

August 2006

# MARITIME REPORTER

AND  
ENGINEERING NEWS

[www.marinelink.com](http://www.marinelink.com)

**Shipbuilding Technology**  
**Combat in a Container**

**LNG**  
**Opportunity for U.S. Market**

**Government Update**  
**New OPA90 Limits on Liability**

**Eye on the Navy**  
**Piracy Strikes**

**Repair Report • Maritime Tools**



**ONLY ONE COMPANY PUTS EVERY  
SINGLE VALVE TO THE TEST.**

**SPACE**



Piping • Valves • Fittings • Metrics • Metals • Valve Automation

**SPACE VALVES EXCLUSIVELY FROM W&O SUPPLY**

Valve failure can cost you untold thousands of dollars. That's why it makes sense to invest in the most reliable, highest-quality valves on the market: SPACE Valves from W&O Supply. SPACE Valves are the only valves for marine applications that are 100% hydrastatically tested in the USA. They feature a unique type of aluminum-bronze trim to make concerns about saltwater corrosion a thing of the past, even in the demanding offshore environment. Also, our SPACE Valves with CR13 trim are specifically engineered to operate in environments where the cargo you're carrying are harsh and corrosive chemicals. SPACE Valves are the only valves that carry both ABS and API approval for marine and offshore applications.

**Available nationwide through our 13 strategically located, stocking locations.**



**The Right Fit.**

1.800.962.9696  
www.wosupply.com

# Out Here There's No Room For Excuses



## When The Pressure's On, We Perform

No one wants to hear excuses when a hydraulic pump or motor failure shuts down your equipment—they just want to know when it will be back up and running. That's when you need Wooster Hydrostatics and Fluid Power Solutions for fast, reliable service. Nobody does it faster or better.

Wooster pump and motor rebuilds are more reliable because we use only OEM replacement parts to ensure quality and ISO 9001-2001 Certified processes for diagnosis and repair.

Wooster turnaround time is faster because we maintain a multi-million dollar inventory of parts, pumps and motors in-house and we offer special services, including Same-Day-Service and V.I.P. 24-Hour Service in addition to our standard service.

Check out Wooster Hydrostatics and Fluid Power Solutions online or contact Customer Service so the next time you need repairs, rebuilds or remans, you'll have more than excuses.



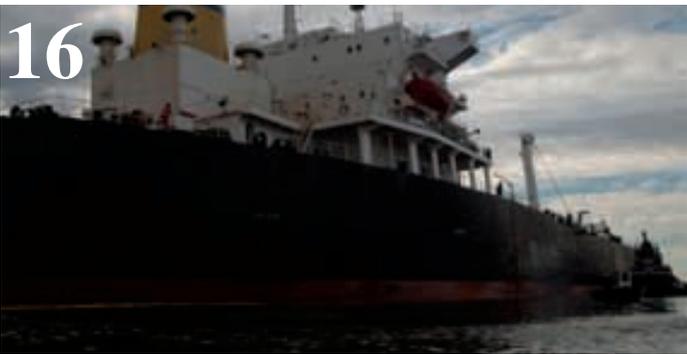
4570 WEST OLD LINCOLN WAY  
WOOSTER, OH 44691  
PHONE 330.263.6555 • FAX 330.263.4463  
TOLL FREE 800.800.6971 (USA)  
SALES@WOOSTERHYDROSTATICS.COM  
WWW.WOOSTERHYDROSTATICS.COM



3700 PARKWAY LANE, SUITE M  
HILLIARD, OH 43026  
PHONE 614.777.8954 • FAX 614.777.8640  
SALES@FLUID-POWER-SOLUTIONS.COM  
WWW.FLUID-POWER-SOLUTIONS.COM

**Power To Perform™**

16



25



28



34

**GOVERNMENT UPDATE**

**16 New OPA90 Limits**

After almost 16 years of steady state, Congress has enacted legislation that significantly increases the limits on liability for ships that spill oil into waters of the United States.

— by **Dennis L. Bryant**

**EYE ON THE NAVY**

**17 Piracy Strikes**

Piracy is nothing new, but it's criminal at best, terrorism at worst.

— By **Edward Lundquist**

**SHIPBUILDING TECHNOLOGY**

**22 Combat in a Container**

The Littoral Combat Ship is designed to be reconfigurable with modular mission packages. The first package for mine warfare is being assembled and tested.

— By **Edward Lundquist**

**Q&A**

**25 Bruce Crager, Intec**

When Crager began his maritime career in 1975, floating production systems did not exist. Today companies are drilling in more than 10,000 feet of water.

**LNG**

**28 Opportunity Knocks**

Robert N. Cowen contends that the LNG boom is a prime opportunity for the U.S. maritime community.

**MARITIME REPORTER AND ENGINEERING NEWS**

**NEW YORK**

118 E. 25th St., New York, NY 10010  
Tel: (212) 477-6700; Fax: (212) 254-6271  
e-mail: [mren@marinelink.com](mailto:mren@marinelink.com) • Web: [www.marinelink.com](http://www.marinelink.com)  
**FLORIDA** • 215 NW 3rd St., Boynton Beach, FL 33435  
Tel: (561) 732-1659 Fax: (561) 732-6984

**Associate Publisher**

Gregory R. Trauthwein • [trauthwein@marinelink.com](mailto:trauthwein@marinelink.com)

**Associate Editor**

Jennifer Rabulan • [rabulan@marinelink.com](mailto:rabulan@marinelink.com)

**Contributing Editors •**

Dennis L. Bryant, Senior Maritime Counsel, Holland & Knight  
Edward Lundquist

**Editorial Consultant**

James R. McCaul, president, International Maritime Associates

**PRODUCTION**

**Production Manager** John Guzman • [guzman@marinelink.com](mailto:guzman@marinelink.com)

**Asst. Production Manager** Irina Tabakina • [tabakina@marinelink.com](mailto:tabakina@marinelink.com)

**ADVERTISING SALES**

**Senior Vice President, Sales**  
Rob Howard • [howard@marinelink.com](mailto:howard@marinelink.com)  
Tel: (561) 732-4368; Fax: (561) 732-6984

**Senior Vice President, Sales**  
Brett W. Keil • [bkeil@marinelink.com](mailto:bkeil@marinelink.com)  
Tel: (561) 732-1185; Fax: (561) 732-8414

**Vice President of Sales**  
Lucia M. Annunziata • [annunziata@marinelink.com](mailto:annunziata@marinelink.com)

**Classified Ad Sales**  
Dale L. Barnett • [barnett@marinelink.com](mailto:barnett@marinelink.com)  
Tel: (212) 477-6700

**Sales Administration Manager**  
Tina Veselov • [veselov@marinelink.com](mailto:veselov@marinelink.com)

**Sales Assistant**  
Rhoda Morgan • [morgan@marinelink.com](mailto:morgan@marinelink.com)

**Manager, Accounting Services**  
Esther Rothenberger • [rothenberger@marinelink.com](mailto:rothenberger@marinelink.com)

**Manager, Public Relations**  
Mark O'Malley • [momalley@marinelink.com](mailto:momalley@marinelink.com)

**Manager, Information Technology Services**  
Vladimir Bibik • [bibik@marinelink.com](mailto:bibik@marinelink.com)

**CIRCULATION**

Kathleen Hickey  
[mrcirc@marinelink.com](mailto:mrcirc@marinelink.com)

**PUBLISHER**

John E. O'Malley  
[jomalley@marinelink.com](mailto:jomalley@marinelink.com)

**International Sales Operations**

**Managing Director, International Sales**  
**TONY STEIN**

12, Braehead, Bo'ness, West Lothian EH51 0BZ, Scotland, U.K.  
Tel: +44 (0) 1506 822240; Fax: +44 (0) 1506 828085

**Germany/Switzerland**  
TONY STEIN • [stein@marinelink.com](mailto:stein@marinelink.com)  
Tel: +44 (0) 1506 822240; Fax: +44 (0) 1506 828085

**Japan**  
KATSUHIRO ISHII  
Ace Media Service Inc., 12-6, 4-chome, Nishiike, Adachi-ku, Tokyo 121,  
Japan, Tel: +81 3 5691 3335; Fax: +81 3 5691 3336

**Korea**  
JO, YOUNG SANG • [biscom@unitel.co.kr](mailto:biscom@unitel.co.kr)  
Business Communications, Inc., Rm 1232, Gwanghwamoon Officia Bldg.  
163, 1-Ga, Shinmoon-Ro, Jongro-Gu, Seoul, Korea 110-999  
Tel: +82 2 739 7840; Fax: +82 2 732 3662

**Scandinavia**  
ROLAND PERSSON/roland@arn.se  
ÖRN MARKETING AB, Box 184, S-271 24 Ystad, Sweden  
Tel: +46 411-184 00; Fax: +46 411 105 31

**CHARLES E. KEIL, Vice President, International Operations**  
215 NW Third Street, Boynton Beach, FL 33435  
Tel: +561-732-0312; Fax: +561-732-8063  
24-hr Tel/Fax: +561-998-0313; Mobile Tel: +561-716-0338  
e-mail: [ckeil@marinelink.com](mailto:ckeil@marinelink.com)

ShipConstructor

Software Inc.

3D Product Modeling and Production Planning

COMMERCIAL

OFFSHORE

NAVY

Courtesy Marine Technologies Ltd., Russia for Bodewes Shipyards B.V., The Netherlands; Dubai Drydocks, UAE; General Dynamics Team: Austal Ships, Australia and Austal Ships, USA; Bender Shipbuilding & Repair Co, Inc., USA and Guido Perla & Associates Inc., USA; Genoa Design International, Canada and Marinette Marine Corp., USA; Vripack Yachting International Naval Architects B.V., The Netherlands.

WORKBOAT

PASSENGER

LEISURE

[www.ShipConstructor.com](http://www.ShipConstructor.com) We Go The Extra Nautical Mile

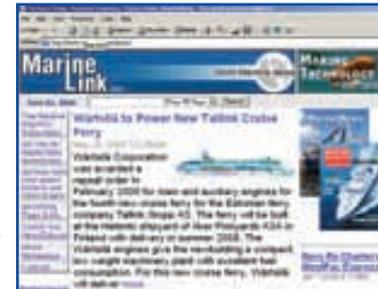
ABS Nautical Systems . . . . .	38	Norsk Hydro Canada Oil & Gas Inc. . . . .	37	Rolls-Royce . . . . .	14	Transas . . . . .	14, 42
Abu Dhabi Ship Building . . . . .	32	Omega Navigation Enterprises . . . . .	13	Samsung Heavy Industries . . . . .	4, 32, 33	TT-Line . . . . .	7
Aker Arctic . . . . .	14	Overseas Shipholding Group, Inc. . . . .	13	Sestri Ponente Shipyard . . . . .	12	UE Systems . . . . .	38
Aker Borgestad Operations AS . . . . .	13	Parker Fluid Control Division . . . . .	42	Single Buoy Moorings . . . . .	35	Vietnam Oil and Gas Corp. . . . .	4
Aker Floating Production ASA . . . . .	13	Parker Hannifin . . . . .	40	SP&C . . . . .	38	Vietnam Shipbuilding Industry Corp. . . . .	4
Aker Kvaerner . . . . .	10, 13, 15	Petro-Canada . . . . .	36	Space and Naval Warfare Systems Command San Diego . . . . .	22	VT Halter Marine Inc. . . . .	8, 9, 33
Aker Kvaerner Operations AS . . . . .	13	Port Said Shipyard . . . . .	12	STX Shipbuilding Company . . . . .	7	VT Shipbuilding . . . . .	30
Aker Yards ASA . . . . .	13	POSCO . . . . .	4	STX Shipbuilding Co. . . . .	4	Weiler Corporation . . . . .	43
Aktieselskabet Borgestad ASA . . . . .	13	Premier Oilfield Rentals . . . . .	10	Suez Canal Authority . . . . .	12	WHOI . . . . .	8
Alfa Laval . . . . .	42	Pride International . . . . .	34	Superior Services Co. . . . .	10	Woods Hole, Martha's Vineyard . . . . .	9
American Bureau of Shipping . . . . .	35	Princess Cruises . . . . .	4	Technip . . . . .	31	Wortelboer . . . . .	43
American Commercial Lines . . . . .	15	RKI Instruments, Inc. . . . .	42	Tidewater, Inc. . . . .	9	Zuhai Shipyard . . . . .	10
Apax Partners . . . . .	15	Rodriquez Cantieri Navali do Brasil . . . . .	15	Todd Shipyards . . . . .	37		
Arcco Inc. . . . .	39	Rodriquez Marine System . . . . .	15	Tognum GmbH . . . . .	12		
ASRY . . . . .	38						
AUGE Industrial Fasteners, LLC . . . . .	43						
BC Ferries . . . . .	9						
Belzona . . . . .	43						
Bernard . . . . .	43						
Bollinger Shipyards . . . . .	10						
BrasFELS Yard . . . . .	31						
CAT PUMPS . . . . .	40						
CFC Solutions . . . . .	12						
China International Shipmanagement Company Ltd. . . . .	33						
China Shipping Container Lines . . . . .	33						
Converteam . . . . .	35, 36						
Corsica Ferries . . . . .	7						
Costa Crociere . . . . .	12						
CS Unitec . . . . .	39						
Daewoo Shipbuilding & marine Engineering . . . . .	4						
Dalian Shipbuilding Industry Corp. . . . .	4						
Desmond-Stephan Mfg. Company . . . . .	44						
Detroit Diesel . . . . .	12						
Drive Shafts . . . . .	12						
Dung Quat Shipyard . . . . .	4						
Dynabrade . . . . .	39						
Eagle Bulk Shipping . . . . .	10						
Elison . . . . .	9						
Elliot Bay Design Group . . . . .	9						
ESAB . . . . .	40, 43						
Evergreen Group . . . . .	9						
ExxonMobil Canada Properties . . . . .	37						
Fincantieri . . . . .	12, 13						
Fishing Technology Development Center . . . . .	14						
Fleet Support Limited . . . . .	30						
France Telecom Mobile Satellite Telecommunications SA . . . . .	15						
General Dynamics . . . . .	22						
General Dynamics NASSCO . . . . .	9						
Germischer Lloyd . . . . .	38						
GlobalSantaFe . . . . .	34						
Goltens (Shanghai) . . . . .	38						
Great Eastern Shipping Company Ltd. . . . .	7						
Guangzhou Min Hua Yacht Manufacture Ltd. . . . .	9						
Hanjin . . . . .	38						
Hanjin Heavy Industries & Construction Co. . . . .	4						
Hobart Brothers Company . . . . .	40						
Husky Terra Nova Partnership . . . . .	37						
Hytorc . . . . .	44						
Hyundai Heavy Industries . . . . .	4, 42						
Hyundai Mipo Dockyard Co. . . . .	4						
IMO . . . . .	17						
Intec Engineering . . . . .	25, 26						
Intelligent Engineering . . . . .	34, 35						
International Chamber of Commerce's International Maritime Bureau . . . . .	17						
Ishikawajima-Harima Heavy Industries . . . . .	15						
ITAN . . . . .	39						
Jiangmen Yinxing Shipbuilding . . . . .	15						
Keppel FELS . . . . .	31						
Keppel FELS Brasil . . . . .	31						
Keppel Shipyard Limited . . . . .	36						
Keppel Verolme BV . . . . .	36						
Kiewit Offshore Services . . . . .	34						
Kristen Navigation Inc. . . . .	7						
Lafarge . . . . .	10						
LeBeouf Bros. Towing . . . . .	11						
LIG Marine Managers . . . . .	15						
Lockheed Martin . . . . .	22, 23						
L'Orange . . . . .	12						
Ludeca, Inc. . . . .	39						
MAN B&W . . . . .	42						
MAN B&W Diesel . . . . .	15						
Marinette Marine . . . . .	22						
Maritime Training Services . . . . .	42						
Mascoat Products . . . . .	42						
McMurdo . . . . .	42						
MDE . . . . .	12						
Mespas AG . . . . .	38						
Miller Electric Mfg. Co. . . . .	43						
MOL (Asia) Ltd. . . . .	9						
Mosbacher Operating Limited . . . . .	37						
MTU Group . . . . .	12						
Murphy Oil Company Limited . . . . .	37						
Nantucket Steamship Authority . . . . .	9						
National Drilling Company . . . . .	38						
Naval Surface Underwater Center Dahlgren, Va. . . . .	22						
Naval Undersea Systems Center Newport, R.I. . . . .	22						
Nippon Kokan KK . . . . .	38						
NOAA . . . . .	8, 33						
Noise Control Engineering . . . . .	42						
Norsafe . . . . .	14						

Setting the Standard for Service.

www.eagle.org

ABS  
FOUNDED 1862  
Setting Standards of Excellence

[www.MarineLink.com](http://www.MarineLink.com) is updated twice every business day, and is distributed free to subscribers. To view breaking news, visit [www.marinelink.com](http://www.marinelink.com). To subscribe to the daily news, delivered directly to your e-mail, visit <http://maritimetoday.com/Alerts/MaritimeAlert.aspx>.



**SUBSCRIBE**

Subscribe to the print or electronic edition of *Maritime Reporter & Engineering News* at [www.marinelink.com/renewsubscr/Renew04/subscribe.html](http://www.marinelink.com/renewsubscr/Renew04/subscribe.html), or e-mail Kathleen Hickey at [mrcirc@marinelink.com](mailto:mrcirc@marinelink.com)

**DAILY NEWS via E-MAIL**

Twice every business day we provide breaking news, tailored to your specification, delivered FREE directly to your e-mail. To subscribe visit <http://maritimetoday.com/login.aspx>

**POST & SEARCH JOBS**

Job listings are updated daily and help match employers with qualified employees. Post a position or keep abreast of new employment opportunities at <http://www.maritimejobs.com>

**ADVERTISE**

MR offers a number of print and electronic advertising packages. To see our editorial calendar and advertising rates, visit [www.marinelink.com/AdvRates/Rates.asp](http://www.marinelink.com/AdvRates/Rates.asp)

**SUBMIT EDITORIAL**

MR invites you to submit company news and events for publication on-line and in print. Visit <http://www.marinelink.com/Story/PostStory.aspx>

**Human Error Blamed for Listing Ship**

Human error caused a New York-bound cruise ship to list suddenly as it left port in Florida, injuring 240 people, Princess Cruises said in a statement.

"We can confirm that the incident was due to human error and the appropriate personnel changes have been made," company president Alan Buskelew said in a letter sent on July 25 to passengers.

The accident occurred July 18, shortly after the recently commissioned Crown Princess left Port Canaveral, in southern Florida with 3,400 aboard.

The ship listed sharply to port, sending furniture, objects and people flying into glass windows and walls as well as emptying the swimming pools onto the decks.

**Vinashin to Build Three Tankers**

The Vietnam Oil and Gas Corporation (PetroVietnam) awarded a contract to the Vietnam Shipbuilding Industry Corporation (Vinashin), for the construction of three 105,000-ton oil tankers, to be built at the Dung Quat Shipyard. The first tanker is scheduled to be handed over by the end of 2008; and the second and third by 2009. The Dung Quat Oil Refinery will start operations in 2009. (Source: <http://www.thanhniennews.com>)

**Korean Shipbuilders Place in Top 10**

Korean shipbuilders occupied seven out of the top 10 positions in the world last month in terms of orders. Hyundai

Heavy Industries was the world's largest shipyard in terms of order backlog as of late June with 11.74 million

compensated gross tons (CGT), British shipbuilding market researcher Clarkson reported. Samsung Heavy Industries came second with an order backlog of 8.27 million CGTs, followed by Daewoo Shipbuilding & Marine Engineering (DSME) with 7.41 million CGTs and Hyundai Mipo Dockyard Co., one of two Hyundai Heavy Industries subsidiaries, with 4.11 million CGTs.

Created after a merger of two shipyards in Dalian, China's Dalian Shipbuilding Industry Corp. made a huge leap up the list to take fifth place with 2.84 million CGTs, beating Korean rivals Hyundai Samho Heavy Industries Co., the other Hyundai Heavy subsidiary, STX Shipbuilding Co. and Hanjin Heavy Industries. (Source: Chosun Ilbo)

**POSCO to Raise Ship Steel Output**

POSCO plans to increase production facilities by 2009 to raise its annual production of steel for shipbuilding by 1.1 million tons to address a shortage. POSCO's annual production capacity of ship steel is projected to rise to 4.7 million tons in the next three years, compared with the current 3.6 million tons, the company said.

The steel maker will invest \$95.14m to increase and

(Continued on page 7)



**BoilFilter Retrofits & Service**

**Video Boroscope Inspection**

**Laser Alignment**

**Benefit From Our Experience**

**AUTHORIZED SALES AND SERVICE**



Auth. Repair Shop for MAN B&W Diesel



For service you can depend on, call toll free 800-622-6747 or email [service@mshs.com](mailto:service@mshs.com) or visit [www.mshs.com](http://www.mshs.com).

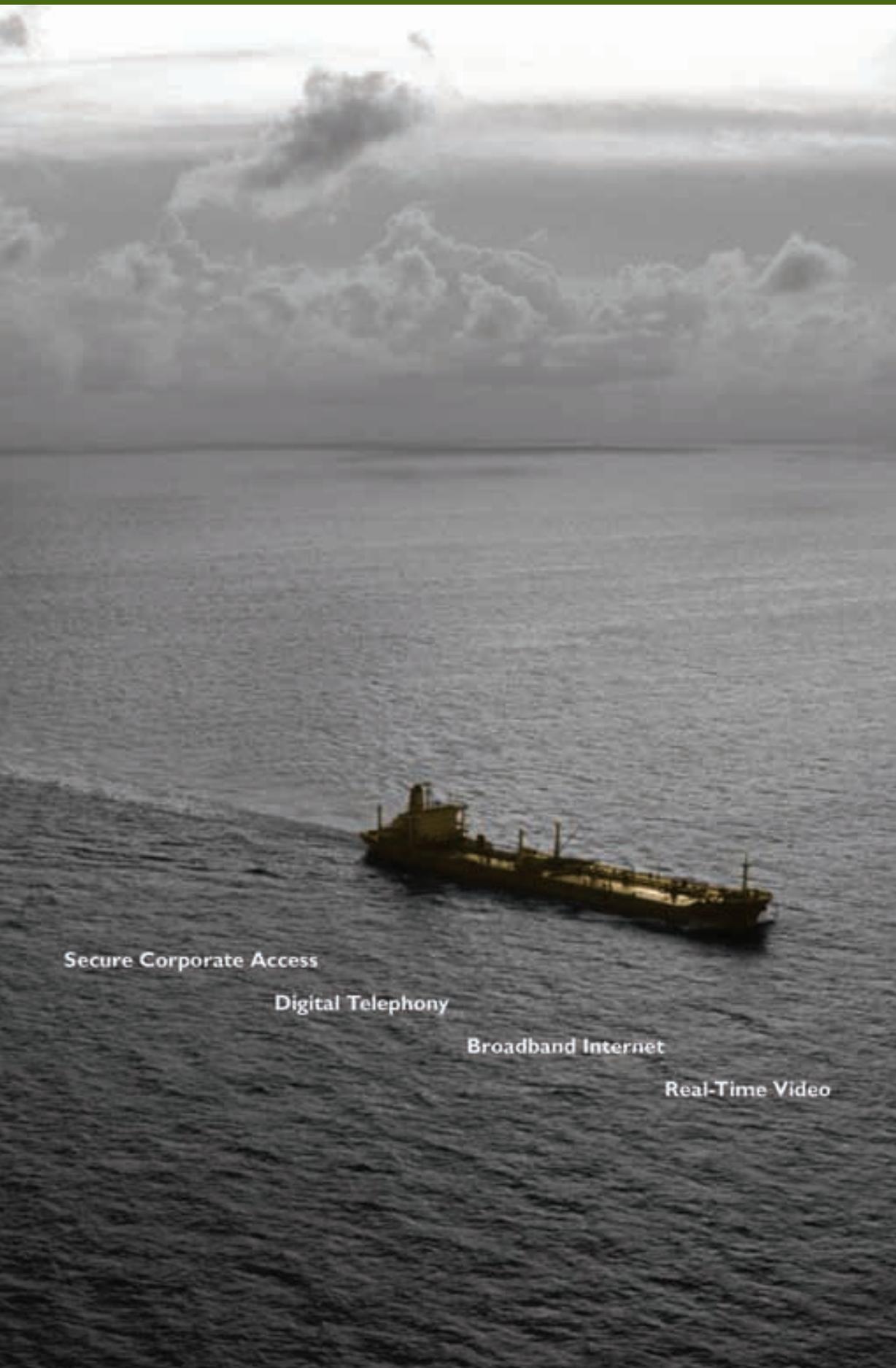


**MOTOR-SERVICES HUGO STAMP, INC.**

AUTHORIZED DISTRIBUTORS & SERVICE CENTER

3190 SW 4th AVENUE, FT. LAUDERDALE, FL 33315 • PHONE: 954-763-3660 • TOLL FREE: 800-622-6747 • FAX: 954-763-2872

# World Class Communications Anywhere in the World



Secure Corporate Access

Digital Telephony

Broadband Internet

Real-Time Video

Whether away at sea or moored in a foreign port, a reliable communications system isn't just a luxury — it's a lifeline. With over 20 years experience in mission-critical offshore communications, CapRock satellite networks deliver advanced services with unmatched reliability.

Available as either a standard service package or a custom-developed network, CapRock satellite solutions provide coastal and offshore vessels with business-grade communications. From telephone, fax, e-mail, internet and video to secure corporate networking, CapRock delivers the services you've come to expect in places you wouldn't expect to find them.



RELIABILITY TO THE EXTREME™

[www.CapRock.com](http://www.CapRock.com)

## Editor's Note

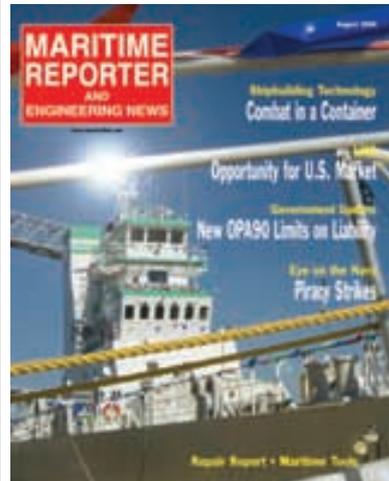
Computers in the future may have only 1,000 vacuum tubes and perhaps only weigh 1 1/2 tons. — Popular Mechanics, 1949 (Source: <http://whatis.techtarget.com>)

Shipbuilding technology is the feature focus of this month's edition, and the Q&A this month with Bruce Crager, CEO of Intec Engineering — conducted late in the spring — got me thinking about the evolution of technology in the marine business. In our report, Crager notes that when he entered the maritime business in 1975, floating production systems did not exist, whereas today there are more than 200 FPS', as well as more than 2,000 subsea wells, and rigs that can drill in more than 10,000 ft. of water. Dramatic strides, to say the least.

Being so close to the work, the evolutionary strides taken by our industry are perhaps not always readily evident, but taking a step back to examine some of the historical milestones lends an interesting perspective. I had the chance to do just that on a recent, hellishly long road trip to a South Carolina beach house in July. Following the trek south on I-95, delayed more than six hours by traffic tie-ups, I — tired and frustrated — stopped off with my son in Wilmington, N.C. to jump onboard the Battleship North Carolina. The memorial is a worthy stop for anyone going through the area — not solely as a respite for the road-weary — but pertinent to this edition of MR, it provided a solid book-end reference to Edward Lundquist's article "Combat in a Container," which starts on page 22. Lundquist, a regular contributor in our pages, delivers insights on the development of combat system packages designed to make the new generation of Littoral Combat Ships a multi-tasking productive force.



## On the Cover



**On the Cover:** Pictured on this month's cover is Lafarge's new articulated tug-barge, the latest addition to its Great Lakes fleet. The Samuel de Champlain tug and Innovation barge were built and are owned by American Transport Leasing Inc., a subsidiary of Lafarge. See story on page 10.

- 20 This Day in Navy History
- 34 Repair
- 39 Maritime Tools
- 41 Insurance Directory
- 42 New Products
- 45 Buyer's Directory
- 48 Ad Index
- 49 Classifieds

**Subscriptions:** One full year (12 issues) \$34.00 in U.S.; outside of U.S. \$55.00 including postage and handling. For subscription information, call 212-477-6700; fax: (212) 254-6271; or e-mail: [mrirc@marinelink.com](mailto:mrirc@marinelink.com)

# MARITIME REPORTER

AND  
ENGINEERING NEWS

[www.marinelink.com](http://www.marinelink.com)

ISSN-0025-3448  
USPS-016-750

No. 8

Vol. 68

118 East 25th Street, New York, NY 10010  
tel: (212) 477-6700; fax: (212) 254-6271

Founder: John J. O'Malley 1905 - 1980  
Charles P. O'Malley 1928 - 2000

Maritime Reporter/Engineering News is published monthly by Maritime Activity Reports, Inc. Mailed at Periodicals Postage Rates at Waterbury, CT 06701 and additional mailing offices.

Postmaster send notification (Form 3579) regarding undeliverable magazines to Maritime Reporter/Engineering News, 118 East 25th Street, New York, NY 10010.

Publications Mail Agreement No: 40024966  
Return Undeliverable Canadian Addresses to  
Circulation Dept. of DPGM  
4960-2 Walker Road  
Windsor, ON N9A 6J3

Publishers are not responsible for the safekeeping or return of editorial material. ©2005 Maritime Activity Reports, Inc.

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means mechanical, photocopying, recording or otherwise without the prior written permission of the publishers.



Business Publications  
Audit of Circulation, Inc.

[www.marinelink.com](http://www.marinelink.com)

[trauthwein@marinelink.com](mailto:trauthwein@marinelink.com)

## Coming in Maritime Reporter & Engineering News

### September 2006 THE SMM EDITION

MR goes to Hamburg, Germany for the world's largest Marine Industry exhibition. Marine Propulsion Annual • Coatings & Corrosion Control • Maritime Security • Marine Electronics: Shipboard Monitors & Displays • SatCom Products & Services

### October 2006 THE SNAME/MARINE DESIGN EDITION

In conjunction with the SMTC&E in Ft. Lauderdale, MR explores the latest trends in ship, boat and offshore design.

Looking for *service* reliability, we deliver it.  
ABB Turbochargers

ABB

New York/NJ, Miami, Houston, Seattle/Tacoma, Los Angeles — email: [turbochargers@us.abb.com](mailto:turbochargers@us.abb.com)

revamp production facilities. It will also boost productivity of TMCP steel, which provides high strength and welds without heat treatment. (Source: <http://times.hankooki.com>)

### Intrepid to Close for Repairs, Renovation



The aircraft carrier Intrepid, the military museum that has been docked on the Hudson River for 24 years, is scheduled to close on Oct. 1 and will be moved to New Jersey for repairs and Staten Island for renovation. The New York Times reported that about a month after the museum closes, the carrier would be towed away from its mooring at Pier 86 and is not expected to return for 18 months. The museum's directors approved the general plan after Mayor Michael R. Bloomberg and the City Council agreed to provide a total of \$17m over the next two years for the overhaul of the carrier and the pier. Gov. George E. Pataki pledged an additional \$5m in state economic development funds. In addition, \$35.5m in federal funds would raise the public financing for the project to \$57.5m, which should cover all the costs. (Source: The New York Times)

### Kristen Orders Tankers From Hyundai Heavy

Kristen Navigation Inc. ordered three oil tankers from South Korea's Hyundai Heavy Industries Co. for about \$234m, Bloomberg reported. The three ships will each have a capacity of 159,000 deadweight metric tons and are due to be delivered in 2009. (Source: Bloomberg)

### GE Shipping to Acquire Two New Tankers

Great Eastern Shipping Company Ltd. has ordered two new building Long Range One (LR1) Product tankers from STX Shipbuilding Company of Korea. The 74,500-dwt vessels are due for delivery during the third quarter of 2008-09. With this order, the company's new building orderbook stands at nine tankers (four LR1 product tankers and five MR product tankers) with an aggregate

dwt of 0.52 million and five OSVs (four AHTSVs and one PSV). The existing fleet of 74 vessels of the company includes 40 ships with an average age of 12.7 years and 34 offshore units and the order book comprises 12 vessels - seven tankers and five offshore supply vessels (OSVs). (Source: <http://www.domain-b.com>)

### Spirit III Sale Reaps \$27M

TT-Line reportedly sold the Spirit III for up to \$20m more than it paid for the ship in 2003. But with cost of modification work done to make the ship suitable for Bass Strait, the TT-Line will probably only keep about \$3.7m from the sale, The Mercury News reported. It

also has to pay its shipbroker more than \$752,500 in commission. Mediterranean operator Corsica Ferries would pay \$82.5m for the ship TT-Line bought for \$62.2m. The identity of the buyer and the sale price had been kept confidential since a memorandum of understanding was signed. (Source: <http://www.the-mercury.news.com.au>)



**“TO FIND THE FINEST OCEANGOING VESSELS, SOMETIMES IT’S BEST TO HEAD UPSTREAM.”**

*- Duff Hughes, President, The Vane Brothers Company*

Jeffboat, strategically located on the Ohio River in Jeffersonville, Indiana, has been designing and constructing vessels for 67 years. Over 10,000 vessels to be exact, all created with heavier welds, wheelabrated steel and superior coatings. At Jeffboat, not only do you get a technologically advanced oceangoing vessel at reasonable labor cost, you also get a dedicated project team. So when you look to build an oceangoing vessel, just look to the Ohio.

**JEFFBOAT**

# NOAA Accepts New Survey Vessel

The National Oceanic and Atmospheric Administration (NOAA) recently took delivery of Henry B. Bigelow, one of a new class of fisheries survey vessels being built under contract with VT Halter Marine Inc., in Pascagoula, Miss. Henry B. Bigelow will support NOAA research efforts in conservation and management of fisheries and marine ecosystems primarily in northeastern U.S. waters, replacing the 45-year old Albatross IV. The ship will be home ported in New England, although a permanent base has not been named.

Henry B. Bigelow is the second of four 208-ft. fish-

eries survey vessels (FSVs) to be delivered by VT Halter Marine, with the third ship, Pisces, and the as-yet unnamed fourth ship in various stages of construction. The FSVs will have the ability to perform hydro-acoustic surveys of fish, and will also be able to conduct bottom and mid-water trawls while running physical and biological-oceanographic sampling during a single deployment -- a combined capability unavailable in the private sector. The ship is named for Henry Bryant Bigelow, the founding director of the Woods Hole Oceanographic Institution and a pioneering ocean researcher whose extensive investigations are recog-



## INDUSTRY LEADER IN QUALITY & SERVICE



- Three Full Service Shipyards
- New Construction
- Drydocks
- Full Service Machine Shop



R & R's Central, North and Sabine Pass facilities provide one-stop, service repair, conversion and construction for tankers, tugs, OSV's barges and offshore drilling rigs.

R & R Marine's three facilities are equipped to offer wide-ranging repair and conversion services. From routine drydocking and inspection of OSV's, tugs, barges and tankers, to the construction and fitting of the most complex offshore drill rig conversions and upgrades.

**- VISIT US AT -  
WWW.RRMARINE.COM**

View our newly expanded 19,000 sq. ft. fabrication shop & state of the art plasma cutting machine.



**NORTH YARD: 7200 Highway 87 East  
Port Arthur, Texas 77642 • 1.888.484.0860**

**CENTRAL YARD: 5700 Procter St. Extension  
Port Arthur, Texas 77642 • 409.963.0035**

**SABINE PASS YARD: 7266 S. 1st Ave  
Sabine Pass, TX 77655 • 409.963.0035**

**ROR  
MARINE  
FABRICATION & DRYDOCK**



nized as the foundation of modern oceanography. His expeditions in the Gulf of Maine, where he collected water samples and data on the phytoplankton, fish and hydrography, made this region one of the most thoroughly studied bodies of water, for its size, in the world.

### Father of Oceanography: Henry B. Bigelow

Henry Bryant Bigelow, born in 1879, developed an early passion for nature, sailing and fishing that would ultimately lead to the foundation of modern oceanography. Raised on the Massachusetts coast, Bigelow enrolled at Harvard in 1897 and graduated cum laude in 1901. During his time at Harvard, Bigelow befriended Professor Alexander Agassiz, who was well-known at the time for his Pacific Ocean expeditions. In the winter of 1901, Bigelow requested to accompany Agassiz



(Photo Credit: NOAA)

on such a voyage, and served as assistant on a trip to the Maldiv Islands in the Indian Ocean. At the end of the trip, Bigelow had the opportunity to study the medusae that had been collected, and his research served as material for his doctoral thesis and was published in 1904.

