 2010
C-474	Voith Tractor TUG 70t UNV 870 VS	Boluda Corporación Marítima	April 2010
C-480	Voith Tractor TUG 70t UNV 870 VS	Boluda Corporación Marítima	January 2011
C-481	Voith Tractor TUG 70t UNV 870 VS	Boluda Corporación Marítima	February 2011
C-482	Voith Tractor TUG 70t UNV 870 VS	Boluda Corporación Marítima	April 2011
C-483	Voith Tractor TUG 70t UNV 870 VS	Boluda Corporación Marítima	May 2011

The VB Bravo will assist and escort ships, and conduct oil-spill recovery, pollution-control and fire-fighting operations in Spanish waters while the VB Titán and VB Trón will form part of the Boluda Towage and Salvage fleet. These tugs are designed for unrestricted navigation and provide towing services as well as executing fire fighting, ship-assistance and escort, cleaning-up of oil spills and pollution-control activities.

Two tugs, featuring four MAN 9L27/38 engines (3,285 kW at 800 rpm), are bound for two twin vessels – the Solan and Bonxie, which will be based at the Shetland Islands (UK) Sullom Voe oil terminal in the northern North Sea. The Solan was launched on 17 December 2009 and the Bonxie on 18 February 2010. The tugs will be operated by the Shetland Islands Council and their design makes them well-equipped for towage, and the general assistance and escorting of tankers and other ships.

Hull Nº	Type	Shipowner	Delivery Date
C-471	Voith Tractor TUG 70t UNV 970 VS	Shetland Island Council (UK)	April 2010
C-472	Voith Tractor TUG 70t UNV 970 VS	Shetland Island Council (UK)	May 2010

MAN Diesel has just finalized another contract with Boluda Shipyards - Unión Naval Valencia for the delivery of two 8L27/38 engines to a tug boat ordered by the Port Authority of Haifa, Israel. MAN Diesel's L27/38 medium-speed engine in its eight- and nine-cylinder variants has been chosen as main engine for all nine tug boats on account of its high-torque performance characteristics, robust and compact design, characterized by a single, front-end box that collectively houses LT/HT cooling-water pumps, thermostatic valves, and lube oil pump, cooler and automatic filter.

The VB Bravo pictured during sea trials (Photo courtesy MAN Diesel).

Viking Prospers in Tough Conditions

Viking Life-Saving Equipment A/S achieved all-time-high sales of $208m, up just over six percent on 2008. The group's profit also improved slightly compared with 2008. The most significant effect of the increased control over working capital can be seen in the company's liquidity, which improved by approximately $26.9m for 2009.

16 New Dealers for Trac Ecological

TRAC Ecological Products, manufacturer of environment-friendly products for onboard equipment cleaning and maintenance, has appointed 16 new US and international dealers and distributors for its product line, from Ft. Lauderdle to New Zealand. TRAC Ecological has developed a unique line of safe, biodegradable chemicals that are designed to efficiently and economically dissolve scale, barnacles, zebra mussels, calcium, rust, lime and other mineral deposits that can reduce water flow. For a full listing of dealers and products, visit www.trac-online.com

GAC Marine Logistics Opens Office in India

Chris Steibelt, Managing Director of GAC Marine Logistics. (Photo courtesy Gulf Agency Company Ltd)

Global ship spares logistics specialist GAC Marine Logistics (GML) has opened a new office in Chennai, India to house its fast growing dedicated customer service team. The India Customer Service desk is led by Customer Service Manager Mrs Rajshree Kurup who has more than 15 years experience in the field of ship spares logistics.

Underwater Hull Cleaning in Dutch Ports

The Netherlands was one of the first countries worldwide to practically ban the in-water cleaning of ship hulls in order to avoid the pulse release of TBT associated with it. Ships moored in ports continue to leach biocides, which leads to accumulation in sediments. The Dutch Ministry of Transport, Public Works and Water Management has pro-actively sought a solution to this environmental problem. It has come to the conclusion that a good non-toxic system includes regular and controlled removal of fouling and that the underwater cleaning and conditioning of ships coated with Ecospeed is at present a Best Available Technology (BAT). Very strict criteria for environmentally safe in-water cleaning practices

have been developed — criteria that Ecospeed has been able to meet so far. ECOTEC-STC is a project funded by the European Commission within the LIFE demonstration projects to confirm the ecological and economical advantages of the Ecospeed coating. One of the first tasks within this LIFE research project has been to validate that Ecospeed is completely free of biocides throughout its lifecycle. The Dutch Ministry of Transport carried out an elaborate study of effluent samples which has shown that no toxins are released at any stage, either at application, during curing or during in-water treatment. The measurements further showed that during conditioning only non-toxic fine particulate matter is released. In December 2009 a full underwater hull cleaning was carried out in Rotterdam on M/V Baltic Swan which was coated with Ecospeed in 2008. It is the first time since 1992 that the underwater cleaning of a ship's hull has taken place in a Dutch port. This milestone event will benefit both the Dutch ports and the environment in the years to come.

Ultrajet Power Three High-Speed Catamarans

Ultra Dynamics supplied three sets of twin UltraJet UJ377 Waterjet installations to South Boats for their New Mk II GRP 43/12m WFSV RRV Catamarans RRV Audrey, Offshore Response 1, and Spike Islander. The GRP catamarans have all been tailored to meet specific code and operational requirements of Wind Farm operations operators Turbine Transfers (Holyhead Towing) and Offshore Wind Power Marine Services:Limited (OWPMS) and Waddentaxi in the Netherlands respectively.

Measuring 43.6 ft in overall length with a draft of 2.3 ft., this newly designed vessel reaches a maximum speed of 34 knots thanks to the twin Iveco FPT NEF 500 BHP diesel engines, via Twin Disc MG5071SC gearboxes coupled to twin Ultra Dynamics UltraJet UJ377 waterjets. The jets supply maximum thrust for holding station at wind farm turbines and for high speed crew transfers.

The UltraJet waterjets are controlled at the helm by a JetMaster joystick control system. The South Catamaran modern central deck house has been designed to accommodate either 10 engineers in KAB sprung seats with tables, or 12 engineers/or passengers in KAB sprung seats without tables at sprint speeds in excess of 32 knots and 28 knot plus cruising speeds. This makes the design ideal for fast transfer of engineers or VIP's or fast transportation of support equipment.

MARITIME REPORTER AND ENGINEERING NEWS

2010 Editorial Calendar

January — Ad Closing : December 11

Feature: Ship Repair & Conversion:Tips & Techniques to keep vessels shipshape and profitable.
Market: Emerging Shipbuilding Markets for 2010 India, Mexico, Turkey, Spain, Russia, Vietnam
Technical: Marine Propulsion Products
Product / Directory: Maritime Fuels, Lubricants and Additives

BONUS DISTRIBUTION:
Pacific International Maritime Conference -January 27-29

February — Ad Closing : January 15

Feature: Cruise Ship, Megayacht & Passenger Vessel Annual
Market: Satellite Communications
Technical: Vessel Emissions: Technologies to keep Sea and Air Clean
Product / Directory: Coatings & Corrosion Control

BONUS DISTRIBUTION: Ship Tech - March 9-10,
NACE Corrosion Conference & Expo - March 14-18
Seatrade Cruise Shipping - March 15-18
Marintech / VietShip - March 16-19

March — Ad Closing : February 12

Feature: International Naval Technology
Market: Maritime Security: Fighting Piracy – Technology vs. Technique
Technical: The Integrated Bridge
Product / Directory: Marine Electronics Buyer's Guide

BONUS DISTRIBUTION:
CMA Shipping 2010 - March 22-24
Offshore Europe - SPE Intelligent Energy March 23-25
Asia Pacific Maritime - March 24-26
ASNE Day - April 8-9

April — Ad Closing : March 12

Feature: Offshore Annual
Market: Heavy Lifting: Deck Machinery & Ropes
Technical: Pump, Valve and Valve Actuation Technology
Product / Directory: Software Solutions

BONUS DISTRIBUTION:
OTC Offshore Technology Conference - May 3-6
RoRo - May 18-20

May — Ad Closing : April 16

Feature: Training & Education Edition
Market: Marine Environmental
Technical: Ship Management & IT
Product / Directory: Posidonia 2010 Edition: New Technology on Display in Athens

BONUS DISTRIBUTION:
Posidonia - June 7-11 / MACC June 1-3

June — Ad Closing : May 14

Feature: Annual World Yearbook -The Definitive Source for annual reports & statistics reaching the world's largest audited marine circulation
Market: U.S. West Coast Report
Technical: Salvage & Recovery
Product / Directory: Training & Education Facilities

July — Ad Closing : June 11

Feature: Satellite Communication Edition
Market: Canada
Technical: Offshore Energy: Oil, Gas, Wind, Wave & Tidal Power
Product / Directory: Diesel Engine Technical Guide

August — Ad Closing : July 16

Feature: The Electric Ship: From the Bridge to the engine room, technologies to optimize power onboard
Market: SMM 2010 Edition: The world maritime industry meets in Hamburg
Technical: Ship Repair & Conversion
Product / Directory: Maritime Tools: Welding, Cutting & Machine Tools

BONUS DISTRIBUTION:
Offshore Northern Seas - Aug 24-27
SMM September 7-10

September — Ad Closing : August 13

Feature: Marine Propulsion Edition
Market: RIBS & Tenders: New Boats & Technologies
Technical: Marine Coatings
Product / Directory: Insulation, Pipes, Pumps & Valves

October — Ad Closing : September 10

Feature: Marine Design Annual
Market: Arctic Ops: Designing Ships & Offshore Structures
Technical: Maritime Security: U.S. Coast Guard Annual
Product / Directory: CAD/CAM & other Software Solutions

BONUS DISTRIBUTION:
SNAME November 4-6

November — Ad Closing : October 15

Feature: Workboat Annual
Market: Training & Education: Keeping in Compliance
Technical: Dynamic Positioning: Harnessing the Power
Product / Directory: Deck Machinery & Cargo Handling Equipment

BONUS DISTRIBUTION:
Int'l Workboat Show Dec 1-3 / INMEX December 8-10

December — Ad Closing : November 12

Feature: Great Ships of 2010
Market: Coatings & Corrosion Control
Technical: The Green Ship: Technologies to keep vessel ops clean
Product / Directory: Maritime Fire & Safety Products

Valve & Valve Actuation Technology

Critical to a vessel's life-cycle cost and profitability is the performance of its pumps and valves. Little noticed unless something goes wrong, this month Maritime Reporter examines recently developments in the pump, valve and valve actuation technology niche.