In 1927, Bigelow was asked to prepare a scientific paper for the US National Academy of Sciences' Committee on Oceanography to address "...whether the United States was contributing as broadly as was desirable to the study of the oceans and if not, what should be done to improve the situation." His work on this project persuaded the Committee that more needed to be done in the field of oceanography, which led to the establishment of the Woods Hole Oceanographic Institution (WHOI); incorporated in 1930. Bigelow served as its first Director from 1930 to 1939, and his report, titled *Oceanography: Its Scope, Problems, and Economic Importance*, was published in 1931. Upon his retirement as director in 1939, he was a member on the Board of Trustees and, in 1960, was named Founder Chairman of the Board in recognition of his achievements there. Additionally, in 1961, the Institution established the Henry Bryant Bigelow Medal in his honor, of which he was the first recipient. Bigelow remained a member of the Harvard faculty during his time at WHOI and after; teaching for a total of 62 years; a tenure he thought must have broken some sort of record. In jest, he remarked that the university owed him a bottle of whiskey for his loyal service; to his surprise, upon his retirement, he was presented with such a gift, "compliments of the President and Fellows." His autobiography notes that he is the only one to ever have been presented a bottle of whiskey on behalf of Harvard University. Bigelow died on December 11, 1967, at the age of 89. His last papers were published following his death, in 1968.

## Vancouver Shipyards to Build New Ship

BC Ferries signed a \$41m contract with Vancouver Shipyards, a Washington Marine Group company, to build a new 125-car intermediate size ferry. Construction on the 328 ft. (100 m) vessel will begin later this year and the ship is expected to enter service by the summer of 2008. The new intermediate vessel will allow for the retirement of the 46-year-old Queen of Tsawwassen. The new ship will initially sail on the Earls Cove - Saltery Bay route on the Sunshine Coast.

## VT Halter Marine Launches Ferry



VT Halter Marine launched the Island Home, a 255-ft. double-ended ferry built for The Woods Hole, Martha's Vineyard, and Nantucket Steamship Authority (SSA), on July 21. The Island Home will replace the Islander, a 56-year old ferry currently serving the Woods Hole to Vineyard Haven route.

The Island Home was designed by Elliott Bay Design Group of Seattle and is capable of carrying up to 1,200 passengers and crew. The ferry will also carry 76 vehicles (cars and semi-trailers) and includes hydraulic lift decks for 16 cars. Displacing nearly 1,950 tons when fully loaded and powered by two direct drive EMD diesel engines delivering 6,000 hp, it has a top speed of 16 knots.

## Fiberglass Catamaran From China



Guanzhou Min Hua Yacht Manufacture Ltd. delivered the fourth in a series of high speed catamaran passenger vessels to Elison, an operator in the far south of Guangdong province. The

catamaran will service the two islands of Shangchuan Dao and Xiachuan Dao, which are busy terminals on an otherwise empty stretch of coastline. The islands lie about 10 miles off shore and are popular holiday destinations for domestic tourists. At 23.8 x 6 x 2.1 m, the catamarans are among the larger vessels on the run to the islands. They carry 130 passengers in a single main deck cabin with a pilothouse on the upper deck.

Propulsion power is a pair of 550 hp Cummins KTA19 M2 engines turning three-blade propellers through 2.5:1 reduction Hanzhou J400 gear boxes. This combination gives the boat a 24-knot speed at sea.

## MOL Promotes Birnbaum

MOL (Asia) Ltd. promoted Fred Birnbaum to Director/General Manager of Marketing for Central China. In addition to having responsibility for all marketing and customer service, he will lead and manage regional business development for the Liner Division as MOL (China) begins a three-year expansion program. Birnbaum is a graduate of SUNY Buffalo with a B.A. in Liberal Arts concentrated in Chinese language and Asian studies. David Prado joins MOL as the General Manager of Transpacific Trade Management in Hong Kong. He succeeds Junya Nakamura who is now the Group Leader of MOL's Ports and Terminal Group in Tokyo. Prado holds

## Evergreen Chairman Wins Award

Dr. Chang Yung-Fa, Group Chairman of the Evergreen Group, has been appointed Commander of the British Empire (CBE) by Her Majesty Queen Elizabeth II in recognition of his services to shipping and British economic interests. "I am both humbled and deeply honored. I am happy to say that shipping has not only been my profession, but also my life's passion. To be rewarded for one's passion is truly a privilege," Dr. Chang said. "On a more personal note, I would like to thank the maritime industry as a whole. I can only hope that my contribution to shipping has been as great as shipping's contribution to my life. The maritime industry has provided me with many full and happy years and shaped the man I am today. In the wise words of the English poet and novelist John Ruskin: 'The highest reward for man's toil is not what he gets for it but what he becomes by it.'" Hatsu Marine, established as a British shipping company in 2002, has developed into one of the largest shipowning entities in the U.K. and was this year awarded the coveted Queen's Award for Enterprise: International Trade. At present, the company operates 11 containerships under the Red Ensign, including four 7,024TEU S-type vessels, which incorporate the latest in environmentally sound features and are among the largest container vessels currently plying the world's oceans.

an MBA in International Business from Fairleigh Dickinson University.

## Tidewater Promotes Platt

Tidewater Inc. promoted Jeffrey M. Platt, from senior vice president of the company to the position of executive vice president. Platt will be responsible for overseeing the day-to-day marine operations of the company, both domestically and internationally. Platt is a 1979 graduate of the University of Pittsburgh with a degree in Electrical Engineering. He joined Tidewater in 1996 as general manager of its business activities in Brazil.

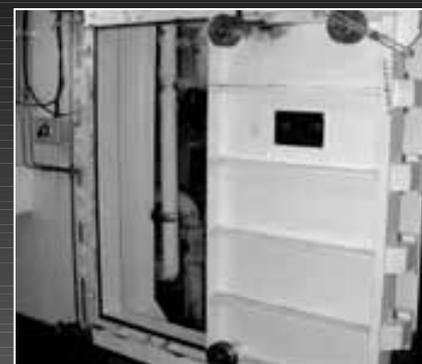
## Grace Retires from NASSCO

General Dynamics NASSCO announced the retirement of Janice S. Grace, its senior vice president of operations, on June 30. Grace, 55, had served as the shipyard's second-ranking executive since February 2004. She was responsible for all production, engineering, materials, master planning and information systems activities at the shipyard. A gradu-



# The LEADER Since 1939

## Sliding Watertight Doors and Custom Closures



ENGINEERING + EXPERIENCE = A WINNING TRADITION™



**Walz & Krenzer, Inc.**

91 Willenbrock Rd., Unit B4, Oxford, CT 06478 • www.wkdoors.com  
Tel: 203-267-5712 • Fax: 203-267-5716 • E-mail: sales@wkdoors.com

## Zuhai Shipyard Completes Construction on Tugs

Zuhai Shipyard recently finished construction of two tugs. The two latest vessels are 30 x 9-m with a 4.1-m molded depth and a 615-ton displacement. The SOLAS-equipped ABS-classed vessels have 550-m/m frame spacing. A plum and fendered bow stem extends to the water line of the raked forward hull section. Accommodation is provided for 12 crewmembers. Tankage is provided for 280 cu. m. of fuel and 50 cu. m. of water. A pair of 80 kW gensets provides electrical power. Propulsion power is provided by a pair of Cummins KTA38 M2 mains each delivering 1,200 hp at 1,800 rpm. The engines turn 2,000-m/m propellers in nozzles through Reintjes gears with 5.95:1 ratios. This power gives a design free running speed of 10 knots

and a 30-ton bollard pull. Rexroth supplied the electric over hydraulic steering.

On deck, a pair of large line storage reels flanks a 30-ton towing hook. The towing hook is fitted with an emergency release that can be activated from the aft controls in the wheelhouse.



### Lafarge Dedicates New Tug-Barge

Lafarge dedicated a new articulated tug-barge as the latest addition to its Great Lakes fleet. The Samuel de Champlain tug and Innovation barge were built and are owned by American Transport Leasing Inc., a subsidiary of Lafarge. The new vessel will transport cement and cementitious materials among 17 Lafarge facilities throughout the Great Lakes, including its terminal on the Cleveland waterfront.

"This new vessel will help assure reliable supplies of cement for our customers," said Alexis Langlois, president of Lafarge's Great Lakes Cement Region. "The tug-barge makes transport less susceptible to weather delays and extends our shipping season." The Innovation and Samuel de Champlain will handle more than one million tons of cement a year.

"Lafarge's Cleveland terminal, which has been in operation since 1928, serves concrete producers throughout northern Ohio. With demand for cement at an all-time high, reliable and efficient distribution is critical to the local construction industry," said Langlois. He added, "We see a strong future in Cleveland and, Ohio. Our business here is growing, and we are investing to support that growth."



ate of the University of California - Irvine, she began working at the shipyard in April 1974 as a material analyst. She was the first woman promoted to vice president and then senior vice president at the shipyard.

### Crofts Promoted



Russell Crofts has been named Managing Director for Premier Oilfield Rentals, a Superior Energy Services company. Crofts has been with Premier Oilfield

Rentals, headquartered in Aberdeen, Scotland, for the past 25 years, most recently as Director of Corporate Services.

Premier Oilfield Rentals provides drilling tools, Oil Country Tubular Goods (OCTG) products and tubular handling equipment to customers around the world.

### Toups Promoted at Bollinger

Bollinger Shipyards appointed Mike Toups as General Manager of Bollinger Amelia Repair, L.L.C.,



Amelia, La. Toups is a veteran of the shipyard industry, with 33 years experience, dating back to his earlier years at Bollinger Lockport and Bollinger Algiers.

Most recently, Toups was employed by North Florida Shipyards, Inc., Jacksonville, FL., as their Senior Estimator/Contracts Administrator.

### Aker Kvaerner Wins Frontier Drilling Contract

Aker Kvaerner has been awarded a contract with Frontier Drilling USA Inc. for delivery of a drilling equipment to the Frontier Peregrine II drillship. The total contract value for Aker Kvaerner is approximately \$17m.

The equipment package will be delivered in 2007.

### Jaeger Join the Eagle Bulk Fleet

Eagle Bulk Shipping has taken delivery of the Jaeger, a 2004 built 52,265dwt Supramax dry bulk vessel. The Company has now taken on-schedule delivery of the three vessels. Jaeger will continue its existing 11 to 13 month time charter, begun in May 2006, at a rate of \$18,500 per day.

The Eagle Bulk Shipping Inc. fleet consists of 16 dry bulk vessels including 12 Supramax and four Handymax vessels, with a cargo carrying capacity of 796,663dwt, and a fleet average age of approximately 5.5 years.

# Pushing It: LeBeouf Bros. Towing

Jon Gonsoulin is not one to rest on his legacy. Jon's grandfather, Earl, began working with the LeBeouf brothers back in 1946 and soon bought into the company. In time, Earl and his two sons, Richard and Jerry, were able to buy the LeBeouf brothers' shares. Earl turned over the helms to his sons in the 1970's. From that time forward, the two brothers continued to strengthen and consolidate the company's position.

In 2005, Richard "Dickie" Gonsoulin purchased his brother's interest in the company. Today the company is solely owned by Dickie with Jon taking an

home office near Bourg, La., at Mile 49 on the Gulf Intracoastal Waterway. It is here that Jon Gonsoulin will build new barges for the company fleet once he has added a high tech array of equipment including an automated one side welding system, NC cutting table and a 600-

ft. railway connecting to the firm's existing floating drydock. "We will continue to contract work for others but we intend to be our own best customer and expect to amortize the improvements over the first four or five barges that we build," explained Jon. In addition to the boats

recently delivered from the Laforce yard, there are two 2000-hp boats powered by Cummins KTA38 M1's on order from Intracoastal Iron Works in Bourg. The first of these, the 72 x 30-ft. Katie Gonsoulin, is scheduled for a September, 2006 delivery.



M/V Sydney Ann nearing completion.



ever more active role in forging the company's present and future growth.

The current fleet is comprised of 22 push boats including the recently delivered M/V Merle Gonsoulin and the M/V Sydney Ann. The 74 x 28-ft. sister ships were delivered in 2006 from LaForce Shipyard in Bayou Labatre, Ala. The vessels are powered by a pair of 1,000 hp Cummins KTA38 M1 engines turning five-blade 74-in. props through 6:1 Rentjes gears. The boats are earning their keep pushing oil barges on the inland waterways of the U.S.

The company's barge fleet includes three spud barges, thirty-two 30,000-barrel oil barges and seven double-skinned 10,000-barrel oil barges. Included in the large double skin fleet are 26 asphalt-capable barges with heaters. The barge maintenance is done at LeBeouf's own yard adjacent to their

## REPAIRS AND CONVERSIONS

**Your Search Is Over.**

- 13 Gulf Coast Locations
- 40 Dry Docks
- Design & Engineering, Hydraulic, Electrical, Machining & Propeller Shops
- 24 / 7 / 365 Service

8365 Highway 308 South • Lockport, Louisiana 70374  
 Telephone: (985) 532-2554 • Fax: (985) 532-7225  
[www.bollingershipyards.com](http://www.bollingershipyards.com)  
 E-mail: [sales@bollingershipyards.com](mailto:sales@bollingershipyards.com)

## MTU Group Now Tognum

The brands and companies of the MTU Group are to operate under the new name of Tognum GmbH with immediate effect. Tognum will function as a strategic holding company for the companies with the globally established brands of MTU, Detroit Diesel,

L'Orange, MDE, CFC Solutions and the Drive Shafts division. Despite their corporate links, the brands and individual companies will continue to operate independently.

"The new name for our group combines the tradition and strength of all the companies and brands and safeguards

their independent market presence," explained the CEO of Tognum GmbH, Volker Heuer, who will continue to be the President and CEO of MTU Friedrichshafen GmbH.

The other members of the management of Tognum GmbH are Joachim Coers, Dr. Gerd-Michael Wolters and

Rainer Breidenbach.

The name Tognum was developed with the assistance of professional naming experts. The name has a Germanic root ("tog") and a Latin root ("um"), and is pronounced very similarly in the most widespread European languages.

In its Germanic and old Scandinavian meaning, "tog" stands for "to pull with strength", while the Latin suffix "um" signifies an important object or monument, and is to be found in names such as Colosseum or Forum.

As a demonstration of togetherness and cooperation, Tognum GmbH will initiate an unusual venture within its group of companies: Employees from all of the companies are to construct a sailing boat together, to be completed by the spring of 2009. The boat will be named Tognum and will be launched to celebrate the 100th anniversary of the oldest company in the group, MTU Friedrichshafen.

MTU is currently developing the Series 1600.

## Suez Canal Orders Ferries, Tractors

The Suez Canal Authority has ordered another 18 Voith Schneider Propellers from Voith Turbo. The propellers are of two different types of size 14 for ferries, as well as size 28 for Voith Water Tractors. The vessels are built by Port Said Shipyard in Port Said where they will also be put in operation. A total of three new Voith Water Tractors will be fitted with VSPs size 28. Each of these Voith Water Tractors that will be used for marine assistance and escorting services in the 163-km-long Suez Canal has a bollard pull of over 50 tons. Like the three Voith Water Tractors, the five double-ended ferries will be stationed in Port Said, Egypt's second largest harbor. Across the Suez Canal, ferry traffic is busy, especially between Egypt and Sinai. Voith Turbo Marine will deliver a total of twelve VSPs for these double-ended ferries, installed in five vessels. The other two VSPs are kept as spares.

## New Flagship Delivered to Costa Crociere

Costa Crociere's new flagship, Costa Concordia, was delivered by Fincantieri at its Sestri Ponente shipyard in Genoa. The 112,000-ft. ship is able to carry 3,780 passengers, is the largest cruise ship flying the Italian flag and the biggest European passenger vessel in terms of capacity.

Costa Crociere has invested around \$573m in the building of the Costa Concordia, and the ship includes several

## Think of all the reasons you trust ACR.



## Now add one more. (The RapidTrack S-VDR)



*The first name in safety and survival is now the last word in IMO-mandated S-VDRs.*

ACR's brilliant new entry meets or exceeds all government requirements. It is compact, easy to install and, thanks to ACR's vast worldwide service network, easy to maintain with virtually zero downtime. The RapidTrack saves significant retrieval time and expense compared to traditional hardened cases.



And its unique, float-free capsule is tough as nails, just like ACR's time-tested automatic EPIRBs.

ACR also offers the world's first type-approved combination **S-VDR/ECDIS**, another sound and simple way to save you money. To view ACR's complete line of smart, efficient bridge-based products, including **AIS, SSAS** and **ECDIS**, visit [www.acrelectronics.com](http://www.acrelectronics.com) and reap the benefits.

## ACR Electronics, Inc.

**World Leader in Safety and Survival Technologies**

ACR Electronics, Inc., 5757 Ravenswood Road, Fort Lauderdale, FL 33312, U.S.A.

For information call (954) 981-3333 • e-mail: [info9@acrelectronics.com](mailto:info9@acrelectronics.com) • [www.acrelectronics.com](http://www.acrelectronics.com)

ACR Electronics, Inc. is registered by UL to ISO 9001: 2000



**This device has not been authorized as required by the Rules of the FCC.  
This device is not, and may not be offered for sale or lease, or sold or leased, until authorization is obtained.**



unique features to the cruising industry. For example, the Samsara Spa, at 2,104 sq. m., is reportedly the largest wellness center ever built on a cruise ship. The Costa Concordia is also the first ship to have two swimming pools under a retractable glass roof: one astern and the other amidships on the same deck. This is reportedly the largest enclosable outdoor area on any cruise ship (3500 sq. m.), enabling use of the pools also on winter cruises in the Mediterranean, where the ship will be operating until 2007. In addition, the central pool area is fitted with a giant 18 sq. m. movie screen, which can be used for daytime projection of video clips and similar entertainment as well as nighttime film screenings.

The delivery of the Costa Concordia brings to 11 the number of ships in the Costa fleet, with total capacity of around 20,500 berths in double occupancy cabins. Costa Crociere has commissioned four more newbuildings, of which one is on option, all from Fincantieri. The Sestri Ponente yard will build two sister ships of the Costa Concordia: the Costa Serena, due to enter service in May 2007, and a second vessel, still to be named, which will be delivered in summer 2009. Meanwhile, an order has been placed at Fincantieri's Marghera shipyard for a 92,700 gt cruise vessel, with an option for a sister ship; these running mates are expected to enter service in spring 2009 and fall 2010, respectively.

## Omega Receives Two Product Tankers

Omega Navigation Enterprises Inc. took delivery of two product tankers, which will be renamed Omega Princess and Omega Lady Sarah.

Omega said so far it has taken delivery of five double hull product tankers and has agreements to acquire one additional double hull product tanker with expected delivery by the end of July 2006.

## Aker Kvaerner Expands FPSO Ops

Aker Kvaerner and the Norwegian ship owner Aktieselskabet Borgestad ASA established a new company named

Aker Borgestad Operations AS, which will operate oil and gas production vessels on behalf of Aker Floating Production, a company which owns several Floating Production Storage and Offloading (FPSO) units. The company, Aker Kvaerner Operations AS and Aktieselskabet Borgestad ASA will each own 45 percent of the shares in Aker

Borgestad Operations, while Aker Floating Production ASA and Aker Yards ASA will own five percent each. Aker Floating Production has so far acquired three tankers which will be converted to FPSOs. The company plans to develop and own a minimum of four FPSO's.

## OSG Named Co-defendant in Indictment

Overseas Shipholding Group, Inc. was indicted on July 19, 2006 by a federal grand jury in Beaumont, Texas for alleged violations of law concerning maintenance of books and records with respect to the handling of waste oils on the Pacific Ruby, one of the company's

### ADVERTORIAL

#### ESAB 653E Weatherguard Provides Outstanding Multi-Process Performance in an Environment-Resistant Package

ESAB's versatile 653E cvcc Weatherguard power source is a multi-process, three-phase power source designed for heavy-duty industrial DC welding applications, including Mig, flux cored wire, submerged arc and stick electrode welding and air carbon arc gouging.



This environment-resistant power source features an all-stainless steel base, frame and fasteners with side and top panels made from a

Specially designed for harsh working environments such as shipbuilding, Weatherguard provides protection from damage caused by water, salt spray, metal dusts, corrosive mists and more.

non-corrosive, non-flammable, high impact composite. All power components, connectors, terminals and support structures are covered with a durable clear protective coating. The control circuitry is enclosed and sealed against dirt, dust and moisture within an easy-access compartment.

Rated 650 amps at 44 Vdc, 100% duty cycle, the power source offers 230/460/575 Vac, 60 Hz operation with a 115 Vac auxiliary power outlet for water circulator or tools. It is compatible with 115 Vac and 42 Vac wire feeders.

Weatherguard is available as a power source unit or a ready-to-weld package supplied with ESAB's Mig 4HD wire feeder. Like all ESAB products, Weatherguard is backed by ESAB's exclusive 100% Satisfaction Guarantee.

For more information, contact us toll free at 1-800-ESAB-123 or online at [www.esabna.com](http://www.esabna.com).

#### MobileFeed Wire Feeders Stand Up To Harsh Environments



ESAB's MobileFeed arc voltage wire feeder is designed for use with DC, CC or CV power supplies. A permanent magnet drive motor with solid state control ensures dependable wire feeding and controlled acceleration for smooth arc starts and chatter-free operation. MobileFeed features a totally enclosed, impact-resistant case that protects the welding wire from dirt, metal grit, moisture and other contaminants. The molded composite plastic case is metal reinforced and flame retardant to stand up to extreme abuse from hot slag, grinding sparks, corrosive chemicals, knocks, drops and more. This wire feeder provides reliable performance for construction sites, pipelines, shipyards, offshore rigs, mobile welding rigs or any other harsh environment.

#### ESAB Backs Products With 100% Satisfaction Guarantee

ESAB Welding and Cutting Products has been a leader in the welding and cutting industry for more than 100 years and is one of the world's largest manufacturers of welding and cutting equipment and welding filler metals. To demonstrate the confidence ESAB has in its welding and cutting products, the company backs these products with an exclusive 100% Satisfaction Guarantee. Service and support starts from the moment the order is confirmed, with an expanded service organization to ensure that customers are completely satisfied with their ESAB product. Spare and consumable parts are manufactured according to ESAB's quality plan. Product and process training for end users is offered as part of a total ESAB package. The 100% Satisfaction Guarantee is evidence of ESAB's commitment to total customer satisfaction and support. Talk to your local ESAB representative or call 800-ESAB-123 for more information.

## Trust Dual Shield® for consistent performance.

- ▶ Smooth, stable arc characteristics
- ▶ Very high out-of-position deposition rates
- ▶ Fume emission rate approaching that of solid wires
- ▶ Dual Shield II low-hydrogen series meets the U.S. Navy's HY classification



Time after time, weld after weld, ESAB brings you products that meet your precise specifications. For shipbuilding applications, Dual Shield mild steel cored wires combine excellent all-position arc characteristics and high deposition rates with exceptionally low fume generation and very low spatter. Dual Shield wire combined with an ESAB Weatherguard 653E cvcc power source and a MobileFeed wire feeder creates a hardworking, reliable package for consistently superior welds. A trusted partner of industry for 100 years, ESAB backs its products with a 100% Satisfaction Guarantee. **Ask for ESAB by name.**

Great things happen when you put us to work.

1.800.ESAB.123 [www.esabna.com](http://www.esabna.com)



WELDING | CUTTING | FILLER METALS

## Norsafe Workboat Completes Sea Trials

Norsafe AS reported exceptional bollard pull and low speed thrust using twin UltraJet 305HT waterjets coupled to twin Yanmar 340 bhp 6LYA-STP engines. The survey boat Munin is designed and tested according to the "Nordic boat standard" for workboats. During sea trials a speed of 30 knots with a displacement of eight tons was comfortably achieved and a bollard pull of 2.8 tons was recorded. According to Norsafe, the workboat has excellent reliability, maneuverability, and sea keeping abilities, making it suitable as a work platform for maintenance on seismic cables.

### Munin 1000 Workboat Main Particulars

Shipyards	.....Norsafe AS
Boat Owner	.....PGS Geophysical
Type	.....Survey Workboat
Hull	.....Planing Mono Hull
Construction	.....GRP
Length	.....32.8 ft. (10 m)
Beam	.....11 ft. (3.4 m)
Displacement	.....Max 8 ton ( 17,637 lb.)
	.....Light 6.8 ton (14,991 lb.)
Speed	.....30 knots
Propulsion	.....Twin UltraJet 305HT
Reverse Controls	.....UltraJet Hydro-mechanical
Engines	.....Twin Yanmar 340 bhp 6LYA-STP
Gearbox	.....2 x Twin Disc MG5050 ratio 1.53:1



wholly-owned Aframax vessels. OSG was named as a co-defendant in a superseding indictment of the chief engineer on the Pacific Ruby, who was first charged on May 17, 2006. The charge is related to the ongoing Department of Justice investigation that began in 2003 regarding the handling of waste oils on the company's vessels. The company continues to cooperate with this investigation.

### Aker Arctic Ice Lab Inaugurated

Aker Arctic has erected a modern new office and ice model test facility in the Vuosaari district of Helsinki. In addition to the ice laboratory and model testing activities Aker Arctic is offering its own portfolio of conceptual ship designs for various yards, ship owners and offshore operators interested in operations in ice-infested cold waters.

### Simulators Installed in Semarang

Last month, Indonesia announced the launch of the Transas Fishing & Navigation Simulator Center in Semarang, central Java. The simulator operates within the Fishing Technology Development Center (BBPPI), part of the Republic of Indonesia's Department of Marine Affairs and Fisheries.

The simulator comprises of the Transas Navi-Sailor ECDIS, Radar/ARPA, NavAids and the full fishing module, including Echo Sounder, Sonar and Net recorder complete with winch panel and lever control. In addition to under sea water visualization, the main visualization uses five circular projectors with Transas Seagull correction. It covers the Indonesian Exercise Area, including Dumai, Belawan, Surabaya, Jakarta, Arafura and its Semarang water area with detailed port visualization.

### Gensets Delivered to Korean Navy



Rolls-Royce delivered the first three gas turbine generator sets which will provide the main electrical power system for the Republic of Korea Navy's the first 7,000-ton destroyer, designated KDX-III.

Rolls-Royce delivered the first three gas turbine generator sets which will provide the main electrical power system for the Republic of Korea Navy's first 7,000-ton destroyer, designated KDX-III. The first AG9140RF gas turbine generator set was produced at the Rolls-Royce Indianapolis plant, and the other two were assembled by Samsung Techwin from Rolls-Royce supplied kits. The first KDX-III destroyer, which is currently under construction, will be delivered to the Korean Navy by the end of 2008. Another six generator sets, being assembled by Samsung Techwin from Rolls-Royce supplied kits, will be supplied to the other two KDX-III destroyers that are scheduled to be built.

**Take Command of Your Career®**

**Y**our experience may qualify you for a seagoing career with **Military Sealift Command**.

In the next several months, **Military Sealift Command** will be hiring **Civilian Mariners** for Federal employment. The following positions are in our Deck, Engine and Medical Departments:

**3<sup>rd</sup> Officer**

**3<sup>rd</sup> Assistant Engineer**

**Able Seaman**

**Ordinary Seaman**

**Wiper**

**Refrigeration Engineer**

**Deck Engineer Machinist**

**Pumpman**

**Unlicensed Junior Engineer**

**1<sup>st</sup> Radio Electronics Technician**

**2<sup>nd</sup> Electrician**

**Medical Services Officer**

If you are interested in a career that offers on-the-job training, advancement opportunities, steady pay and Federal benefits, visit our Web site at [www.sealiftcommand.com/MR](http://www.sealiftcommand.com/MR) or call **1-888-228-5509** to speak with a recruiter.



**MILITARY  
SEALIFT  
COMMAND**

**Take Command of Your Career®**

MSC IS AN EQUAL OPPORTUNITY EMPLOYER AND A DRUG-FREE WORKPLACE.

## LIG Introduces New Program

LIG Marine Managers released its new On Line Marine GL and Maritime Employers Liability Rating Program, Thunderstorm, designed to provide instant service and quotes for a wide variety of marine related accounts. The program is designed for marine contractors, boat repairers, stevedores, terminal operators, wharfingers and related marine industries. The Thunderstorm Rating System will be expanded to other lines over the next six months as well.

Minimum premium for the Marine GL Program is \$25,000 when written monoline, and reduces to \$10,000 when written with support business. Minimum premium for the Maritime Employers Liability (MEL) Program is \$5,000.

## ACL Sees 2Q Profits Tripled

American Commercial Lines reported that the company's second- quarter profits nearly tripled on strong sales. The Jeffersonville-based company posted net income of \$17.7m, compared with \$6.03m during the same period a year ago. Sales increased 20 percent.

The company announced last month it plans to hire 1,100 people over the next three years.

## Rodriquez Cantieri Navali Delivers

Rodriquez Cantieri Navali do Brasil delivered the first and launched the second of seven 52 m Double Ended CityCats under construction in Niteroi near Rio De Janeiro. Gavea I is the fourth vessel to be completed by Rodriquez's Brazilian shipyard after the three 28-m catamarans delivered in 2005. Entirely built of aluminum, the vessel measures 52 x 14.2 m and is able to transport 1,300 passengers, 900 of whom seated, for a total payload of 125 tons, with a light displacement of 290 tons. The Citycat 52 DE is a double-ended vessel with a double bridge in order to optimize the time spent at the quayside and two MTU 16V 2000 M70 engines rated at 1050 kW each, placed between the two hulls on the boat's longitudinal axis, each coupled to an azimuth propeller wholly designed by Rodriquez Marine System. This system allows the vessel to reach a service speed of 18 knots with a fuel consumption of 250 liters per hour for each engine. Gavea I will be used to link Rio de Janeiro to the residential and industrial city of Niterói, a route used by over 80,000 passengers every day.

## Apax Partners to Acquire FTMSC

France Telecom has signed an agreement with Apax Partners to sell 100 percent of the shares of France Telecom Mobile Satellite Communications SA (FTMSC). The completion of the transaction is expected in the near future. FTMSC is a large mobile satellite communications provider, marketing and distributing communications solutions for customers based in areas with limited access to terrestrial telecoms infrastructure. Apax Partners is a private equity investment groups. Its funds invest in specific industries including telecoms, and provide long-term equity financing to build and strengthen world-class companies. This deal will enable FTMSC to consolidate its position on the international mobile satellite communications market. FTMSC's service operator strategy is based on long-term partnerships with all leading mobile satellite communications operators (Inmarsat, Thuraya, Iridium

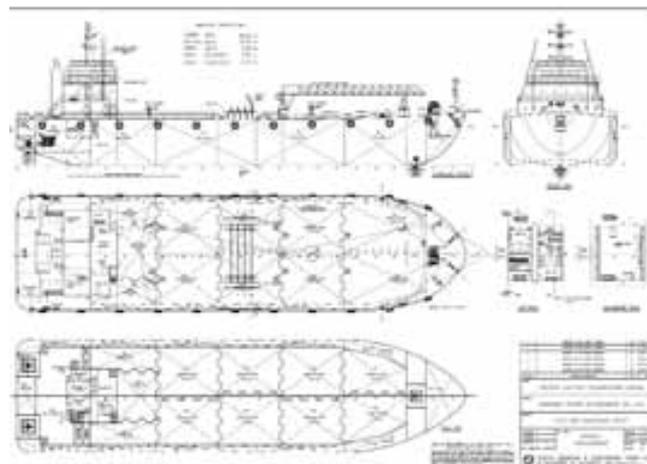
## Moving Mountains to Build Ships

Asked what was previously on the site of the new Jiangmen Yinxing Shipbuilding yard, a company representative said, "Mountains, we moved mountains to build ships."

Those words express the nature of the new China shipbuilding. With funds reportedly earned from ship breaking, Jiangmen Yinxing's parent firm has built two shipyards, one for building vessels 10,000 to 80,000 tons and this yard, at Jiangmen on a branch of the Pearl River, for vessels under 10,000 tons.

In addition to several huge sheds, the yard has several covered and open building and launch ways. These include two each for 3,000-, 6,000- and 8,000-ton vessels. In early July the facility had 800 workers and more

were being hired. While a number of the workers were involved in constructing the yard facilities, some had begun cutting steel for one of the new yard's first projects. This will be a 4,250-dwt bunkering craft for South African owner Unicorn Shipping International Ltd. Designed by naval architect Focal Marine & Offshore Corp. Ltd., the vessel will be just under 70-m overall with a beam of 17.6-m and a 7.2-m molded depth. The double-hulled ship will carry cargo in a total of eleven tanks. Main engine power will be a pair of electronically controlled Cummins QSK19-M engines each delivering 660 hp (492 kW) at 1,800 rpm. The mains will turn Schottel SRP330 azimuthing drive units with 1.4-m propellers. A third azimuthing drive, this one a Schottel SRP200 will be located in the bow giving the vessel excellent control when maneuvering alongside other ships. Electrical needs for cargo pumps as well as the electro-hydraulic bow thruster will be met in part by a 370 kW generator powered by a Cummins KTA19 (D)M engine.



etc.). FTMSC combines their maritime and land mobile services with airtime, hardware, in-house developed applications and customised solutions, offering one of the most complete portfolios on the market. In 2005, FTMSC posted revenues of \$201m.

## Partnership Wins LNG Contract

Aker Kvaerner in joint venture (50/50) with Ishikawajima-Harima Heavy Industries (IHI) was awarded a contract for the engineering, procurement and construction of the Ingleside Energy Center regasification terminal in Ingleside, Texas. The contract value to the Aker Kvaerner and IHI joint venture is \$665m.

The project is expected to take approximately three years to complete, after Ingleside Energy Center elects to issue a Notice to Proceed. Construction is scheduled to begin the first quarter of 2007. The Ingleside Energy

Center LNG terminal will be the second large LNG regasification project for the partnership.

The design and engineering will be directed from Houston involving approximately 125 personnel from Aker Kvaerner and IHI. In addition, the project will employ a peak construction labor force of approximately 750.

## RK 280 is now the MAN 28/33D

The RK 280, previously developed and sold through the U.K. branch of MAN B&W Diesel, will be transferred to the headquarters in Augsburg and newly launched as an MAN 28/33D engine. The commercial responsibility will shift from the U.K. to the Medium Speed Marine division, headed by Prof. Dr. Wolfram Lausch as of July 1. The 28/33D engine is sold in a 12V, 16V and 20V configuration. It runs on MDO and is rated 450 kW per cylinder.

## STRONGER REPAIRS FASTER, EASIER

**Unique epoxy resin system bonds to almost anything—produces proven, long lasting repairs with outstanding impact strength, tensile strength, and abrasion resistance.**

- Repairs everything from pinholes and ruptures to complete breaks in pipes, pumps, ducts, tanks, valves, flanges, joints, and machinery casings, including equipment carrying water, low-pressure steam, gases, gasoline, oil, alcohol, and caustics

- Bonds tenaciously to most surfaces including steel, plastic, fiberglass composites, ceramic and wood



**STANDARD RESIN** for small holes/cracks (large holes/cracks with reinforcement)

**RED PUTTY** for medium to large holes, cracks and other defects

**STEEL PUTTY** for steel-like repairs on metal—can be drilled, tapped, machined

**SEALER** for small holes and cracks

**LEVELING COMPOUND** for corroded surfaces

**UNDERWATER PUTTY** for repairs in dry, moist, or submerged conditions

For detailed literature contact:

Ferro Corporation  
Liquid Coatings and Dispersions Division  
1301 N. Flora St., Plymouth, IN 46563  
Tel: 574-935-5131 • Fax: 574-935-5278



# New OPA 90 Limits on Liability



The Athos I, a 750-foot Cyprus flagged vessel, lists eight degrees on November 28, 2004 in the Delaware River. (USCG photo by PO Mike Lutz)

After almost 16 years of steady state, Congress has enacted legislation that significantly increases the limits on liability for ships that spill oil into waters of the United States. The Coast Guard and Maritime Transportation Act of 2006 was signed by President Bush on July 11 and deserves close attention by ship owners and operators and by marine liability insurers.

## Old limits on liability

Up until July 11, the U.S. had relatively straight-forward sets of limits on liability for oil pollution incidents, based on the Oil Pollution Act of 1990 (OPA 90). There was one set for tank vessels and another set for any other vessels. For a tank vessel, the limit was the greater of either: (a) \$1,200 per gross ton or (b) \$10m (for vessels of greater than 3,000 gross tons) or \$2 million (for vessels of 3,000 gross tons or less). For any other vessel, the limit was the greater of \$600 per gross ton or \$500,000.