W&O Supply was recently presented with a challenging application by one of the nation's largest barge operators. An automated valve package was required that would withstand harsh chemical loading and unloading as well as the marine environment and would meet U.S. Coast Guard safety standards. Current industrial packages did not meet the requirements, so by working with the customer and manufacturing partners W&O engineered an automated valve system that would withstand the demands of the application. The end result is a valve, actuator, and control system meets all requirements, improves the customer's operation, and was delivered in time and under budget.

As the world becomes more environmentally conscious, more attention than ever is being paid to the maritime market.

Companies such as **Herborner Pump** offer products that are specified by the U.S. Navy, MSC, NOAA, major cruise ship operators, and offshore drilling companies around the world as the "heart" of their waste water processing systems.

One of the key areas of interest has been how ships and offshore production facilities deal with black and gray water (i.e. sewage and waste water). In the past few years, owners and operators have needed to transition from the previous methods of waste disposal (i.e. "dilution is the solution to pollution") to sophisticated on-board waste processing systems that render waste water virtually drinkable. These systems incorporate advance waste processing technologies and equipment that have become integral to the operation of the ship. With all of this sophisticated equipment, the "heart" of these waste processing systems is still the pump which must transfer the waste to the processing systems and move it through the filtration/processing mechanisms. Without a reliable pump, all of these advanced technologies are useless. Unplanned pump failure may result in major downtime and costs to the owner.

Headworks BIO 'Clean Sea' system utilizing Herborner pumps for Oasis of the Seas.

Herborner Pump products are specified by the U.S. Navy, MSC, NOAA, major cruise ship operators, and offshore drilling companies around the world as the "heart" of their waste water processing systems. Herborner Pump has been designing and manufacturing quality pumps for more than 130 years. In order to assure that the highest quality standards are met, Herborner Pump performs all operations (design, casting, machining, assembly, and testing) in house, assuring their customers that their Herborner pump will provide the "bullet proof" reliability that the marine industry has grown to depend upon.

According to Glen Burgos, president of **BFG Marine**, even with the availability of many powered and automated valve actuators, the Offshore Oil Industry has many applications where a manually operated remote valve actuation system is necessary for several reasons, including safety, reliability, and durability. For example, the U.S. Coast Guard requires that fuel valves on crew, utility, offshore supply, and anchor handling vessels be able to be operated remotely from outside the engine room in case of a fire or other emergency. BFG Marine has provided many such vessels with a simple system to do so that incorporates a flexible reachrod. The flexible reachrod is sealed and lubricated, virtually eliminating

Flanged vs. Grooved Valve Assemblies

Grooved Valve Assemblies

Valve assemblies are typically constructed with flanged components, but this joining method can add unnecessary weight to a piping system. A six-inch flanged valve assembly constructed with a lug butterfly valve, connected with weld-neck flanges and 8 bolts and nuts on each side of the valve weighs approximately 86 pounds/39 kilograms. That's four connections and 16 bolts that require star-pattern tightening in three passes to ensure proper torque requirements are met. An alternative to the flanged valve assembly that is ideal in the shipbuilding industry is the grooved valve assembly. A six-inch valve assembly that utilizes a grooved-end butterfly valve, grooved-end pipe and two industry-approved couplings to connect the components weighs approximately 36 pounds/16.3 kilograms, representing a 58 percent weight reduction over the flanged assembly. The couplings have only two bolts and nuts each and do not have torque requirements, resulting in faster initial assembly and maintenance. Unlike flanges that must be welded to the pipe end, grooved valve assemblies do not require welding, which further reduces installation time and reduces safety risks. With a smaller profile than flanges, couplings are ideal for confined spaces as they require less space for assembly. Couplings allow for 360-degree orientation, which simplifies positioning of the bolts for future access and maintenance.

In addition to the installation benefits, grooved valve assemblies also provide performance benefits such as noise and vibration attenuation. The elastomeric gasket, contained inside the internal cavity of the ductile iron or galvanized coupling, creates a discontinuity thereby reducing sound transmission. The material from which the gasket is made also serves to absorb vibration.

When specifying grooved valve assemblies, it's imperative that couplings and valves have received type approval by International Association of Classification Societies (IACS) governing bodies. Victaulic holds numerous type approvals for a broad range of products to be used in the shipbuilding industry.

- By Ionut Chirica, Victaulic

W&O

Automated Valve Package

BFG

Flexible Reachrod

CS Unitec

Nut Runners

KZValve

Ball & Butterfly Valves

maintenance, particularly important for a system that may never be needed, but must work when it is. BFG Marine provides systems and system design guidance to several major drilling rig builders. Its systems are used to operate dump valves, sewage treatment system valves, firefighting system valves, and ballast valves. In one case, a rig builder came to BFG Marine looking to remotely actuate ballast valves located deep inside a semi-submersible's pontoons, and BFG Marine was able to develop a custom solution. "There is a misconception out there that all manual remote valve actuation systems are the same, and that choosing components for them is simple", said Glenn Burgos president, BFG Marine. "In truth, they are not the same. Like anything else, some brands are made better and perform better than others. And designing a system properly may not be as simple as it may seem. There are many variables to be considered, and many of these are often overlooked. We've gained quite a number of new clients by solving issues they've had with previous systems because we pay attention to the details of the application that were not considered previously." Such attention to detail helped lead to BFG's flexible reachrod systems being specified into the U.S. Navy's new Freedom Class Littoral Combat Ships, as well as several other U.S. Military ships. The company has also recently extended its reach into several industrial sectors that have applications where BFG's systems are a good solution. Successful applications include: Nuclear Power Plants, Petro-Chemical Plants, Pharmaceutical Plants, Breweries, Steel Mills, and Amusement Parks.

Colfax Corp. recently received a $7.6m pump order from Brightoil Shipping Group Co. Ltd., an international marine bunkering business (offshore marine fuel supplier) headquartered in Shenzhen, China. Under the agreement, Colfax will supply 180 two-screw rotary positive displacement pumps that Brightoil will install in 40 new tankers through 2011. The pumps – manufactured by Colfax's Houttuin business in Utrecht, Netherlands – will be used for transferring fuel oil and gas oil, as well as stripping (removal of waste or contaminants, such as water). Colfax will ship the pumps in installments beginning later this year and continuing through 2011.

CS Unitec's pneumatic nut runners are ideal for actuating valves, as well as tightening, tapping, reaming, pipe beveling and other driving applications. CS Unitec offers three powerful, lightweight models (6 1015 0010, 6 1015 0075 and 6 1015 0099) with 0.9 HP air motors at only 10 pounds each. These nut runners are available in 3/4" Female, 3/4" Male and 1/2" Male Square drives. The worm gear drive and vane air motor provide up to 423 ft.-lbs. of torque at 22 RPM. Each has a compact angle head for working in confined spaces, operate in forward and reverse direction, and have an air consumption of 45 CFM at 90 PSI.

CS Unitec also offers other pneumatic nut runners with speeds of 22 to 125 RPM and 3/4" Female, 3/4" Male and 1/2" Male Square drives. All pneumatic units are ATEX approved for use in hazardous environments and Ex Zones, making them ideal for use in the oil, gas and power generation industries. Hydraulic nut runners are also available for subsea applications.

KZValve offers ball and butterfly valves in stainless steel, bronze, polypropylene and nylon, all with stainless steel hardware. Sizes range from 1/4 to 4-in., with up to 2,000 psi. KZValve actuators are NEMA 6P rated (waterproof), NEMA 7 rated (ignition safe), and exceed the USCG electrical systems standard test procedure. Actuators are available in 12V DC, 24V DC and 24V AC. Actuators can be removed while the valves stay in service. For larger systems, the staff welcomes custom applications.

Gate Valve Actuator Controllers for CVN-78

DRS Consolidated Controls Inc., a DRS Defense Solutions LLC business unit, won the contract from Northrop Grumman Shipbuilding to design, qualify and manufacture the Gate Valve Actuator Controllers (GVAC) for the Gerald R. Ford (CVN-78). These controllers will operate gate valves used in the United States Navy's next-generation aircraft carrier, and work for GVAC is underway at the DRS Consolidated Controls plant in Danbury, Conn., with delivery of production hardware on track for the first quarter 2012.

"The Gate Valve Actuator Controls (GVAC) program is significant for DRS as we have been fortunate to win every electro mechanical actuator (EMA) controller program that we bid on for this ship and expands our leadership position in deploying EMA controls to replace shipboard hydraulics," said Jeff Armstrong, VP and general manager, DRS Consolidated Controls. "We appreciate the confidence that Northrop Grumman continues to place in us to make these leading edge programs a low risk reality."

(Continued from page 21)

About the Authors
Justin Mitchell and Carlos Tamez practice admiralty and maritime law, personal injury and commercial litigation in the Houston office of Hill Rivkins LLP (www.hillrivkins.com). Mitchell is also a licensed mariner and former OSV captain and Tamez is a licensed shipyard welder. Both attorneys can be reached at jmitchell@hillrivkins.com or (713) 222-1515.