## New limits on liability

The new legislation subdivides tank vessels into those with qualifying double hulls and those without double hulls. The group without double hulls includes not only those with single hulls, but also those with either double sides or double bottoms. For a tank vessel greater than 3,000 gross tons that does not have a qualifying double hull, the new limits on liability are the greater of \$3,000 per gross ton or \$22 million. For a tank vessel of 3,000 gross tons or less that does not have a qualifying double hull, the

new limits are the greater of \$3,000 per gross ton or \$6m. For tank vessels with qualifying double hulls, the new limits are the greater of \$1,900 per gross ton or either \$16m (for tank vessels of greater than 3,000 gross tons) or \$4 million (for tank vessels of 3,000 gross tons or less). For any other vessel, the new limits on liability are the greater of \$950 per gross ton or \$800,000.

In changing the limits on liability, Congress was attempting to do two things: (1) account for inflation over the past 16 years and (2) provide an economic incentive for owners of single hull tankers to convert to double hulls even earlier than the mandatory phase-out date. With respect to inflation, the limits on liability were increased approximately 160 percent for double hull tank vessels and for non-tank vessels. For tank vessels without qualifying double hulls, though, the limits were increased approximately 250 percent.

A major impetus for the separate treatment for tank vessels without double hulls was the November 2004 oil spill into the Delaware River from the single hull tanker ATHOS I. Even though the tanker was not negligent in the discharge that resulted from striking an uncharted obstruction in the navigable channel of the Delaware River, many believed that the spill would not have occurred if the ship had been constructed with a double hull. Among those who were of that belief was Representative Frank LoBiondo (R-NJ). The impact of the oil was felt in his district, which borders the Delaware River. Congressman LoBiondo is also Chair of the

Subcommittee on Coast Guard and Maritime Transportation of the House Committee on Transportation and Infrastructure. As such, he strongly influences legislation relating to the Coast Guard and to the maritime industry. He introduced the Delaware River Protection Act of 2006 (which was subsumed into the Coast Guard and Maritime Transportation Act of 2006) that first included the new limits on liability.

## Disjointed effective dates

Legislation normally takes effect automatically upon the President's signature. In this case, though, Congress wanted to give ship owners a little time to adjust to the new limits on liability and to obtain increased insurance coverage, if needed. Thus, the provision changing the OPA 90 limits includes a provision intended to delay its effective date for 90 days. The legislation, though, is complex and statutes are interpreted the way they are written, not necessarily the way they were intended. Because of the use of incorrect phrasing, only the new limits for tank vessels got delayed. The new limits for other vessels came into effect on July 11, 2006, when the legislation was signed.

While most commercial vessels carry liability insurance well above the old OPA 90 limits on liability, some maintained minimum coverage. These latter vessels must immediately obtain insur-

ance coverage up to at least the new limits - unless they choose to effectively self-insure. Even those vessels with insurance coverage somewhat above the new limits should consider whether additional coverage may be appropriate.

## Inflation adjustments

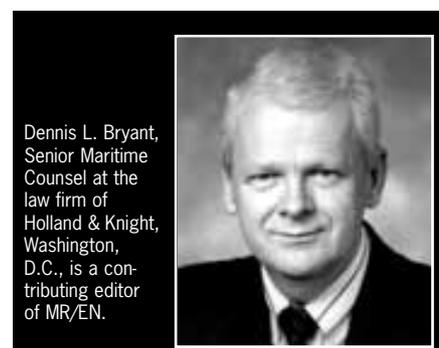
The new legislation includes a provision requiring that the limits on liability be adjusted at least every three years to account for inflation. The original OPA 90 had a similar provision, but no adjustments were ever made. Congress can be expected to insist upon such adjustments in the future.

## COFRs

OPA 90 includes a separate provision regarding the requirement for a vessel over 300 gross tons to establish and maintain evidence of financial responsibility to meet the maximum amount of liability to which it may be subject in the event of an oil pollution incident. This provision is implemented by regulations promulgated by the U.S. Coast Guard. Evidence of compliance with those regulations is in the form of the Certificate of Financial Responsibility (COFR) issued by the USCG National Pollution Funds Center. Until new regulations are promulgated reflecting the higher limits on liability, the current OPA 90 COFRs continue to be valid.

## Conclusion

As a result of the delay resulting from the rapid increase in liability limits and the cumbersome regulatory process, there is a disconnect between financial responsibility represented by the COFR and the maximum potential strict liability under the amended law. Owners and operators should not be lulled into the false impression that the amounts represented on the COFR are the actual limits on liability during this (potentially extended) period between the effective date(s) of the higher limits and the effective dates of the new (and as yet unseen) COFR regulations.



Dennis L. Bryant, Senior Maritime Counsel at the law firm of Holland & Knight, Washington, D.C., is a contributing editor of MR/EN.

## Eye on the Navy

# Piracy: Criminal at Best; Terrorism at Worst

Piracy is nothing new. Basically, it's maritime crime. It gets difficult to pursue and bring pirates to justice when it occurs in the ungoverned territory of the sea, or under the noses of countries that can't-or won't- do anything about it. And it gets scary when you imagine the tactical employment of piracy as a method of terrorism.

Let's look at one vital chokepoint, the Malacca Straits.

According to Noel Choong, head of the International Chamber of Commerce's International Maritime Bureau (IMB) Piracy Reporting Center, the Vessel Tracking System (VTS) indicates that 62,616 ships transited Malacca Straits in the year 2005, about 35 percent of them are tankers. Approximately a quarter of the world's annual merchant fleet tonnage passes through Straits of Malacca, Sunda Strait and Lombok Straits, Choong says, and carrying a third of the world's trade. This includes a million barrels of oil per day, mostly to China, Japan and South Korea.

Twelve cases of piracy and armed robbery in the Malacca Straits were reported for 2005, according to Choong, compared with 38 cases in 2004. While a positive trend, the numbers are still alarming. "We believed more than 50 percent of cases normally go unreported," Choong says.

"The greatest concern at the present is piracy in the congested Malacca Straits, through which half of the world's supply of oil and a third of world's commerce passes," says John S. Burnett, author of *Dangerous Waters: Modern Piracy and Terror on the High Seas*. "The straits wind through numerous islands, with many places for pirates to hide and await the target of their choosing."

### Who governs the seas?

Indonesia, Malaysia and Singapore border these waters. Coordinating a response to acts conducted in neutral waters, or in one country's territory, that results in the pirates escaping to other territorial water to evade capture has been problematic.

According to Choong, the number of cases in Malacca Straits dropped in 2005 due to international pressure on Indonesia. In July 2005, the Indonesian Navy launched "Maritime Operation



Edward Lundquist is a senior science advisor and naval analyst with Alion Science and Technology, Washington, D.C.

Gurita 2005," involving patrol boats, warships and aircraft to provide presence and security to the Indonesian side of the Straits of Malacca and Singapore Straits.

"It appears that the operation is successful with the apparent reduction in attacks," Choong says. "The operation is still ongoing."

Choong notes that most pirates in that region are believed to be hiding and originating from Indonesia. However, it is not known how long the Indonesian Navy could sustain these patrols in view of the cost and assets involved.

Clearly increased presence of patrols will reduce pirate activity, or at least send it elsewhere.

There are other piracy-prone waters. Some danger zones include waters in and around Chittagong, Bangladesh; the Gulf of Aden and Southern Red Sea; the eastern and northeastern coasts of Somalia are high-risk areas for hijackings, according to the IMB. "Ships not making scheduled calls to ports in these areas should keep at least 200 nm away from the coast," IMB warns. Dar es Salaam (East Africa), Abidjan (Ivory Coast), Bonny River/Lagos/Onne/Warri (Nigeria), Douala (Cameroon), Tema (Ghana) are all piracy-prone waters, as is Chennai and Kandla in India. Port au Prince, Haiti, Kingston, Jamaica, and Callao, Peru, are on the IMB list, as is Basrah oil terminal anchorage and Umm Qasr in Iraq.

Let's imagine the consequences of a major piracy-terror incident in the Malacca Straits. It is one thing to take temporary control of the largest merchant ship for criminal aims. It happens. It isn't much more of an effort to take control of a very large crude carrier (VLCC) or liquefied natural gas (LNG) carrier for political purposes, and steam it into Singapore Harbor with a threat to explode the ship and its cargo. We know

# Who

provides the most comprehensive offshore marine services in the market today?

# Who

continually invests in building competitive and innovative next-generation vessels?

# Who

is the leading modern offshore support services company thanks to sustained and fast growth?



# BOURBON

there are terrorists all too willing to blow themselves up. Pirates have committed ruthless crimes for relatively small gain. One can assume they would commit more heinous acts for a well-funded terrorist "customer."

Consider the devastating environmental impact if terrorists blew up a large oil or gas carrying ship, especially in a

choke point. The economic ramifications are just as bad.

"It is quite clear that any serious disruption to the flow of maritime traffic through this channel would have a widespread and far-reaching detrimental effect, presenting ships with a detour of around 600 miles and, without doubt, higher freight rates and costlier goods

and commodities as a result. That is why the preservation of its integrity is such an important issue," reports the International Maritime Organization (IMO), the United Nations specialized agency with responsibility for the safety of shipping and the prevention of marine pollution by ships.

Jolly Roger With an Uzi: The Rise and

Threat of Modern Piracy (Naval Institute Press) by attorneys Jack Gottschalk and Brian Flanagan, present case studies that show that most reported pirate assaults occur in the waters off Indonesia, Brazil, and Somalia, and in the South China Sea, but, the authors say, no location is entirely safe. The authors say that modern-day pirates are motivated by greed and are not necessarily part of a larger organized crime group. Pirates, they claim, are well equipped with high-powered automatic weapons and high-speed boats. Attacks are usually well planned, and they often have intelligence gathered from well-placed informants. The costs in terms of both economic loss and seafarers' deaths and injuries are enormous.

"As the risk of security as well as its importance grew, Japan and China has long been looking for ways to detour the Strait of Malacca," according to the Korean news website, Donga.com. "This means creating an 'Asian Panama Canal' in Kra, the southern part of Thailand. The construction of the Kra Canal, as short as 100 km, can reduce the travel route by 1,200 km and two to five days of travel time."

As appealing as that canal may be, it would be a very expensive and time-consuming project, leaving us vulnerable to the Malacca choke point for many years to come. And such a canal would be a new choke point, vulnerable to terrorism or piracy, as well.

### Partners against piracy

Terrorists have already proven their willingness to attack from the sea.

"Al Qaeda and other extremists are the primary enemy in the region, he said," said U.S. Navy Vice Adm. Patrick M. Walsh, commander of combined maritime forces in the region. Walsh holds the titles of Commander, U.S. Naval Forces Central Command; Commander, U.S. 5th Fleet. "They attacked the motor vessel Limburg in 2002; they targeted economic infrastructure with attacks on oil platforms in 2004; and they attacked the USS Cole in 2000."

A collation of naval partners have created a task force to patrol the waterways of the Middle East from the Gulf of Oman to the southern border of Kenya and includes the Red Sea. Called Task Force 150, its operating area extends out to Pakistan's border with India, and includes ships from 15 to 17 nations, and support from other nations. It recently came under the command of Pakistani Rear Adm. Shahid Iqbal, who relieved Dutch Commodore Hank Ort.

Such partnerships are an objective of U.S. Chief of Naval Operations Admiral



Orkot Marine Bearings is a leading worldwide manufacturer and supplier of bearings to the marine industry for over 25 years.

Designed to match specific application requirements, Orkot Marine Bearings have a unique combination of mechanical and physical properties ensuring suitability for use in seawater, grease, oil, and even running conditions.

- ▶ Low coefficient of friction
- ▶ Virtually no swell in water
- ▶ Tolerates high edge loading
- ▶ 24-hour turnaround on non-stock sizes
- ▶ Approved dry running capability
- ▶ Environmentally friendly
- ▶ Major classification approvals

# Orkot

## Marine Bearings

Trelleborg Sealing Solutions  
24 hour service (United States)

**1-800-546-7568**

[www.orkotmarine.us](http://www.orkotmarine.us)

### APPLICATIONS INCLUDE:

- ▶ Rudder bearings
- ▶ Water-lubricated stern tube bearings
- ▶ Stabilizer bearings
- ▶ Deck machinery bearings
- ▶ Termination bushings for soft line rope
- ▶ Stern roller bearings
- ▶ Anchor handling bushings
- ▶ Door bushings
- ▶ Crane mast bearings
- ▶ Steering and diving system bearings
- ▶ Ride and motion control bearings



North/South America Tel: +1(541) 688-5529 \* Fax: +1 (541) 688-2079  
Europe/Asia Tel: +44 (01) 1709 78 9828 \* Fax: +44 (01) 1709 78 9802



# \$1.8 billion

in investments  
between 2007 and 2010  
for next generation vessels  
positioning us as a market leader  
in global maritime services.



**BOURBON**

Building together a sea of trust

 [bourbon-online.com](http://bourbon-online.com)

Mike Mullen. "Without our collective mastery of the sea — we cannot protect and promote free trade, we cannot help those in peril, we cannot provide relief from natural disaster, and we cannot intercede when slavery, weapons of

mass destruction, terrorism, smuggling, drugs, and piracy threaten our collective way of life." Mullen says "Our vision should be to extend peace through an inter-connected community of maritime forces that together could form a 1,000

ship Navy — a fleet-in-being, if you will — comprised of all freedom-loving nations, standing watch over the seas — standing watch with each other."

While the U.S. has not suffered from pirates near its ports, it has a major mar-

itime security challenge, monitoring and protecting more than 1,000 harbor channels; 25,000 miles of intracoastal and coastal waterways; more than 350 ports and more than 3,700 passenger and cargo terminals.

### This Day in Navy History

**August 1, 1801** - U.S. schooner Enterprise captures Tripolitan ship Tripoli

**1921** - Successful tests of gyroscopic high level bombsight (Norden Bombsight) at Torpedo Station, Yorktown, VA. Carl Norden developed the bombsight for the Bureau of Ordnance.

**1946** - Office of Naval Research established

**1958** - USS Nautilus (SSN-571) submerges under Arctic ice cap near Point Barrow

**August 2, 1943** - PT-109, under command of LTJG John F. Kennedy, cut in half by Japanese destroyer Amagiri

**1943** - Naval task groups bombard Japanese forces on Kiska, Alaska

**1950** - Amphibious force ships land Marine First Provisional Brigade at Pusan, Korea helping to save this last area of South Korea from capture.

**1964** - Three North Vietnamese PT boats attack USS Maddox (DD-731) in international waters in Gulf of Tonkin. Maddox sinks one.

**August 3, 1804** - American Squadron, including USS Constitution, attacks Tripoli

**1812** - Frigate Essex captures British brig Brothers

**1861** - Construction of USS Monitor authorized

**1861** - First manned ascent in a balloon from a ship, gunboat USS Fanny, to observe Confederate artillery position at Hampton Roads, VA

**1942** - Mildred McAfee (Horton) becomes the first woman officer commissioned into Naval Reserve.

**1950** - First Marine Corps aviation mission against North Korea by VMF-214, from USS Sicily

**1950** - First helicopter evacuation in Korea by VMO-6

**1958** - USS Nautilus (SSN-571) is first ship to reach the geographic North Pole submerged.

**1970** - USS James Madison (SSBN-627) conducts first submerged launching of Poseidon nuclear missile off Cape Kennedy

**August 4, 1846** - Sailors and Marines from USS Congress capture Santa Barbara

**1858** - First trans-Atlantic cable completed by USS Niagara and British ship Agamemnon

**1944** - Fifth Fleet carrier task forces begin air attack against Iwo Jima and the Bonin Islands

**1947** - Birthdate of the Medical Service Corps

**1964** - USS Turner Joy and USS Maddox report being attacked by North Vietnamese PT boats in Gulf of Tonkin

**August 5, 1832** - Frigate Potomac is first U.S. Navy ship to entertain royalty, King and Queen of Sandwich Islands, Honolulu

**1864** - RADM David Farragut wins Battle of Mobile Bay, sealing off last Confederate port on Gulf Coast

**1882** - Authorizing of first steel warships, beginning of the modern Navy.

**1921** - Yangtze River Patrol Force established as command under Asiatic Fleet.

**1990** - Navy and Marine Task Force (USS Saipan, USS Ponce, and USS Sumter) begin evacuation of U.S. citizens and foreign nationals from Liberia during civil war.

**August 6, 1862** - CSS Arkansas destroyed by her commanding officer to prevent capture by USS Essex.

**1943** - Battle of Vella Gulf begins. US destroyers sink 3 of 4 Japanese destroyers.

**1945** - Atomic bomb detonated over Hiroshima, Japan. Navy weaponeer, Captain W.S. Parsons, USN, armed the atomic bomb on the B-29 bomber, Enola Gay.

**1990** - President George Bush orders Operation Desert Shield, largest overseas deployment since Vietnam, to protect Saudi Arabia after Iraq's invasion of Kuwait.

**1997** - Naval Forces on Guam help rescue and begin providing medical care to survivors of Korean Airlines Flight 801 that crashed on Guam.

**August 7, 1782** - Badge of Military Merit (Purple Heart) established

**1942** - Navy Amphibious Task Force lands Marines on

Guadalcanal, Solomon Islands in first U.S. land offensive of World War II

**1964** - Gulf of Tonkin Resolution passed by Congress August 8

**1813** - US Schooners Hamilton and Scourge founder in storm on Lake Ontario

**1959** - Announcement of Project Teepee, electronic system to monitor 95 percent of earth's atmosphere for missile launchings or nuclear explosions. System developed by William Thaler, Office of Naval Research physicist.

**1972** - Women authorized for sea duty as regular ship's company

**August 9, 1815** - CAPT Stephen Decatur concludes treaty for U.S. with Tripoli

**1842** - Signing of Webster-Ashburton Treaty under which U.S. and Great Britain agreed to cooperate in suppressing the slave trade.

**1865** - Return of Naval Academy to Annapolis after 4 years at Newport, RI

**1941** - Atlantic Charter Conference is first meeting between President Roosevelt and Winston Churchill

**1942** - Battle of Savo Island begins; First of many sea battles near Guadalcanal

**1949** - First use of pilot-ejection seat for emergency escape in U.S. made by LT Jack I. Fruin of VF-171 near Walterboro, SC

**August 10, 1916** - First Naval aircraft production contract, for N-9s

**1964** - Signing of Gulf of Tonkin Resolution which is used as the starting point of the Vietnam Conflict

**August 11, 1812** - USS Constitution captures and destroys brig Lady Warren

**1877** - Professor Asaph Hall of Naval Observatory discovers first of two satellites of Mars. He found the second one within a week.

**1921** - Carrier arresting gear first tested at Hampton Roads.

**1960** - USNS Longview, using Navy helicopters and

frogmen, recovers a Discover satellite capsule after 17 orbits. This is first recovery of U.S. satellite from orbit.

**August 12, 1812** - USS Constitution captures and destroys brig Adeona

**1918** - SECNAV approves acceptance of women as yeoman (F) in U.S. Navy

**1942** - USS Cleveland (CL-55) demonstrates effectiveness of radio-proximity fuze (VT-fuze) against aircraft by successfully destroying 3 drones with proximity bursts fired by her five inch guns.

**1957** - In first test of Automatic Carrier Landing System, LCDR Don Walker is landed on USS Antietam.

**1958** - USS Nautilus (SSN-571) arrives Portland, England completing first submerged under ice cruise from Pacific to Atlantic Oceans.

**August 13, 1777** - American explosive device made by David Bushnell explodes near British vessel off New London, CT.

**1846** - Joint expedition led by CDR Robert Stockton seizes Los Angeles, CA

**1870** - Armed tug Palos becomes first U.S. Navy ship to transit Suez Canal

**August 14, 1813** - HMS Pelican captures USS Argus

**1886** - SECNAV establishes Naval Gun Factory at Washington Navy Yard

**1945** - Japan agrees to surrender; last Japanese ships sunk during World War II (15 August in DC)

**August 15, 1845** - U.S. Naval Academy established at Annapolis, MD on former site of Fort Severn.

**1895** - Commissioning of Texas, the first American steel-hulled battleship. Texas served off Cuba during the Spanish-American War and took part in the naval battle of Santiago. Under the name of San Marcos, she was sunk in weapon effects tests in Chesapeake Bay in 1911. Her hulk continued in use as a gunnery target through World War II.

**1908** - First Navy post offices established in Navy ships

**1958** - USS Lexington (CVA-16) arrives in vicinity of

### Fatigue and Fracture Analysis of Ship Structures Course

Houston, Texas, November 2006

Develop an understanding of fatigue and fracture issues affecting design, maintenance and operations

- Sea load/structural response estimation
- Fatigue and fracture concepts
- Fabrication/construction tolerances
- Corrosion/residual stress effects
- Damage tolerance/fitness-for-purpose analysis
- Fatigue in welded connections
- Global and local stress analysis

Early registration discount ends September 15, 2006

Accredited by the Royal Institution of Naval Architects for continuing professional development and by the Society of Naval Architects and Marine Engineers for compliance with NYSSED guidelines for continuing professional competency.



BMT Fleet Technology Limited

1-613-592-2830 snicholson@fleetech.com www.fleetech.com



### On Board Generation of Nitrogen

**Chemical Tankers, LNG, FPSO, Controlled Atmosphere, Barges, Terminals, High Pressure Bottle Filling, etc:**

- All Generon Systems utilize high efficiency hollow fiber membrane modules produced in its Pittsburg, California, U.S.A. facility
- Thousands of systems sold to all areas of the Oil and Gas, Marine and Industrial markets
- Systems certified to Dew Point of -70°F / -56.6°C, purities to 99% N<sub>2</sub>, and all major third party societies
- All Generon IGS facilities are ISO 9001:2000 Certified
- Sales, Service, Manufacturing Globally

Generon IGS, Inc  
www.igs-global.com

Taiwan

**August 16, 1812** - USS Constitution recaptures American merchant brig Adeline  
**August 17, 1812** - Frigate President captures British schooner L'Adeline in North Atlantic  
**1942** - Submarines USS Nautilus and USS Argonaut land 222 Marines on Makin Island, first amphibious attack made from submarines  
**1959** - ADM Arleigh Burke reappointed CNO for 3rd 2 year term, serving longest term as CNO  
**1962** - Navy's first hydrofoil patrol craft, USS High Point (PCH-1) launched at Seattle, WA  
**August 18, 1838** - Exploring Expedition under LT Charles Wilkes embarks on world cruise.  
**1966** - First ship-to-shore satellite radio message sent from USS Annapolis in South China Sea to Pacific Fleet Headquarters at Pearl Harbor  
**August 19, 1812** - USS Constitution captures HMS Guerriere.  
**1812** - Devastating hurricane struck the Navy's New Orleans station, delaying military preparations in the War of 1812  
**August 20, 1952** - In interservice air operation at Chang Pyong-ni, Korea, U.S. Navy, Marine and Air Force aircraft destroy 80 percent of assigned area.  
**August 21, 1800** - U.S. Marine Corps Band gave its first concert in Washington, D.C.  
**1883** - Installation of the first electric lighting on a US Navy Ship completed on USS Trenton.  
**1920** - Radio station built by U.S. Navy and French Government transmits first wireless message heard around the world. At time it was the most powerful radio station in the world.  
**1951** - First contract for nuclear-powered submarine awarded.  
**August 22, 1912** - Birthday of Dental Corps  
**1945** - First surrender of Japanese garrison at end of World War II; USS Levy receives surrender of Mille Atoll in Marshall Islands  
**August 23, 1864** - RADM David Farragut's squadron captures Fort Morgan at Mobile Bay winning control of Mobile Bay  
**1958** - Massive concentration of Pacific Fleet in Quemoy-Matsu area prevents invasion of islands by China.  
**1958** - In Taiwan Straits Crisis, Units of 7th Fleet move into Taiwan area to support Taiwan against Chinese Communists.  
**1963** - The first satellite communications ship, USNS Kingsport (T-AG-164) in Lagos, Nigeria, connected President John F. Kennedy with Nigerian Prime Minister Balewa who was aboard for the first satellite (Syncom II) relayed telephone conversation between heads of state.  
**August 24, 1814** - British invasion of Maryland and Washington, D.C.; Washington Navy Yard and ships burned to prevent capture by the British  
**1912** - **Launching of USS Jupiter, first electrically propelled Navy ship**  
**1942** - U.S. carrier aircraft begin 2-day Battle of Eastern Solomons where Japanese task force defeated and one Japanese carrier sunk. Japanese recall expedition to recapture Guadalcanal.  
**1960** - USS Bexar (APA-237) deploys to Pangahan Province in response to emergency request for aid from the Province's governor.  
**August 25, 1843** - Steam frigate Missouri arrives at Gibraltar completing first Trans-Atlantic crossing by U.S. steam powered ship.  
**August 26, 1775** - Rhode Island Resolve: Rhode Island delegates to Continental Congress press for creation of Continental Navy to protect the colonies  
**1839** - Brig Washington seizes Spanish slaver, Amistad near Montauk Point, NY  
**1865** - Civil War ends with Naval strength over 58,500 men and 600 ships  
**August 27, 1917** - Squadron of minesweepers departs U.S. for service off France  
**1944** - USS Stingray (SS-186) lands men and supplies on Luzon, Philippines to support guerilla operations against the Japanese.  
**1945** - Pacific Fleet ships enter Sagami Bay, near Tokyo, Japan.  
**1959** - Off Cape Canaveral, FL, USS Observation Island (EAG-154) makes first shipboard launching of a Polaris missile.  
**August 28, 1867** - Captain William Reynolds of Lackawanna raises U.S. flag over Midway Island and took formal possession of these islands for the U.S.  
**1952** - Units on USS Boxer (CV-21) launch explosive-filled drone which explodes against railroad bridge near Hungnam, Korea. First guided missile launched from

ship during Korean Conflict.

**1965** - CDR Scott Carpenter and 9 aquanauts enter SeaLab II, 205 ft. below Southern California's waters to conduct underwater living and working tests  
**1991** - A helicopter from USS America (CV-66) rescues 3 civilian sailors who spent 10 days in a lifeboat 80 miles off Capt May, NJ after their sailboat capsized.  
**1992** - Navy and Marine forces begin providing disaster relief after Typhoon Omar hit Guam  
**1992** - Marines and Army forces begin providing disaster relief in Florida after Hurricane Andrew.  
**August 29, 1861** - U.S. squadron captures forts at Hatteras Inlet, NC  
**1862** - Union gunboat Pittsburgh support Army troops in

landing at Eunice, Arkansas

**1915** - Navy salvage divers raise F-4, first U.S. submarine sunk in accident  
**1916** - Congress passes act for expansion of Navy but most ships not completed until after World War I.  
**1964** - USS Boxer and 2 LSDs arrive off coast of Hispaniola to give medical aid to Haiti and Dominican Republic which were badly damaged by Hurricane Cleo.  
**August 30**  
**1913** - Navy tests Sperry gyroscopic stabilizer (automatic pilot)  
**1929** - Near New London, CT, 26 officers and men test Momsen lung to exit submerged USS S-4  
**1961** - Two Cuban frigates fire on a Naval Reserve air-

craft on a training mission over international waters

**August 31, 1842** - Congress replaces the Board of Navy Commissioners, a group of senior officer who oversaw naval technical affairs, with the five technical Bureaus, ancestors of the Systems Commands. One of the 1842 Bureau, the Bureau of Medicine and Surgery, continues to serve under its original name.  
**1943** - Commissioning of USS Harmon (DE-678), first Navy ship named for an African American Sailor.  
**1944** - Carrier task group begins 3-day attack on Iwo Jima and Bonin Islands  
**1962** - Last flight of Navy airship made at NAS Lakehurst, NJ

Source: www.history.navy.mil



## Diesel fuel prices won't be bottoming out anytime soon.

One way to attack the problem is switching to high performance fuel injectors from Interstate Diesel.

Fuel savings of 3% and greater have been documented in independent tests with our ECOTIP® Superstack Injectors and verified by feedback from users.

### Results Confirmed

Electro-Motive ran similar tests which validated these findings.

Estimates in savings range from \$10,000 to \$18,000 per

engine, per year, depending on the duty cycle.

### Further Options

For savings greater than 3%, specify our designed-to-application ECOTIP® Special Injector. It can be specially configured to maximize fuel savings...or our ECOTIP® Ultrastack Injector, with its "straight-shot" fuel delivery system which reduces the fuel penalty in Electro-Motive Tier O engine kits.

Added to fuel savings, these injectors reduce smoke, NO<sub>x</sub> and particulate matter for a win-win situation.

Call for more information.



Serving the Power, Marine and Industrial Markets Since 1947.

**Interstate Diesel**  
OEM Partner  
**ELECTRO-MOTIVE**

4901 Lakeside Avenue, Cleveland, OH 44111-3996  
or call (800) 321-4234; Fax: (216) 881-0805.  
www.interstate-mcbee.com/emd/emd.htm

Patent Numbers 3,338,874; 5,467,924; 5,797,427; 5,725,157; 6,007,000; 6,012,433; 6,321,723; 6,511,002

Contact your regional distributor for sales and service.

#### UNITED STATES

**Engine Systems, Inc.**  
1220 Washington Street  
Rocky Mount, NC 27801  
P.O. Box 1928 (27802-1928)  
PHONE: (252) 977-2720  
FAX: (252) 446-3830



**Inland Energy Services**  
210 Alexandra Way  
Carol Stream, IL 60188  
PHONE: (630) 871-1111  
FAX: (630) 871-8997



#### Stewart & Stevenson Services, Inc.

8631 East Freeway  
Houston, TX 77029  
PHONE: (713) 671-6200  
FAX: (713) 671-6286



1400 Destrehan Avenue  
Harvey, LA 70058  
PHONE: (504) 347-4326  
FAX: (504) 341-2084

#### Valley Power Systems, Inc.

11300 Inland Ave.  
Mira Loma, CA 91752  
PHONE: (951) 681-9283  
FAX: (951) 360-4637



#### AUSTRALIA, S.E. ASIA

**EMD Service International LCC**  
1133 First Avenue  
Harvey, LA 70058  
PHONE: (504) 340-7034  
FAX: (504) 349-5788



#### BRAZIL

**Retam Diesel**  
Rua-Dr. Alfredo de Castro 200  
Sao Paulo Cep 01155  
BRAZIL  
PHONE: 55-11-3660-2860  
FAX: 55-11-3660-2874



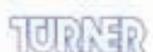
#### CANADA

**Midwest Power Products**  
1460 Waverley Street  
Winnipeg, Manitoba R3T 0P6  
CANADA  
PHONE: (204) 452-8244  
FAX: (204) 452-2153



#### EUROPE, AFRICA

**Turner Diesel Ltd.**  
Unit 1A, Dyce Industrial Park  
Dyce, Aberdeen AB21 7EZ  
Scotland, UNITED KINGDOM  
PHONE: 44-122-472-3925  
FAX: 44-122-477-0221



# Combat Capability in a Container



Engineers work on a Remote Minehunting System in its holding bay on board the Navy's newest guided missile destroyer USS Momsen (DDG 92). Momsen is the first Navy Ship to utilize a working RMS on board. RMS will provide the Strike Group Commander the first ever off-board mine reconnaissance capability from a surface combatant. (U.S. Navy photo)

## By Edward Lundquist

The U.S. Navy has two different Littoral Combat Ship (LCS) seaframes currently under construction, while concurrently assembling the combat systems packages. Unlike multi-mission combatants, the focused-mission LCS will feature reconfigurable, modular mission packages to counter access-denial threats - mines, submarines or small, fast attack boats - in the littoral. The first mission packages for mine warfare are now being assembled and tested at the Naval Surface Warfare Center in Panama City, Fla.

"We're bringing a large number of individual systems primarily focused on unmanned platforms - unmanned underwater vehicles, unmanned surface vehicles, [and] unmanned air vehicles - in which we've integrated sensors and weapon systems. And we have put them together in a modularized fashion to put into the mission bays of the seaframe," says Capt. Walt Wright, program manager for LCS Mission Modules, Program Executive Officer for Littoral and Mine Warfare.

Lockheed Martin is building LCS 1, named Freedom, a semi-planing mono-hull design at Marinette Marine in Marinette, Wisc. General Dynamics is building LCS 2, named Independence, a trimaran at Austal USA in Mobile, Ala.

Each ship, which will be more than 4,000 tons loaded, will have a core crew of just 40 people, and each mission package will bring a crew of 15 people. A mission package includes the systems, modules and crew. There will also be an aviation detachment of 20 people for a total of 75 crew per ship.

NSWC Panama City is designing, developing and integrating the modules for the mine warfare (MIW) mission package. The antisubmarine warfare (ASW) package is being created by Space and Naval Warfare Systems Command (SPAWAR) San Diego and Naval Undersea Systems Center Newport, R.I. The surface warfare (SUW) mission package is being developed by Naval Surface Warfare Center Dahlgren, Va.

There are significant challenges integrating the components of a combat system with any new ship. With LCS, the challenge is multiplied because there are essentially three different interchangeable mission packages, two different combat systems, and two different seaframes.

"We are creating the first of the three mission packages for LCS," said Jose Velez, a systems engineer and the LCS customer advocate at NSWC Panama City. Velez said NSWC Panama City is also the certifying authority for all of the

mission packages. "We certify that the mission packages are ready. We check the interfaces, validate the communications and verify everything works the way it's supposed to and that they are ready for fleet use."

The seaframe has the basic combat management system (CMS) with the computing environment and post mission analysis tools for each of the mission packages. The mission packages can be changed quickly to give the ship a different mission. Each of the two ship designs, while very different, had to meet requirements for weight, volume, power, storage, and physical and computer interfaces, along with speed, draft and inherent self-defense capabilities. The modules can be placed on either seaframe design.

"A mission specialist would be able to operate his or her systems the same way with either ship," Velez said.

The mission packages are modularized 20-ft. ISO-compatible shipping containers made by Sea Box, Inc. The containers are standard size, but strengthened for naval use, with Tyco Unistrut fastening systems installed to secure the equipment to the deck, overhead and bulkhead, according to Jeff Mott, project engineer for the MIW support containers development.

The containers have lighting and

power receptacles, with interfaces for power (115 VAC, 44VAC and 28VDC) and communications mounted outside the box. They are equipped with white and red lighting (for night vision), handling equipment and diagnostic computers, smoke alarms, fire extinguishers, and phones. Some containers have air conditioning or nitrogen charging equipment.

## Mine Warfare Mission Modules

The LCS configured for mine warfare can sprint to an area of concern, then deploy offboard systems to look for mines. Its volume search sonars can search a large volume of water to find objects of interest, then it can go back and investigate mine-like objects using Electro-optical identification (EOID) sensors.

LCS carries a helicopter which can employ the AN/AES-1 Airborne Laser Mine Detection System (ALMDS), built by Northrop Grumman Corp. Airborne Ground Surveillance and Battle Management Systems, Melbourne, Fla., a high-area coverage system that detects, classifies, and localizes floating and near-surface moored sea mines using a blue-green laser.

The LCS MIW mission package will have one container that carries four Raytheon AQS-20 variable depth mine-

hunting sonar units. Two of the towed sensors will be configured for employment from the H-60S helicopter, and the other two configured for towing by the Lockheed Martin WLD-1 Remote Minehunting Vehicle (RMV). The towed bodies used with the aircraft have "wings," while the bodies towed by the RMV do not. Each AQS-20 sonar can be used for both volume search mine hunting and for identification, but requires a different sensor head for the two functions. A handling system is installed in the container to change sensor heads on the sonar bodies.

The Flight 0 MIW LCS mission package is intended to have one H-60 helicopter and two RMVs, but the initial LCS will use just one RMV because the system has just entered production and there are limited units available for use. The RMV runs just below the surface with a large snorkel mast antenna for communications relay and a camera and air supply and exhaust for its 370-horsepower Cummins diesel. The engine provides propulsion as well as 500-plus amps of electric power for the onboard systems and the streamed sensor being towed far behind and below the main unit. The autonomous RMV follows a

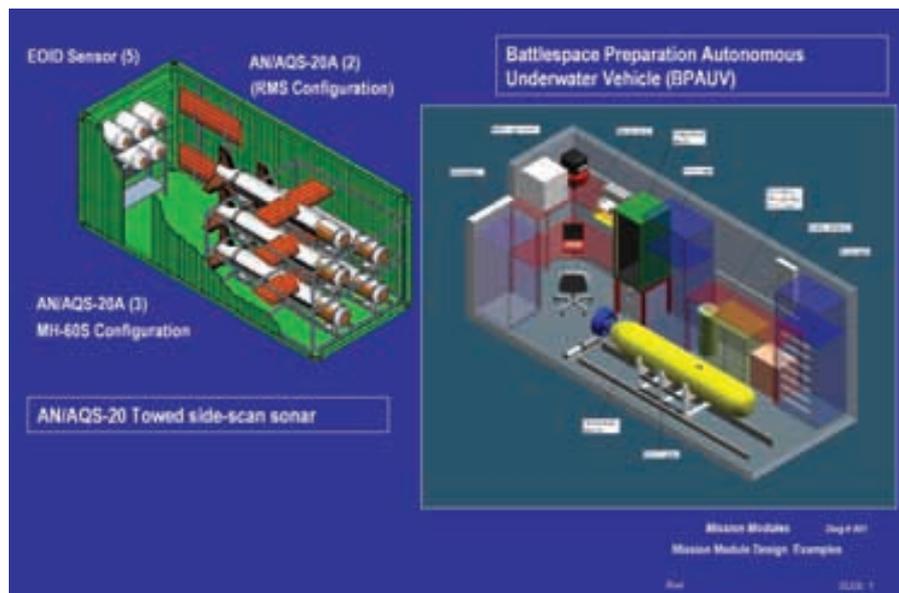
course of pre-programmed waypoints at transit speeds up to 16 knots, and then streams the AQS-20, which it tows at six to 10 knots, depending on the depth of the tow body. The sonar maintains a pre-programmed elevation above the bottom. "We've taken RMS to sea," says Wright. "It's a very effective mine hunter."