Dynamic Positioning & Mariner Licensing

Accordingly, the dilemma for the majority of owners and operators of DP vessels in the Gulf of Mexico is whether a DPO standing watch on the bridge of a vessel is required to maintain (1) a DPO Certificate, (2) a USCG Merchant Marine Officer's license or (3) both.

The issuance of a DPO certificate is itself an important part of maintaining a safe and industry compliant navigational watch. However, hiring a DPO with a DP certificate who is not qualified as a licensed watchstander may not be enough to comply with the Coast Guard requirements. This certificate merely complies with industry standards and does not necessarily license an individual to stand a navigational watch. Although U.S. regulatory bodies have not mandated a DPO certification or endorsement to a Merchant Mariner's License, DPOs can nonetheless be watchstanders and in this case, the applicable standards for maintaining licensed officers must comply with U.S. Coast Guard licensing requirements. 46 C.F.R. § 11.401 et. seq.

To stand watch in the capacity of master, chief mate or other officer in charge of a navigational watch, the watchstander must be licensed by the Coast Guard in accordance with the provisions of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978, as amended in 1995 (STCW), and other laws and receive the appropriate certificate or endorsement as required by STCW. 46 U.S.C. § 10.101 et. seq. For example, a Senior DPO, standing a bridge watch alone, may not comply as an officer of the watch. On the same token a license chief mate may not comply with industry standards as a DPO.

Consequently, when hiring and employing a watchstander aboard a DP vessel, the vessel owner or operator should be careful to comply with both industry standards for DPOs and Coast Guard licensing requirements. Furthermore, to avoid potential liability issues, employers should be sure to comply with the licensing and manning requirements for the specific tonnage or class of vessel also.

In the event of a marine casualty, there may be certain liability consequences for the vessel owner and operators. For example, a vessel owner who employs a DPO who is not a licensed mariner and also a certified DPO may unnecessarily expose himself to additional liability as courts have consistently held that vessel owners have a nondelegable duty to man vessels with a competent crew. Therefore, owners need to ensure that their vessels are staffed by competent and properly-licensed mariners at all times. If a vessel owner does not take these steps, he could violate this duty and in some cases inadvertently waive the limitation of liability provisions he would normally be entitled to under U.S. law.

Photo courtesy Hill Rivkins LLP (with permission)

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OTE '10

"Where Leaders from the Subsea Offshore, Defense and Science Meet"

May 25-27, 2010, in Newport, RI

OceanTech Expo (OTE) 2010 brings together the three legs of the subsea technology industry: science, commercial(offshore Oil & Gas) and defense – to discuss the business of ocean technology. OTE is set in scenic Newport, Rhode Island from May 25-27, 2010, and three packed days will include:

- In-water demos directly from the dockside exhibition area
- Networking Opportunities
- Industry Outlook Sessions (IOS)
- Hands on training

This year's Industry Outlook Session is headlined by **keynote speaker John Westwood of Douglas-Westwood**, a renowned authority on most matters in the Offshore Oil & Gas and Subsea markets. A partial listing of the OTE Industry Outlook Session topics and speakers can be found to the right, while a full listing can be found on www.oceantechexpo.com.

(Photos courtesy of M Ship Co., LLC)

Setting OceanTech Expo apart from the plethora of conferences and exhibitions is its live, in-water product and system demonstrations. All OceanTech Expo exhibits, Industry Outlook Sessions and demonstrations are situated directly on the water at the Newport Yachting Center, steps away from the booth to the dock. For the event, OceanTech Expo has solidified comittments for six vessels, ranging in size from 22 to 165 ft., offering multiple sonar, remotely operated vehicle (ROV) and autonomous underwater vehicle (AUV) demonstrations.

A featured vessel will be the Stiletto Maritime Test Platform (pictured above left), a prototype naval ship manufactured as an operational experiment for the Pentagon's Office of Force Transformation. An example of next generation military vessels combining new materials (carbon fiber) with a networked architecture and a breakthrough hull design, she now serves as a Maritime Test Bed platform for the Rapid Reaction Technology Office in the Office of the Secretary of Defense.

OTE 2010

Fast Facts

When: May 25-27, 2010
Where: Newport Yachting Center, Newport, RI

Contact: Rob Howard
tel: 561-732-4368
Email:
howard@ marinelink.com

www.oceantechexpo.com

OTE 2010 Keynote Speaker

John Westwood, Chairman, Douglas-Westwood

The organizers of the OceanTech Expo (OTE) are pleased to welcome John Westwood, Chairman Douglas-Westwood, as the keynote speaker, kicking off OTE's signature "Industry Outlook Sessions"; a series of topical conferences designed to allow subsea technology users to discuss technology gaps and future needs.

Westwood's presence at OTE is particularly topical given the Obama Administration's recent moves to open additional regions off of the continental United States for oil and gas exploration. His address is tentatively entitled:

"Prospects for the Ocean Technology Industries"

The oceans are recognized as the provider trade routes, vast natural resources and as an overused dumping ground for the debris of our lifestyles. However, despite the considerable amount of scientific research on the oceans there is relatively little knowledge of the commercial markets for the ocean industries and their multiplicity of technology sectors.

In this presentation Westwood reviews the macro factors that are impacting our business sectors and the relative significance of the ocean industry markets. Then, as a worked example, he does a 'deep dive' into the marine energy sector, covering the business prospects for offshore oil & gas, offshore wind, wave and tidal power. For additional information on OTE and the Industry Outlook Sessions, visit

www.oceantechexpo.com

Industry Leaders to Address OTE Delegates

Tuesday, May 25, 2010

10:45 am – 12:15 pm • Oceanographic & Hydrographic Survey
Panel Chair: Rhodri E. Evans, Ph.D., Asst. VP & Marine Survey Manager, SAIC

1:30 pm- 3:00 pm • Arctic Ocean Exploration
Panel Chair: Dan Walker, Ph.D., Associate Professor, Ocean & Naval Architectural Engineering, Memorial University of Newfoundland

3:00 pm- 5:00 pm • Technologies for Offshore Oil & Gas
Panel Chair: Steven Kopits, Managing Director, Douglas-Westwood USA

Wednesday, May 26, 2010

9:00 am – 10:30 am • Port & Harbor Security
Panel Chair: Marianne Molchan, President, Molchan Marine Sciences, Inc.

10:45 am -12:15 pm • Ocean Renewable Energy
Panel Chairs: RADM Sam De Bow (NOAA, Ret'd), Director, Center for Research on Offshore Renewable Energy (RORE) University of Rhode Island
Maggie M. Merrill, Marine Renewable Energy Council-MREC, University of Massachusetts

1:30 pm – 3:00 pm • Wreck Oil Removal Program (WORP)
Speakers include: Dagmar Schmidt Etkin, Ph.D., President, Environmental Research Consulting; Carleen Lyden-Kluss, Executive Director, North Marine Environmental Protection Association (NAMEPA); CAPT Anthony Lloyd, Chief, Office of Incident Management and Preparedness, US Coast Guard; Dr. Deborah French McCay, Director of Impact Assessment Services, Principal, Applied Science Associates

3:30 pm – 5:00 pm • Federal Technology Overview
Panel Chair: Donald A. Jagoe, Vice President, SAIC, Newport, RI

Thursday, May 27, 2010

9:00 am - 10:45 am • Undersea Robotics
Chair: Andrew Bennett, Ph.D., Vice President, Research & Development, Scientific Systems Company, Inc. (SCCI)

Full Panel Details can be found at www.oceantechexpo.com

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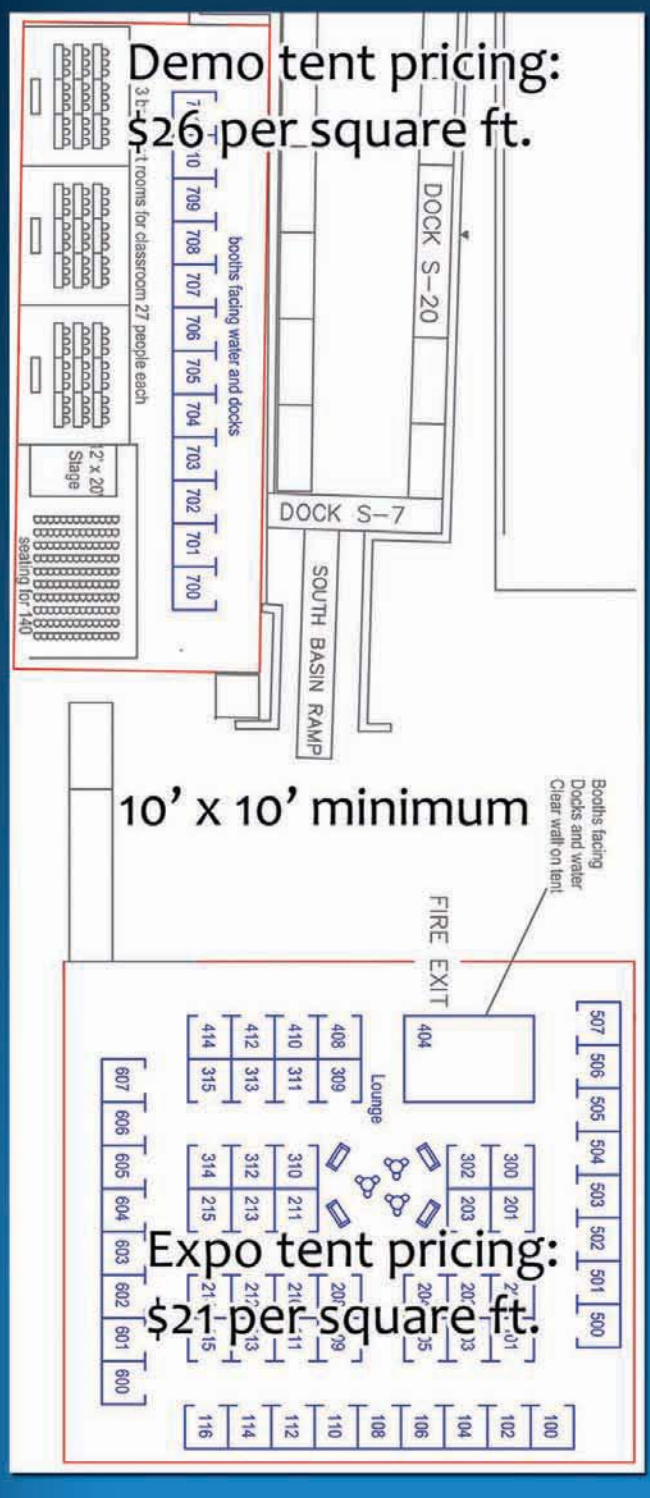

Exhibits

Companies wishing to marry focused client product or technology training sessions with live demonstrations will also find the logistics and meeting space at the OTE's Newport venue to be ideal. In addition to easy water access, there will also be a number of co-located break-out rooms available for one-on-one or group presentations and discussions.

Technology Represented at OTE

- ★ Acoustics
- ★ AUV's
- ★ Bathymetry
- ★ Cables
- ★ Charting
- ★ Data acquisition & mgmt.
- ★ Environmental impact studies
- ★ Geology
- ★ Geophysics & geotechnics
- ★ Hydrography
- ★ Instrumentation
- ★ Meteorology
- ★ Modeling & prediction
- ★ Navigation
- ★ Oceanography
- ★ Platforms
- ★ Pollution monitoring
- ★ Remote sensing
- ★ ROV's
- ★ Sensors
- ★ Sonar
- ★ Survey

Exhibiting companies interested in scheduling and booking conference or vessel space for individual or joint demonstrations or training should contact the conference organizers who will help to plan and coordinate your specific program.

EXPO VENUE

Newport Yachting Center
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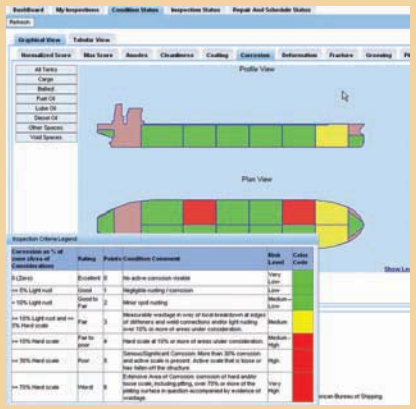
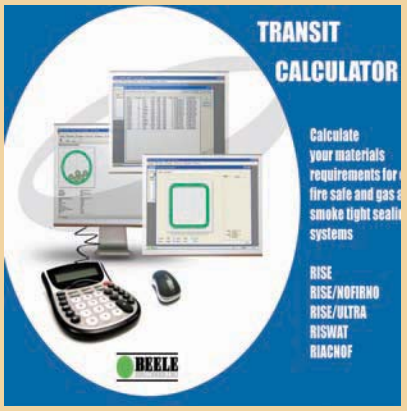
ABS Nautical
Hull Inspection Module



ABS Nautical Systems' Hull Inspection module is a web-based software tool that helps track the structural condition of a vessel throughout its service life. The program includes a hull inspection manual outlining areas to examine; tools for scheduling, recording and reporting inspections; and identification of critical areas for on-going monitoring.

www.abs-ns.com

Beele Engineering
Calculation Software



Beele Engineering's calculation software, designed to support users when calculating the materials requirements for sealed cable or pipe penetrations, now includes even more sealing solutions. The current version now calculates the RISE or RISWAT insert sleeves, the RISE, RISWAT or NOFIRNO filler sleeves, ACTIFOAM spare filling sheets, the RISE or RISE/ULTRA crushers and the DRI-FIL, FIWA or NOFIRNO sealant. Copies of the free material calculation software can be downloaded at

www.beele.com

Ship Decision 3.0

ShipDecision is committed to creating easy-to-use software to help people work effectively. The latest release, ShipDecision 3.0, was developed using the Adobe Flex framework. The enhanced graphical user interface creates an even more intuitive user experience, and makes it easy to organize and prioritize business transactions.

www.shipdecision.com

MESPAS

Mespas offers a solution based on the cloud-computing concept, with software and central server infrastructure provided as a managed service. The applications are built upon three product groups: Asset Management, Procurement, and Crew Management with various modules each, such as planned maintenance, purchasing, document management, TMSA, etc.

www.mespas.com

Dassault Systèmes V6

Dassault Systèmes and IBM said that German shipbuilder Meyer Werft selected the Dassault Systèmes V6 PLM platform for collaborative product development. IBM Global Business Services (GBS) will provide transformation consulting, implementation and integration services to improve time, quality and cost in the yard's engineering and manufacturing processes.

www.3ds.com

Seagull Counter-Piracy Training

Seagull AS launched a training package to assist seafarers in their battle against piracy; a computer-based training (CBT) module plus workbook, giving full procedural advice to assist crew preparedness for attacks by pirates. The Seagull CBT package offers guidance on how to reduce the possibility of pirates or armed robbers getting on board the vessel, how to manage a situation where pirates or armed robbers gain access to a vessel, and provides an understanding of how to react should pirates actually seize control of a ship.

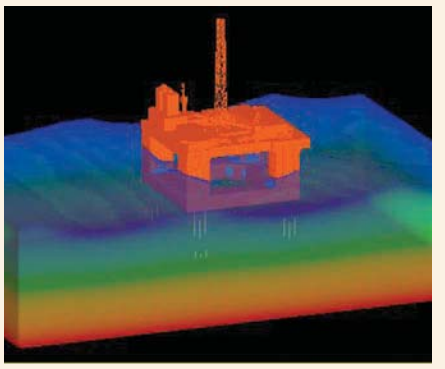
www.seagull.no

MarineCFO

MarineCFO is a provider of software solutions for both large and small workboat companies, with solutions designed to streamline dispatch, crew licensing, crew scheduling, vessel operations and maintenance while seamlessly synching data with the vessel. MarineCFO can be installed behind enterprise firewalls or accessed through the web using Internet Explorer.

www.marinecfolive.com

Flow-3D



CFD software FLOW-3D is designed to enable maritime engineers to model fluid-structure interaction for applications like simulating moored or tethered ships, offshore platforms and ship launches. Users can also study wave impacts on FPSO units, sloshing dynamics of fluid cargo, wave power generation systems and more.

www.flow3d.com

Port Clearance with GL Maritime Software

GL Maritime Software's "Port Clearance Assistant" is now available at no cost to ship owners and managers. The module of the ship management software simplifies port clearance procedures and ensures that the crew onboard has the right information available. As the software module incorporates contributions and experience of its user community, "Port Clearance Assistant" will be available at free of charge in 2010.

Email maritime.software@gl-group.com

McAllister Towing Moves to HELM

McAllister Towing is moving from its legacy operations system to HELM, a maritime operations software system developed by Edoc Systems Group Ltd. HELM's operations module will allow McAllister to streamline their dispatching and invoicing processes in their largest port: New York. Afterward HELM will be rolled out across McAllister's remaining 11 ports along the U.S. East Coast and the Caribbean over the course of 2010. According to Andrew McAllister, Vice President and Managing Director of IT at McAllister Towing, "We chose Edoc's HELM system because of their experience with multi-port ship docking operations, and their willingness to tailor their system to our specific needs as part of their customization process. They also changed the user interface to closely match our old system. This is not common practice but we requested it as part of our change control process."

www.edocmarine.com

Intergraph's SmartMarine 3D

SmartMarine 3D is the design and modeling component for offshore and ship design in Intergraph's Marine Enterprise portfolio. SmartMarine 3D provides a multi-discipline, integrated, seamless and single design environment to model structural, hull, piping, equipment, HVAC and electrical with automated detailing and drawings. SmartMarine 3D improves design quality, reduces production errors, increases data integrity and improves cross-discipline collaboration. SmartMarine 3D has proven to reduce costs and shorten project schedules for shipbuilders and offshore design firms alike.

www.intergraph.com

Spectec: Quality & Safety Module

AMOS2 Quality Management System (QMS) is designed to facilitate the integration of various management systems that ship operators must, or choose, to comply with such as the ISM Code, ISPS Code, TMSA and the ISO standards for Quality, Environment and Occupational Health and Safety. AMOS2 QMS allows for easier compliance with management standards.

Coming in 2011: Starfix.NG

"Starting in 2011 Fugro will introduce Starfix.NG the first phase of a completely new – Next Generation (NG) - suite of software employing the most modern technology," said Aris Lubbes, Division Technical Manager, Offshore Survey Division, Fugro N.V.

The software will cater for all the survey activities Fugro conducts world wide, and will be completely modular to ensure that simple jobs remain simple, while allowing for the addition of 'expert', modules to support more complex work.

Modern ways to visualize data, and the environment, provide an extremely powerful tool providing additional insight in otherwise complex processes and hardware configurations.

Therefore 3D visualization and the associated computations will be fully supported in the new Starfix.NG software. All the maps and displays will be presented in 3D and will equally support relatively simple plan views as complex immersive 3D environments.

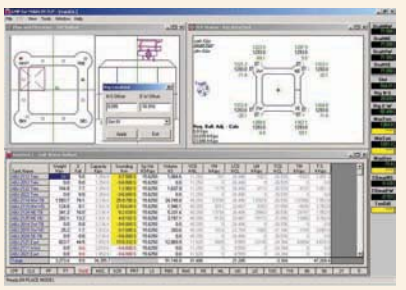
Sitting alongside 3D is accuracy, also referred to as 'variance' or 'Total Propagated Error' (TPE), Starfix.NG has a variance engine embedded throughout all computations from simple trigonometry to complex geodetics calculations and Kalman filters.