Ed Benner is a logistician at NSWC Panama City who is working on the training requirements for the mission specialists. Much of the initial training for LCS mission specialists will be "factory training" with the original equipment manufacturers, he says. First, the sailor must be trained to operate an individual system, then to be able to work in the mission command center as a team.

"Because there's no legacy school or no schoolhouse infrastructure set up for a lot of these unmanned systems, you had to pick what was available out of the existing schools and then come up with your own specialized curriculum at the laboratories or at vendor sites to actually do vendor training in a lot of cases," adds Capt. Wright.

#### Passing the test

John Brady, a systems engineer at



# CRANKSHAFT GRINDING

**While Installed in Engine**



- **CRANKPIN AND MAIN JOURNAL REFURBISHING**  
While crankshaft is in engine
- **LINE BORING OF MAIN BEARING POCKETS**  
Laser and Optical Alignment
- **ALL TYPES OF ON-BOARD MACHINING** Cylinder boring, engine top decks, horizontal joints, couplings, journals
- **METALSTITCH®**  
Only Lloyd's approved USA company for repair of cracked or broken cast iron engine blocks



## IN-PLACE MACHINING COMPANY

USA: 800-833-3575    International: 414-562-2000    FAX: 414-562-2932

**24 HOUR EMERGENCY SERVICE** ...day or night, 365 days a year  
email: [help@inplace.com](mailto:help@inplace.com)    Website: [www.inplace.com](http://www.inplace.com)








**LIFEBOATS • RESCUEBOATS • DAVIT SYSTEMS**

USCG approved rescueboats and davits in stock,  
ready for immediate shipment.

## MARINE EQUIPMENT, INC.

P.O. Box 73049 • Houston, Texas 77273 USA  
Tel: 281-447-8597 • Fax: 281-447-8680  
E-mail: [marineequipment@att.net](mailto:marineequipment@att.net)

## Shipbuilding Technology

NSWC Panama City said the Navy is employing new methods to test and certify the mission packages.

Much of the LCS combat capability comes from systems that were originally developed for use with some other platform or for some other purpose. Some of these systems are quite mature and have been thoroughly tested. Others have not been fully tested. "We decide how much risk there is in bringing new, unproven systems into the mission package, and determine if that level of risk is acceptable. We are using a lab-based test environment as well as at-sea testing. So we will end up deploying with some systems that have not been through the full OPEVAL process," says Brady. "That's the new paradigm for the 50-knot Navy."

"We used to wait until a system was

completely ready for an operational evaluation, and then we created an elaborate test regime that took six to nine months, maybe longer. After that, we would wait for the analysis and the report of the results. Now we are constantly testing. We test a little, learn a little, and test some more. It's ongoing, and we are incorporating what we learn," Brady says. The systems being employed on LCS address the full regime of mines at all depths. Some of the systems are in production, some are in low-rate production, and some are engineering development modules (EDMs). Greg Roberts heads up the Mission Package Development Lab at Panama City where they have replicated the actual operation centers to be found on each of the LCS seaframes. The ruggedized COTS workstations will

have the same software packages. The lab enables the flexible development, integration and certification of the initial spiral software packages.

The software packages can be readily adapted as the technology and processing capability matures. "It's rapidly reconfigurable," Roberts says. "We can be certifying 1.0 while we are developing 1.1."

"We're looking at tighter integration if the command and control software for the vehicles, with less legacy software employed where possible," says Sandy Martin, a system engineer at NSWC Panama City. The RMV, for example, is autonomous, and follows pre-planned waypoints. The operator on the LCS can monitor the visual presentation transmitted from the camera on the mast. The vehicle operator works next to the sen-

sor operator. In the future, the two stations might be combined, or one operator might be able to control multiple vehicles. "We want to aim for less and less vehicle control, and only intervene with an autonomous vehicle as needed," Martin says. "LCS has shattered all of the old approaches to shipbuilding," says Martin. "This is the first time we have pulled this many items together that were never designed to work together."

### About the Author

*Edward Lundquist is a senior science advisor and naval analyst with Alion Science and Technology, Washington, D.C. A retired U.S. Navy captain, he currently supports the Navy's Surface Warfare Directorate.*



**Meet your New Engineer**

**MICAD MARINE**  
Real Time Marine Information Systems

**The World Leader In Real Time Marine Information Systems**

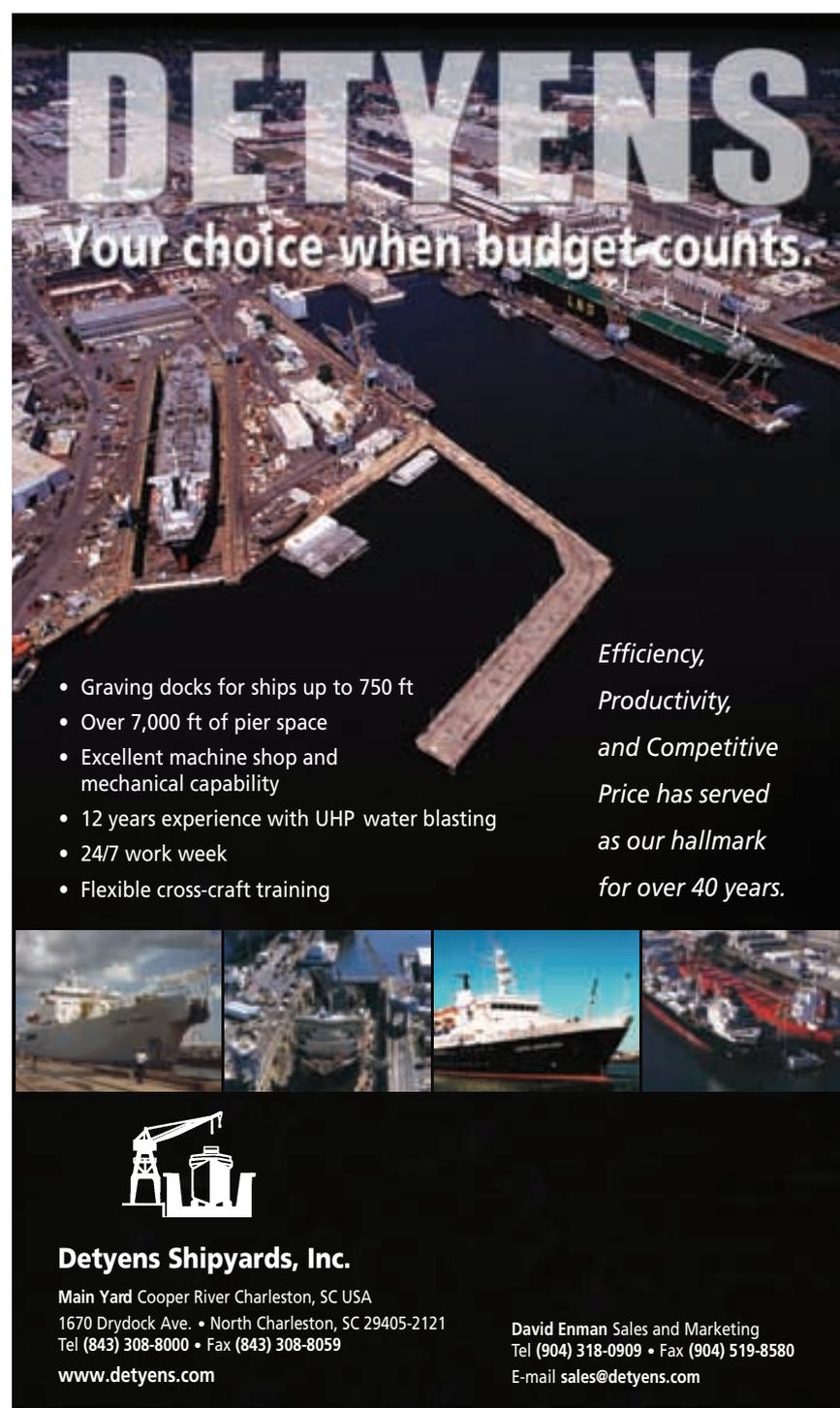
Say "Hello" to MICAD Marine, a proprietary modular software and satellite system that continuously monitors, stores and transmits real time data from up to 25,000 vessel points direct to both onboard and onshore personnel.

Every system that's critical to your vessel's performance can be monitored right at your fingertips to help you reduce your vessel downtime, reduce your vessel maintenance and reduce your fuel costs by up to 20%.

With its space saving design, single data cable connections and real time monitoring, the MICAD Marine System truly is an Able Seaman.

[www.micadmarine.com](http://www.micadmarine.com)

Toll Free: 866 779 7779 · Outside the USA: +1 714 899 1006



**DETYENS**  
Your choice when budget counts.

- Graving docks for ships up to 750 ft
- Over 7,000 ft of pier space
- Excellent machine shop and mechanical capability
- 12 years experience with UHP water blasting
- 24/7 work week
- Flexible cross-craft training

*Efficiency, Productivity, and Competitive Price has served as our hallmark for over 40 years.*

**Detyens Shipyards, Inc.**

Main Yard Cooper River Charleston, SC USA  
1670 Drydock Ave. • North Charleston, SC 29405-2121  
Tel (843) 308-8000 • Fax (843) 308-8059  
[www.detyens.com](http://www.detyens.com)

David Enman Sales and Marketing  
Tel (904) 318-0909 • Fax (904) 519-8580  
E-mail [sales@detyens.com](mailto:sales@detyens.com)

# Q&A with Bruce Crager, CEO, Intec Engineering

**MR: How did you become involved in the maritime field?**

**Crager:** I became involved in the maritime field as an ocean engineer at Texas A&M. I was a co-op student and spent 12 months in various areas working for Otis Engineering, which Halliburton later acquired. I spent eight months of this time offshore and confirmed that this was an area where I wanted to be involved. I initially started in the drilling industry and was exposed to the design of rigs. I also was very involved with offshore production operations during my time at Oceaneering, when I started and managed a group that focused on floating production systems.

**MR: What are the three of the most significant changes that have occurred within the maritime industry in the last five years?**

**Crager:**

**a.** The oil and gas boom market has used up most of the existing tonnage, and industry has fewer vessels available today for drilling or for conversion to floating production than in the past.

**b.** The continued phasing out of tankers due to OPA 90 has significantly changed the market for hulls that could be converted to floating production/storage offloading systems (FPSOs). Most FPSO providers also are focusing on units with double hulls to accommodate regional requirements. As a result, even single-hull vessels coming out of tanker service may not be used for FPSO conversion.

**c.** The continued need for trained personnel, exacerbated by the high median age of our industry, is a challenge across the oil and gas sector. This dilemma also impacts the maritime industry, and trained personnel will become more and more difficult to locate.

**MTR: How has the industry changed from when you began your career?**

**Crager:** The industry has changed significantly since I began my career in 1975. At that time, floating production systems did not exist, industry had installed only a small number of subsea wells and drilling rigs were limited to approximately 4,500 ft. of water. We now have almost 200 floating production systems, more than 2,000 subsea wells and rigs that drill in more than 10,000 ft. of water. These technology strides are dramatic. That is, industry's



continued drive for innovation to support the exploration and development of new reservoirs—that are increasingly remote and challenging—has elevated and extended technology performance. A critical component of this success is the understanding and value of lessons learned; thus carrying industry forward as demand increases exponentially, particularly among emerging regional markets, such as Southeast Asia, Russia, China, Eastern Europe, West Africa and Latin America.

**MR: What investments is INTEC making that are intended for the long-term health of the company?**

**Crager:** INTEC's greatest asset is its people, making our primary investment employee career development, knowledge retention and technology development. This effort supports the company's engineering and technology-driven initiatives and systems that serve our clients' needs for safe, reliable developments. INTEC believes in providing sustainable career growth through on-site project training and mentoring and lunch-and-learn sessions. The result is

that we're able to push the technology envelope while providing expert training and hands-on exposure to frontier projects. We also invest in processes and systems for knowledge-sharing among the company's various operations worldwide. Our investments further include geographic diversification to support increasing deepwater and offshore arctic development opportunities.

**MR: What is your annual R&D expenditure? Can you go into detail regarding the focus of current major R&D projects?**

**Crager:** While INTEC values and invests in R&D in-house, we create our greatest R&D value by assisting clients in qualifying emerging technologies for their actual projects. Our primary focus, and we believe one of our most significant industry contributions, has been the expansion of technology in subsea oil and gas production and transportation system design. Examples include: subsea flowline heating for hydrate prevention and recovery; subsea processing and flow metering; offshore arctic pipeline design technology; cryogenic

pipeline system capabilities; and deep-water riser system analysis and design methodologies; and control buoy applications.

**MR: How have industry and/or customer demands and changes significantly affected the product and service offerings of INTEC?**

**Crager:** Industry's various mergers and acquisitions over the last few years have led to fewer but larger clients and shifts in engineering approaches for capital projects. In some cases, these changes have resulted in more opportunities for INTEC to grow its full-scope engineering capability, beginning with conceptual and front-end detailed engineering through to detailed design work and construction management. INTEC also sees more opportunities for its services as an owner's engineer, particularly among national oil companies (NOCs), which require a full spectrum of engineering and project management services. Acting as an owner's engineer, we're able to create a complete field development solution while gaining increased efficiencies for an operator.

In general, frontier projects increasingly demand integrated services from engineering through to construction. INTEC teams with construction contractors to provide such services. Industry's serious shortage of skilled personnel combined with an increasing demand for integrated services, however, could limit the company's ability to grow. Large- to medium-sized specialty engineering companies like INTEC now compete with manpower providers and independent consultants that once were employees of engineering service companies. Separately, increased oil and gas development projects in areas such as West Africa, Brazil, the Mediterranean, Australia and Malaysia find INTEC well-placed geographically, with operating and project offices around the world.

**MR: How does the continued trend of new ship construction evolving in the Far East, particularly China, affect your business?**

**Crager:** We see China as a potential area of growth, and we are evaluating our strategy for it. Our Malaysian and Australian operations have developed significant FPSO/FSO design and construction capabilities over the last few years. We believe these floater designs

### Bruce Crager, CEO, Intec Engineering

Bruce Crager is chief executive officer of INTEC Engineering. He joined the company on Feb. 14 this year, bringing more than 30 years of management and executive experience in the oil and gas industry. Eager to further INTEC's global growth in deepwater, subsea and arctic areas, he advises that the company continues to be on the forefront of technology and technology development. "INTEC's technology leadership continues to flourish, with the offshore industry relying on INTEC to create value, particularly in the offshore frontier, so that projects may go forward," said Crager. With expertise in serving both international operators and suppliers, Crager has focused his career on leading teams and companies in the evaluation and selection of field development solutions. His forte includes floating production systems and subsea production initiatives.

Crager was president of ABB Offshore Systems Inc. from September 2001 through March 2004. At ABB, Crager was responsible for all company activities, including profit and loss, company growth, strategic planning and coordination with other ABB divisions. Annual revenues were \$135m. ABB OSI provided project management services and subsea equipment under EPC-engineering, procurement and construction-contracts with values as high as \$200m.

Crager previously served as president of Smit-Oceaneering Cable Systems in 2001 and as senior vice president of Oceaneering International Inc., with responsibilities for mobile offshore production systems, from 1988 through 2001.

Crager reports that one of his most-revered projects is Oceaneering's early 1990s installation of the "Ocean Producer" floating production/storage and offloading (FPSO) system, which is still operating offshore Angola.

"At 50 ft. of water offshore Gabon, the 'Ocean Producer' was the shallowest water installation of any FPSO to that date. Designing for this limited water depth was a real challenge, especially because this project was Oceaneering's first FPSO conversion, installation and operation," said Crager. In terms of technology innovations, Crager led a team at Hughes Offshore that developed the Placid Oil production system installed in the Garden Banks area of deepwater Gulf of Mexico. Installed in the mid-1980s, he reports that the system remains one of industry's significant stepping stones for water depth, number of wells and a large template design.

"The Placid subsea system accommodated 24 wells with satellite trees in water depths exceeding 2,200 ft.," said Crager.

Crager was part of a team that developed a production riser patent when bidding on the Placid Green Canyon free-standing production riser. He also co-authored and holds additional patents for an arctic offshore platform; a split-stack blowout prevention system; and an integral buoyant riser. Previous to Oceaneering, Crager held several senior positions related to worldwide marketing and the manufacture of subsea products, with experience including offshore drilling and the consulting and management of offshore operations worldwide.

Crager holds a Bachelor's of Science degree in Ocean Engineering from Texas A&M University at College Station and a master's degree in business administration from the University of Houston.

will facilitate continued growth for our Asia-Pacific business.

**MR: What do you consider the top priorities for your company in the coming 12 to 24 months?**

**Crager:**

- Deepwater field development and marine pipeline projects
- Arctic projects
- LNG projects
- Deepwater hybrid risers
- FPSO, FSO, FLNG, FSRU
- Long-distance subsea tie-backs
- High-pressure/high-temperature (HP/HT) projects

**MR: What is your outlook for the business in 2006 and beyond?**

**Crager:** Barring an unforeseen shock, we envision sustained demand that will put continuing pressure on increased production of oil and gas. The upside may be limited by the industry operating at nearly full capacity. That is, the industry has only so many drill rigs, installation vessels, reservoir engineers and technical staff to progress developments. These industry constraints will dampen significant year-on-year growth in the numbers of offshore projects.

The cost of technical personnel will rise as competition increases between operators, contractors and equipment suppliers for scarce resources. National oil companies also are demanding increasing levels of local content, causing difficulties in staffing major projects in

remote locations. Rising costs for raw materials and equipment will further impact development of projects. Also note: projects that were marginal at \$30 oil are likely to remain marginal at \$50 oil due to cost increases.

High political risk in some oil and gas provinces, including parts of the Middle East and West Africa, will continue to cause operators to balance their portfolios and investments, driving development activity toward locations-such as the U.S. Gulf of Mexico-that enjoy more predictable and acceptable political and fiscal risks.

While perhaps located in increasingly challenging frontiers-such as the offshore arctic and deeper waters-and more expensive to develop, operators likely will pursue exploration and development in regions less impacted by political unrest.

**MR: What markets do you see as being lucrative in the coming years? Which segments do you see on the decline?**

**Crager:** Potential growth areas:

- Construction vessels capable of multi-tasking in deepwater, including laying large-diameter pipelines efficiently and installing deepwater templates, moorings, risers and other equipment
- Multifunction construction vessel for the arctic environment
- Multipurpose vessel for subsea tie-back installations
- FPSOs in GOM
- Floating LNG and floating storage and regasification units

Potential decline areas:

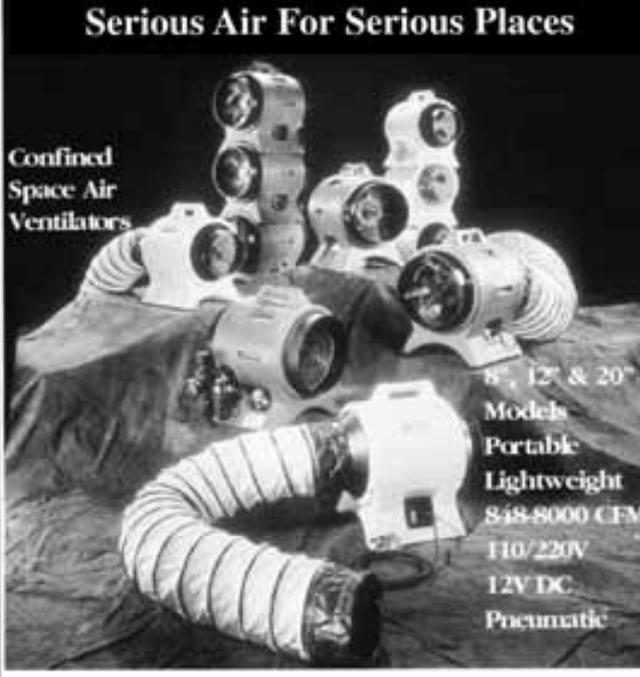
- Areas with high risks because of political, economic and cultural unrest

**MR: What do you consider to be the biggest challenges to your company's success?**

**Crager:**

- Shortage of skilled personnel
- Globalization; i.e., the ability to out-source project scope and resource sharing
- Local content requirements of NOCs and alliances with indigenous contractors
- Commoditization of "highly" specialized services and operator expectations for low-cost solutions
- Jones Act for offshore Alaskan arctic vessels and GOM shuttle vessels
- Offshore arctic design and construction technology advancement to mitigate high investment costs
- Limited visa quotas limiting movement of skilled engineers.

**Serious Air For Serious Places**



**Confined Space Air Ventilators**

8", 12" & 20" Models  
Portable  
Lightweight  
848-8000 CFM  
110/220V  
12VDC  
Pneumatic



**Americ Corporation**  
785 Bonnie Lane  
Elk Grove Village, IL 60007  
For more information, call 800-364-4642  
or Fax 847-364-4695

www.americ.com

**AGMarine**

5711 34th Avenue NW, #201  
Gig Harbor, WA 98215-8548 USA  
253.851.0862 Fax 253.851.0865  
www.agmarine.com

**Yokogawa & Commercial Marine Distributor**

- Autopilots
- Gyrocompass
- Electromagnetic Speed Logs
- Charting Tables
- Control Monitoring Systems
- Industrial Components
- Systems Design & Integration
- New Construction
- Retrofits
- OEM Replacement Parts
- Authorized Training Center

**World Wide Service & Support Network**

- Vessel Service Arrangements
- 24 / 7 Engineering & Parts Support
- Factory Trained Agent Network



**YOKOGAWA** ◆

# SNAME MARITIME TECHNOLOGY CONFERENCE & EXPO and SHIP PRODUCTION SYMPOSIUM

**October 10 - 13, 2006  
Ft. Lauderdale, Florida**



## WHO SHOULD ATTEND

Admiralty Lawyers  
Industry Regulators  
Managers/Directors  
of Engineering and Technology  
Marine Engineers  
Marine Scientists  
Maritime Professionals  
Naval Architects  
Naval Engineers

Ocean Engineers  
Offshore Industry Professionals  
Oil Company Executives  
Port Engineers  
Shipbuilders/Boatbuilders  
Shipowners/Operators  
Students  
Yacht Designers



For more  
information  
visit  
[www.sname.org](http://www.sname.org)

Reserve a  
booth at the  
"Only Show  
of Its Kind in  
North  
America"

**To Register, Visit [www.sname.org](http://www.sname.org)**



## WHY YOU SHOULD ATTEND

- Attend over 50 technical papers and presentations on all applications of maritime and small craft technology
- Attend the popular Ship Production Symposium
- Network and exchange ideas with leading maritime professionals
- Visit over 175 booths at the Expo
- Serving the shipbuilding, design, technology, and production sectors of the industry

## DON'T DELAY

Contact Rob Howard today  
at (561)732-4368  
to reserve one of the  
premium booths available  
for the SNAME Maritime  
Technology Expo.



# United States Maritime Industry Can Benefit

By Robert N. Cowen, Esq., Venable LLP

Over the next few years, the world fleet of Liquefied Natural Gas tankers will more than double in size as demand for LNG soars. A significant portion of the growth in the LNG trade is expected to come from shipments of LNG to the United States. The dramatic growth already underway in the global LNG fleet has created a window of opportunity for the U.S. maritime industry. For the first time in many years, the employment of U.S. mariners and U.S. flag vessels has become a real option. Rising foreign crew costs, more favorable U.S. tax laws and national security considerations all strongly support the use of U.S. mariners and U.S. flag vessels in the importation of LNG into the U.S.

As the world faces the specter of higher oil prices and limited incremental oil supplies, proven reserves of natural gas are plentiful and growing. The Federal Energy Regulatory Commission has characterized the long term supply outlook for LNG as robust, with many major development projects underway throughout the world.

Because these reserves of natural gas are generally located far from consuming areas, often the only practical way to transport the gas to market is by sea. When natural gas is refrigerated to minus 260 degrees Fahrenheit it becomes a liquid and its volume is reduced by a factor of 1/600th. It is then economical to transport it long distances by sea on specially built tankers.

World demand for LNG is projected to triple by the year 2020. In the U.S. alone, LNG imports are expected to grow to meet eight percent of the demand for natural gas over the next few years, versus 3 percent in 2003.

To meet the projected growth in demand for LNG, the shipping industry has ordered a massive number of new LNG tankers. Today the world fleet comprises about 200 vessels. Based on the current world orderbook, over 140 LNG tankers will be delivered over the next three years, doubling the carrying capacity of the existing fleet.

The industry is struggling to find qualified mariners to crew these new vessels. It is estimated that at least 5,000 additional deck and engine officers will be required over the next five years. Yet there is already a shortage of trained officers throughout the international maritime industry. Recruiting and training skilled crews to operate these highly

sophisticated vessels represents a major challenge to the LNG industry.

The severe shortage of experienced LNG officers has driven up foreign crew wages dramatically and reduced the cost differential between using U.S. citizen officers and using foreign nationals. The employment of U.S. officers has many other attractions for operators of sophisticated LNG carriers. There already exists a highly skilled pool of U.S. officers with recent LNG experience who can help meet the immediate need to crew some of the new ships. For the future, U.S. merchant marine academies have the capacity to train large numbers of additional skilled officers. U.S. maritime unions also maintain sophisticated training facilities with simulation equipment that can provide navigation, cargo handling and engine room training specific to LNG vessels.

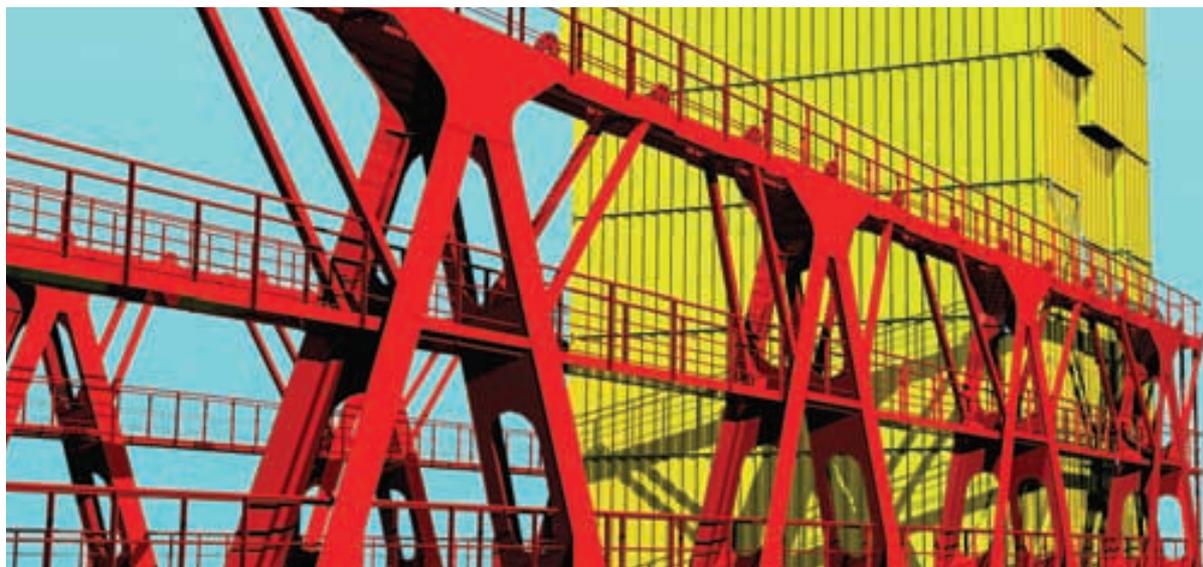
Expanding beyond the use of U.S. officers, recent changes in U.S. tax laws have made it economically feasible to consider the option of placing new LNG tankers under U.S. flag with full U.S. crews. This represents a dramatic departure from the past when cabotage laws, or special government programs and subsidies, have been required to support the use of U.S. flag vessels.

Under the American Jobs Creation Act

A modern LNG Carrier. (Photo Courtesy of Wärtsilä)



Think of us **when you are**



# Profit From Dramatic Growth in LNG Trade



of 2004, Congress adopted a highly favorable tonnage tax election to promote the use of U.S. flag vessels operating in the foreign trades. Under a tonnage tax election, a U.S. flag operator in the foreign trades pays only a nominal annual tax based on the net tonnage of the vessel. This eliminates the tax disadvantage of using a U.S. flag vessel in the foreign trade. There is no requirement for U.S. flag LNG tankers to be built in U.S. shipyards because these vessels will be engaged solely in the foreign trades. This means that operators of U.S. flag LNG tankers can order their vessels from the same Far Eastern shipyards as their foreign flag competitors. There is also no restriction on raising capital for these vessels from foreign investors because Jones Act citizenship requirements do not apply to U.S. flag vessels operating in the foreign trades.

The only economic impediment to U.S. flag operation in the importation of LNG arises from the higher cost of using full U.S. crews. While the wages of foreign LNG officers have risen dramatically, the cost differential of using full U.S. crews is still likely to be substantial. But there are compelling commercial and strategic reasons driving the parties to find creative ways to reduce U.S. flag operating costs and promote

Robert Cowen is a partner in the maritime and environmental practices at Venable LLP. He previously served as COO and General Counsel of Overseas Shipholding Group, a publicly traded oil tanker company.



the use of U.S. flag LNG tankers.

U.S. national security considerations also strongly favor the use of American officers and U.S. flag vessels to import LNG into the U.S.

Today there are only five existing LNG receiving terminals serving the continental U.S. Reflecting the anticipated growth in LNG imports, the Federal Energy Regulatory Commission and the Maritime Administration have granted approval for 17 new onshore and offshore terminals and many more applications are pending. Yet, even many of those approved by federal authorities continue to meet fierce local community opposition. The opposition stems in large part from the fear of catastrophic accidents or terrorist attacks involving LNG tankers as they pass near coastal communities.

Ways must be found to satisfy the safety concerns of local communities or else sufficient terminal capacity will not be built and needed LNG supplies will be diverted to markets in Europe and the Far East. The use of U.S. crews and U.S. flag tankers can add a significant additional dimension of security and control in the movement of sensitive LNG cargoes into U.S. coastal terminals. This can go a long way toward addressing the legitimate concerns of adjacent communities. The U.S. Congress has recognized the strategic benefits of using of U.S. flag vessels to import LNG. In Section 304(a) of the recently enacted Coast Guard and Maritime Transportation Act of 2006, Congress directed the Secretary of Transportation to develop and implement a program to promote the importation of LNG on U.S. flag vessels. The increasing demand for LNG has created a unique opportunity for the U.S. maritime industry to become a significant participant in the expanding global LNG trade. It is in the interest of all segments of the U.S. maritime community to cooperate in order to fully exploit this opening.

## looking for fresh ideas

For over 70 years, MacGREGOR's engineering innovations have shaped the way ships' cargo is handled. This unrivalled experience is available to owners who want their ships to be as efficient as possible. Whether the cargoes are general, dry bulk, containers or RoRo vehicles.

When planning your next newbuilding, take advantage of our cargo handling expertise. We'll come up with a solution that not only suits your immediate needs, but will also ensure that effective cargo handling is maintained throughout a ship's lifetime. You can rely on MacGREGOR quality.

We understand ships, and we know about cargo handling.

**Profit from our experience**

**MacGREGOR**

[www.macgregor-group.com](http://www.macgregor-group.com)

### VT Loads Out Destroyer Bow Section

The bow section of the second Royal Navy Type 45 destroyer, HMS Dauntless, was loaded out from VT Shipbuilding's facility in Portsmouth Naval Base for transport to Scotland.

The 1,000-ton steel section sailed from Portsmouth on a four-day voyage via the English Channel and Irish Sea to the Govan yard on Clydeside of Type 45 program prime contractor BAE Systems Naval Ships.

HMS Dauntless' bow was carefully wheeled out on powerful tractor conveyor units and transported some 100 yards to the barge VT Woolston moored adjacent to the main VT shipbuilding hall in a three-hour operation. The structure is 164 ft. (50 m) long and 46 ft. (14 m) high, and has taken nearly 20 months to build. "The lessons learned on ship 01 mean that we have significantly reduced the number of man hours required to build the section for ship 02," said VT Type 45 Project Director John Richardson. "The level of outfit has also been considerably higher as a result of the design evolving and maturing."

**The bow section of HMS Dauntless is loaded out from the VT Shipbuilding Assembly Hall in Portsmouth.**



### FSL Docks Frigate

Fleet Support Limited (FSL) started work on the latest Royal Navy Type 23 frigate to enter its facilities for maintenance. The docking of the Plymouth-based HMS Portland is a five-month program to upgrade the 1999-built ship. The enhancement package includes a complete upgrade of the ship's aviation facilities that will enable her to operate the Merlin helicopter, and the fitting of the Surface Ship Torpedo Defense suite, improving its employability around the world. This is coupled with extensive refurbishment work of both hull and living accommodation. FSL Engineering Director Mal Lewis said, "HMS Portland will be another opportunity for us to demonstrate our growing expertise in work on Type 23 frigates and to develop our aspirations towards becoming a centre of excellence for this class of ship."



## ZODIAC

Zodiac, mastering the elements



**Orca MSD's are designed for vessels from 24 to 500 persons. Orca is very light weight with fully automatic microprocessor control panel. All models are USCG / IMO / EC certified.**

**EVAC NORTH AMERICA INC.**  
1260 Turret Drive  
Rockford, Illinois 61115-1486  
Tel. +1 815 6548300, fax +1 815 6548306  
marine@evac.com - www.evac.com - www.zodiac.com



## KING-GAGE® Marine Systems

**KING-GAGE® LevelPRO**  
**Multiple Tank Level Processors**  
Continuous measurement of multiple ballast and shipboard service tanks.

- Total volume and/or tank depth
- Durable corrosion proof housing
- Digital communications output



**Tank Level Indication for the Marine and Offshore Oil/Gas Industries**

**KING-GAGE® LiquiSeal**  
**Liquid Level Transmitter**  
Rugged marine liquid level sensor for ballast/cargo/service tanks or draft measurement.

- Electronic or pneumatic output
- Proven air purge principle
- Externally mounted



**KING-GAGE® LevelBAR**  
**Tank Level Indicator**  
Analog LED column graphically displays tank level as total volume and/or depth.

- Replaces fluid-filled gages
- Stainless steel housing
- Greater reliability





Since 1937 KING ENGINEERING CORPORATION

800-242-8871 • 734-662-5691 • FAX 734-662-6652

[www.king-gage.com](http://www.king-gage.com)

# Challenging FPU Job Completed

The consortium of Keppel FELS and Technip completed the offshore mating of the 25,000-ton topside and the 4,500-ton spider deck with hull structure, weighing 17,500 tons, for one of the world's largest floating production platforms, the P-52, in Brazil.

The deck mating operation was comprised of two major phases. The first involved placing the topsides deckbox, with all process modules already pre-installed, onto the lower hull structure.

The second involved the hoisting of the three major sections of the spider deck to join with the underside of the deckbox. The operation was completed at Jacuecanga Channel near Keppel FELS Brasil's BrasFELS Yard in Rio de Janeiro, Brazil.

## Step 1

In phase one, the P-52's hull was anchored and submerged to a predetermined depth of 40 m, using a ballasting procedure, at the precise location and under suitable weather and tide conditions. BrasFELS's FS1 barge, on which the topside deckbox was built, was then positioned between the hull columns with the assistance of a winch system. During the operation, the distance between the barge and the hull columns were just 1.5 m apart. With gradual deballasting, the hull emerged, lifting the topside off the barge and gradually taking the full load of the topsides through the four columns. After this sensitive operation, the second phase mating began.

It first involved towing the barge BS-3, on which the central part of the spider deck was built, to between the columns of the lower hull. Once it was in the intended location, the lower hull was ballasted down so that the hoist wires from the spider deck could be connected to the deckbox. After this operation, the hull was again deballasted to a predetermined depth so that another barge, BS-5, on which the port and starboard sides of the spider deck sections were built, could be towed laterally between the columns. Once again, when the spider deck sections were in the right location, the lower hull was ballasted so that the hoist wires could be connected between the spider deck sections and deckbox.