All error estimates are rigorously propagated throughout the system resulting in an accurate total propagated error for positions, observations and results.

Herbert Software Solutions, Inc.

LMP (Load Management Program) is designed for offshore installations, including stability, monitoring and weight management for a wide range of offshore platform designs including Semi's, TLP's and Spars. This proven system combines rigorously tested algorithms, a user friendly interface, and custom tools and reports to provide quick and consistent results.

www.herbertsoftware.com



Veson

Veson Nautical is a provider of Maritime Enterprise Resource Planning (Maritime-ERP) solutions and services. Veson's IMOS (Integrated Maritime Operations System) provides modules for Chartering, Operations and Financials; and Veslink is a set of highly configurable web-based services that creates a network of trusted contacts for exchanging shipping data. Veson's offerings consolidate, analyze and leverage data across all commercial shipping activities, allowing users to enhance decision-making, manage risk and maximize profit.

www.veson.com

MHI Licenses Diesel Engine Tech To China

Mitsubishi Heavy Industries, Ltd. (MHI) and Zhejiang Yungpu Heavy Machinery Co., Ltd. (YUNGPU) in China's Zhejiang Province have agreed on licensing of the technology incorporated into the Mitsubishi-UE, MHI's low-speed marine diesel engines. The licensing became effective late last month. YUNGPU is the third Chinese company to be licensed Mitsubishi-UE engine technology, and the event will further accelerate these engines' penetration into the Chinese shipbuilding market, where strong growth is expected.

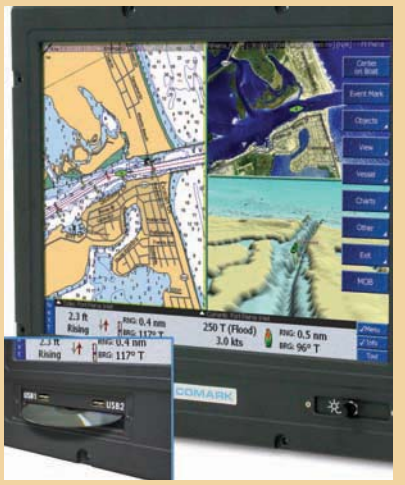
YUNGPU plans to complete manufacture and delivery of the first unit by the end of this year. The engines licensed to YUNGPU are the UEC37LSII and UEC33LSII, small-size marine diesels with cylinder bores of 370 and 330 mm, respectively.

Temperature Measurement Handbook and Encyclopedia

Recently released was the Volume MMXIV Omega Temperature Measurement Handbook 7th Edition, with detailed information and specifications on over 40,000 products for process measurement and control featured on over 2,000 Full Color pages.

www.omega.com/literature

MDU19PC Marine Panel Computer



Comark Corp. announced the availability of a front access DVD/USB option for the MDU19PC marine panel computer, to allows for quick data or program updates at the console, without having to remove the display from the panel, load software on a remote computer, or use portable drives. The option is specifically targeted at ECDIS and ECDIS-N applications that require periodic data updates to remain compliant.

www.comark.com

Algae-X International
PO Box 4011
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tel: 239-463-0607
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fax: 281-240-1828
email: cliffk@enerteck.net
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email: pdouglas@fluoramics.com
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Product: LiQuifix is an aerosol spray lubricant that is non-toxic and odorless with very low VOCs; LiQuifix meets Calif. standards for indoor air pollution and the new EPA regulations and has a flash point of 275°F.

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www.MystikLubes.com
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J.Schild
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fax: 251-639-7306
email: johan@stiegler.net
Products: Freedom, a fuel additive and conditioner

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Ralph Lewis
tel: 713-490-1100
fax: 713-490-6696
email: pri@priproducts.com
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Hood River, OR 97031
Phil Roberts
tel: 848-250-4836
email: gold88paro@yahoo.com
Descr: Marine lubrication specialist

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www.separationequipment.com
Floyd Goble
tel: 800-248-4805
fax: 813-684-1210
email: floydgoble@separationequipment.com
Descr: Alfa Laval is a distributor of centrifuges and spares
Products: Centrifuges, plate heat exchangers, backflushing lube oil filter, fresh water generator

TD Collaborative LLC
3R Green St.
Woburn, MA 01801
www.tdcollaborative.com
Hugh Wright
tel: 781-933-6116
fax: 781-933-6117
email: sales@tdcollaborative.com
Descr: Viscometer development and manufacture
Products: In-line viscometer for HFO precombustion control

Total Control Systems
2515 Charleston Pl.
Fort Wayne, IN 46808
www.tcsmeters.com
Dan Murray
tel: 800-348-4753
fax: 260-484-9230
email: sales@tcsmeters.com
Descr: Manufacturer of custody transfer positive displacement flow meters
Products: Ductile iron and aluminum 700 Series flow meters; 11/2" through 4" with flow rates up to 600 gpm

Transcube
18 Lois St.
Norwalk, CT 06851
www.transcube.net
Toby Nunn
tel: 866-814-2470
fax: 203-847-4310
email: info@transcube.us.com
Descr: For more than 40 years Transcube has provided a range of fuel tanks for environmental containment, transportation and deployment of fuel

Varna Products
4305 Business Dr.
Cameron Park, CA 95682
www.varnaproducts.com
Tiffany McAchran
tel: 530-676-7770
fax: 530-676-7796
email: tmcachran@varnaproducts.com
Descr: Manufacturing of industrial oil/fuel pumps
Products: Industrial oil and fuel pumps for prelube, soakback, transfer, drain/fill, etc.

WEMA USA
15 NE 3 St.
Ft Lauderdale, FL 33301
www.wemausa.com
Alan
tel: 954-463-1075
fax: 954-463-1270
email: info@wemausa.com
Descr: Worldwide marine equipment supplier
Products: Fuel, water and holding tank senders, gauges and related instruments and switches

William Marine Limited
P.O. Box 2853
Chaguaramas, Trinidad and Tobago
www.williammarine.com
Wilfred de Gannes
tel: 868-384-SHIP (7447)
fax: 868-662-6326
email: degstt@hotmail.com
Descr: Supplier of Shell Marine lubricants and oils, located at Western Main Road and Chaguaramas Bay in a hurricane safe natural deep water harbor

EMD Receives Tier II Certification

Electro-Motive Diesel has achieved IMO Tier II Emissions Certification for its model 710 G7C-T2 engines for C1, D2, E2 and E3 duty cycles. In October of 2008 IMO's Marine Environmental Protection Committee amended Annex VI of the rules and set NOx Tier II levels effective January 1, 2011. EMD's two cycle medium speed G7C-T2 engine has been certified to meet this new requirement. In addition to IMO Tier II, EMD engines are U.S. EPA Tier II certified as well as being certified by ABS, DNV, BV, Lloyds, CCS, and KR classification societies.

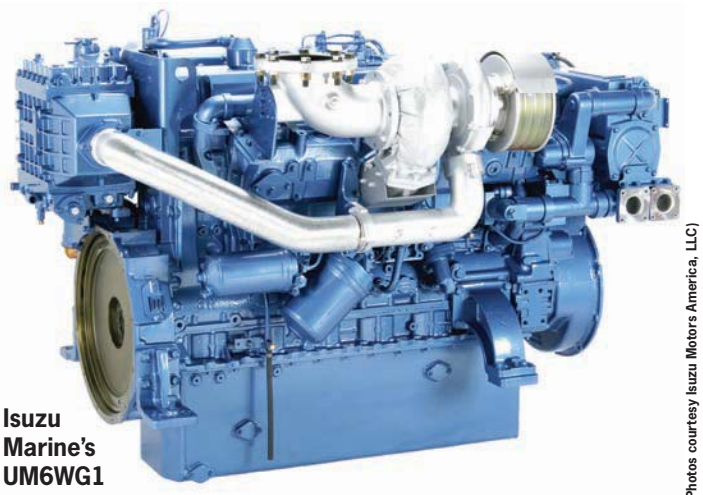
ACL GE Energy New Product Introduction Award

American Commercial Lines Inc. received the 2010 GE Energy New Product Introduction Award. The award is provided to the company that introduces the most innovative solution to GE Energy's commercial transportation supply chain. ACL was recognized for bringing a water-based, environmentally friendly, economical and safe solution to GE Energy as an alternative to land-based transportation options. Commenting on the award, Gabe Forir, ACL's Director of Sales, Midwest Region, stated, "We are excited to receive the 2010 GE Energy New Product Introduction Award for our work, along with partner TMO Global Logistics, in developing a barge transportation solution for GE. Transporting wind turbine blades and towers in barges via the U.S. inland waterways is a commercially viable solution for wind power companies, like GE, who are committed to optimizing their supply chains."

Profile

Isuzu Motors America

Since Isuzu's introduction of its Tier II electronic common rail commercial marine engines the company has seen various installations and re-powers across North America. One of the most recent repowers was in Eureka, Calif. With California offering programs such as the Carl Moyer Fund, commercial fishing vessels in that state have begun exploring more fuel efficient engine options. F/V Joy Ann, owned and operated by Paul Randstrom, recently installed an Isuzu 15.7 liter (UM6WG1) 505 hp, Tier II, M1 Isuzu Marine engine, coupled to a Twin Disc MG5114DC 4.59:1 transmission. With the re-power completed in January of 2010 the 58-ft trawler with a 20-ft beam has seen a fuel savings of 30 percent. Other benefits of the upgraded engine are the front PTO option for ease of adding large hydraulic pumps and the reduced noise level. The Isuzu Marine engine is now reported to run quieter than the Joy Ann's 35 kW, 1,800 rpm auxiliary generator. The engine was supplied from Hamilton Engine, the Isuzu distributor in the Northwest and Bob Zimmerling at Coast Diesel, based in Astoria, Ore.