With these naval operations conclud-

ed, the P-52 floating production platform, in its final configuration, was towed back to Keppel FELS Brasil's BrasFELS shipyard, where a 600-ton flare boom will be installed. The P-52 is an 81,000-ton (displacement) semisubmersible oil-processing platform. It is constituted of the hull, which remains partially submerged when it is operating in the oilfield, the deck box, the processing modules, modules for energy generation, gas compression, accommodation and utilities, and the helideck and recreational facilities.

Production is expected to begin in early 2007. When fully operational, the P-52 semisubmersible platform will be able to process 180,000 barrels of oil a day, compress 9.3 million cu. m. of gas a day and inject approximately 300,000 barrels of water into the reservoir.

To be deployed in the Roncador Field development program, in the Campos Basin, the unit will be anchored at a depth of 1,800 m and be interconnected to the subsea systems comprising 68 risers (20 Production risers, seven Gas Lifts, 13 Water Injection, one oil export, provision for one future oil export, one

gas export, 23 utilities umbilicals and two service risers).



Towing the P-52 deck box to mate with the lower hull.



Positioning the deck box to meet the lower hull.



The mating of the P-52 FPU completed.



**BRADFORD MARINE**  
**BAHAMAS**

## Service Beyond Expectations

CELEBRATING A LEGACY OF EXCELLENCE

"Our shipyard in Freeport provides a full line of quality yacht and commercial vessel repair and refit services. Since commencement of operations, many large luxury motor/sailing yachts and commercial vessels have been dry-docked and serviced. Our floating drydock has given Bradford Marine the ability to provide quality service to vessels of all types in the Bahamas." —Paul Engle, President



Paint Shop



Floating Drydock



Towing & Salvage



Travel Lift



Sales



BRADFORD GRAND BAHAMA, LTD.  
QUEENS HIGHWAY, FREEPORT HARBOUR • 242.352.7711 • WWW.BRADFORD-GRAND-BAHAMA.COM

# Abu Dhabi Ship Building Gets New Composite Workshop

Abu Dhabi Ship Building recently opened the Middle East's largest facility for building composite vessels.

ADSB is already established in building steel and aluminum ships, and this expansion is designed to enable it to compete in the expanding military and commercial market throughout the region. Work has started on the first composite vessel and discussions are currently at an advanced stage for building 12 vessels for the UAE Coast Guard.

The \$8.2m facility at ADSB's Mussafah (Abu Dhabi) base covers 4,650 sq. m. and is capable of building

vessels up to 196.8 ft. (60 m) long.

The workshop is pressurized to keep out dust and sand and is temperature and humidity controlled.

ADSB Composites' first project will be a Halmatic-designed 52.5 ft. (16 m) fast workboat. With a ramped bow for

beach landing and an open deck, it will be capable of transporting two Hummer size military vehicles at a speed of over 30 knots.

**The ADSB composite workshop is the biggest of its kind in the Middle East.**



## SHI Develops RTLinux Powered Robots

Samsung Heavy Industries Shipbuilding Division (SHI) selected RTLinuxPro as the base for its robotics systems and has several advanced RTLinux powered robots in production use. Working with FSMLabs' Korean partner, RealTimeWave, engineers at SHI have created advanced shipbuilding robots including an autonomous "Spider" welder that autonomously guides itself over the ships membrane wall. In addition to the Spider robot, SHI has developed a RTLinux powered pipe alignment robot also in production use and a third, Stewart-Gough Type six-axes parallel robot is under development.



The robots use SHI designed 3-D path tracking and real-time attitude control systems. SHI Project Leader and Managing Director Jae-Hun Kim said "RTLinuxPro and the excellent support from RealTimeWave helped us bring this complex equipment from design to production in record time and with low development cost." Young-Jun Park, the principal research engineer for SHI adds that "RTLinuxPro has a unique capability of combining very precise real-time with the standard Linux platform so that we could make the time sensitive control algorithms operate together with background processing without worrying about interference".

Jae-Hun Kim also said, "SHI has interests in the ship automation and building automation system markets where we think there will be much future growth and RTLinux is a key technology for us in this area."



# Maritime Security Expo 2006

*5<sup>th</sup> Annual Expo & Conference*

**September 19-20, 2006**

**Jacob Javits Convention Center**

**New York City**

## The Largest Maritime Security Event in the World

**3000 Attendees**

**200 Exhibiting Companies**

**37 Countries**

**For more information on exhibiting or sponsorship opportunities, please contact Barbara Lecker, Derek Lotfi or George DeBakey at 301-493-5500**

**Organized by:**



**E. J. KRAUSE & ASSOCIATES, INC.**

**Corporate Partner:**

**Lockheed Martin**

**Corporate Sponsors:**

**IBM**

**Booz Allen Hamilton**

**General Dynamics Information**

**Technology**

**Maritime Executive Awards Sponsor:**

**SeaAway Family of Companies**

**Official Publications:**

**Journal of Commerce**

**GSN: Government Security News**

**Official International Publication:**

**Cargo Security International**



**[www.maritimesecurityexpo.com](http://www.maritimesecurityexpo.com)**

**VT Halter Marine Makes Strides on High-Tech NOAA Vessels**



VT Halter Marine has had success in building a series of new fisheries survey vessels for NOAA. Not only must the ships withstand the rigors of sea duty, they feature a number of technological advances that enable the ships to carry out exacting scientific studies in an efficient manner. Recently, a traditional keel laying ceremony was held for NOAA ship Pisces, preceded by the initial cutting of steel for the fourth and final vessel in the series. These sister ships will join NOAA ships Oscar Dyson and Henry B. Bigelow, which were also built by VT Halter Marine.

"With this new class of vessel, NOAA is increasing the efficiency of its fisheries research with state-of-the art technology. These ships are so quiet, for example, that we expect scientists to be able to study fish and marine mammals with little impact on their behavior," said Rear Admiral Samuel P. De Bow Jr., NOAA, who is director of NOAA's Office of Marine and Aviation Operations and NOAA Commissioned Officer Corps. The 208-ft. ships are being built to meet the requirements of NOAA Fisheries Service as well as the acoustic quieting standards set by the International Council for Exploration of the Seas.

**Main Particulars**

Owner .....	NOAA
Mission .....	Fisheries Survey
Length .....	208 ft. (63.6 m)
Beam .....	49 ft. (15 m)
Depth .....	28 ft. (8.65 m)
Maximum Draft .....	19 ft. (5.9 m)
Main engine .....	DHT 900 Z73 FD4 SCO/60H
Manufacturer .....	Ansaldo/Siemens
HP@RPM .....	3,016 HP/ 2,250 KW @ 134 RPM
Ship's Service Power .....	2x Caterpillar 3512/ Two 3508
KW .....	Two @ 1,360 KW/ Two @ 910 KW
Propellers .....	Rolls Royce
Material .....	NAB
Steering System .....	Rolls Royce
Speed .....	14 Knots
Hull Construction .....	Steel Hull/ Aluminum Deckhouse
Crew Capacity .....	39
Electronics .....	Seacoast Electronics
Tankage (Gallons) .....	Fuel - 350 MT Ballast - 375
.....	MT Fresh Water - 36 MT
Classification / Certification .....	ABS
Delivery Date .....	January 2008
Trawling System .....	Rapp Hydema
Stern Gantry and Side Frame .....	Huber
Centerboard Handling System .....	National Oilwell
Bowthruster .....	Elliot White Gill

**SHI Delivers World's Largest Containership**

What is reported to be the world's largest containership, Xin Los Angeles, has been delivered by Samsung Heavy Industries Co Ltd. (SHI) to Lloyd's Register class. The ship is owned by China Shipping Container Lines (CSCL) and is operated by China

International Shipmanagement Company Ltd., a joint venture between CSCL and V.Ships. The ship is 9,600 teu and is the first in a series of eight being built by SHI. The ship will trade from China to Europe initially and will eventually also trade to the U.S. Xin Los Angeles can carry a maximum of 18 rows of containers by eight tiers on the

weather deck and 16 rows by 10 tiers in the holds. The ship measures 336.7 x 45.6 m with a 15-m draft, and is powered by an MAN B&W 12K98MC-C Mk6, which produces 68,520 kW. During sea trials the ship achieved a ballast service speed of 25.4 knots. The ship is also enrolled in LR's Ship Emergency Response Service (SERS).



**Don't Let A Professional Incident Become A Personal Catastrophe**

**Protect Your U.S.C.G. License**

Since 1935, MOPS has been providing vital coverage to U.S.C.G.-licensed maritime professionals serving aboard every type of commercial vessel.

**Choose Your Comprehensive Coverage**

- Unlimited License Defense
- Full or Partial Income Coverage
- Civil Liability Defense
- Professional Liability
- Civil Penalties Legal Defense
- Criminal Acts (Oil Pollution) Defense

**Benefit From Our Legal Network**

MOPS' unmatched network of maritime attorneys will work for you, handling your case from first notification through final resolution.

**Call For MOPS Marine License Insurance Today**

For a no-obligation rate quote, please call 1-800-782-8902, ext. 3302 or visit [www.mopsmarinelicenseinsurance.com](http://www.mopsmarinelicenseinsurance.com).



**MOPS Marine License Insurance, 370 West Park Ave., P.O. Box 9004, Long Beach, NY 11561**

# Offshore Boom Boosts IE

Inquiries about the event can be emailed to [info@offshorecoms.com](mailto:info@offshorecoms.com)

THE ONLY INTERNATIONAL EVENT FOCUSING ON COMMUNICATIONS TECHNOLOGIES IN THE OFFSHORE OIL & GAS AND MARINE ENVIRONMENT

## Offshore 2006 Communications

**Expanded Program!**  
**Track 1**  
**Off & Gas**  
**Track 2**  
**Ocean & Maritime**

NOVEMBER 7-9, 2006 HOUSTON, TEXAS

The 6th Annual Offshore Communications Conference & Exhibition is the only event dedicated to communications technologies in the Offshore Oil & Gas and Marine environment. This niche event will address communications requirements, market opportunities, technologies and legislation for the Offshore Oil & Gas, Marine, Shipping, Telecom and Government & Defense industries.

Organized by **TSC** In association with **SVF**

www.offshorecoms.com

**Main Sponsor:** Schlumberger

**Premier Corporate Sponsor:** CapRock

**Corporate Sponsors:** SES AMERICOM, PETROCOM

**Supporting Sponsors:** RigNet, TSC, Agosulf, Ocean Flow, DUPLOBIX

**Media Sponsors:** BUSINESS OIL-GAS, Ocean News, ENR, MARITIME REPORTER, Via Satellite, MarineNews, Offshore.com, energymc.com, satellite evolution, MARINE TECHNOLOGY, offshore, TOUCH OIL AND GAS

Topics:  
 Homeland Security  
 Emergency Response  
 Ocean Observing Systems  
 Military Operations  
 Marine Science  
 Surveillance  
 Offshore Oil & Gas  
 Submarine Telecom  
 Ship & Cargo Tracking  
 Real-time Monitoring

Satellite  
 Wireless  
 Acoustic  
 Fiber Optic  
 IT Solutions

Call for more information: Tel: 713.211.7142 / Fax: 713.211.7141 / info@offshorecoms.com

Intelligent Engineering is currently involved in a drilling rig repair project, using its SPS Overlay in the reinstatement of the pipe-rack deck on board the Pride South Atlantic, a semi-submersible unit belonging to Pride International.

Work onboard the Pride South Atlantic is the latest in a series of new offshore contracts, and will involve the reinstatement of a 490 sq. m. deck area to be carried out at the Maua Jurong facility in Niteroi, close to Rio de Janeiro in Brazil.

"We have deliberately targeted the offshore sector for a number of reasons," said Denis Welch, SPS Overlay director. "One, a significant percentage of the world's mobile offshore drilling units (MODUs) are 20 years old or more and require steel upgrades and reinstatements. Two, day rates are high and operators are keen to extend the lives of these older units with minimal disruption. And three, growing concern over the impact resistance of pontoons and decks in light of last year's hurricane season provides an ideal opportunity for us to promote the properties of our Sandwich Plate System."

IE has secured a number of contracts -- completed and pending -- for a number of drilling companies. With its licensee Keppel, IE has also recently completed a deck reinstatement on board the semi-submersible Atwood Seahawk at the Malaysia Marine and Heavy Engineering Sdn. Bhd. facility in Pasir Gudang, Malaysia. This project, the company's first in Malaysia, was for U.S. drilling contractor Atwood Oceanics of Houston.

Meanwhile, GlobalSantaFe is reportedly pleased with work recently completed by IE at Kiewit Offshore Services in Ingleside, Texas to reinforce areas of the lower pontoons, located above the four thruster rooms on board the semi-submersible drilling rig Development Driller 1. The company has signed up for similar reinforcement work to be



Work on Development Driller 1 included reinforcement of areas in the lower pontoons, located above the four thruster rooms on board the semi-submersible drilling rig.

carried out on the pontoons of a newbuild rig, currently under construction at Keppel FELS in Singapore.

"We are very pleased with the increased level of lower hull watertight integrity produced by the application of the SPS Overlay to the pontoon tops in way of all four thrusters rooms," said Mike Kucharski, Director of GlobalSantaFe's Semi submersible Building Program.

Speaking on behalf of Kiewit Offshore Services, Project Manager Vic Rosen said, "We knew that



Perimeter bars being put in place.

the thrusters room strengthening could be completed without impacting on other repairs and the rig's forthcoming operations."

As a result of the work, the impact resistance of the pontoons immediately above the thruster rooms has been significantly enhanced, but without conventional invasive and time-consuming crop-and-replace steelwork.

The 2005 hurricane season highlighted the need for better impact resistance to avoid structural damage caused by objects projected against MODU's hulls when such units encountered severe storms. As a result, Intelligent Engineering personnel are now fielding regular enquiries about the strengthening of pontoons, columns, decks and helidecks. SPS Overlay provides excellent impact protection because the elas-



SPS Overlay completed.

tomeric core dissipates strain energy over a large area, thereby reducing load concentrations that can lead to the formation and propagation of cracks.

Other contracts completed by IE in the offshore sector include structural reinstatement and strengthening of FPSOs whilst they remain on station. The company's "no hotwork" repair procedures for such craft are attracting considerable attention from a number of FPSO operators. "Many converted FPSOs were elderly single-hull tankers in the first place," said Welch. "They may be expected to remain on station for anything up to 20 years. Taking them off to a repair yard is simply not an option."

Meanwhile, in a contract with a leading European operator, the first of two offshore supply vessels has recently been fitted with a special impact-resistant fender in hull areas prone to damage from deck-crane cargo handling. And IE is working with Monaco-based Single Buoy Moorings on a study of FPSO side shell collision protection using SPS

Technology. The study will determine if SPS can provide equivalent protection to double-hulled construction currently mandated under Marpol regulations.

The American Bureau of Shipping will assess the results of the study which, if shown to meet the Marpol criteria, could mean that single-hulled VLCCs could be converted into FPSOs

by using SPS Overlay on the outside of their hulls, rather than installing internal complex cofferdams.

### Converteam to Perform Upgrade for CCG

Converteam was awarded a contract from the Federal Government of Canada to provide mid-life electrical system

upgrade services to the Canadian Coast Guard icebreaker, Sir Wilfrid Laurier. The scope \$2.65m contract includes three main elements: upgrade the existing propulsion system; supply a new bow thruster system; and supply new drive systems and motors for the existing cranes. Converteam will design, manufacture, supply, and warrant the



# Meeting **CHALLENGES** at every turn...






When strength and reliability are essential to your success on the open water, trust Kobelt to deliver. Kobelt has been manufacturing quality steering systems and engine controls for 45 years, and their wide range of marine products are built to last and withstand the most rugged conditions.

Constructed of durable bronze and stainless steel, we back every one of them with the best warranty in the industry, along with worldwide sales and support.

Contact us today, and set your course for EXCELLENCE.





**your best source for quality steering & engine control products**

Phone (604) 590-7313 | Fax (604) 590-8313  
www.Kobelt.com | sales@kobelt.com | 8238 129th Street, Surrey BC V3W 0A6

## Repair

complete equipment sets, as well as provide an operator training program for each system. Additional services to be provided include assisting the shipyard during initial equipment installation, equipment commissioning and testing, plus sea trials and performance tests. Most of the work for this contract will be performed by Converteam's

Pittsburgh office, with coordination from the Burlington, Ontario, Canada office.

The Canadian Coast Guard Ship (CCGS) Sir Wilfrid Laurier is a 5,250 KW light icebreaker that operates in the western Arctic Ocean, with a mission of keeping shipping lanes open for cargo transport ships. The CCGS Laurier's

home port is in Victoria, British Columbia, was initially launched in 1986, and carries a crew of 26. The 3,812-ton vessel is 272 ft. long and has a cruising speed of 11 knots, and a cruising range of 6,500 miles. The ship is named in honor of Sir Wilfrid Laurier, the seventh Prime Minister of Canada from 1896 to 1911.

## FPSO Conversion Contract to Keppel



Keppel Shipyard Limited (Keppel Shipyard) and Keppel Verolme BV (Keppel Verolme) won contracts worth a total of around \$84m for the conversion of a tanker to a Floating Production Storage Offloading (FPSO) facility and the repair of a FPSO vessel, respectively.

The conversion of the VLCC Capella to FPSO Mondo is the eighth such FPSO/FSO project that Keppel Shipyard is executing for Single Buoy Moorings Inc (SBM) since 2000. The vessel is expected to be completed in third quarter 2007.

"We have recently completed the conversion of the FPSO Capixaba for SBM and are delighted to be awarded the new project with them," said Nelson Yeo, executive director of Keppel Shipyard.

The scope of work on the former VLCC Capella includes the installation and integration of the topside modules, installation of an external turret and helideck, fabrication and installation of a flare tower and bow modification work. Built in 1975, VLCC Capella, of 273,000 dwt, is 1105.6 ft. (337 m) long and 178.8 ft. (54.5 m) wide.

When completed, the floating system will be leased by SBM to ExxonMobil for deployment in Mondo Field, Block 15 offshore Angola for the Kizomba C Development. FPSO Mondo will be capable of processing 100,000 barrels of oil per day (bopd) with a storage capacity for 1.6 million barrels of oil. It will be moored in water depth ranging between 720 and 760 m.

Meanwhile, sister company, Keppel Verolme has secured an agreement with Petro-Canada (East Coast) for the repair of Terra Nova FPSO. The scope of work comprises maintenance, inspection and modification activities on both hull and process topsides systems of the Terra Nova FPSO.

Maintenance work being carried out includes survey and overhaul of thrusters, underwater maintenance and coating, and repair to the vessel and the process systems. Inspection and modification works cover the testing of cargo tanks and pressure vessels, extension of

# DEANSTEEL



B-Class Door



A-Class Window



A-Class Stainless Steel Door

**Fire Rated Products:**

- IMO Doors & Frames
- IMO Windows
- USCG Doors & Frames
- Standard & Custom Berths
- Lockers & Misc. Marine Furniture

**USCG & Transport Canada Certificates available!**



111 Merchants St. • San Antonio, TX • 78204 • 800-825-8271  
[www.deansteelmarine.com](http://www.deansteelmarine.com) or e-mail: [sales@deansteel.com](mailto:sales@deansteel.com)



**SMITH BERGER MARINE, INC.**  
**OFFERS A COMPLETE LINE OF**  
SHARK JAWS



**SAFE - RELIABLE - ECONOMICAL**

Smith Berger Marine, Inc. builds a full range of Shark Jaws for Anchor Handling Tug Supply vessels. Standard ratings are 100, 200, 350, 500 and 750 metric tons and all units have Quick Release at the rated load. Smith Berger flexibility allows us to customize our equipment to suit the operating characteristics of your vessel. Third party certification, load tests, release tests and load monitoring systems are available options.

Rely on the 100 year history of Smith Berger to outfit your vessel with our rugged and dependable equipment.

SHARK JAWS • TOWING PINS • STERN ROLLERS

Smith Berger Marine, Inc. 7915 10th Ave., S., Seattle, WA 98108 USA  
 Tel. 206.764.4650 • Toll Free 888.726.1688 • Fax 206.764.4653  
 E-mail: [sales@smithberger.com](mailto:sales@smithberger.com) • Web: [www.smithberger.com](http://www.smithberger.com)

## Don't Get Burned.



**Firesafe & Watertight Cable and Pipe Penetration Seals**

RISE doesn't just stop fire cold, it also cuts installation time dramatically so you won't get burned financially. The RISE cable and pipe penetration sealing system is virtually impenetrable to fire, smoke, gas and water. For a copy of the groundbreaking booklet "Everything You Should Know About Cable and Pipe Transits to Ensure a Safe Vessel" or for more information, contact W&O Supply.



The Right Fit.  
 1-800-962-9696  
[www.wosupply.com](http://www.wosupply.com)

Approved by ABS, USCG, Lloyd's Register, DNV, TC and NAVSEA.

Piping • Valves • Fittings • Valve Automation • Metrics • Metals



**Insulation Specialists - Thermal - Acoustical - Fireproofing**

SEI manufactures covers for the offshore and marine industries

Introducing "Fire-Temp"® Covers for fuel valves and actuators






Let us take care of all your insulation and fire - proofing needs  
 We accept Mastercard, Visa and Amex

**WANT SUPERIOR QUALITY  
 WANT SUPERIOR SERVICE  
 CALL SUPERIOR ENERGIES, INC**

1-800-BUY-SEI-1

P.O. Drawer 386, Groves TX 77619  
 Telephone: (409) 962-8549 Fax: (409) 962-4027  
 Website: [www.insulationsei.com](http://www.insulationsei.com)

the accommodation quarters and modifications in the process modules.

The Terra Nova FPSO is operated by Petro-Canada, one of the largest integrated oil and gas companies in Canada. It has the largest interest in Terra Nova, which is co-owned by ExxonMobil Canada Properties, Husky Terra Nova Partnership, Murphy Oil Company Limited, Mosbacher Operating Limited, Norsk Hydro Canada Oil & Gas Inc. and Chevron Canada Resources.

The vessel was expected to arrive at Keppel Verolme by mid-July 2006. It is scheduled for delivery and deployment in the Terra Nova field, located 350 km ESE of St John's Newfoundland, Canada, by mid September 2006.

## HMS Richmond Returns to Sea



Portsmouth-based frigate HMS Richmond is back at sea after an 18-month, multi-million pound refit which has transformed her into one of the Navy's most capable warships. The Type 23 vessel returned to sea on schedule following the upgrade carried out at Portsmouth Naval Base by Fleet Support Ltd (FSL). A team of inspecting officers declared the ship ready to begin sea trials.

The refit included a series of complex structural alterations and system fits, including a new 4.5-in. Mod 1 gun and the latest towed array sonar, that will maintain its technological edge in submarine hunting. An upgrade of her aviation capability will allow it to operate the highly-capable Merlin helicopter.

The ship's propulsion and mechanical systems have received a major overhaul, and there has been a thorough make-over of all accommodation on board, including conversion of the ship to accept female personnel for the first time. The frigate's Commanding Officer, Commander Piers Hurrell, said: "This is a key milestone for HMS Richmond, and significant effort has been expended by both FSL and the ship's staff against a very tight timeline."

Following three months of trials, HMS Richmond will return to active service in the autumn as one of the best equipped

frigates in the Fleet. She will then be available for deployment to ensure maritime security worldwide.

HMS Richmond is one of 13 Type 23 frigates in service with the Royal Navy, six being based in Portsmouth. It 436 ft. (133 m) long and displaces more than 4,000 tons. Its armament includes a vertical-launch Sea Wolf surface-to-air mis-

sile system, anti-submarine torpedoes and Harpoon anti-ship missiles.

## Todd Shipyards Wins Navy Contract

The U.S. Navy has awarded Todd Shipyards Shipyard a delivery order under its Multiple Award Contract in the amount of \$5m for the in-drydock

repairs and preservation of Caisson #4 at Drydock #2 at Puget Sound Naval Shipyard in Bremerton, Wash. Work will be accomplished by the Todd Pacific workforce and selected subcontractors commencing in August 2006 with completion scheduled for November 2006. The work includes interior and exterior preservation, structural repairs and mis-



World-leading integrated marine systems.

Rolls-Royce has brought together the stars of marine technology to provide customers with a single focus for integrated marine systems. The marine products in our extensive range are designed to work perfectly together, enabling us to combine them in a variety of systems that deliver optimum performance with

outstanding reliability. Rolls-Royce is fully committed to customer satisfaction. Through our global support network we offer comprehensive, tailored support options, ensuring year on year our customers save time and money and our marine solutions run reliably and efficiently. **Trusted to deliver excellence**

[www.rolls-royce.com](http://www.rolls-royce.com)



## WaterWeights



imesgroupbusiness

domestic and worldwide locations  
tel 888 998 3787  
intl 1 909 626 8316  
web [www.imesinc.com](http://www.imesinc.com)

## load testing

- capacities to 1,000 tons
- rental, sale, lease, and turnkey service
- suspended and deck loads for numerous applications

Originators of the water bag, we are the market leaders, providing products and services to the highest standards with global coverage.



cellaneous maintenance items including ballast valve repairs.

### ASRY Wins \$13M Rig Contract

Arab Shipbuilding and Repair Yard Company (ASRY) won a \$13m contract from National Drilling Company (NDC), in Abu Dhabi, for its offshore self-elevating three legged jack-up drill rig Al Mariyah. The rig, originally manufactured by Nippon Kokan KK in 1982, is owned by NDC and has been lying unused. In order to meet the increasing demands of its operations in the Arabian Gulf, NDC has decided to re-activate the rig in a phased manner. ASRY was awarded the contract earlier in the year and the rig arrived in Bahrain on June 10 for a six-month program of refurbishment and upgrade work. The scope of work involves extensive hull and structure repairs and refurbishment, both externally and internally. Major repairs and part renewal will be undertaken to the three cylindrical legs, each 210 ft. long. There will also be a complete overhaul undertaken to the leg elevating system with renewal of the hydraulic motors as well as the control consoles for the three legs. Included in the repairs is the installation of a new raw water tower, fabrication of new lifeboat platforms as well as substantial replacement of steel. In all, it is estimated that some 1,000 tons of steel will be utilized during the refurbishment contract.

### Approval for Planned Maintenance System

The ship management software developed by Mespas AG has been type approved by Germanischer Lloyd. Especially the planned maintenance feature included in the software makes this approval very attractive for the ship operators.

### Condition Monitoring in Tight Spaces

UE Systems' Remote Access Sensor (RAS) includes a sensing transducer which is permanently mounted on a test subject such as a pump, motor, bearing or valve housing. It is connected to a cable, which can be inserted through a test port and attached to an Ultraprobe to data log and/or record sound samples for analysis. Another remote sensor, the RAS-MT, is a magnetically mounted transducer assembly with cable, included with the Ultraprobe 10000 and available as an optional accessory for the 9000. This provides consistency while monitoring equipment condition and will operate in difficult-to-reach test points. The UE Ultra-Trak 750 measures ultrasonic amplitude changes on a continuous basis, thereby providing early warning of mechanical failure, valve leakage or flow disruption. It is connected via cable with 4-20 mA, 0-10VDC and heterodyned outputs to remotely record or data log equipment for passively monitoring ultrasound.

### New Interface for Maintenance & Repair Fleet Management Module

ABS Nautical Systems has developed an interface that allows shipowners to download ABS classification machinery survey status data directly into the Maintenance & Repair module of the NS-5 fleet management software.

"Clients asked for this and we have delivered," said ABS Nautical Systems President, Jack Kitchura. "It will make life simpler and promote data accuracy for the operators of hundreds of vessels that use our NS-5 software system to manage their on-board operations."

Prior to this development, a shipowner or operator would have to access the survey status information on each vessel in the fleet from the classification society's web-based system and then re-enter that information into the Maintenance and Repair module for each ship in the fleet.

The interface allows the ship operator to access the ABS survey database direct from the Maintenance and Repair module and to then download all the applicable Continuous Machinery Survey (CMS) information for the operator's entire ABS classed fleet with a few simple key strokes.

"It should be emphasized that this is a one way data transfer," Kitchura said. "The owner has access to the survey status on his vessels but ABS, as the classification society, can not gain access to the owner's Maintenance & Repair data which remains confidential."

### SP&C Cleans Up

When a Seattle-based boat company needed to resurface the fish tanks on three of its crab boats this spring, they called SP&C, of Long Beach, Wash. Formerly ColPak Northwest, SP&C is a family-owned business that specializes in ultra-high pressure washing and surface preparation, as well as marine and industrial coatings and insulation. With a powerful ultra-high pressure waterjet equipment from Jet Edge, SP&C blasts away the grit, cleaning decks and hulls and fish holds down to bare metal before



prepping and resurfacing them.

During a recent three-month project, SP&C cleaned out four fish holds on the Alaska Rose and Bering Rose, removing layer upon layer of epoxy coating, rust, coal, tar and salt before they reached bare metal. Ultimately, 8,000 sq. ft. of surface area was cleaned.

To get the job done, SP&C used two ultra-high pressure Jet Edge Gyrojet wands powered by a 260-hp Jet Edge 55-260DXS diesel intensifier pump.

According to SP&C President James Starr, his company began offering ultra-high pressure washing out of necessity, when he discovered it was the fastest way to remove old surface coatings, microbial corrosion and chlorides before prepping and resurfacing.

SP&C also specializes in applying rust inhibitor, spray and pour foam, fiberglass over foam, polyurea elastomers, two-part epoxy and acrylic floor systems.

### Goltens Secures Agreement with Hanjin

Hanjin has named Goltens (Shanghai) as its exclusive engine and repair service provider. In addition to working with Goltens facilities in Shanghai, Hanjin will also have access to service at Goltens workshops around the world.

**Now more than ever,  
Skookum signifies value in  
today's cost-conscious world.**



You've known us for quality rigging products since 1890. Our comprehensive block, fairlead, sheave and alloy forging lines have met the challenges of the most demanding applications around the world. And in the process, we've proudly taken part in the shaping of American history; from salvage operations at Pearl Harbor and construction of the Grand Coulee Dam to San Francisco's BART and the space shuttle.

Whatever your applications, we're committed to serving you with the finest in standard and custom engineered products. For further information contact your nearest dealer or call us at:

**503/651-3175**

Skookum  
PO Box 280, Hubbard, OR 97032  
FAX 503/651-3409



**SKOOKUM®**

**Blocks & Rigging**

AN ULVEN COMPANY

1-800-547-8211 • www.skookumco.com

## MaritimeJobs.com

Welcome to the industry's favorite online employment office!

Each day employers and job seekers meet online to post and seek incredible career opportunities in every conceivable maritime profession. **Each day MaritimeJobs.com receives more than 2,600 visitors - that's over 85,600 visitors every month!** Employers appreciate having instant, comprehensive access to an international pool of the most skilled, qualified professionals in today's industry. **Job seekers love the fact that posting resumes is absolutely free of charge!**

[www.maritimejobs.com](http://www.maritimejobs.com)

**EMPLOYERS!**

Job posting and resume search:  
**only \$495 per month!**



Additional information on the products profiled in the "Maritime Tools" section can be found at [www.maritimeequipment.com](http://www.maritimeequipment.com).

### Laser Alignment Tool

Ludeca Inc.'s Boralign laser alignment tool is for the measurement of stern tubes, strut bearings, engine and compressor bores. Boralign measures whether multiple bores are in line with one another and with the rotating centerline of the shaft. Universal brackets fit bore diameters from 5 to 30 in.



The stainless steel construction is designed to resist corrosion and, at 48.5 lbs, can be used for a variety of drilling jobs. With a cutter stroke of 3.75 in., it drills holes

up to 2.0625 in. diameter and 3 in. deep in steel. A 0.75 in. geared chuck converts the HB-4400 into a standard drill press with a stroke of 6.75 in. for solid twist drills for up to 1/2 in. diameter in steel.

### Hydraulic Magnetic Drill

CS Unitec's HB-4400- with a 1.5 hp motor and oil flow of 6.5 gpm at 2,000 PSI- is made for drilling structural steel and other metals. It performs in a wide range of jobs including underwater applications, as well as Class 1 hazardous areas and underground mining.

### Remove Weld Seam Corrosion

The DynaRover from Dynabrade is designed for the removal of weld seam



corrosion without stooping. Another feature includes its butt welds, angle welds, and penetration welds, which achieve an SSPC-SP11 profile reading of greater than 1 mm in one pass.

### Surgrip Valve Wheel Wrenches



ITAN Surgrip Valve Wheel Wrenches provide leverage on hand operated valve wheels. The special head design of the wrench allows for reduced slippage when working in

overhead or crowded positions. ITAN Surgrip Valve Wheel wrenches are available in six sizes to fit a variety of valve wheels for different applications.

### Carbide Cutters



Arcco Inc. released the first in a series of carbide-coated cutting tools designed specifically to for use in the manufacture of fiberglass boats and components.

The 4.5 in. 46grit Carbide Combo-Wheel provides users with the ability to remove stock with efficiency and longevity, and also provides cutoff capability similar to using a Cutoff Wheel all in one compact tool.

## Towing, Mooring, Anchor, Oceanographic – and other Winches

### MOORING WINCHES --

Our CONGRATULATIONS to Sause Brothers on doubling this year's double-drum mooring winches order, for the new oil barges Morro Bay and the Monterey Bay. Rapp is honored to have also received Sause' latest order for two towing and two bow hawser winches.



TOWING WINCHES -- Recent orders in Estonia and Poland are now followed by still another from Western Towboat in the U.S. Two newer towing winch clients have followed in Western's footsteps in the last year.



**Celebrating Workboat in New Orleans next December -- come and visit us at booth number # 2537**



[www.rappus.com](http://www.rappus.com)



[www.rappmarine.com](http://www.rappmarine.com)

Product of choice for professional welders.

## Trust AlcoTec for top-quality aluminum welding wire.

Environmentally friendly packaging designed to maximize product stability and quality

AlumaPak 300-lb. drum and 50-lb. AlumaPak Mini provide continuous twist-free wire for ease of use and consistent quality welds



AlcoTec Wire Corporation – a subsidiary of ESAB® Welding and Cutting Products – is the world's largest producer of aluminum welding wire and the only single source for all the aluminum alloys currently registered for aluminum welding applications. Our state-of-the-art drawing and spooling equipment, combined with proprietary processes, ensure the best dimensional, mechanical and metallurgical control in the industry. The result is wire with precise diameter, cast, helix and sliding friction controls for exceptional feedability and lot-to-lot consistency. **For your next aluminum welding job, ask for AlcoTec by name.**

1.800.228.0750 [www.alcotec.com](http://www.alcotec.com)

**AlcoTec**



Great things happen when you put us to work.

## Maritime Tools

### New Welding Training Center



Hobart Brothers Company opened a new training center to address

new filler metal solutions, along with safety and health practices. Located at Hobart Brothers' plant in Troy, Ohio, the new training center will educate distributors, end-users, and employees on optimal application and use of Hobart Brothers' filler metals, which include Hobart, Tri-Mark, Corex and McKay brands. A typical process class lasts three days, includes classroom technical

training and is supplemented by lab exercises that simulate job site applications.

### 422/421 Worldwide Hose

Parker Hannifin has introduced its 422/421 Worldwide hose, a one-wire hose manufactured to strict international quality specifications (ISO 1436-1 Type



1SN). The 422/421 offers higher working pressures than the existing Parker 421 hose, intended for improved reliability and expanded applications. Additional features of Parker's 422/421 hose include a nitrile inner tube for greater fluid compatibility across a wide range of hydraulic fluids, including biodegradable ones. The hose is available in sizes -4 to -32.

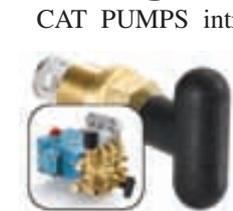
### Handyplasma Cutting Package



ESAB's HandyPlasma 380 is a plasma cutting package with the power to cut 9.5 mm and sever 12.7 mm. This is contained in a compact

portable design, weighing at 22 lbs. A compact, simple torch with ESAB's patented XT nozzle offers access to tight spaces and good visibility. Other features include a template following feature, side-mounted pressure gauge, externally mounted and adjustable air regulator/filter, and automatic air purge when the unit powers on. The variable output feature allows the operator to turn down the output for precise cutting on thin materials. This 208/230 VAC single phase machine comes complete with torch, spare parts, air filter/regulator, input power cord with plug, and work cable with clamp.

### Pulsating/Jetting Valve



CAT PUMPS introduced the MAG-JET Valve for jetting. The MAG-JET uses a SS magnetic valve and a strong corrosion resistant magnet to hold

one inlet valve open, creating a strong pulse-jetting action to power nozzles through clogs. A push-in the MAG-Jet handle activates jetting action. When the MAG-JET holds the valve open, it reduces the pump flow by one-third, causing the desired pulsations. The MAG-JET mounts into the inlet valve plug making field-retro-fit easy on many CAT PUMPS models including the direct-drive 66DX, high-performance gearbox and larger truck and trailer mount pumps. The MAG-JET works with performances ranging from 3-25 GPM, 1,000-4,000 PSI.



# The industry event for West and Central Asia

Under the patronage of His Highness Sheikh Mohammad Bin Rashid Al Maktoum, Vice-President and Prime Minister of UAE and Ruler of Dubai

#### Principal sponsors



Sponsored and supported by



دبي المدينة البحرية  
DUBAI MARITIME CITY



Sponsored by

Aalborg Industries  
BP Marine  
Bulk Shipping & Trading  
Charter Trade Global LLC  
Clyde & Co.  
Dena-BMS  
Dubai Drydocks  
Emarat Maritime  
Lloyd's Register  
Nico International  
Norton Rose  
Scan-Trans Middle East  
Sharaf Shipping Agency

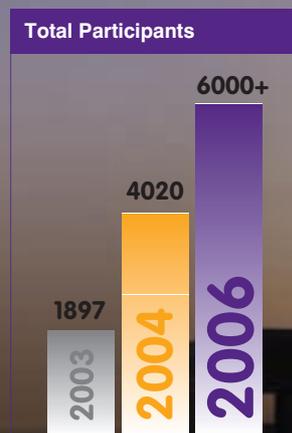
Supported by

Dubai Chamber of Commerce & Industry  
DP World  
Dubai Shipping Agents Association (DSAA)  
International Association of Ports and Harbors

4-6 December 2006  
Dubai World Trade Centre  
United Arab Emirates

Enhance your participation by attending one or more conference sessions on the following subjects:

- State of the industry across the Middle East and Central Asia
- Shiprepair & Marine Technology (part of SMEM's new technical programme)
- Energy transportation
- Finance for shipping
- Port development
- Dry bulk



[www.seatrade-middleeast.com](http://www.seatrade-middleeast.com)

## Directory: Insurance

### AIK Commercial Equipment Finance

Marine Finance Division  
5700 Granite Parkway, Suite 850, Plano, TX 75024  
www.aigcef.com  
Kirk Phillips  
tel: 972-987-3720 • fax: 972-987-3700 • email:  
kirk.phillips@aig.com  
Marine Finance provides loans and leases to both the domestic and international maritime sector. Whether you are an inland towing operator, offshore energy service provider, or international transportation company, we have the experience and resources to help you meet your needs.

### ACE USA

436 Walnut Street  
Philadelphia, PA 19106  
www.INAMARMARINE.com  
Michael Jacobs  
Tel: 215-640-2302  
email:michael.jacobs@ace-ina.com  
Descr: Commercial Marine Insurance  
Products: Cargo, Hull and Protection and Indemnity, Marine Liability Insurance

### American Marine Underwriters Agency

108 Greenwich Street, New York, NY 10006  
www.boatinginsurance.com  
Kathryn Martuscello Hoff  
tel: (212) 349-3500, fax: (212) 698-5367  
email:kathryn@boatinginsurance.com  
Descr: Marine Insurance Broker  
Products: Personal & Commercial Marine Insurance

### DJI Insurance Brokerage

PO Box 287  
Kutztown, Pa 19530  
www.cwpeteragency.com  
David J Imschweiler  
Tel: 1-888-682-6354  
Fax: 1-610-683-5695  
email:david@cwpeteragency.com  
Descr: Ocean marine Insurance Brokerage  
Products: equipment, boats, divers, cargo

### G & S Marine Services

P.O. Box 1490  
Southaven, Miss. 38671  
www.soundexproducts.com  
Gene Shackelford  
tel: 901-335-0985  
fax: 662-429-3589  
email:gene@soundexproducts.com  
Products: Insurance, PrePurchase, Damage Surveys

### Great American Insurance Company

65 Broadway, New York, NY 10004  
GreatAmericanOcean  
Capt. Ed Wilmot  
tel: 212-510-0135; fax: 212-422-1063  
email:ewilmot@gaic.com  
Descr: Multi line marine specialty insurer  
Products: hull, P&I, pollution, shiprepairer, MCL, pier & dock, commercial package

### John W. Fisk Company

4833 Conti Street Suite 200  
New Orleans, LA 70119

www.jwfisk.com  
Johnny Fisk  
tel: 504-486-5411  
fax: 504-482-1475  
email:insure@jwfisk.com  
Descr: Insurance Agents and Brokers  
Products: All types of Insurance for Marine and Oilfield Industries

### Kildall Agency

5610 40th Ave W  
Seattle, Wa 98199  
www.kildallagency.com  
Tom Kildall  
tel: 800 875 1230  
fax: 206 770 6320  
email:kildall@juno.com  
Descr: License Insurance  
Products: Prepaid legal, wage and liability protection for USCG licensed mariners and tankermen

### LIG Marine Managers

9600 Koger Blvd.  
St. Petersburg, FL 33702  
www.LIGInsurance.com  
Karen Tischler  
Tel: (727) 578-2800  
Fax: (727) 578-9977  
email:KLT@LIGInsurance.com  
Descr: Commercial Marine Wholesaler specializing in Longshore and Maritime Insurance coverages  
Products: WC/Longshore, Maritime Employers Liability, Commercial Vessels, Hull/P&I, Umbrellas, International

### MOPS Marine License Insurance

370 West Park Avenue, P.O. Box 9004  
Long Beach, NY 11561  
www.mopsmarinelicenseinsurance.com  
Marguerite Meditz  
Tel: (516) 431-4441,x3302  
Fax: (516) 431-0796  
email:mmeditz@lancer-ins.com  
Descr: U.S.C.G License Defense Insurance  
Products: Pre-paid legal defense, income protection & professional liability coverages

### Nautical Service Technologies, Inc.

4949 Royal Palm Drive  
Estero, FL 33928-2509  
www.boatcheckers.com  
Gene Sipe  
tel: 239-470-8468  
fax: 239-947-5175  
email:info@boatcheckers.com  
Descr: Marine Surveyors / Adjusters  
Products: Damage Claims, Appraisals & Accident Reconstruction

### Oversea Insurance Agency, Inc.

1274 Scott Street  
San Diego, CA 92106  
www.overseainurance.com  
Bill Jones  
tel: 800-266-2662 or 619-222-1111  
fax: 619-222-0777  
email:service@overseainurance.com  
Descr: Yacht Insurance  
Products: boat insurance, yacht insurance, marine insurance, powerboat insurance, sailboat insurance

## AIG Commercial Equipment Finance, Inc.

### AIK Commercial Equipment Finance, Inc. Marine Finance Division

5700 Granite Parkway, Suite 850, Plano, TX 75024  
www.aigcef.com  
Kirk Phillips  
tel: 972-987-3720 • fax: 972-987-3700 • email: kirk.phillips@aig.com

Marine Finance provides loans and leases to both the domestic and international maritime sector. Whether you are an inland towing operator, offshore energy service provider, or international transportation company, we have the experience and resources to help you meet your needs.

### Pinnacle Marine Corporation

W5845 Carla Court  
Stoddard, WI 54658  
www.pinnaclemarine.com  
Robert McMahon  
tel: 888.788.6556  
fax: 608.788.3227  
email:info@pinnaclemarine.com  
Products: Insurance coverage for the passenger vessel industry

### PointSure Insurance Services, Inc.

2101 4th Avenue, Suite 1600  
Seattle, WA 98121  
www.pointsure.com  
Chris Engstrom  
tel: 206.269.8601  
fax: 206.269.8907  
email:chris.engstrom@pointsure.com  
Descr: Specialty Wholesale Insurance Broker  
Products: USL&H workers' compensation insurance, ocean marine

### SeaBright Insurance Company

2101 4th Avenue, Suite 1600  
Seattle, WA 98121  
www.sbc.com  
Dean Rappleye  
tel: 206-269-8504  
fax: 206-269-8903  
email:dean.rappleye@sbic.com  
Descr: Insurance Company  
Products: State-Act Workers' Compensation, USL&H Act Workers' Compensation and Maritime Employers Liability

### Smithwick & Mariners Insurance, Inc.

366 U.S. Route One  
Falmouth, ME 04105  
www.smithwick-ins.com  
Mark J. Gandolfo  
Tel: 207-781-5553  
Fax: 207-781-5571  
email:mgandolfo@smithwick-ins.com  
Descr: Marine Insurance with offices in Falmouth, ME and New Bedford, MA  
Products: Boat Yards, Workboats, Tug Boats, Passenger Vessels, Barge Operations, Fishing Vessels, Yacht Clubs, Marinas and more

### The American Equity Underwriters, Inc.

118 North Royal Street, Suite 900  
Mobile, AL 36602

www.amequity.com  
Julie Hershey  
Tel: 251.431.6112  
Fax: 251.431.6150  
email:info@amequity.com  
Descr: Insurance Provider  
Products: Workers Compensation, United States Longshore and Harbor Workers Compensation Act (USL&H), Excess Workers Compensation and Employer's Liability Coverage

### Virtual Claims Services, Inc.

241 Water Street  
New York, NY 10038  
www.virtualclaim.com  
Jose Guerrero  
Tel: 212-571-2571  
email:jagjr@virtualclaim.com  
Descr: VCS provides marine claims handling services, such as cargo, hull, legal liability, inland marine claims.  
Products: Marine Claims Adjusting Services

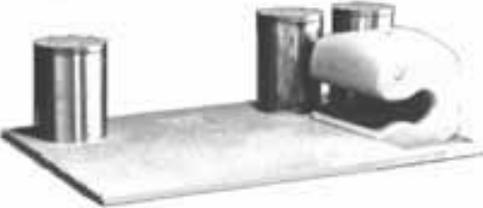
### Water Quality Insurance Syndicate (WQIS)

80 Broad Street 21st Floor  
New York, NY 10004  
www.wqis.com  
Harry Yerkes  
tel: 212-292-8700  
fax: 212-292-8716  
email:hyerkes@wqis.com  
Descr: WQIS is an underwriter of pollution liability insurance for marine vessels in the U.S.  
Products: Pollution coverage for the following: Vessel owner & operator, cargo owners, marinas, non vessel owners

### Zurich

105 East 17th Street  
New York, NY 10003  
www.zurichglobalenergy.com  
Roy Salley  
Tel: 917-534-4857  
Fax: 917-534-4824  
email:roy.salley@zurich.com  
Descr: Zurich Financial Services is an insurance-based financial services provider with a global network that focuses its activities on its key markets in North America and Europe. Founded in 1872, Zurich is headquartered in Zurich, Switzerland.  
Products: Ocean cargo, brown water hull, marine liabilities

**HYDRAULIC TOW PIN UNITS**  
*Cable Hold-Down Blocks and Stern Rollers*



*The Toughest Cable Tamer Ever Created!  
Often Copied, Never Equaled*

**WESTERN MACHINE WORKS**  
1870 Harbour Road, North Vancouver, B.C. Canada V7H 1A1  
Phone: (604) 929-7901 or 929-2365 Fax: (604) 929-7951  
Email: wmw@alliedship.com Website: www.alliedship.com

**MARATHON**  
Marathon Petroleum Company LLC, a recognized leader in the energy industry, is seeking the following professionals.

**Marine Inspector**

U.S. based integrated oil company is looking for an experienced mariner to join its marine department as a marine vetting inspector. Ideal candidates will have recent senior officer experience (deck or engine) aboard tankers or extensive prior surveying experience with a major classification society. Domestic and some international travel required. Must be willing to relocate to the New Orleans area. Company offers an excellent benefits package. Submit resume and salary requirements to:

**Manager - Tanker Operations**  
P.O. Box AC  
Garyville, LA 70051  
Email - jwbrady@marathonpetroleum.com

**MARATHON** Marathon Petroleum Company LLC EQUAL OPPORTUNITY EMPLOYER  
**WWW.MARATHONPETROLEUM.COM**

**COASTAL MARINE EQUIPMENT, INC.**  
MANUFACTURERS OF MARINE DECK MACHINERY



**At The End Of The Day, The Best VALUE in Deck Machinery**

www.coastalmarineequipment.com  
Phone (228) 832-7655 Fax (228) 832-7675

## New Sound Dampening Coating



Mascoat Products released its newest version of the Delta dB Sound Dampening coating. The coating is reportedly capable of sound damping of 12 dB in only a 60 mil (1.5mm) thickness. The water based coating can be applied by brush, roll or airless spray method rapidly and has no harmful VOC's. Delta dB comes in standard colors of white, light grey, grey and flat black. The product has passed testing to IMO A 653.16 and can be used under the interior finish coat ruling of all major class societies.

## World's Largest Radial Turbocharger Debuts

MAN B&W recently introduced what it calls the world's largest radial turbocharger for two stroke engines and thermo efficiency systems. The TCR series is designed to set new standards for radial-flow turbochargers: high power density, low weight and a compact design. A total of six frame sizes cover four and two-stroke engines from 390 to 5,800 kW engine output per turbocharger. TCR22 is the largest frame size of the series. Test runs on a 6S35MC engine rated 4,440 kW/173 rpm showed efficiency over the entire load range, helping to lower fuel consumption as well as the exhaust gas temperature, which in turn relieves thermal stress on other engine components.

## HTiBS Receives INS Class C Approval

The Hyundai-Transas intelligent Bridge System (HTiBS) from Hyundai Heavy Industries and Transas Ltd. recently became the first system to be type-approved as INS class C. Designed in full compliance with IEC1924 standard, it gained the certificate from Det Norske Veritas. The system is designed to provide the navigator with: an integration of navigational data, databases and ship's particulars; simultaneous execution of application on one workstation; ability to connect/integrate with external hardware and software; close control of received data quality; and alarm management to support a safe level of situation awareness.

## RKI Offers Portable Gas Detector

The Marine EAGLE from RKI Instruments, Inc. is designed to provide

detection combinations in a portable gas monitor featuring gases like % LEL and volume of hydrocarbons, oxygen, as well as PPM levels of hydrogen sulfide and/or carbon monoxide. The EAGLE features include an infrared sensor for combustible gas monitoring in inerted tanks, dual hydrophobic filters, strong internal pump with low flow auto shut off and alarm, internal oil mist filters, ergonomic RFI/EMI/chemical/weather resistant enclosure, operating hours for over 30 hours on alkaline batteries, and a variety of accessories for specific applications.

## Software Monitors Underwater Noise

Sound-Guard is a PC-based data acquisition system used to measure, monitor, and log the underwater sound levels from any vessel. It is useful for research vessels which need to maintain low underwater noise during sensitive scientific operations. It may also be used by vessels that need to monitor sound output while operating in sensitive ocean areas or around sensitive marine habitats. Sound-Guard is designed to be used with existing hull mounted hydrophones, but ships without such equipment can also use Sound-Guard by installing other transducers.

The software was developed by Noise Control Engineering (NCE) for the University of Delaware's new research vessel, R/V HUGH R. SHARP with a grant from the Office of Naval Research (ONR).

## New McMurdo NAV-7 GMDSS NAVTEX



McMurdo's NAV-7 is the new generation GMDSS NAVTEX Receiver. Information is delivered on a six-in. screen. It offers simultaneous tri-channel monitoring, meaning that a single list of Navtex messages can be viewed together.

An automatic sorting feature allows a message to be viewed on screen and sorted by channel, station ID, message category or age. An index message listing page allows for quick searching and direct access to full message text.

## Anti-heeling Pump

Allweiler AG manufactures its ALLTRIMM anti-heeling propeller pump in seawater-resistant aluminum bronze (CC333G). This inline propeller pump has reversible hydraulics and a uniform pumping capacity. Three radial-shaft sealing rings contain an integrated leak sensor. The electric motor is constructed with standard parts from a German manufacturer and conveniently integrated into the pump lobe. As a result, the pump forgoes components required in conventional designs such as a valve controller, coupling, and gearbox. The pump is available in one and two-stage versions that deliver a flow rate up to 1,300 cu. m./hour and delivery heads up to 10 m (single-stage) or 20 m (two-stage).



## New Marine Selector Valve



Parker Fluid Control Division now offers the Marine Selector Valve designed for electric remote tank selection in applications with multiple diesel and/or gasoline fuel tanks. The Marine Selector Valve permits continuous engine function during tank switching, from the safety and convenience of the boat's control panel. The two-way, normally closed valves, rated for fuel safety shut off, features integral solenoids and a manual override in a one-piece construction. Applications for this valve include marine engines, generator sets and cross-over piping arrangements, as well as fuel balancing.

The Marine Selector Valve is manufactured with six ports for fuel return in diesel tanks and three ports for gasoline. Available in aluminum, the new valve has a flow capacity of 180 gph and fuel line connections of 0.5-in. Female NPT.

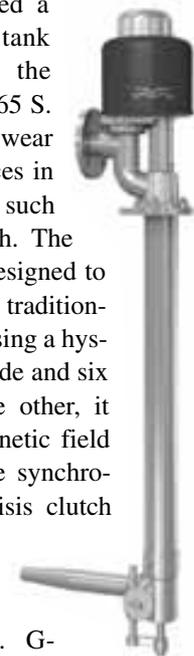
## DVD: Immersion Suit Training: It Could Save Your Life

*Immersion Suit Training: It Could Save Your Life*, is the latest training aid from Maritime Training Services, and illustrates how Immersion Suits can be used to improve a seafarer's chances of survival in an emergency. Having an Immersion Suit for each person on

board is not just good practice; SOLAS will soon require it. *Immersion Suit Training: It Could Save Your Life*, an 11 minute DVD from Maritime Training Services, takes a close look at the use and maintenance of these important life saving appliances. Filmed on the icy waters of Puget Sound, the program starts with a look at the dangers of hypothermia, the unseen killer, and how Immersion Suits can be used to improve a seafarer's chances of survival in an emergency.

## New Tank Cleaning Machine

Alfa Laval launched a new single-nozzle tank cleaning machine, the Gunclean Toftejorg i65 S. It incorporates low-wear materials and advances in mechanical design, such as a hysteresis clutch. The hysteresis clutch is designed to be more reliable than traditional machines. Comprising a hysteresis plate on one side and six supermagnets on the other, it creates an even magnetic field that does not require synchronization. The hysteresis clutch also allows design changes that protect against leakage and cross-contamination. G-Pass, the Alfa Laval software used in preparing shadow diagrams, lets Alfa Laval evaluate the proposed cleaning solution, creating a three-dimensional image of the tank and its corrugations, stringer platforms and other internal obstructions. This image can be viewed from any angle, revealing any "shadows" that are not directly hit by the cleaning jets.



(Continued from page 40)

## New m3 Plasma Cutting System



ESAB's m3 Plasma System combines multiple plasma cutting and marking features in a single system. The m3 system aims to deliver high-speed, low-cost standard plasma cutting; high-quality precision cutting and marking; and high-current, thick-plate cutting all with a single plasma torch. When configured for 600-amp operation, the system can cut and mark material from 1 mm to 160 mm with uniform quality.

## Internal Deburring Brushes



Weiler Corporation's Bore-Rx line of internal deburring brushes is designed to increase productivity of in-

machine deburring in CNC machining centers. Bore-Rx brushes are used for the removal of burrs found at intersecting holes and other internal edges of the work-piece and can be used for bore finishing applications. Bore-Rx brushes are manufactured with more filament density than tube brushes, allowing them to remove even well attached burrs and boast an expanded lifespan. Also, Bore-Rx brushes can be operated at high RPMs and rotating in both directions. Brushes are available in sizes ranging from 0.75 -4 in. in either wire or abrasive nylon filament.

## Wortelboer Debuts PBM-4

Wortelboer developed a new version of the PBM pipe end preparation machines. The line of PBM machines will be extended with a small PBM-4. The PBM 4 has a clamping range from 0.2 - 4 in. pipe diameter by a wall thickness up



to 17 mm. The standard PBM 4 is fully manual operated. With the heavy duty self-centering prism clamp the pipe is held firmly in place. After starting the motor the tool head can be moved by hand towards the pipe to make a bevel. According to Wortelboer, all these handlings take place in a few seconds. The PBM 4 and other PBM pipe end preparation machines up to diameter 24-in. pipe (O.D. 610 mm).

## Miller Integrates Bernard Q-Guns, Centerfire

Miller Electric Mfg. Co. and Bernard will integrate Bernard Q-Guns with Centerfire consumables on most of its industrial wire feeder products and bundled MIG welding systems. This initiative brings Bernard products to all Miller customers, effective immediately. Centerfire contact tips "drop-in" and lock in place without tools for quick



changeovers. The design allows for better electrical conductivity to enhance arc performance and improve heat dissipation for longer tip life. The nozzle features a built-in spatter shield for smooth gas flow to reduce downtime and increase arc-on time.

**Miller/Bernard Integrated Systems**  
Miller's 22-A, 24-A and R-115 wire

feeders will now incorporate the Bernard Q400 gun, as will the Delta-Fab and CP-302, Invision 354MP, XMT 304 XMT 350 MIGRunner systems. The Q400 gun with Centerfire consumables is a 400-amp, 100 percent duty cycle, air-cooled, 15-ft. MIG welding gun and replaces Miller's Roughneck 4015 gun at no additional cost. Other Miller products will come standard with Bernard Q-Guns and Centerfire consumables in the future. Miller's new 75 Series wire feeder will also feature the Bernard Q-Gun and Centerfire consumables. The integrated Miller/Bernard system features a new Accu-Mate connection that secures the Bernard Q-Gun power pin assembly to the Precision Drive (PD) wire drive assembly.

## Belzona Performance Coatings

Belzona's range of performance coat-

**Delta~dB**  
Sound Damping Coating  
Offers incredible sound damping abilities in a minimal thickness.

**Mascoat**  
PRODUCTS  
www.Mascoat.com  
800.549.0043

**The Leaders in Marine Insulation Coatings!**

- Manufacturing marine coatings since 1995
- Applied to over 450 vessels worldwide
- Approved by ABS, DNV, Lloyds, USCG, Transport Canada, NK and the US Navy
- Turn Key specifications and technical assistance

**Delta T Marine<sup>2</sup>**  
Highly efficient, thin coat thermal insulation that's easy to spray on and is VOC-free.

# Discover the "ME" in SNAME

- Prestige of membership in the premiere technical society of the maritime industry.
- Network with maritime professionals on a local, national, and international level.

Want to learn more about how SNAME membership can benefit YOU?

VISIT US [www.SNAME.org](http://www.SNAME.org)

## Maritime Tools

ings for high temperature immersions, designed to withstand a variety of aqueous/hydrocarbon combination of up to 180 degrees Celsius, offers cost effective means of corrosion protection with the flexibility of alternative application methods, which can be applied in-situ to new or existing equipments.

The company's line of coatings benefit from being solvent free, and 100 percent solid. Belzona products can be used for equipments such as oil and gas separators, scrubbers, dearators, hydrocyclones, degassing vessels, and colessors vessels. The company also offers polymeric products and, more recently, applications for riser repair and protection.

### Nuts and Bolts

AUGE Industrial Fasteners, LLC offers calibrated bars from 0.5 to 4 in. diameter and lengths up to 4 ft. in any type of steel and non ferrous materials. Also offered are different grades of nuts from 0.5 to 4 in. in diameter. A selection of coatings, such as PTFE Resins, Xylan and Teflon are also available, as well as



in-house Cadmium, Zinc Plating, clear or yellow. AUGE carries an inventory of API 6A Monogrammed R-Oval BX, RX and Combination ring joint gaskets, available in low carbon steel and 316 stainless steel for differing service requirements.

### Bolting Equipment

Hytorc's Freedom-Line includes the XXI, AVANTI, and STEALTH. The XXI features continuous rotation, anti backlash design, a 360 degree uni-swivel, simulator switch, 300,000 psi Alloy-mechanism, and torsion-free internal mechanism. The AVANTI is a lightweight, corrosion-resistant tool with a 360 x 180 degree Uni-swivel. The all-new STEALTH offers twin-speed automatic, anti backlash pawl with a 6-to-12-point ratchet. It also has a 360 x 220 degree, flat-fit Uni-swivel, pin and screw-free click-in cassettes.



nacles from metal and concrete surfaces. Swirl-Off serves as an alternative to scraping, sandblasting, or using chemicals on surfaces. The product is the incorporated with cutters to remove paint and rust from ship surfaces.



### Desmond-Stephan Offers Swirl-Off

Swirl-Off from Desmond-Stephan Mfg. Company can be used for removal of paint, rust, scale, and bar-

**YOU ALWAYS SAVE  
TIME BY DOING IT  
RIGHT THE FIRST TIME.**

**Git-Rot will repair and consolidate rotted wood fibers restoring original strength to wood. Use in joists, studs, beams and sills, anywhere there's rot. Repair can be sanded, painted, tapped and screwed.**



Life Industries Corp.  
Home of BoatLIFE  
P.O.Box 71789,  
N. Charleston,  
SC 29415-1789  
843.566.1225  
Fax 843.566.1275  
Please mention code MR06

[www.boatlife.com](http://www.boatlife.com)

# ANCHORS

## ANCHOR

## MARINE

LARGEST INVENTORY OF NEW & USED IN THE U.S.A.

# CHAINS

FAX: 713/644-1185  
WATTS: 800/233-8014  
PHONE: 713/644-1183

P.O. BOX 58645  
HOUSTON, TX 77258

ALL TYPE ANCHORS & CHAIN  
ABS, LLOYDS  
GRADE 2, 3, K-4  
CHAIN & FITTINGS

sales@anchormarinehouston.com  
www.anchormarinehouston.com

In New York: 718-447-3908

## Don Sutherland

ssuthe7880@aol.com

Photography • Video  
Stock and Contract Services

Highest-quality images for  
Advertising • Presentations • Reports • Your wall

2000+ photos online [www.don-sutherland.com](http://www.don-sutherland.com) Collector specials

# 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](mailto:momalley@marinelink.com)

## ACCOMMODATION LADDERS & GANGWAYS

Generon IGS, 11985 FM 529, Houston, TX 77041

## AIR CONDITIONING & REFRIGERATION

Cospolich Refrigeration, 14695 Highway 61, Norco, LA 70079  
**RW Fernstrum, 1716 11th Avenue, Menominee, MI 49858, 9068635553, 9068635634, seanf@fernstrum.com, Contact: Sean Fernstrum, www.fernstrum.com**

## BOATBUILDER

AMERICAN MARINE HOLDINGS GOVERNMENT SERVICES, 1838 Turnbull Lakes Drive, New Smyrna Beach, FL 32168  
 Gladding Hearn, 1 Riverside Ave., Somerset, MA 02725  
 Willard Marine Inc., 1250 N. Grove St., Anaheim, CA 92806

## BULKHEAD SEALS/PANELS

**CSD North America, 880 Candia Rd., Unit 10, Manchester, NH 03109**

## CAD/CAM SYSTEMS

**Autoship Systems Corp., 611 Alexander Street, Suite 312, Vancouver, BC V6A 1E1, Canada, 604-254-4171, 604-254-5171, sales@autoship.com, Contact: Ross Muirhead, www.autoship.com**  
 Creative Systems Inc., P.O. Box 1910, Port Townsend, WA 98368

## CAPSTANS

**Coastal Marine Equipment, 20995 Coastal Parkway, Gulfport, MS 39503-9517, 228-832-7655, 228-832-7675, sales@coastalmarineequipment.com, Contact: Ralph Waguespack, www.coastalmarineequipment.com**

## CARGO MANAGEMENT

**Autoship Systems Corp., 611 Alexander Street, Suite 312, Vancouver, BC V6A 1E1, Canada, 604-254-4171, 604-254-5171, sales@autoship.com, Contact: Ross Muirhead, www.autoship.com**

## CFD SOFTWARE

CD-Adapco, 9401 General Dr., Ste 131, Plymouth, MI 48170

## COATINGS/ CORROSION CONTROL/PAINT

Ameron International Performance, 13010 Morris Road, Ste 400, Alpharetta, GA 30004  
 International Paint Co., Stonegate Lane, Felling, Gateshead, Tyne and Wear NE10 0JY, UK  
**NAPASCO, INC., 213 Main Project Road, Shriever, LA 70395, 985-449-0730, 985-449-0740, napasco@napasco.com, Contact: Pam Bartell, www.napasco.com**  
 Sea Coat Technology, 11215 H Jones Road West, Houston, TX 77065

## COMMUNICATIONS

David Clark, PO Box 15054, Worcester, MA 01615  
 L-3 Communications, 6000 Fruitville Road, Sarasota, FL 34232  
 Pipeline Communications and Technology, Inc., 2800 Woodlawn Dr. Ste. 264, Honolulu, HI 96822

## COMPOSITE SHAFTS

**Centa Corp., 815 Black Hawk Drive, Westmont, IL 60559, 630-734-9600, 630-734-9669, bobl@centacorp.com**

## COMPUTER/ COMPUTER SOFTWARE

Omega Engineering, One Omega Dr., Stamford, CT 06907

## CONTROL SYSTEM-MONITORING/STEERING

Kobelt Manufacturing Co., Ltd., 8238-129 Street, Surrey, BC V3W0A6, Canada  
**L-3/TANO-EDI, 759 Hill Street, New Orleans, LA 70121, 504-831-9800, 504-833-4119, guy.hardwick@l-3com.com**  
 Omega Engineering, One Omega Dr., Stamford, CT 06907

## COUPLINGS

**American Vulkan, 2525 Dundee Rd, Winter Haven, FL 33884, 863 324 2424, 863 324 4008, vulkanusa@vulkanusa.com, www.vulkanusa.com**  
**Centa Corp., 815 Black Hawk Drive, Westmont, IL 60559, 630-734-9600, 630-734-9669, bobl@centacorp.com**  
 Mapeco Products, 91 Willenbrock Rd., Unit B, Oxford, CT 06478

## CRANE - HOIST - DERRICK - WHIRLEYS

Davit Sales, PO Box 232, Jefferson Valley, NY 10536  
**DMW Marine, LLC, 1123 St. Matthews Road, Chester Springs, PA 19425, 610-827-2032, 610-827-1199, dw@dmwmarine.com, Contact: Douglas M. Weidner, www.dmwmarine.com/**

## CRANE TESTING

Imes, Inc., 5139 Brook St., Suite E, Mont Claire, CA 917063

## DECK MACHINERY- CARGO HANDLING EQUIPMENT

**Coastal Marine Equipment, 20995 Coastal Parkway, Gulfport, MS 39503-9517, 228-832-7655, 228-832-7675, sales@coastalmarineequipment.com, Contact: Ralph Waguespack, www.coastalmarineequipment.com**  
 Davit Sales, PO Box 232, Jefferson Valley, NY 10536  
**DMW Marine, LLC, 1123 St. Matthews Road, Chester Springs, PA 19425, 610-827-2032, 610-827-1199, dw@dmwmarine.com, Contact: Douglas M. Weidner, www.dmwmarine.com/**

Global Incorporated, P.O. Box 24, 160 Cannery Road, Somerset, PA, PA 15501

Hyde Marine Inc, 28045 Ranney Parkway G, Cleveland, OH 44145-1144

Nabricho Marine Products, 1050 Trinity Road, Ashland City, TN 37016

Nonwegian Maritime Equipment AS, BOX 244, NO-5480 HUSNES, Norway

## DIESEL ENGINE OVERHAUL

Fincantieri Marine Systems, 800 Principal Court, Suite C, Chesapeake, VA 23320

## DIESEL ENGINE- SPARE PARTS & REPAIR

Mariso USA, Inc., 12783 Capricorn Dr., Stafford, TX 77477

## DOOR LOCKS

**The Brass Works Inc., P.O. BOX 566, DeLand, FL 32721, 386-943-8857, 386-943-8810, info@marinedoorandcabinethardware.com**

## DOORS- MARINE & INDUSTRIAL

Diamond/Sea Glaze, 19372-94th Ave, Surrey, BC V4N 4E4, Canada  
 Joiner Systems, 1925 52nd Avenue, Lacine, Quebec H8T 3C3, Canada  
 Seaclear Industries, 220 Maltby Rd., Suite 131, Bothell, WA 98012

**USA Sliding Doors, Inc., 801 Hosmer Road, Churchville, NY 14428, 585-538-4160, 585-538-2806, info@usaslidingdoors.com, Contact: Mr. Robert Weiland, www.usaslidingdoors.com**

## EDUCATION

Massachusetts Maritime Academy, 101 Academy Drive, Buzzards Bay, MA 02532

## ELECTRICAL SERVICES

QCI Marine Offshore, 6754 Willowbrook Park Dr, Houston, TX 77066

## EMPLOYMENT

**Military Sealift Command, PO BOX 120, CODE APM-124, VIRGINIA BEACH, VA 23458-0120, 1-888-SEALIFT, webmaster@msc.navy.mil, Contact: Audra Lamb, www.msc.navy.mil/**

## ENGINES

Fairbanks Morse, 701 White Avenue, Beloit, WI 53111  
 Fincantieri Marine Systems, 800 Principal Court, Suite C, Chesapeake, VA 23320

## ENVIRONMENTAL SOLUTIONS

Hyde Marine, 28045 Ranney Parkway G, Cleveland, OH 44145-1144

## EQUIPMENT FINANCING

**AIG Commercial Equipment Finance, Inc., 5700 Granite Parkway, Suite 850, Plano, TX 75024, 972-987-3708, 972-987-3700, kirk.phillips@aig.com**

## EXHIBITIONS/TRADE SHOWS

CMA Shipping, 62 Southfield Ave, Stamford, CT

## FIRE & SAFETY PRODUCTS

Western Fire & Safety, 2446 NW Market Street, Seattle, WA 98107

## GALLEY EQUIPMENT

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

## GLASS

ProCurve Glass Technology, LLC, 3535 Davisville Rd., Hatboro, PA 19040

## HOISTS

**Coastal Marine Equipment, 20995 Coastal Parkway, Gulfport, MS 39503-9517, 228-832-7655, 228-832-7675, sales@coastalmarineequipment.com, Contact: Ralph Waguespack, www.coastalmarineequipment.com**

## HVAC

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

## IMAGING EQUIPMENT

EMX, Inc., 4200 Dow Road, Suite C, Melbourne, FL 32934

## INSULATION

Superior Energies, 3115 Main Ave., Groves, TX 77619  
**Superior Energies Inc., 3115 Main Ave., Groves, TX 77619**

## INTERIOR MATERIALS

**Thermax - Fipro, 3115 Range Rd., Temple, TX 76504, 8132642656, 8132642507, sales@thermaxmarine.com, Contact: John Hutchison, www.thermaxmarine.com**

## INTERIORS

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

## QCI Marine Offshore, 6754 Willowbrook Park Dr, Houston, TX 77066, 281 885 1300, 281 885 1349, Lbobbit@qcimarine.com, Contact: Larry Bobbit, www.qcimarine.com

## JOINER, WALL SYSTEMS, CEILING SYSTEMS, DOORS

**Thermax - Fipro NA, 3115 Range Rd., Temple, TX 76504, 8132642656, 8132642507, sales@thermaxmarine.com, Contact: John Hutchison, www.thermaxmarine.com**

## JOINER- WATERTIGHT DOOR-PANELLING- CEILING SYSTEM

Joiner Systems, 1925 52nd Avenue, Lacine, Quebec H8T 3C3, Canada

## JOYSTICKS & POTENTIOMETERS

Feteris Components USA, 4703 Murat Place, San Diego, CA 92117

## KEEL COOLERS

**RW Fernstrum, 1716 11th Avenue, Menominee, MI 49858, 9068635553, 9068635634, seanf@fernstrum.com, Contact: Sean Fernstrum, www.fernstrum.com**

## LIFEBOAT TESTING

Imes, Inc., 5139 Brook St., Suite E, Mont Claire, CA 917063

## LIFEBOATS/RAFTS

Viking Life Saving Equipment, 1400 NW159th Street Suite 101, Miami, FL 33169

## LIFESAVING EQUIPMENT

C.M. Hammar AB, August Barks Gatan 15, 421 32 Vastra Frolunda, Sweden  
 Viking Life Saving Equipment, 1400 NW159th Street Suite 101, Miami, FL 33169

## LOAD CELLS

**Omegadyne Inc, 149 Seltzer Ct, Sunbury, OH 43074, 740 965 9340, 740965 9438, info@omegadyne.com, Contact: Alfred Friere, www.omegadyne.com**