Isuzu Marine's UM6WG1 engine.

(Photos courtesy Isuzu Motors America, LLC)

Tom Aliotti, a boat builder in Bellingham, Wash. is finishing up the twin engine, jet pump driven Bristol Bay Gill-netter, powered by two Isuzu Marine 7.8 liter (UM6HK1) 350 hp, Tier II, M3 rated diesel engines. The Isuzu Marine engines are coupled to Whitewater 15-inch jet pumps. The boat is 32 ft long with a beam of 14 ft. Loaded and ready to fish (22,000 GVW) this vessel should achieve 30+ knots. With an additional 13,000 lbs of gear the vessel should achieve 20 knots.

BUYER'S DIRECTORY

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

AUTOMATION AND COMMUNICATION SYSTEMS

L-3 Maritime Systems, 9 Malcolm Hoyt Drive, Newburyport, MA 34232, USA

AUTOPILOT SYSTEMS

AG Marine, 5711 34th Ave NW 2nd floor, Gig Harbor, WA

BARGE FABRICATION

Signal International LLC, 1011 S.Hwy 6, Ste 108, Houston, TX 77077, USA

BEARING- RUBBER, METALLIC, NON-METALLIC

Cooper Bearings, 5365 Robin Hood Road Suite B, Norfolk, VA

BOAT BUILDING AND DESIGN

Rivolta Group, 1765 Ringling Blvd. Suite 300, Sarasota, FL , tel:941 954-0355, fax:941 954-0111, Rrivolta@rivolta.com contact: Renzo Rivolta, www.rivolta.com

Textron Systems, 1010 Gause Blvd., Slidell, LA , tel:985 661-3621, fax:985 661-3631, dmirelez@tmls.textron.com contact: Daniel Mirelez, www.textron.com

BOATBUILDER

Washburn Doughty, P.O. Box 296, E. Boothbay, ME 04544, USA

BOW AND STERN THRUSTERS

Omnithruster Inc., 2201 Pinnacle Parkway Twinsburg, Ohio 44087, Cleveland, OH 44139, USA , tel:330 963-6310, fax:330 963-6325, widmer@omnithruster.com contact: Kurt Widmer, www.omnithruster.com

BRAKE SYSTEMS

Hilliard Corporation, 100 West 4th Street Elmira, New York 14901-2148, NY , tel:607 733-7121, fax:607 732-8979, rdoud@hilliardcorp.com contact: Rob Doud, www,hilliardcorp.com

BULKHEADS/MJ DOORS

Advanced Structures Corporation, 235 W. Industry Court, Deer Park, NY , tel:631 667-5000, fax:631 667-5015, advstrcorp@aol.com contact: Susan Stark, www.AdvancedStructuresCorp.com

CAD/CAM SYSTEMS

Autoship Systems Corp.,, 409 Granville Street Suite 1451, Vancouver, BC V6A 1E1, Canada

CENTRIFUGES

Westfalia Separator, Inc., 100 Fairway Ct., Northvale, NJ , tel:201 784-4395, fax:201 767-3416, Francis.Kennedy@geagroup.com contact: Frank Kennedy, www.wsus.com

CHARGE AIR COOLERS

3 Star Atlantic Radiator Ultra Sonic Cleaning Division, 4358 N.Dixie Highway, Oakland Park, FL 78634, USA , tel:954 566-7403, fax:954 561-5946, MCross9241@aol.com

CONTROL SYSTEM-MONITORING/STEERING

Omega Engineering, One Omega Dr., Stamford, CT 06907, USA , tel:203 359-1660, fax:203 968-7192, kkwait@omega.com contact: Dan Jackson, www.omega.com

CORDAGE

Yale Cordage, 77 Industrial Park Road, Saco, ME , tel:207 282-3396, fax:207 282 4620, info@yalecordage.com contact: Dick Hildebrand, www.yalecordage.com

CRANKSHAFT REPAIR

In-Place Machining, 3811 N. Holton St., Milwaukee, WI 53212, USA

DECK FITTINGS

Baier Marine, 1914 N 34th Street Suite 502, Seattle, WA , tel:206 709-1500 ext. 223, fax:206 632-2441, sales@baiermarine.com contact: Alex Smith, www.baiermarine.com

DECK MACHINERY- CARGO HANDLING EQUIPMENT

Smith Berger Marine, 7915 10th Ave. S., Seattle, WA 98108, USA

DIESEL ENGINE- SPARE PARTS & REPAIR

Goltens Worldwide, PO Box 1176, Marion, MA , tel:508 728-3128, fax:508 536 6025

Motor-Services Hugo Stamp, 3190 SW 4th Avenue, Ft. Lauderdale, FL 33315, USA , tel:954 763-3660, fax:954 763-2872 , www.mshs.com

DOOR LOCKS

The Brass Works Inc., P.O. Box 566, Deland, FL , tel:386-943-8857, fax:386-943-8810, info@marinedoorandcabinethardward.com

DOORS- MARINE & INDUSTRIAL

Walz & Krenzer, Inc, 91 Willenbrook Rd.Unit B4, Oxford, CT , tel:203 267-5712, fax:203 267-5716, sales@wkdoors.com contact: Melissa Shepstone, www.wkdoors.com

ELECTRIC MOTORS AND CONTROLS

Ward Leonard, 401 Watertown Road, Thomaston, CT

ELECTRIC PROPULSION

Avtron Industrial Automation, 7900 E.Pleasant Valley Road, Independence, OH , tel:216 642-1230/ext 1263, fax:216 642-6037, mduskey@avtron.com contact: Mark R. Duskey, www.avtron.com

ELECTRICAL SERVICES

PMI Industries, Inc, 5300 St. Clair Avenue, Cleveland, OH

ENGINE AND COMPONENT ALIGNMENT

Dynamold, Inc., 2905 Shamrock Ave., Fort Worth, TX 76107, USA , tel:817-335-0862, fax:817-877-5203, pmpeck@dynamold.com contact: Michael Peck, www.dynamold.com

EPIRB

Whiffletree Corporation Inc., PO Box 27, Bridgton, ME , tel:207 647-3300, fax:207 647-3700, glcl@bellatlantic.net

FENDERING SYSTEMS/ BUOYS - DOCK & VESSEL

Schuyler Rubber Co., 16901 Woodred Rd.NE, Woodinville, WA 98072, USA , tel:425 488-2255, fax:425 488-2424, Greg@schuylerrubber.com contact: Greg Armfield, www.schuylerrubber.com

FILTRATION

Boll Filter, 9822 General Drive. Ste. 180, Plymouth, MI 48170, USA , tel:734 451-4680, fax:734 451-4681, Latorre@bollfilterusa.com contact: Michele Latorre, www.bollfilterusa.com

GALLEY EQUIPMENT

Jamestown Metal Marine Sales, Inc., 4710 Northwest 2nd Ave., Boca Raton, FL 33431, USA
Maritime Associates International, 3832-010 Baymeadows Rd. #407, Jacksonville, FL 32217, USA
US Outfitters, 10752 Deerwood Park Boulevard South Waterview II Suite 100 Jacksonville, FL 32256, Jacksonville, FL

HATCHES & DOORS

Baier Marine, 1914 N 34th Street Suite 502, Seattle, WA , tel:206 709-1500 ext. 223, fax:206 632-2441, sales@baiermarine.com contact: Alex Smith, www.baiermarine.com

Juniper Industries, 72-15 Metropolitan Ave., Middle Village, NY 11379, USA , tel:718-326-2546, fax:718-326-3786

Maritime Associates International, 3832-010 Baymeadows Rd. #407, Jacksonville, FL 32217, USA
US Outfitters, 10752 Deerwood Park Boulevard South Waterview II Suite 100 Jacksonville, FL 32256, Jacksonville, FL

HORNS/WHISTLES

Kahlenberg Brothers Co., P.O. Box 358, Two Rivers, WI 54241, USA , tel:920-793-4507, fax:920-793-1346, EKahlen@Kahlenberg.com contact: Erick Kahlenberg, www.Kahlenberg.com

HVAC

Jamestown Metal Marine Sales, Inc, 4710 Northwest 2nd. Ave., Boca Raton, FL 33431, USA

INTEGRATED BRIDGE SYSTEMS

L-3 Maritime Systems, 9 Malcolm Hoyt Drive, Newburyport, MA 34232, USA , tel:978 462-2400, fax:978 462-4497, Jon.Miller@L-3com.com contact: Jon Miller, www.L-3com.com/MPS

INTERIORS

Jamestown Metal Marine Sales, Inc., 4710 Northwest 2nd Ave., Boca Raton, FL 33431, USA
Maritime Associates International, 3832-010 Baymeadows Rd. #407, Jacksonville, FL 32217, USA

Thermax Marine-Panel Specialists, Inc., 3115 Range Rd., Temple, TX 76501, USA , tel:813 340-3940, fax:813 264-2507, thermax@panelspec.com contact: John Hutchinson, www.thermaxmarine.com

US Outfitters, 10752 Deerwood Park Boulevard South Waterview II Suite 100 Jacksonville, FL 32256, Jacksonville, FL

JOINER PANELS/FURNITURE

Maritime Associates International, 3832-010 Baymeadows Rd. #407, Jacksonville, FL 32217, USA
US Outfitters, 10752 Deerwood Park Boulevard South Waterview II Suite 100 Jacksonville, FL 32256, Jacksonville, FL