## MARINE ENGINEERING

Delta Marin, Kurokatu 1, Raisio FIN-2100, Finland

## MARINE EQUIPMENT

**Tidewater Skanska, Inc., PO Box 57, Norfolk, VA 23501, 757-547-2153, 757-547-4806, sby@tidewaterskanska.com**

Waterman Supply, P.O. Box 596, Wilmington, CA 90748

## MARINE HAZARD RESPONSE

Marine Respose Alliance LLC, 1102 SW Massachusetts St., Seattle, WA 98134-1030

## MARINE MANAGEMENT

Homblower Marine, 115 East Market Street New Albany, IN 47150-3409

## MARINE PRESSURE TRANSDUCERS

**Omegadyne Inc, 149 Seltzer Ct, Sunbury, OH 43074, 740 965 9340, 740965 9438, info@omegadyne.com, Contact: Alfred Friere, www.omegadyne.com**

## MARINE TRANSPORTATION

SEACOR Marine, Inc., 5005 Railroad Ave., Morgan City, LA 70380

## MARITIME TRAINING & SCHOOLS

Marine Safety International, Marine Terminal , Laguardia Airport, NY 11371

## MONITORING SYSTEMS

Bulldog Technologies Inc., 11120 Horseshoe Way - Suite 301, Richmond, BC V7A 5H7, Canada

Micad Marine, 5731 McFadden Ave, Unit B, Huntington Beach, CA 92649

## MOTOR PROTECTION

Marine Safe Electronics, 261 Milway Ave. #12, Concord, Ontario L4K 4K9, Canada

## NAVAL ARCHITECTS, MARINE ENGINEERS

BMT Fleet Technology, 311 Legget Dr, Kanata, ON K2K 1ZB, Canada

**Bristol Harbor Group, Inc., 103 Poppasquash Rd., Bristol, RI 02809, 401-253-4318, 401-253-2329, design@bristolharborgroup.com, Contact: Greg Beers, P.E. - President, www.bristolharborgroup.com**

CDI Marine Co., 9550 Regency Square Blvd, Ste 400, Jacksonville, FL 32222

Delta Marin, Kurokatu 1, Raisio FIN-2100, Finland  
 Jamestown Marine Services, Inc., 1084 Shennecossett Road, Groton, CT 06340

**JMS Naval Architects & Salvage Engineers, 1084 Shennecossett Rd., Groton, CT 06340, 860-448-4850, 860-448-4857, jms@jmsnet.com, Contact: Blake Powell, VP, www.jmsnet.com**

R.J. Mellusi & Co., 71 Hudson St., New York, NY 10013  
 Robert Allan Ltd., 1639 W. 2nd Avenue Ste 230, Vancouver, BC, Canada

**Schrider & Associates, Inc., P.O. Box 2546, Daphne, AL 36526, 251-621-1813, 251-626-1814, mikes@schneider.com, Contact: Michael Schrider**

## OFFSHORE SERVICES

Harvey Gulf Marine, 3817 Spencer St, Harvey, LA 70058  
 SEACOR Marine, Inc., 5005 Railroad Ave., Morgan City, LA 70380

## OIL SPILL RESPONSE

Marine Response Alliance, 1102 SW Massachusetts St, Seattle, WA 98134-1030

## PAINTS AND ANTI FOULANTS

International Paint Co., Stonegate Lane, Felling, Gateshead, Tyne and Wear NE10 0JY, UK

Sea Coat Technology, 11215 H Jones Road West, Houston, TX 77065

## PIPE FITTINGS/CUTTINGS/CONNECTING/ SYSTEMS

Ameron International Performance, 13010 Morris Road, Ste 400, Alpharetta, GA 30004

W & O Supply, 3485 Evergreen Ave., Jacksonville, FL 32208

## PIPE LEAK REPAIR

**CSD North America, 880 Candia Rd., Unit 10, Manchester, NH 03109**

## PORTABLE VENTILATORS

Americ Corp, 785 Bonnie Lane, Elk Grove Village, IL 60007

## PREVENTATIVE MAINTENANCE

Marine Safe Electronics, 261 Milway Ave. #12, Concord, Ontario L4K 4K9, Canada

## PROFESSIONAL SOCIETY

SNAME, 601 Pavonia Ave, Jersey City, NJ 07306

## PROPULSION EQUIPMENT

Fincantieri, Diesel Engine Div., GMT, Bagnoli della, Rosandra 3334 Trieste, Italy

Hamilton Jet, 20 Lunnis Road, Po Box 709, Christchurch 8004, New Zealand

## RADIATION DETECTION

Nucsafe, 765 Emory Valley Road, Oak Ridge, TN

## REFUELING EQUIPMENT

Global Incorporated, P.O. Box 24, 160 Cannery Road, Somerset, PA, PA 15501

## REMOTELY OPERATED VEHICLES

**VideoRay LLC, 580 Wall St, Phoenixville, PA 19460, 610-458-3000, 610-524-9846, info@videoray.com, Contact: Chris Gibson, www.videoray.com/**

## ROPE-MANILA-NYLON-HAWSERS-FIBERS

Atlantic Cordage, PO BOX 30, Avenal, NJ 07001-0030

## ROTATING EQUIPMENT

Seatworthy, 22 Main Street, Centerbrook, CT 06409

## SAFETY PRODUCTS

Western Fire & Safety, 2446 NW Market Street, Seattle, WA 98107

## SANITATION DEVICE- POLLUTION CONTROL

EVAC North America Inc., 1260 Turret Dr., Rockford, IL 61115

## SATELLITE COMMUNICATIONS

Seawave, 76 Hammarlund Way (Tech 3), Middletown, RI 02842

## SEATING

**H.O. Bostrom, 818 Progress Ave., Waukesha, WI 53186, 262.542.0222, 262.542.3784, johnbostrom@hobostrom.com, Contact: John Bostrom, www.hobostrom.com**

## SECURITY

Bulldog Technologies Inc., 11120 Horseshoe Way - Suite 301, Richmond, BC V7A 5H7, Canada  
 EMX, Inc., 4200 Dow Road, Suite C, Melbourne, FL 32934  
 Security Services North West, Inc., P.O. Box 660, Port Townsend, WA 98368

## SHAFTS

American Vulkan, 2525 Dundee Rd, Winter Haven, FL 33884  
**Centa Corp., 815 Black Hawk Drive, Westmont, IL 60559, 630-734-9600, 630-734-9669, bobl@centacorp.com**

## SHIP DESIGN

AVEVA, Inc, 10370 Richmond Ave, Houston, TX 77042

SNAME, 601 Pavonia Ave, Jersey City, NJ 07306

## SHIP REPAIR

OCEAN TECHNICAL SERVICES, MILITARY OCEAN TERMINAL BAYONNE UNIT #8-FOOT OF 32ND STREET, BAYONNE, NJ 07002

R&R Marine Fabrication & Drydock, 7200 HWY 87 EAST, Port Arthur, TX 77642

**United Marine Services, Po BOX 22077, Beaumont, TX 77720, 4098330744, 4095473815, Lrichardson@ATT.net**

## SHIP SIMULATORS

Kongsberg Maritime AS, PO Box 1009, 3194 Horten, Norway

Kobelt Manufacturing Co., Ltd., 8238-129 Street, Surrey, BC V3W0A6, Canada

#### **SURFACE PREP TOOLS**

Aurand Mfg., 1210 Ellis St., Cincinnati, OH 45223  
Daleside, 200 Dairy Ashford, Ste. 440, Houston, TX 77077

#### **TANK LEVELING INDICATORS**

Ian-Conrad Bergen, 3119 North Davis Highway, Pensacola, FL 32503, 850-434-1286, 850-434-1246, sales@icbergeb.com, Contact: Ron Monell, www.icbergan.com

Technical Marine Service, Inc., 6040 North Cutter Circle, Suite 302, Portland, OR 97217-3956

#### **TESTING SERVICES**

BMT Fleet Technology, 311 Legget Dr, Kanata, ON K2K 1ZB, Canada

#### **TOWING EQUIPMENT**

Harvey Gulf Marine, 3817 Spencer St, Harvey, LA 70058

#### **TRAINING**

Calhoon MEBA Engineering School, 27050 St. Michaels Road, Easton, MD 21601

DM Consulting, 12316 Dormouse Road, San Diego, CA 92129, 858-705-0780, 858-538-5372, jstiglich@aol.com, Contact: Joe Stiglich, www.drydocktraining.com

Massachusetts Maritime Academy, 101 Academy Drive, Buzzards Bay, MA 02532

#### **TRAVEL SERVICES**

Griffin Americas, 3648 Greenbriar Drive, Houston, TX 77098

#### **TURBOCHARGERS**

McAllister Towing, 17 Battery Pl. Suite 1200, New York, NY 10004

#### **ULTRASONIC TESTING**

M.A.C.E, 5910 NE 15th Ave., Fort Lauderdale, FL 33331  
Panametrics-NDT, 18 Woerd Avenue, Waltham, MA 02453

#### **VACUUM TOILET SYSTEM**

EVAC North America Inc., 1260 Turret Dr., Rockford, IL 61115

#### **VALVES**

W & O Supply, 3485 Evergreen Ave., Jacksonville, FL 32208

#### **VESSEL FINANCING**

AIG Commercial Equipment Finance, Inc., 5700 Granite Parkway, Suite 850, Plano, TX 75024, 972-987-3708, 972-987-3700, kirk.phillips@aig.com

#### **VIBRATION CONTROL PRODUCTS**

Lo-Rez Vibration, 186 W. 8th Ave., Vancouver, BC V5Y 1N2, Canada

#### **VOYAGE DATA RECORDERS**

Rutter Technologies Inc., 22 Pearl Place, P.O.BOX 427, St. John's NL A1C 5N8, Canada

#### **WATERMAKERS**

Village Marine Tec, 2000 West 135th St, Gardena, CA 90249

#### **WATERTIGHT CLOSURES**

Walz & Krezner, 91 Willenbrock Rd., Oxford, CT 06478

#### **WELDING PRODUCTS & POWER EQUIPMENT**

Alcotec/ESAB, 411 South Ebenezer Road, Florence, SC 29501

#### **WINCH MANUFACTURER**

Burrard Iron Works Ltd., 220 Alexander Street, Vancouver, BC V6A 1C1, Canada, 604-684-2491, 604-684-0458, sales@burrardironworks.com

#### **WINCHES & FAIRLEADS**

Coastal Marine Equipment, 20995 Coastal Parkway, Gulfport, MS 39503-9517, 228-832-7655, 228-832-7675, sales@coastalmarineequipment.com, Contact: Ralph Waguespack, www.coastalmarineequipment.com

Nabrico Marine Products, 1050 Trinity Road, Ashland City, TN 37016

#### **WINDLASSES (ANCHORS)**

Coastal Marine Equipment Inc., 20995 Coastal Parkway, Gulfport, MS 39503-9517, 228-832-7655, 228-832-7675, sales@coastalmarineequipment.com, Contact: Ralph Waguespack, www.coastalmarineequipment.com

#### **WINDOWS**

Diamond/Sea Glaze, 19372-94th Ave, Surrey, BC V4N 4E4, Canada

#### **WINDSCREEN & WINDOW WIPERS**

Hepworth Marine International, Hepworth House, Brook St., Redditch, Worcestershire B98 8NF, UK

# THE MARINE MART

The Classified  
and Employment Section



## Employment/Recruitment • www.MaritimeJobs.com

### **Chief Mate**

Job Location: USA, Tampa

TECO Energy is interested in building careers, not filling positions. Our goal is to recruit and retain the best talent possible. That's why we've developed a comprehensive benefits package around the 5 key dimensions that embody the entire work experience: compensation and benefits, work/life balance, culture, development, and rewards.

TECO Ocean Shipping offers paid travel, advancement opportunities from within, and paid training

#### **PURPOSE AND FUNCTION:**

Second in command of the vessel. Assumes command in Master's absence. Responsible for safe loading, stowing, carriage, and discharge of cargo. Responsible for deck maintenance, ensuring all equipment in good working order. Responsible for fire and safety equipment, ensuring all ready, available and in good working order. Supervises deck personnel, promotes safety, and performs administrative duties.

#### **ESSENTIAL DUTIES AND RESPONSIBILITIES:**

1. During assigned watch, responsible for the safe navigation, communications and general safety of the vessel. Immediately informs Master of any close quarters situation, fog or reduced visibility, emergency communications or any time there is doubt or reservations concerning safety of the vessel or crew.

2. As necessary, train, supervise and assist mates and seamen in all aspects of vessel operations, including all emergency response situations.

3. Conduct annual performance evaluations of deck unlicensed personnel for the purpose of developing their skills and improving performance.

4. Cargo operations - plan and supervise the loading, stowage and discharge of the cargo, coor-dinating with the ballast/de-ballast operations. Prepare the Notice of Readiness, and the Notice of Completion Forms.

5. Responsible for availability and condition of all vessel safety equipment, ensuring full compliance with all regulatory requirements w.r.t. inspection, maintenance, testing and record keeping.

6. Responsible for the maintenance of deck, deck equipment, accommodations, and cargo holds, making the most efficacious use of vessel personnel and/or shoreside assistance for preservations or repairs.

7. Responsible for the inspection of cargo holds, ladders, slope sheets, sugar sump plating, etc. upon completion of discharge. Responsible for the inspection of all rigging, cargo gear, booms, cranes, winches, ground tackle, etc. at least once each month, and the maintenance of records pertaining to these inspections.

8. Supervise inventory and requisition procedures for deck department equipment and supplies.

9. Administrative duties will include: preparing U.S.C.G. 735's for crew members, approving deck overtime, submitting payroll, record keeping, conducting meetings, preparing reports, implementing company policies, conducting performance appraisals and any other related duties as

assigned by the Master.

10. Successfully complete all training programs.

#### **ADDITIONAL REQUIREMENTS**

#### **SUPERVISION:**

Junior Mates, Bosun', Able Bodied Seamen, Ordinary Seamen, and Deck Cadets. (2 Officers and Unlicensed Seamen plus Cadets, as assigned.)

#### **CONTACTS (internal and external):**

Internal - Master, Fleet Manager.

External - TECO Stevedoring, Purchasing, Human Resources, Payroll, Technical Reps, Outside Contractors, U.S. Coast Guard, A.B.S., Regulatory Inspectors, Agents, and Stevedores.

#### **JOB RELATED KNOWLEDGE, SKILLS AND ABILITIES:**

Safety Leadership

Attention to Detail

Communication (Oral & Written)

Adaptability

Delegation

Attracting and Developing Talent

Individual Leadership (Influence)

Technical/Professional Knowledge

Judgment (Problem Solution)

Planning and Organizing (Work Management)

Teamwork

Motivational Fit

Customer Service Orientation

#### **QUALIFICATIONS:**

EDUCATION: High school diploma or GED. (Waived for employees hired prior to 1995).

LICENSES/ Master 1600 tons

CERTIFICATES: Chief Mate - Oceans, Unlimited with Radar Endorsement

S.T.C.W. Certificate with required endorsements

GMDSS Operator Certificate (Maintainer's preferred)

CPR Certificate (EMT Preferred)

TECO offers a competitive salary and benefits package including medical, dental, life insurance, 401(k), and retirement. TECO Energy is proud to be an Equal Opportunity Employer.

Kandy Reed

TECO Ocean Shipping

Email: kandy.reed@tecoocean.com

Web: http://www.tecooceanshipping.com

### **Mate**

Job Location: USA, Seattle

Sea Coast Transportation is based out of Seattle, WA. We operate tug and barges from Alaska to Los Angeles and mainly carry clean oil. We currently have positions for 2nd Mate and Chief Mate. Must have a minimum USCG 200 ton license with a towing endorsement. Must be a US Citizen or equivalent

Lisa Garcia

Sea Coast Transportation

2700 W. Commodore Way

Seattle WA 98199 USA

Phone: 206-443-9418

Fax: 206-260-3130

Email: lgarcia@sea-coast.com

**Dynamold**

Dynamold, Inc. is a leader in the manufacture of pre-catalyzed-filmed epoxy chocking material for engine and component installation.



**MOPS**

Since 1935 MOPS Marine License Insurance has been providing license defense, income protection and civil liability defense and indemnity coverages to USCG licensed deck officers, engineering officers and certified tankermen. MOPS offers a wide range of license defense and income protection packages to state and federal pilots.



**Reid Supply**

Reid Supply Company released a new 88-page catalog consisting of stainless steel parts and devices. The new catalog contains over 6,000 stainless items in categories including clamps, quick release pins, thread inserts, latches, ball plungers and springs. The catalog is a subset of the Reid Supply catalog containing industrial components.



**NetWave**

NetWave Systems introduced its NW-4000 series of Compact Voyage Data Recorders. This VDR concept was developed in a co-maker ship between several manufacturers, making use of so Digital Signal Processors, within networked microprocessor architecture.



**Weir**

With a range of engineered products, Weir Valves & Controls has developed an extensive global installed base and expertise across a wide range of industry sectors: including Power Generation, Oil & Gas, Refining, Petrochemical, Chemical, Pulp & Paper, and Desalination.



**BoatLife**

BoatLife has added three environmentally friendly products to their line. They are: Hull Cleaner, Black Streak Remover and Carpet Spot Remover. The VinylLife Vinyl Cleaner and Protectant was added to the line last year.



**Arcco**

Arcco Inc. released three new products in its series of carbide-coated cutting tools designed to excel when used in the manufacture of fiberglass boats and components: the Aggressor 4.5 in., 46-grit Carbide Combo-Wheel, the Aggressor Carbide DA style sanding disks and the Aggressor 4.5 in. Carbide Cutoff Wheel.



**MAN B&W**

MAN B&W's responsive organization provides competitive service solutions. The service personnel offer support- each one with an extensive maritime background, developed through many years of marine engineering experience and training.



**Dickinson**

Dickinson Marine manufactures diesel cookstoves, heaters and marine products which have been an important part of the commercial and pleasure boating industry since 1932. The barbecues are manufactured of stainless steel in an octagonal shape that provides strength and rigidity.



**NVTi**

Night Vision Technologies (NVTi) introduced new scientific advancements. Now each system is equipped with radar integration and object tracking. The recently developed radar integration program connects the camera to the radar software system. When the radar detects an object, the cameras automatically track to that location.



**SAM Electronics**

NACOS features integration for one man bridge operations; new generation of radar/pilot series and automatic speed control. To control the vessel's safe track considering navigation and collision avoidance is the main task of the officer on watch.



**CCWS**

Designed by Coffin World Water Systems (CWWS), ULTRA-SEP Bilge Water Separators were the first systems in the world certified by the USCG to the standard of the IMO's new resolution MEPC.107.(49). USCG certifies of approval issued to all eight available ULTRA-SEP models.



**Marine Gangways**

Marine Gangways maintains an inventory of common component parts allowing for quick response to critical near-term requirements of clients. The company not only provides new products, but can repair and update existing gangway. The products are assembled from component parts by a G-3 certified welder.



**iCan**

iCan fully-sealing containers are designed to ensure fluid cleanliness between bulk storage units (drums or totes) and the top-off point. In addition, the same seals that keep the dirt out also keep the fluids in. Consider iCan for a better way to store, identify and dispense industrial fluids.



**Cat Pumps**

Cat Pumps introduces the new Mag-Jet Valve for jetting. The Mag-Jet uses a special SS magnetic valve and a super strong corrosion resistant magnet to hold one inlet valve open, creating a strong pulse-jetting action to power nozzles through the toughest clogs.



**FCI Watermakers**

FCI Watermakers offers the Neptune, now available in a wall-mount configuration, ideal when water demands are high, but space is limited. Combining modular flexibility with the convenience of a framed unit, the Neptune is suitable for large yachts, commercial vessels and island homes.



**Transas**

The Transas S-VDR 3100 is designed to meet and exceed the requirements of the IMO resolution MSC.163 (78) as well as A861 (20). It offers additional recording capabilities beyond IMO requirements such as ARPA and AIS. It features playback inside Navi-Sailor ECS. It features an ultra compact design.



**JLMD**

The JLMD System is a pre-installed system allowing access to the highest and lowest point of each tank whatever the position of the angle of casualty. The JLMD system can be installed on any kind of cargo or bunker tank. It enables immediate access to the tanks of a sunken ship and quick recovery of its contents.



**Altair**

The Altair Single-Gas Detector from MSA Instrument Division features three sensor options: carbon monoxide, hydrogen sulfide and oxygen. Carbon monoxide and hydrogen sulfide versions can operate for over two years. Advanced design offers superior dust and water protection and high resistance to RFI.



**Delta Wave**

Delta Wave Communications launched RigTrac system. It is a solution used for rig and asset tracking. The system beta tested in 2005 Hurricane season in the GoM and performed with zero errors. RigTrac offers a feature in that constant monitoring is not required until an asset moves from its designated location.



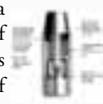
**Elmridge**

All-ReadyComplete First Aid System, developed in partnership with the National Safety Council, contains essential supplies & easy instructions with illustrations. Eleven different care packs. Easily integrates into existing first aid training programs and allows companies to meet OSHA standards.



**Bernard**

Bernard will provide a Q-Gun and samples of Centerfire consumables with the purchase of most industrial wire feeder products and bundled MIG welding systems from Miller Electric Mfg. Co. Bernard has also implemented 'Choose Your Weapon' Gun Exchange program, allowing end-users to get the right gun for their application.



**ASA/Jensen**

ASA/Jensen Marine's Voyager Observation System can be utilized as a way to keep watch over the engine room or sleeping quarters. Using the system to for potential fire hazards is becoming is a way to stay informed of the boat's inner workings. As another option, the observation system can also be used as a security system.



**Parker**

Parker Engineered Polymer Systems (EPS) Division has published a 434-page comprehensive Rotary Seal Design Guide (Catalog EPS 5350/USA) which is poised to become the sealing industry's premier engineering guide for rotary sealing applications.



**Mustang**

Mustang Survival Auto Hydrostatic PFD Wins MAATS 2006 Innovation Award For Safety. The Mustang Survival Auto Hydrostatic Inflatable Personal Flotation Device (PFD) was recognized with the Innovation Award for Safety at the Marine Aftermarket Accessories Tradeshow (MAATS) in Las Vegas.



# ADVERTISER INDEX

**GET FREE INFORMATION ONLINE at: [www.maritimeequipment.com/mr](http://www.maritimeequipment.com/mr)**

Page#	Advertiser	Website	Phone #	Page#	Advertiser	Website	Phone #
6	<b>ABB Turbocharger AG</b>	www.abb.com	(203) 750-2200	C4	<b>Karl Senner, Inc.</b>	www.karlsenner.com	(504) 469-4000
12	<b>ACR Electronics</b>	www.acrelectronics.com	(954) 981-3333	30	<b>King Engineering</b>	www.king-gage.com	(734) 662-5691
26	<b>AG Marine</b>	www.agmarine.com	(253) 851-0862	35	<b>Kobelt Manufacturing</b>	www.Kobelt.com	(604) 590-7313
EL	<b>AIG Commercial Equipment Finance, Inc.</b>	www.aigcef.com/marine.html	(972) 987-3720	44	<b>LIFE Industries</b>	www.boatlife.com	(800) 382-9706
39	<b>Alcotec</b>	www.alcotec.com	(231) 941-4111	28-29	<b>Macgregor</b>	www.macgregor-group.com	46-31-85-09-00
41	<b>Allied Shipbuilders Ltd.</b>	www.alliedship.com	(604) 929-7901	41	<b>Marathon Petroleum</b>	www.marathon.com	(713) 629-6600
26	<b>Americ Corporation</b>	www.americ.com	(800) 364-4642	23	<b>Marine Equipment, Inc.</b>	www.marineequipmentinc.homestead.com	(281) 477-8597
3	<b>American Bureau of Shipping</b>	www.eagle.org	(281) 877-5800	32	<b>Maritime Security Expo 2006</b>	www.maritimesecurityexpo.com	(301) 493-5500
44	<b>Anchor Marine</b>	www.anchormarinehouston.com	(713) 644-1183	43	<b>Mascoat Products</b>	www.mascoat.com	(800) 549-0043
20	<b>BMT Fleet Technology Limited</b>	www.fleetech.com	(613) 592-2830	24	<b>MICAD Marine</b>	www.micadmarine.com	(866) 779-7779
11	<b>Bollinger Shipyards, Inc.</b>	www.bollingershipyards.com	(985) 532-2554	14	<b>Military Sealift Command</b>	www.sealiftcommand.com/MR	(888) 228-5509
17,19	<b>BOURBON</b>	www.bourbon-online.com	33 (0) 1-40-12-86-16	33	<b>MOPS Insurance</b>	www.moplicenseins.com	1 (800) 782-8902
31	<b>Bradford Grand Bahama</b>	www.bradford-grand-bahama.com	(242) 352-7711	4	<b>Motor-Services Hugo Stamp Inc.</b>	www.mshs.com	(954) 763-3660
5	<b>CapRock Communications</b>	www.CapRock.com	(832) 668-2300	34	<b>Offshore Communications 2006</b>	www.offshorecoms.com	(772) 221-7720
18	<b>CD-adapco Group</b>	www.cd-adapco.com	(631) 549-2300	18	<b>Orkot Marine</b>	www.orkotmarine.us	1 (800) 546-7568
41	<b>Coastal Marine Equipment, Inc.</b>	www.coastalmarineequipment.com	(228) 832-7655	8	<b>R&amp;R Marine Fabrication &amp; Drydock</b>	www.rmarine.com	1 (888) 484-0860
36	<b>CSD North America</b>	www.csdsealingsystems.com	(603) 641-3914	39	<b>Rapp Hydema</b>	www.rappmarine.com	47-75-55-01-00
36	<b>Deansteel Manufacturing</b>	www.deansteel.com	(210) 226-8271	37	<b>Rolls-Royce Marine</b>	www.rolls-royce.com	(401) 224-2130
24	<b>Detyens Shipyard, Inc./ Enman and Associates</b>	www.detyens.com	(904) 318-0909	40	<b>SEATRADE Middle East</b>	www.seatrade-middleeast.com	971-4-3245344
44	<b>Don Sutherland Photography</b>	www.don-sutherland.com	(718) 447-3908	2	<b>ShipConstructor Software, Inc.</b>	www.ShipConstructor.com	(250) 479-3638
13	<b>ESAB Welding &amp; Cutting Products</b>	www.esabna.com	(843) 669-4411	38	<b>Skookum</b>	www.skookumco.com	1 (800) 547-8211
30	<b>EVAC North America Inc.</b>	www.evac.com	(815) 654-8300	36	<b>Smith Berger Marine</b>	www.smithberger.com	(206) 764-4650
15	<b>Ferro Corporation</b>	www.ferro.com	(574) 935-5131	27,43	<b>SNAME</b>	www.SNAME.org	(201) 798-4800
20	<b>Generon IGS</b>	www.generon.com	713) 937-5200	36	<b>Superior Energies, Inc.</b>	www.insulationsei.com	(409) 962-8549
37	<b>Imes, Inc.</b>	www.imesinc.com	(888) 998-3787	C3	<b>Telenor</b>	www.telenor.com/satellite	1 (301) 838-7700
23	<b>In-Place Machining</b>	www.inplace.com	(800) 833-3575	C2	<b>W &amp; O Supply</b>	www.wosupply.com	1 (800) 962-9696
21	<b>Interstate Diesel</b>	www.interstate-mcbee.com	(800) 321-4234	9	<b>Walz &amp; Krenzer, Inc.</b>	www.wkdoors.com	(203) 267-5712
7	<b>Jeffboat, Inc.</b>	www.jeffboat.com	(812) 288-0273	1	<b>Wooster Hydrostatics</b>	www.woosterhydrostatics.com	(330) 263-6555

The listings above are an editorial service provided for the convenience of our readers.  
If you are an advertiser and would like to update or modify any of the above information, please contact [productionmanager@marinelink.com](mailto:productionmanager@marinelink.com)

## Senior Fleet Safety Officer

Job Location: USA, Houston, TX

BP Shipping is the center of the Group's marine expertise and is responsible for chartering and operating an international fleet of owned and controlled crude and product tankers, including gas carriers for the BP Group and third parties. BP Shipping also provides marine expertise and services to other parts of the BP Group.

The Senior Fleet Safety Officer will work in a high performing team of operational and technical professionals based in the region and will be responsible for the safe and effective operation of BP's operated fleet and will provide safety expertise to the rest of the BP Shipping team in Houston.

BP Shipping has in place a quality assurance system aimed at providing continual improvement and providing assurance that its operational activities are in compliance with BP Group expectations, regulatory requirements and its own high operating expectations. The purpose of the role is to provide support to the Fleet Safety Advisor in the development, implementation and monitoring of safety programs and marine operational standards of BP Shipping's operated and time charter vessels in accordance with BP Group expectations, OSHA regulations, and industry specific regulations.

The Senior Fleet Safety Officer provides marine operational Health, Safety and Environment (HSE) support to the HSE Regional Manager in emergency response, incident reporting, and administration of shore-based safety activities in the region. Accountabilities include:

- Provide advice and guidance to the fleet and the superintendents regarding safety and health activities, including selecting safety equipment, environmental initiatives and health programs.
- Provide advice and guidance on current and new local legislation affecting safety, loss control and environmental management.
- Support regional reporting activities for the BP Shipping Business Unit.
- Assist the Health, Safety, Security and Environment (HSSE) Regional Manager in the administration of emergency response plans, business continuity plans, and notification systems, including the development of participation in an administration of drills and training activities.
- Provide or coordinate relevant safety training, including new hire orientation in the Houston office, technical safety training to superintendents and other BP Shipping staff, and core value safety training for contractors in support of the Operations Assurance team and vetting.
- Conduct HSE and International Safety Management auditing of the owned/operated fleet, time charter fleet, and ship repair yards.
- Provide on-site HSE support to the fleet during dry-dock and repair periods.
- Coordinate the implementation of group standards under the guidance of the HSSE Regional Manager.
- Conduct surveys of onboard activities,

including bridge management audits and Display Screen Equipment assessments.

- Monitor onboard training of officers and crew, assessment of life saving appliances, fire fighting equipment and other appropriate equipment as necessary.
  - Demonstrate and advise junior officers on how to develop safety training lectures.
  - Utilize behavior based safety to improve safety onboard and on-shore.
  - Conduct and support root cause analysis investigations and follow-up of recorded incidents.
  - Support crew trainers and fleet safety training officers, including monitoring progress, evaluating performance, and reviewing reports.
- Required Qualifications:
- Minimum of a Bachelor's degree in Science, Mathematics or a similar discipline.
  - Minimum of 5 years of experience in a ships officer or engineering capacity.
  - Marine license and/or certificate of Chief Officer or Second Engineer or higher.
  - Legal authorization to work in the US on a full-time basis for anyone other than your current employer.
  - The willingness and ability to travel up to 50% globally and commit to being away from home for up to 2 months at any one-time.

Preferred Qualifications:

- A minimum of 2 years of experience in a direct or supporting safety or health related role, in an industrial or maritime environment.
- A minimum of 2 years of experience supervising, leading and/or managing small teams.
- A minimum of 2 years of experience with HSE auditing.

A detailed job description and application process can be viewed online: [www.bp.com/careers/us](http://www.bp.com/careers/us), click on "Experienced Hires," then click "Search by job number" and enter the specific job #6971 in the keywords/job ID field. The successful applicant must submit and pass a drug-screening test prior to employment and may be required to participate in a random drug-screening program. Relocation will be in accordance with current BP guidelines.

EOE, M/F/D/V.  
BP CAREERS  
BP

Email: [BPCAREERS@BP.COM](mailto:BPCAREERS@BP.COM)  
Web: <http://www.bp.com/careers/us>

BP CAREERS  
BP

## Marine Engineering Manager

Job Location: USA, Riviera Beach, Florida  
We are currently looking for a Marine Engineering Manager at the company's headquarters in Riviera Beach, Florida. This person will manage and direct the repair and maintenance programs covering Tropical's fleet of vessels, including major repairs and dry dockings. Monitors the operating budgets and vessel expenses. Tropical Shipping, owned by Nicor, Inc. (NYSE:GAS), is one of the leading containerized cargo carriers in the Caribbean region. From its headquarters at the Port of Palm Beach, Tropical currently serves

35 ports throughout the Bahamas, Caribbean and South America. Requirements for this position are: Bachelor's Degree in Marine Engineering or related field. One year as Chief Engineer of Motor Vessels, sailing at sea. Experience must include shore side, operation and maintenance of heavy fuel medium speed engines. Technical knowledge in electrical, mechanical, hydraulic and diesel engines required. Knowledge of safety and regulatory compliance.

Chief Engineers License and valid Passport. Requires the ability to travel extensively for voyage repairs.

We offer a competitive benefits package including 401(k) and relocation. For additional company information, and to fill out an on-line application, visit [www.tropical.com](http://www.tropical.com), e-mail a resume and cover letter to [careers@tropical.com](mailto:careers@tropical.com), or fax to 561-840-2956.

DFWP/EOE  
careers  
Tropical Shipping  
Fax: 561-840-2956  
Email: [careers@tropical.com](mailto:careers@tropical.com)  
Web: <http://www.tropical.com>

## Deck Engineer Machinist

Job Location: USA  
Announcement #: 05-328-02-EX  
Title, Series, Grade  
(Code)

Deck Engineer Machinist, WM 9952-15 (328)

Base Salary: \$33,832 - \$39,270 Per Annum

Type of Appointment: Excepted Service Career-Conditional

Opening: 13 June 2005, with periodic cut-offs

Location: MSC Vessels Worldwide

Who May Apply: Open to all qualified United States Citizens.

Duties: The Deck Engineer Machinist is responsible for maintaining, repairing, and operating deck machinery, Underway Replenishment (UNREP) machinery, and material handling equipment. This includes but is not limited to the hydraulic systems, cargo fluid systems (piping and pneumatic systems), internal combustion engines, material handling equipment (fork trucks, pallet jacks, etc.), cargo handling equipment (cranes, booms, winches, etc.), ship's boats including engines, associated machinery, davits and winches, hull structure (bulkheads, decks, bulwarks, railings), mooring machinery and UNREP machinery. The Deck Engineer Machinist must also be proficient in the use of machine shop equipment (lathes, milling machines, drill presses, arbor presses, etc.), hand tools, hand held power tools, burning, brazing, and welding procedures (Oxy-Acetylene cutting and brazing systems, carbon arc, stick welding) and welding systems. The incumbent will assist, observe and perform "Quality Assurance" on work done by shipyard or other shore side repair personnel, as directed. The incumbent must be proficient in the performance of fire, boat, and damage control drills, taking initiative to perform emergency drills as required. The

Deck Engineer Machinist is directly responsible to the First Assistant Engineer and works under the supervision of the Second Assistant Engineer (Cargo).

Minimum Eligibility Requirements: Must be a United States Citizen, minimum age of 18; possess a current U. S. Passport within seven months of expiration, and a current United States Coast Guard Merchant Mariner's Document (USCG MMD) within ten months of expiration. The following endorsement(s) are required: Deck Engineer, or Machinist, or Qualified Member of the Engine Department (QMED) any rating. Note: If you are requesting 10-point preference, you must provide DD-214 Certificate of Discharge and the SF-15 Application for 10-Point preference and supporting documentation.

Note: If you are requesting 10-point preference, you must provide DD-214 Certificate of Discharge (Member Copy 4), the SF-15 Application for 10-Point preference and a copy of your VA letter. Evaluation Criteria: Applicants who meet the Minimum Qualification 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 for successful job performance. A ranking 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. Ability to Plan, Organize, Interpret, and/or Analyze Information and Supervise the work of others.
2. Knowledge of Cargo Loading and Discharge Operations.
3. Knowledge of Current Navigation Methods and Equipment.
4. Knowledge of Shipboard Safety, Lifesaving, CBR-D, and Firefighting Equipment, and Programs.

To earn the highest rating possible, it is your responsibility to submit detailed information in response to the KSAs listed above. Evaluations, ship assignments, awards, training, education, commercial experience, etc., will also be part of the rating and ranking process.

Employment Requirements: MSC Civilian Mariner positions are subject to drug urinalysis testing, participation in vaccine immunization programs, require the candidate to pass a physical exam and obtain a security clearance. In addition to successfully completing the medical examination (arranged by MSC), 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. Entry-level positions require candidates to pass an English Language Competency Test. A tentative offer of employment will be rescinded if the selectee fails to report to any of the scheduled appointments, fails the physical examination, language competency test, drug test, lacks the certification requirements, or is unable to obtain a security clearance. MSC employees are required to participate in direct deposit/electronic funds transfer as the standard method of payroll payments. MSC employees are required to 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.

**How to Apply:** ALL documents MUST be POSTMARKED by the cut-off or closing date of this announcement.

Candidates for this announcement must submit the following forms completed, signed and dated:

1. Optional Application for Federal Employment (OF 612) including social security number, US Citizenship, veteran's preference and previous federal employment. For forms visit [www.sealiftcommand.com](http://www.sealiftcommand.com).

2. Responses to the job-related factors (KSA's) identified in Evaluation Criteria

above

3. Declaration of Federal Employment (OF-306), including Applicant's Statement of Selective Service Registration Status. For Selective Service information, visit [www.sss.gov](http://www.sss.gov).

4. A copy of the front and back of your current Merchants Mariners Document (MMD) with a minimum of ten months of validity, US Passport with at least seven months of validity, and licenses, certificates, etc.

5. If you are a current or prior federal government employee, you must include a Standard Form

SF-50, Notice of Personnel Action that documents your government service.

6. If claiming Veteran's Preference, you must provide supporting documentation (SF-15 Application for Preference, ([http://www.opg.gov/forms/pdf\\_fill/sf15.pdf](http://www.opg.gov/forms/pdf_fill/sf15.pdf)) DD-214's Member Copy-4, or VA Certificate verifying disability). Additional information on Veteran's Preference is available at [www.opm.gov/veteran](http://www.opm.gov/veteran).

Late and/or incomplete applications will not be processed. We will not return or copy applications and supporting documents once submitted. Applicants should make copies before submitting documents.

**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](mailto:civmar@marinersupport.com) or call our toll free Recruitment hotline at 877-JOBS-MSC (1-877-562-7672).

Please also visit our website at [www.sealiftcommand.com](http://www.sealiftcommand.com).

**NOTE: FAILURE TO PROVIDE REQUIRED INFORMATION REQUESTED FOR THIS POSITION WILL ADVERSELY AFFECT YOUR ELIGIBILITY.** Federal job applicants who make a false statement in any part of the application could be turned down for the job; fired after beginning work; or subject to fine, imprisonment (U.S. Code, title 18, section 1001), or other disciplinary action. **MILITARY SEALIFT FLEET SUPPORT COMMAND IS AN EQUAL OPPORTUNITY EMPLOYER.**

Selection for this position will be made solely based on merit, fitness, and qualifications without regard to race, sex, color, creed, age, marital status, national origin, non-disqualifying handicap conditions, or any other non-merit factors.

The agency provides reasonable accommodation to applicants with disabilities, where appropriate. Determinations of whether an accommodation is appropriate shall be made by the agency as soon as practicable, after the initial application process and shall be made with regard to all applicable statutes and regulations. If

assistance is required to complete the application process, interested applicants should call our CivMar Support Center at the above number and refer to the "How to Apply" section of this announcement.

Civmar Support Center  
Military Sealift Command  
6353 Center Drive, Building #8, Suite 202  
Norfolk VA 23502

Email: [civmar@marinersupport.com](mailto:civmar@marinersupport.com)

Web: <http://www.sealiftcommand.com>

## Maritime Educator/Simulator Instructor

**Northeast Maritime Institute**, based in Fairhaven MA and a leader in maritime education since 1981, is accepting applications and resume's for the position of a Maritime Educator & Simulator Instructor with experience in the Western Rivers and Gulf Coast tug and barge industry. This position will be part of a team of instructors teaching a USCG approved 15 month modulated program for the Western Rivers segment of the industry leading to a Mate/Steersman USCG License.

Candidates will have a strong maritime background, with proven educational experience. A successful candidate will have a background of successful teaching experiences, team work, compassionate people skills, high ethical standards, current USCG License as Master of Towing Vessels w/ Inland & Western Rivers endorsements, sailing experience in the last 5 years on those endorsements, and a Bachelor's degree. Desirable qualities of a candidate would have; simulator instructor experience on TRANSAS marine simulators, an advanced maritime degree, maritime training in the tug and barge industry and teaching experience at a USCG approved training facility.

This position is a full time salaried position with benefits. A personal interview is required. NMI will accept applications and interview until the position is filled. Interested persons should send a cover letter and resume with copies of all applicable certifications and licenses by mail, email or fax to: Capt. Robert C. Glover III, Director of Education, Northeast Maritime Institute, 32 Washington Street, Fairhaven MA 02719; FAX 508-992-9184; [rglover@northeastmaritime.com](mailto:rglover@northeastmaritime.com) No Phone calls please. EOE. [www.northeastmaritime.com](http://www.northeastmaritime.com)

## Take Command of Your Career®

Military Sealift Command is actively recruiting for the following licensed positions:

### 3RD OFFICER 3RD ASSISTANT ENGINEER



**Third Officer** — This licensed deck officer performs watch standing duties and assists the Master and senior deck officers in carrying out their responsibilities. These may also include the collateral duties of Assistant Damage Control Officer, CBR-D Officer, or Special Services Officer. Position requires applicants to hold a Unlimited Any Oceans Third Officer License and a valid STCW 95 certificate, a Global Maritime Distress Safety and a Automated Radar Plotting Aid Certificates.

**Position opens 24 July 2006.**

**Third Assistant Engineer** — This licensed engineer position monitors the safe and efficient operation of engineering machinery, equipment and spaces. Also, performs routine maintenance and repair of machinery, observes engine/fire room repairs and work being done by shipyard or other shore side facilities. Position requires applicants to hold Third Assistant Engineer Steam or Motor or Gas Turbine Unlimited Horsepower License and a Valid STCW 95 certificate.

**Position opens 12 July 2006.**

If you are interested in one of these opportunities that offers on-the-job training, career advancement, steady pay and Federal benefits, visit our Web site at [www.sealiftcommand.com](http://www.sealiftcommand.com) or call 1-888-228-5509 to speak with a recruiter.



**MILITARY  
SEALIFT  
COMMAND**  
*Take Command of Your Career®*

MSC IS AN EQUAL  
OPPORTUNITY  
EMPLOYER AND A  
DRUG-FREE WORKPLACE.



Administration – Construction  
Crewing – Engineering  
Finance – M & R  
Operations – Sales

(Established 1969) P O Box 260 • Mercer Island, WA 98040 • 206-232-6041

### HEALTH, SAFETY, ENVIRONMENT & QUALITY MANAGER

International Ship Management Company has an immediate requirement for an HSEQ Manager based in Miami. Focus will be to drive safety and environmental compliance forward and achieve industry-leading HSEQ performance.

Successful candidate must have expert knowledge and practical experience in auditing, inspections, incident investigation, training, root-cause analysis and managing operational budgets.

Min. req.: Master's License, 5 yrs. Experience in office environment in key ISM-ISO-related role. PSV experience a plus. Will report to Dir of Ship Mgmt. Exc, comprehensive non-contributory benefits pkg offered. Salary commensurate with exp. Submit Resume to: [resourcec@gmail.com](mailto:resourcec@gmail.com). DFWP.

Applicants must have immediate right to live and work in the U.S.

## MARITIME INJURIES

Schechter, McElwee, Shaffer & Harris's attorneys have over 70 years of combined experience representing injured seamen, offshore workers and long-shoremen in cases nationwide. Our services are on a contingent fee basis - there is no bill or fee for our services unless we recover for you.

Schechter, McElwee, Shaffer & Harris, L.L.P.

Houston & Galveston, Texas

Nationwide 24-hour help line

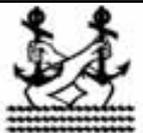
1-800 282-2122

(713) 524-3500

Website - [www.smslegal.com](http://www.smslegal.com)

2006 GLOBAL  
MARINE DIRECTORY  
**Over 330,000 Records!**  
FREE LISTING!  
The Global Marine Directory is used by marine industry buyers— more than 10,000 worldwide! Go to:  
[www.globalmarinedirectory.com](http://www.globalmarinedirectory.com)  
Standard (\$249) Professional (\$649)  
Order online at: [www.marinelink.com/directory.html](http://www.marinelink.com/directory.html)

Mates, AB's, OS's  
Captains, Engineers  
Tankermen



Let us find the best job for you!  
**PROGRESSIVE MARINE**

Companies looking for qualified crew members, please call:

TEXAS - 281-689-7400 Fax: 281-689-7711  
LOUISIANA - 504-834-1114 Fax: 504-834-1181

#### HELP WANTED



### VANE BROTHERS

— Over a Century of Maritime Excellence —

Baltimore ★ Norfolk ★ Philadelphia

**THE VANE BROTHERS COMPANY** is recruiting qualified candidates for positions on our brand new state-of-the-art marine transport vessels operating along the Northeastern Atlantic Seaboard. We offer highly favorable work schedules – 2 weeks on – 2 weeks off, as well as excellent opportunities for career advancement.

#### Tug Masters and Mates

Must possess a valid Master of Towing Vessels near coastal or greater endorsement. **Experience with petroleum barges necessary.** New York Harbor experience preferred.

#### Marine Engineers

Chief engineers for Coastal and Inland tugboats. Must possess a valid **DDE** (Designated Duty Engineers) license or greater. Valid **MMD** (Merchant Marine Document) required. Two years engine room experience required.

#### Tankermen

Current **MMD** and **PIC** endorsement required; experience preferred.

If you have the skills and experience to qualify for any of these positions, please contact **Michael Freitas**, Fleet Recruiter, at 410-735-8235 or fax your resumé to 410-735-8160.

[www.vanebrothers.com](http://www.vanebrothers.com)

# Get Onboard with us!

TECO Ocean Shipping is accepting applications for all Chief Engineer-Unlimited and First Assistant Engineer-Unlimited licensed positions.

Must possess a valid USCG Chief Engineer-Unlimited or First Assistant Engineer-Unlimited license, USGC Merchant Mariners Document, STCW 95 endorsement for motor vessels of unlimited horsepower and a current U.S. passport. As a TECO Ocean team member, you'll enjoy the following benefits:

- ▶ Equal time
- ▶ Medical/dental benefits
- ▶ Paid holidays
- ▶ Tuition reimbursement program for approved classes
- ▶ 401-k savings plan with a company match
- ▶ Performance-based incentive compensation program
- ▶ Retirement plan
- ▶ Paid travel

#### TECO Ocean Shipping

Marine Human Resources  
1300 East 8th Ave, Suite S-300  
Tampa, Florida 33605

Please fax a copy of your documents to:  
(813) 242-4849

Apply Online at [tecoceanshipping.com](http://tecoceanshipping.com) | EOE



## USA Shore based Shipping Recruitment

To \$85k

### Project Manager

Our client, a provider of quality ship repair services, needs Project Managers to plan, direct, and coordinate activities of project to ensure that goals are accomplished within the prescribed time frame. Bachelors Degree and two years shipyard related experience required. Salary to \$85k with excellent benefits package.

To \$60k

### Estimator

Operator of one of the largest ship repair facilities in the US needs Estimators to prepare and administer accurate labor and material estimates for all bid packages and growth work. Bachelors Degree or two years related experience and training required. Salary to \$60k with excellent benefits package.

To \$90k

### Marine Advisor

Our client, an established offshore consultancy, requires a Marine Adviser with Master Mariner/Captain Unlimited license. 5 years experience in the offshore oil and gas field of operation required. Salary to \$90k. Excellent benefits including a bonus scheme.

**Director of Marine Operations**  
Casino/Cruise Company - \$100k

**HSE Manager**  
Offshore Support Vessels - \$80k

**Marine Surveyors**  
Nationwide, Caribbean, S. America - \$75k

**Technical Manager**  
Offshore Support Vessels - \$80k

**faststream**  
recruitment inc

t: +1 954 467 9611 e: [shipping@faststream.us](mailto:shipping@faststream.us) [www.faststream.us](http://www.faststream.us)  
View the latest shore based shipping, marine & offshore jobs online



## Vessels for Sale/Charter • New/Used Equipment

[www.MaritimeEquipment.com](http://www.MaritimeEquipment.com)



*Specializing In Barges*

- ◆ Single or Double Hull, Inland or Ocean-Going
- ◆ Design, Construction & Modification
- ◆ Chartering & Sales

**ZIDELL**  
MARINE CORPORATION

Ask for Bill Gobel  
503-228-8891 1-800-547-0259  
3121 SW Moody Avenue, Portland, Oregon 97239

**Marine Link** .com World Maritime News

[www.marinelink.com](http://www.marinelink.com)

Featuring the online, interactive editions of **MARITIME REPORTER AND ENGINEERING NEWS** and **MarineNews** magazines; the world's two largest circulation marine industry publications. Up-to-the minute industry news combined with our award-winning editorial has made MarineLink the most popular online media for every possible aspect of maritime business!

**186,000 unique users!**  
**1,279,000 hits per month!**

### "BID NOTICE"

**WOODS HOLE, MARTHA'S VINEYARD AND NANTUCKET STEAMSHIP AUTHORITY**  
**INVITATION FOR BIDS**  
**SALE OF THE M/V FLYING CLOUD 41 METER HIGH-SPEED CATAMARAN**  
**CONTRACT NO. 14-06**



The Woods Hole, Martha's Vineyard and Nantucket Steamship Authority (at times hereafter referred to as the "Authority" or the "Owner") will accept sealed bids until **2:00 p.m. prevailing time, on Wednesday, September 13, 2006**, from responsible and eligible bidders to purchase from the Steamship Authority the **M/V Flying Cloud, a 41 Meter High-Speed Catamaran**, at the Authority's Procurement Office, which is located in the Authority's General Offices on the second floor of the Woods Hole Terminal, P.O. Box 284, Foot of Railroad Avenue, Woods Hole, Massachusetts 02543, at which time and place the bids will be publicly opened.

Copies of the bid documents may be obtained from the Steamship Authority's Procurement Office, telephone (508) 548-5011, extension 515, during regular business hours, Monday thru Friday, 8:30 a.m. till 4:30 p.m. The vessel, currently running out of our Hyannis Terminal, located in Hyannis, Massachusetts, may be inspected by appointment, by calling Tim Twomey, 508-548-5011 ext. 222.

All bids submitted must be accompanied by a Deposit in the form of a certified check on, or a treasurer's or cashier's check issued by a responsible bank payable to the "Woods Hole, Martha's Vineyard and Nantucket Steamship Authority" in the name of which the contract is to be executed. The amount of such **Deposit shall be \$50,000.00**. The Deposit may be applied toward the purchase price. Deposits of the unsuccessful bidders will be returned.

The Steamship Authority reserves the right to reject any or all bids or make the award with or without modifications and determined to be in the best interest of the Authority.

**Vessels for Sale/Charter • New/Used Equipment**  
**www.MaritimeEquipment.com**



**Southern Scrap Recycling**

© Metal Recyclers Since 1900

We buy barges and other marine vessels for scrap. Serving the inland waterways and Gulf coast area.

MOBILE • MORGAN CITY • NEW ORLEANS

Call 1-800-467-2727 ext. 359

**RASMUSSEN EQUIPMENT COMPANY**



**Used AmClyde 15HP Capstan**

11,000 lb haul-in cap.  
31,000 lb Bollard rating.

\$18,500 ea.

Seattle, WA

(800)227-7920 • equipmentsales@rasmussenco.com

**RASMUSSEN EQUIPMENT COMPANY**



Berger Fairleads • Anchor • Spud Winches • Skagit Clyde • Manitowoc • Deck Winches

(800)227-7920 • equipmentsales@rasmussenco.com

**Products & Services • www.MaritimeEquipment.com**

**USCG License Software**

Affordable - Merchant Marine Exam Training

<http://hawsepipe.net>

Freelance Software, 39 Peckham Place, Bristol RI 02809  
(401)556-1955 - sales@hawsepipe.net



STOCKS IN MAJOR U.S. PORTS  
ASSOCIATED COMPANIES IN MEXICO,  
EUROPE AND THE FAR EAST

21 CHARLES ST., WESTPORT, CT 06880  
Ph: 203-226-5200 Fx: 203-226-5248  
ankermarinepaint@earthlink.net

**SEASCHOOL**®

•USCG Approved OUPV to MASTER/MATE 200 GRT  
STCW-95 BST

Call Today: 1-800-237-8663

[www.seaschool.com](http://www.seaschool.com)



Marine filters, strainers and screens  
**888-526-7795**  
 Yankee Wire Cloth Products, Inc.  
 221 W. Main St.,  
 West Lafayette OH 43845  
 Fax: 740-545-6323  
[www.yankeewire.com](http://www.yankeewire.com)

**WORLD-WIDE TURN-KEY TOW-DELIVERIES, TOW-  
PREPARATIONS, ANY DWT, SURVEY-& INSURANCE  
ASSISTANCE, DEMO-VESSEL & EQUIPMENT SALES.**  
<http://www.nordicship.com>

**TANKS** Custom Fuel Cell Bladder Tanks  
 Diesel or Gas

- Impact Resistant
- Non-Expanding
- Vibration Proof
- Lightweight
- Fully Baffled

MADE TO FIT  
WORK BOATS, PATROL  
BOATS, RACE BOATS.

**AJUL**® TOLL FREE 800-526-5330

**AERO TEC LABORATORIES, INC.**  
 Spear Road Industrial Park, Ramsey, NJ 07446-1251 USA  
 Phone: 201-825-1400 Fax: 201-825-1962

**DAVIT SALES INC.**  
 &  
**DAVIT ENGINEERING**  
 Naval Architects & Marine Engineers

**MARINE CRANES**  
**MARINE ENGINEERS**  
**OIL SPILL BOOM**

**CRANE TYPES**  
 FIXED BOOM  
 TELESCOPIC BOOM  
 KNUCKLE BOOM

PERMANENT BOOM  
 CONTRACTOR BOOM

VISIT US ON THE WEB AT  
**WWW.DAVITSALESINC.COM**

**CRANSTON, RI \* JEFFERSON VALLEY, NY**  
 TEL: 914 962 4544 FAX: 914 962 5418 E-MAIL: DAVIT1@AOL.COM

**Redwise**  
 GLOBAL SHIP DELIVERY & CREWING

**Redwise Maritime Services B.V.** Amersfoortseweg 12E,  
 3751 LK Bunschoten-Spakenburg, The Netherlands  
 Phone +31 (0)33 421 7860 (24 hrs). Fax +31 (0)33 421 7879

info@redwise.nl www.redwise.com



PERCEPTION®

Integrated Shipyard Management Systems

Independent Cost Estimating, Planning & Scheduling Services

Cost Estimating • Planning & Scheduling • Purchasing & Material Control • Work Orders & Time Charge Control • Job Costing & Earned Value Performance Reporting

927 West Street, Annapolis, Maryland USA 21401

Phone +410-263-8593, FAX +410-267-0503

Email: [info@sparusa.com](mailto:info@sparusa.com)

Visit our web site: [www.SPARUSA.com](http://www.SPARUSA.com)

## TURBOCHARGERS !!!

World Wide Exchange Program & Service

E-mail: [ramturbo@bellsouth.net](mailto:ramturbo@bellsouth.net)

321-868-2920 • (Fax only: 321-868-2921)

Thermax®



FIPRO  
FIRE PROTECTION

INTERIOR JOINER PANELS  
NON-COMBUSTIBLE . NON-TOXIC

- Walls and Ceilings (C, B-0, B-15, & A-60)
- Certificates meeting requirements of USCG, SOLAS, IMO, FTP CODE, MARED, Transport Canada.

Other marine products include METALCORE (Arborite-Wilsonart HPL fused to Aluminum Sheets) -- FURNITURE (BUNKS, DRESSERS, WARDROBES, NIGHT STANDS) -- Laminated plywood & chipboard.

WEB: [www.ThermaxMarine.com](http://www.ThermaxMarine.com)

WEB: [www.Panelspec.com](http://www.Panelspec.com)

WEB: [www.fipro-ag.com](http://www.fipro-ag.com)

E-MAIL: [sales@ThermaxMarine.com](mailto:sales@ThermaxMarine.com)

Tel: 813-264-2656

800-947-9422



Winch used on Irving built tugs for Panama Canal Authority.



Timberland Equipment Limited

P.O. Box 490, 459 Industrial Avenue

Woodstock, Ontario, Canada N4S 7Z2

Tel: (519) 537-6262 • Fax (519) 539-5853

email: [sales@tewinch.com](mailto:sales@tewinch.com) • Web Site: [www.timberland.on.ca](http://www.timberland.on.ca)



Almon Johnson Limited

5301 Shreveport-Blanchard Hwy Shreveport, LA 71107

Tel: (800) 387-1892

- Towing Machines • Hawser Winches • Traction Winches • Anchor • Windlasses
- Capstans • Oceanographic Winches • Cable Laying Systems • Hose Reels • Fairleaders
- Chain Jacks & Stoppers

## Need Financing?

for

Any Type of Working Vessel  
Or A Repower/Rebuild  
Or Marina Equipment

And Your Bank Really Isn't Interested?  
Or You're Just Getting Started? Or your  
Credit is Less Than Perfect?

We Offer Custom Lease and Sale/Leaseback  
Financing at Competitive Rates to the  
Marine Community!

Contact: Capt. Bill Anderson

Ph: 804-733-4827

Fax: 804-733-4857

Email: [DominionMarine@aol.com](mailto:DominionMarine@aol.com)

Dominion Marine Leasing LLC.

Marine Financing Specialists

Many Styles Available

100% glare Reduction  
5 Mil thick  
Mylar  
Sun Screens

Bunk Curtains

IMMEDIATE DELIVERY ON SELECTED STYLES

(718) 983-5600 (800) 336-6857 Fax (718) 983-9127

Website: [metromarine.com](http://metromarine.com) E-mail: [sales@metromarine.com](mailto:sales@metromarine.com)

METRO MARINE DESIGN ASSOCIATES MADE IN THE USA

## DEHUMIDIFIERS FOR EVERY SITUATION

- Prevent rust and corrosion
- Stop dampness from condensation
- Reduce ventilation, heating, and maintenance costs
- Prevent unpleasant environments and odors
- Maintain controlled humidity
- Eliminate mold and mildew



CAPACITY OF 6 GALLONS TO 52 GALLONS/DAY



Ebac Industrial Products, Inc.  
700 Thimble Shoals Blvd. Suite 109  
Newport News, VA 23606

Telephone: 800-433-9011  
Fax: 757-873-3632

## Satellite Phones

Affordable Coverage  
Airtime 14¢ to 99¢/min

866-439-2412

Globalstar™  
GO FURTHER. DO MORE.

AETNA ENGINEERING  
A DIVISION OF LINDBY-HITZEL

Direction Indicating  
Shaft Tachometer

- ✓ Guaranteed accurate to 1 RPM
- ✓ Display shows F (Forward) or R (Reverse)
- ✓ Simple four wire installation
- ✓ No separate "Black Box" required
- ✓ Rugged - 2-Year Limited Warranty

Contact one of our engine specialists to assist you  
with your tachometer needs

0-379 Lake Michigan Dr. NW, Grand Rapids, MI 49504 USA  
Toll Free: 1-800-779-7962 Fax: 231-223-9467  
Email: [aetna@aetnaengineering.com](mailto:aetna@aetnaengineering.com)  
Web: [www.aetnaengineering.com](http://www.aetnaengineering.com)



## ♥ Tank Tender

The original precision  
tank measuring system!

Accurate tank soundings have never been easier when one TANK TENDER monitors up to ten fuel and water tanks. Reliable, non-electric, medical grade components; accurate liquid levels; fast installation! Only one small hole in tank top. Furnished as optional equipment by many first class yacht builders.



HART SYSTEMS, INC.

Gig Harbor, WA USA

[www.thetanktender.com](http://www.thetanktender.com)

253-858-8481 Fax: 253-858-8486

## RUSTIBUS

### REMOVES RUST & PAINT!

THE MOST POWERFUL MACHINES!

DAELSEIDE INC  
2000 Dairy Ashford, suite 440  
Houston, TX 77077  
Ph: 281 668 9330 - Fax: 281 668 9331  
E-mail: [dssinc@rustibus.com](mailto:dssinc@rustibus.com)

[www.rustibus.com](http://www.rustibus.com)



**www.maritimereplicas.com**  
 Most accurate and finest detailed ship models  
 e-mail: shipreplicas@yahoo.com • 1-305-386-1958

**Professional • www.MaritimeEquipment.com**



**A. K. Suda, Inc.**  
 NAVAL ARCHITECTS & MARINE ENGINEERS

- Concept & Contract Design
- Construction Drawings
- Transportation Analysis
- Owner Representation

3004 19th Street • Metairie, LA 70002  
 Ph. (504) 835-1500 • Fax (504) 831-1925 • info@aksuda.com

**M. ROSENBLATT & SON**  
 Naval Architects Marine Engineers



Serving the Maritime Industry and the United States Navy in 36 Worldwide Locations

www.amsec.com 757-463-6666

Serving the marine industry for over 140 years



**CRANDALL**  
 DRY DOCK ENGINEERS, INC.

- Consulting • Design • Inspection

Railway and Floating Dry Docks  
 Dry Dock Hardware and Equipment

Box 505804, Chelsea, MA 02150 (617) 884-8420 Fax: (617) 884-8466  
 www.crandalldrydock.com

**Naval Architecture  
 Marine Engineering  
 Project Management  
 Vessel Surveys  
 Legal • Negotiations**



www.acma-inc.com



**Alan C. McClure ASSOCIATES, INC.**  
 Naval Architects • Engineers

2600 S. Gessner, Suite 504, Houston, TX 77063  
 (713) 789-1840 • (713) 789-1347 FAX • info@acma-inc.com

**Boland Industrial Consulting Services, Inc.**  
 Equipment Reliability • Vibration Analysis • Laser Alignment • Lubrication  
 All Vibration and Alignment Problems

Office: (228)762-3172 Fax: (228) 762-3108  
 Cell: (251) 232-7163 P.O. Box 612  
 John S. Boland President Pascagoula, MS 39568



**GHS** Onboard Version Available!  
 General HydroStatics  
 Ship Stability, Strength and Salvage Software

**Creative Systems, Inc.**  
 Creators of GHS

P.O. Box 1910 Port Townsend, WA 98368 USA  
 phone: (360) 385-6212 fax: (360) 385-6213  
 email: sales@ghsport.com  
 www.ghsport.com/ghs

**BRISTOL HARBOR MARINE DESIGN**  
 Naval Architects / Marine Engineers

a division of  
 BRISTOL HARBOR GROUP, INC.

103 POPPASQUASH RD  
 BRISTOL, RI 02809  
 TEL 401.253.4318  
 FAX 401.253.2329

design@bristolharborgroup.com  
 www.bristolharborgroup.com

**CUNNINGHAM & WALKER**  
 MARINE CONSULTANTS, INC.

NAVAL ARCHITECTURE & MARINE ENGINEERING  
 MARINE HVAC ENGINEERING  
 MARINE ELECTRICAL ENGINEERING

345 OLD PLANTATION DR., ST. AUGUSTINE, FL 32086  
 TEL: 904-797-4785 FAX: 904-797-4785

**C. R. CUSHING & Co., INC.**  
 NAVAL ARCHITECTS, MARINE ENGINEERS,  
 TRANSPORTATION CONSULTANTS

30 VESEY STREET, 7TH FLOOR, NEW YORK, NY 10007  
 P: (212) 964-1180 F: (212) 285-1334 INFO@CRCCO.COM  
 WWW.CRCCO.COM

**CUNNINGHAM  
 MARINE HYDRAULICS CO., INC.**

Service Parts Repair Consulting

Authorized Sperry - Decca - C. Plath Dealer

**CMH HELE-SHAW, INC.**



1714 Willow Avenue  
 Hoboken, N.J. 07030  
 (201) 974-0570 # (800) 322-2641  
 FAX # (201) 974-0574

E-Mail Address:  
 cmh@cmhusa.com



**ALION**  
 SCIENCE AND TECHNOLOGY

Aligned with your needs.

**JJMA MARITIME SECTOR**

**Total ship design from analysis and development to life-cycle support.**

- Naval & marine engineering
- Naval architecture
- Industrial engineering & systems design
- Systems engineering
- Survivability, recoverability & vulnerability
- Signature engineering
- Combat systems integration
- Program & acquisition management

An employee-owned company serving the US Navy, DoD, civilian agencies and commercial customers.

4300 King Street, Suite 400  
 Alexandria, VA 22302  
 703.933.6687  
 www.alionscience.com/maritime

The ultimate stop for solving marine propulsion shafting vibration or design problems

**CADEA** www.cadea.hr

TRG M. PAVLONICIA 6 • HR-21000 SPLIT • CROATIA  
 PHONE: + 385 21 490 151 • FAX: + 385 21 490 154

**CDI Business Solutions**  
 Government Services

**CDI Marine Company** Shipbuilding Life Cycle Support  
 Naval Architects / Marine Engineers  
 904-805-0700

**The M&T Company** Military Aviation  
 Engineering / Technical Services  
 732-657-5600

JACKSONVILLE, FL • BREMERTON, WA  
 ISLANDIA, NY • PHILADELPHIA, PA  
 LAKEHURST, NJ • PATUXENT RIVER, MD  
 PASCAGOULA, MS • PORTSMOUTH, VA  
 SEVERNA PARK, MD • SAN DIEGO, CA  
 WASHINGTON, DC

Visit us at our web site at:  
 http://www.cdi-gs.com Email: cdi-gs@cdicorp.com



**EVERETT ENGINEERING INC.**

"INGENUITY UNLIMITED"

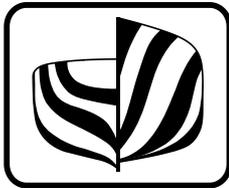
**NEW!** Main propulsion ABS certified shaft, sleeve and bushing weld repair & fabrication services up to 15" diameter and 50 feet in length

- Stainless & carbon steel cladding/weld repair
- Straightening and score/gouge filling

<http://www.everettengineering.com>

1420 W. Marine View Drive  
Everett, WA 98201

Tel: (425) 259-3117 Fax: (425) 258-1288

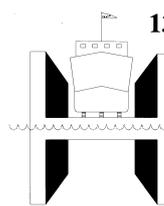


**ROBERT ALLAN LTD.**

NAVAL ARCHITECTS AND MARINE ENGINEERS  
TO THE INTERNATIONAL MARINE COMMUNITY

230 - 1639 West 2nd Avenue Vancouver, BC V6J 1H3 Canada  
Telephone 604-736-9466 www.ral.bc.ca Facsimile 604-736-9483

**HEGER DRY DOCK, INC.**



13 Water Street, Holliston, MA 01746

Engineering for all types of dry docks

- Design
- Docking Calculations
- Certifications
- Engineer/Diver
- Inspections
- U.S. Navy 1625C FCR's
- Dockmaster Training Classes

Phone: (508) 429-1800 Fax: (508) 429-1811  
www.hegerdrydock.com

**MSC MARINE SYSTEMS CORPORATION**  
MARINE ENGINEERS / NAVAL ARCHITECTS

HM&E Design Inspection CAD IETM Logistic Support Testing Programs

68 FARGO STREET, BOSTON, MA 02210  
TEL: (617) 542-3345 FAX: (617) 542-2461

INFO @ MSCORP.NET  
WWW.MSCORP.NET

**Marine Surveyor Course and Training**  
Standards based training for all vessels.

1-800-245-4425

[www.navsurvey.com](http://www.navsurvey.com)

**GEORGE G. SHARP, INC.**



22 CORTLANDT STREET, NEW YORK, NY 10007  
TEL (212) 732-2800 FAX (212) 732-2809

WASHINGTON (703) 548-4400  
VIRGINIA BEACH (757) 499-4125  
BREMERTON (360) 476-8896  
SAN DIEGO (619) 425-4211

[www.georgessharp.com](http://www.georgessharp.com)

MARINE SYSTEMS • ANALYSIS & DESIGN

**Noise Control Engineering, Inc.**

Shipboard Noise & Vibration Control

Design ♦ Analysis ♦ FEA

♦ Treatment Selection

Diagnostics ♦ Testing ♦ Underwater Noise

978-670-5339 • Fax 978-667-7047

799 Middlesex Turnpike • Billerica, MA 01821

[www.noise-control.com](http://www.noise-control.com) • [nonoise@noise-control.com](mailto:nonoise@noise-control.com)

**G&C GIBBS & COX INC**

NAVAL ARCHITECTS & MARINE ENGINEERS

[www.gibbscox.com](http://www.gibbscox.com)

Email: [info@gibbscox.com](mailto:info@gibbscox.com) Phone: 703-416-3620



**THE GLOSTEN ASSOCIATES**  
Consulting Engineers Serving the Marine Community

1201 Western Avenue, Suite 200  
Seattle, Washington 98101

206.624.7850 | TEL

[www.glosten.com](http://www.glosten.com) | WEB

Naval Architects | Marine Engineers | Ocean Engineers

**JMS**

NAVAL ARCHITECTS  
SALVAGE ENGINEERS  
the sea going naval architects

Engineering & Design For:

- New Build • Modifications
- Repairs • Shipyard Support

860-448-4850 • [JMSnet.com](http://JMSnet.com)

**JOHN W. GILBERT ASSOCIATES, INC.**

Naval Architects

Marine Engineers

(781) 740-8193  
FAX (781) 740-8197



75 Terry Drive, Suite 200  
Hingham, MA 02043

**M.A.C.E.**

FT. LAUDERDALE - USA - WORLDWIDE  
PHONE: (954) 563-7071 FAX: (954) 568-6598

- N.D.T. Services
- Vibration - noise - structural/modal analysis
- Field balancing. Laser Alignment
- Torque - torsional vibration analysis
- IR - Thermography inspection
- Emission tests, Engine Performance tests

SPECIALISTS IN THE DESIGN OF:

- OFFSHORE SUPPORT VESSELS
- TUGS AND TOWBOATS
- BARGES
- HIGH SPEED CRAFT
- NAVAL VESSELS
- CREWBOATS
- SPECIAL PURPOSE VESSELS
- YACHTS

DESIGN, CONSULTING, SURVEYING AND DRAFTING SERVICES

**GUARINO & COX, LLC**  
Naval Architects, Marine Designers and Consultants  
19399 Heisterberg Road Suite 203, Covington, LA 70433  
Tel: (985) 871-9997 Fax: (985) 871-9927 [g.cox@guarino-cox.com](mailto:g.cox@guarino-cox.com)

*Ideas Engineered Into Reality*  
**GUIDO PERLA & ASSOCIATES, INC.**

NAVAL ARCHITECTS,  
MARINE, MECHANICAL & ELECTRICAL ENGINEERS

701 Fifth Avenue, Suite 1200  
Seattle, WA 98104

Phone: 206-768-1515  
<http://www.gpai.com>



**Marine Services International Ltd.**

Naval Architects, Engineers & Surveyors

1315 Topsail Rd., St. John's, NL, Canada

Tel: (709) 782-2700 Fax: (709) 782-2707

E-mail: [projects@canship.com](mailto:projects@canship.com)

*Seaworthy Systems, Inc.*

ISO 9001: 2000 Certified  
MARINE ENGINEERS AND NAVAL ARCHITECTS  
Essex, CT 05426  
(860) 787-9061; Fax: (860) 787-1263; [www.seaworthysys.com](http://www.seaworthysys.com)  
SAN FRANCISCO • PHILADELPHIA • WASHINGTON, DC

**Want to Have Your  
Ad Here? Call today!**

**Brett W. Keil**  
Tel: 561-732-1185

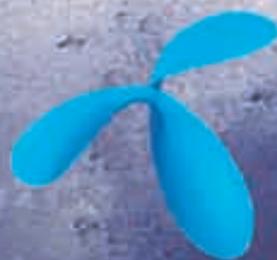
**Rob Howard**  
Tel: 561-732-4368

**Dale Barnett**  
Tel: 212-477-6700

> satellite services

## Maritime

Safety at sea.  
Fleet management.  
Crew and passenger  
communications.



To learn more about Telenor's maritime solutions or how to become a Telenor Service Provider, visit [www.telenor.com/satellite](http://www.telenor.com/satellite) or e-mail us at [customer\\_care@telenor.com](mailto:customer_care@telenor.com).

# telenor

**KARL SENNER, INC** ... *When Only The Best Will Do*



## M/V Bourbon Bora

Karl Senner, Inc. supplied four (4) Reintjes WVS 730 aluminum alloy case, reverse reduction marine transmissions, ratio 2.541:1. This American Bureau of Shipping classed crewboat is approximately 170 feet long overall.

**Owner: Bourbon Offshore  
Marseilles, France**

**Builder: Midship Marine  
Harvey, Louisiana**

**REINTJES**

**MARINE GEARBOXES**

**BERG PROPULSION**

CONTROLLABLE PITCH PROPELLERS  
AND BOWTHRUSTERS



**Rexroth**  
Bosch Group

**SALES, PARTS, SERVICE • 500 H.P. TO 20,000 H.P.**



# Karl Senner, Inc.

**WEST COAST**  
Karl Senner, Inc.  
12302 42nd Drive S.E.  
Everett, WA 98208  
Mr. Whitney Ducker  
(425) 338-3344

**NEW ORLEANS**  
Karl Senner, Inc.  
25 W. Third St.  
Kenner, LA 70062  
(504) 469-4000  
Telefax: (504) 464-7528

Visit our website at <http://www.karlsenner.com>

E-mail address: [service@karlsenner.com](mailto:service@karlsenner.com) • [sales@karlsenner.com](mailto:sales@karlsenner.com) • [parts@karlsenner.com](mailto:parts@karlsenner.com)