LIFEBOATS/RAFTS

DBC Marine Safety Systems, 101-3760 Jacombs Rd., Richmond, BC V6V 6T3, Canada

LIFESAVING EQUIPMENT

C.M. Hammar AB, August Barks Gatan 15, 421 32 Vastra Frolunda , Sweden

LIGHTING SYSTEMS/ EQUIPMENT

Maritime Associates, P.O. BOX 1788, Crystal Bay, NV 89402, USA

LIVING QUARTERS AND PUBLIC SPACES

VSS Industries, 7640 Wilbur Way, Sacramento, CA , tel:916 681 8677, fax:916 681 4867, duane@vsscountertops.com contact: Duane Tucker, www.vsscountertops.com

LUBRICANTS

ExxonMobil Marine Lubricants, 3225 Gallows Rd, Fairfax, VA , www.exxonmobilmarinelubes.com

Kobelco Eagle Marine, Inc., 366 Fifth Avenue, Suite 712, NY, NY 10017, USA

MARINE & OFFSHORE SIGNAGE

Maritime Associates, P.O. BOX 1788, Crystal Bay, NV 89402, USA

METEOROLOGICAL INSTRUMENTS

R. M. Young Company, 2801 Aero Park Drive, Traverse City, MI , tel:231-946-3980, fax:231-946-4772, vsherman@youngusa.com

MOORING PRODUCTS AND SYSTEMS

PSI Marine, Inc., 3075 Shattuck, Ste 801, Saginaw, MI

PARTS LOCATOR SERVICE

Inventory Locator Service, 8001 Centerview Parkway Suite 400, Memphis, TN 38018, USA

PARTS/SERVICE AND REPAIR

Westfalia Separator, Inc., 100 Fairway Court, Northvale, NJ 07647, USA , tel:(201) 784-4335, fax:(201) 784-4399, Klaus.Brinkrode@geagroup.com contact: Klaus Brinkrode, www.wsus.com

PASSIVE FIRE PROTECTION

Microtherm, 3269 Regal Drive, Alcoa, TN , tel:865 681-0155, fax:865-681-0016, ABostrom@microtherm.us contact: Alyssia Bostrom, www.microtherm.us

PROPELLERS

Kahlenberg Brothers Co., P.O. Box 358, Two Rivers, WI 54241, USA , tel:920-793-4507, fax:920-793-1346, EKahlen@Kahlenberg.com contact: Erick Kahlenberg, www.Kahlenberg.com

PROPULSION EQUIPMENT AND SERVICES

Sound Propeller Systems, LLC, 9130 15th Pl.S Suite A, Seattle, WA , tel:206 392-0021, fax:206 392-0026, nhansen@soundpropsys.com contact: Norm Hansen, www.soundpropellersystems.com

PROPULSION ORDER TELEGRAPHS

Prime Mover Controls, 3600 Gilmore Way, Burnaby, BC V5G 4R8, Canada

RIGID INFLATABLE BOATS

Wing Inflatables, P.O. Box 279, 1132 Samoa Blvd., Arcata, CA 99521, USA

SATELLITE COMMUNICATIONS

Intellian Technologies, 9261 Irvine Blvd., Irvine, CA , tel:949 916-4411, fax:949 271-4183, sales@intelliantech.com contact: John Minetola, www,intelliantech.com

SEALS

Kobelco Eagle Marine, Inc., 366 Fifth Avenue, Suite 712, NY, NY 10017, USA , tel:212-967-5575, fax:212-967-6966, hawkins@kobelco-eagle.com contact: David Hawkins, www.kobelco-eagle.com

SEATING

H.O. Bostrom, 818 Progress Ave., Waukesha, WI 53186, USA , tel:262.542.0222, fax:262.542.3784, sales@hobostrom.com contact: Mike Oemichen, www.hobostrom.com

SHAFT HORSEPOWER SYSTEMS

Hillhouse Industrial Marine, 296 Knox Mountain Road, Sanbornton, NH , tel:603 566-4330, fax:603 934 5388

SURFACE PREP TOOLS

Aurand Mfg., 1210 Ellis St., Cincinnati, OH 45223, USA

TANK GAUGING AND SENSORS

Electronic Marine Systems, 800 Ferndale Pl., Rahway, NJ 07065, USA , tel:732 382-4344, fax:732 388-5111, emsmarcon@aol.com contact: Tom Priola, www.emsmarcon.com

TANK LEVELING INDICATORS

King Engineering Co, PO Box 1228, Ann Arbor, MI 48106, USA

Technical Marine Service,Inc., 6040 N.Cutter Circle Suite 302 Portland,Ore 97217 , tel:503 285-8947, fax:503 285 1379, SBrox@tms-usa.com

Technical Marine Service,Inc., 6040 North Cutter Circle, Suite 302, Portland, OR 97217-3956, USA , tel:503-285-8947, fax:503-285-1379, SBrox@tms-usa,com contact: Steve Brox, www.Levelcom.net

WASTE WATER TREATMENT

Marinfloc AB, Industrivagen 10, Verekil , tel:+46 (0) 304-606 300, fax:+46 (0) 304-100 51, pl@marinfloc.com

WINCHES & FAIRLEADS

Skookum, P.O. Box 280, Hubbard, OR 97032, USA

Employment/Recruitment • wwwMaritimeJobs.com

Spirit Cruises needs Captains!
Job Location: USA, Philadelphia

WORK IS MORE FUN ON THE WATER!

Spirit Cruises provides high-energy, 2-3 hour boat excursions in America's most exciting port cities – Philadelphia, Norfolk, VA, New York, Chicago, Washington DC, Boston, and Baltimore. Guests come aboard to celebrate the special moments of their life. Our Captains ensure consistently high levels of safety, quality, service, and customer satisfaction; and maintains a high level of profitability.

Some Essential Functions:

- Rotates as cruise captain on cruises and ensures adherence to procedures detailed in the Product Management Guide. This includes thorough pre-cruise preparation, adherence to cruise scripts, supervision of crew, proper piloting of vessel, adherence to all Coast Guard rules and regulations, and guest satisfaction.
- Conducts pre-cruise meetings and communicates to crew all necessary information regarding the cruise (special needs, boarding procedures, etc.).
- Ensures that staff and guests adhere to all safety standards and procedures.
- Participates in the execution of the Safety Program, including emergency drills.
- Participates in the proper maintenance of all ship's systems and boarding facilities including but not limited to gangways, diesel, hydraulic, pneumatic, electrical, water (potable, raw, black, and gray), fire suppression, communications, and navigation.
- Recruits non-exempt operations staff (crew) when necessary to fill vacant positions.
- Completes all shift records: checklist, logbook, payroll, and documentation of safety training.

Some Requirements:

1. Must currently possess 100 ton license with a satisfactory record
2. Effectively deal with internal and external customers some of whom will require high levels of patience tact and diplomacy
3. Minimum of 5 years of marine experience. Preferably to include 2 years as a captain with an outstanding record
4. High school diploma or equivalent
5. Vessel handling and navigation knowledge
6. Detailed working knowledge of all ship's systems and their proper maintenance: gangways, diesel, hydraulic, pneumatic, electrical, water (potable, raw, black, and gray), fire suppression, communications, and navigation
7. Work with Microsoft Office applications (especially Word & Excel)

Preamble to the Job Posting

After almost 12 years as Executive Director of the Society, a position I have found to be exciting, challenging and personally rewarding, I have decided to retire this summer to pursue other interests including grandchildren, sailing and golf. An announcement for this position follows, and responses including a cover letter and detailed resume may be emailed directly to me at pbk@sname.org.

Phil Kimball, Executive Director, SNAME The Society of Naval Architects and Marine Engineers

The Society of Naval Architects and Marine Engineers

POSITION OF EXECUTIVE DIRECTOR

The Society of Naval Architects and Marine Engineers is seeking an experienced marine professional to serve as Executive Director of the Society. This person is the chief administrative officer of the Society with responsibilities for overall strategic management, tactical administration, Sections, operation of the Society's headquarters for-profit building and management of its 11-member professional staff.

The Executive Director receives direction from the Society's President and the Executive Committee and periodically reports to the Headquarters Review Committee, Executive Committee, and Council. He/she manages the departmental activities of finance and accounting, membership, knowledge management, education, annual meeting and symposia, information technology and the website and technical and professional development. He/she participates on standing, special and ad hoc committees, all human resource functions, and the employee benefits program. He/she assumes leadership responsibilities for special projects and new Society initiatives and represents the Society at conferences, tradeshows and special events.

The ideal candidate has at least 15 years of proven senior level management experience in the maritime and/or offshore industries. Association experience, either as an employee or through volunteer involvement at the management/governance level, is strongly preferred. SNAME is a professional technical Society and degree(s) in Naval Architecture, Marine, Ocean, or other engineering-related disciplines are desirable. The candidate must have proven skills in the management of small or medium-sized businesses or commensurate experience. Applicants must possess and demonstrate leadership, organizational, communication (written and oral), creative, interpersonal, and computer skills.

The Society was founded in 1893 as a technical and engineering society focused in the maritime industry, and currently has a membership of 8700 individual members, 20% of whom are located in 96 countries outside of North America. The Society owns and manages it own building located in the Journal Square area of Jersey City, NJ.

Only Fellows, Members, and Affiliates of the Society are eligible for the office of Executive Director. Qualified candidates should submit a formal letter of application and a resume with salary history and references by e-mail to Philip B. Kimball at pbk@sname.org. All submittals will be maintained in confidence. The Society is an equal opportunity employer.

Our people make the difference. O.S.S. (Our Service System) helps us to create the best possible work environment and provide outstanding guest service. Spirit Cruises shipmates are dynamic, upbeat, and friendly. Our core values emphasize respect for one another, teamwork, innovation, personal responsibility, and honest communication. And above all, our most important obligation is to think and work safely.

We recognize our shipmates for a job well done. Our shipmate appreciation program includes weekly heroes and monthly MVP's.

And there is plenty of opportunity to advance. More than 60% of our on-board managers were promoted from within. Each position has the opportunity to learn skills that will qualify them for future management positions.

Come be a part of the premier team in this exciting industry. We offer competitive pay and comprehensive benefit package. This exempt position will report to the Marine Operations Manager. Check us out on the web and see the full description. Then qualified and interested candidates must complete our on-line application at http://tbe.taleo.net/NA7/ats/careers/requisition.jsp?org=ENTERTAINMENTCRUISES&cws=1&rid=420

Or for a Spanish application go to:
http://tbe.taleo.net/NA7/ats/careers/requisition.jsp?org=ENTERTAINMENTCRUISES&cws=5&rid=420

Equal Opportunity Employer
Bridget Nelson
Spirit Cruises, LLC
Philadelphia PA 19106 USA
Fax: 312-494-1430
Email: BNelson@entertainmentcruises.com
Web: http://tbe.taleo.net/NA7/ats/careers/requisition.jsp?org=ENTERTAINMENTCRUISES&cws=1&rid=420

Assistant Storekeeper

Job Location: Military Sealift Command (MSC) Vessels Worldwide

Who May Apply:
Open to all qualified United States Citizens who are currently not employed with Military Sealift Fleet Support Command (MSFSC) as civil service mariner (CIVMAR) employees. Relocation expenses are not
authorized for this position.

Duties:
The Assistant Storekeeper (ASK) is responsible for performing Supply Department functions assigned in
accordance with directives. The Assistant Yeoman Storekeeper is responsible for the day-to-day operation
and management of his/her assigned duties. Responsible for proper material identification for both
Government and Commercial items. Utilize management data lists, allowance lists, load lists, technical
manuals, parts lists, and automated commercial off the shelf (COTS) technical research systems. Performs
receipt, issue, stowage and inventory of all types of material received onboard for stock or direct turnover
to other departments, including proper handling of hazardous materials

Minimum Eligibility Requirements:
Must be a United States Citizen of at least 18 years of age and possess and maintain a valid:
1. U. S. Passport with a minimum of 7 months remaining of expiration date,
2. United States Coast Guard (USCG) Merchant Mariner's Document (MMD), or Merchant
Mariner Credential (MMC), with a minimum of 10 months remaining of expiration date.
3. Transportation Worker Identification Credential (TWIC) card with a minimum of 10 months
remaining of expiration date.
4. Must have specialized experience. Specialized experience includes the administration of
supply operations, and performing receipt, issue, stowage and inventory of all types of
material. Related specialized experience must have been one of the following:
1) Aboard a MSC vessel with completion of the Storekeeper Basic Course or,
2) Military experience in a supply/logistics rating (E-4 or above) or,
3) Commercial Warehouse/Inventory Management experience.

Evaluation Criteria:
Applicants who meet the Minimum Eligibility Requirements described above will be further evaluated.
Documented experience, education, training, and awards contained in the application package will be
reviewed to determine the degree to which you possess the required knowledge, skills, and abilities (KSAs)
that are essential to perform the duties and responsibilities of the position. A rating determination will be
conducted against the knowledge, skills and abilities to determine your qualifications as reflected by your
responses to the following job related factors:

1. Knowledge of basic material identification processes for standard and non-standard stock material.
2. Knowledge of basic receipt, stowage, issue and inventory procedures required for proper storeroom
inventory management.
3. Knowledge of the proper handling, storage and management requirements for hazardous material
authorized.

Evaluations, awards, training, education, and related MSC, military, and/or commercial experience, etc.,
will also be part of the rating process.

Conditions of Employment
1. CIVMAR positions are subject to drug urinalysis testing.
2. Able to obtain and maintain security clearance eligibility and assignment to a sensitive position.
3. Able to successfully pass the physical examinations (arranged by MSC) and maintain MSFSC medical requirements. Participate in vaccine immunization; including a tuberculosis (TB) screening test is also
required. TB screening is not provided at the MSC-arranged medical examination, but can usually be
obtained from your personal medical provider or free at any local Public Health Clinic. If you have
previously had a positive TB skin test (i.e. a CONVERTER or REACTOR), another skin test is not
required, but you must instead provide the Medical Department written proof that you have completed
treatment with medicine (i.e. INH), or that you have started treatment with medicine, or that such treatment
is not warranted as determined by competent medical authority.
4. Attend and successfully complete all mandatory training courses, including Personal Survival, which
requires the ability to float in the water for a minimum of 60 seconds.
5. Be ready, willing, and able to physically perform the duty of this position worldwide at all times.
6. Be ready, willing, and able to work in shipboard environmental conditions, and wear protective
equipment worldwide at all times.
7. Entry-level positions require candidates to pass an English Language Competency Test.
8. Participate in direct deposit/electronic funds transfer as the standard method of payroll payments.
Note:
a. The tentative offer of employment will be rescinded if the selectee fails to report to any of the scheduled
appointments, fails the physical examination, fails the language competency test, fails drug test, fails to
disclose employment information, fails to report to the New Employee Orientation, or is unable to obtain a
security clearance.
b. In case by case bases, an applicant who accepts a tentative offer of employment will be required to

provide a VA Rating Decisions and or Office of Worker's Compensation Program (OWCP) Scheduled
Awards.
How to Apply:
ALL documents MUST be POST-MARKED by the cut-off or closing date of this announcement.
Only applications received during the announced timeframe will be considered. MSFSC is not responsible
for obtaining documents to include in your package.
The following documents are required and are to be submitted in the following order:
1. A completed, signed and dated Optional Application for Federal Employment (OF-612) to include
social security number, US Citizenship, veterans preference and previous federal employment. For forms
visit www.sealiftcommand.com.
2. A completed, signed and dated Declaration of Federal Employment (OF-306), including Applicant's
Statement of Selective Service Registration Status, for forms visit www.sealiftcommand.com. For
Selective Service information, visit www.sss.gov. If you answered yes to Questions 9 and/or 11; or have
current or pending criminal charges and/or charges for any violation of law, court abstracts from the Clerk
of Courts are required.
3. A current United States Coast Guard Merchant Mariner's Document (MMD), front and back or
Merchant Mariner Credential (MMC), all pages and front and back copy of the Transportation Worker
Identification Credential (TWIC) with a minimum of ten months remaining of expiration date.
4. A front and back copy of your current United States Coast Guard license, and/or STCW certificate with
a minimum of ten months remaining of expiration date, if applicable.
5. A current U. S. Passport with a minimum of seven months remaining of expiration date.
6. A copy of professional certificates as applicable for this position.
7. If you are a current or prior federal government employee, you must include a copy of your separation
Notice of Personnel Action (SF-50).
8. If you served in the U.S. Military Service, you must provide a copy of your Certificate of Discharge
(DD214) that shows the type of discharge you received. This information is located under the "Character
of Service" block of your DD214. If you are claiming 10 points or higher veteran's preference, you must
provide supporting documentation such as, a completed Application for Preference (SF-15)(http://www.opm.gov/forms/pdf_fill/SF15.pdf). Additional information on Veterans' Preference is
available at www.opm.gov/veterans. You will also be required to provide a copy of the VA Rating
Decisions upon accepting the tentative offer of employment.
9. Resume. All resumes will include the following information, type written in Times New Roman, 12
pitch. (See template):
(a) Full name.
(b) Relevant work experience within the last 5 years including paid and non paid public or private
sector work experience related to the job for which applying.
(c) Colleges or universities name, city, and state (with zip code), major(s), type and year of any
degree received (if no degree, show total credits earned and indicate whether semester or quarter hours).
0. A narrative response to each of the Knowledge, Skills and Abilities (KSA's) will be provided. The
KSA responses must also be type written in Times New Roman, 12 pitch. (See template).
11. Last 5 years of Performance Evaluations (if available) and training certificates applicable to the
position you are applying to.
12. Job related honors, awards, and special accomplishments; for example, Military, Government or
recognized professional organizations related to the maritime field and performance awards. Submit
copies.
Failure to submit any required information to show that you meet the minimum qualifications as
outlined in the JOA will result in the applicant being found ineligible. Failure to provide a Resume
and or KSA's as directed in the JOA will result in applicant being found ineligible. All applications and supporting documents will become the property of MSFSC, and will not be returned
to the applicant once submitted. Applicants are encouraged to make copies of all documentation prior to submission.
How To Contact Us:

Please send completed packages to:
Military Sealift Command
CIVMAR Support Center
6353 Center Drive, Building #8, Suite 202
Norfolk, VA 23502
If you have any questions, please email us at civmar@marinersupport.com or call our toll free Recruitment
hotline at 1-877-JOBS-MSC (1-877-562-7672). Please also visit our website at www.sealiftcommand.com.

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Job Location: USA, WA, Port Angeles/Seattle

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-Proven close quarter boat handling skills required.
-Our ideal candidate will have Launch Experience delivering passengers and freight to and from various ships at anchor and underway.
-Excellent boat handling experience required.

Min. Requirements
Minimum USCG 100 Ton License Required
FCC
Current CPR
STCW 95
(ARPA Preferred)

-Salary DOE & Qualifications
- Relocation Assistance Available
- Excellent Benefits Package including Medical, Dental, Vision and Company Sponsored 401K for eligible full-time staff

E-mail or Fax Resume- NO CALLS
E-mail Resume's to allie@arrowlaunch.com
E-mails without Resume's WILL NOT be considered.
Fax- 360-457-1552

Allie Williams
Arrow Launch
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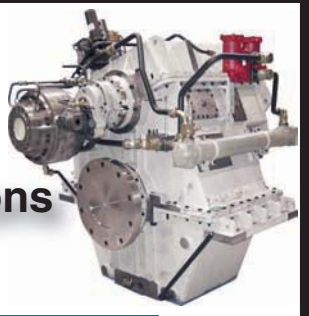

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