

May 2005

NorShipping 2005 Edition

MARITIME REPORTER AND ENGINEERING NEWS

www.marinelink.com

The Norway Way **X-Bow Debuts**



Marine Environment

Can a Ballast Free Ship Work?

Government Update

Do You Have a Permit?

Ship's Store • Safety Products • Marine Propulsion Directory: Spares & Repairs

DEREKTOR SHIPYARDS
proudly announces the launch of the
M/V Chenega

the second high-speed ferry to be delivered
to the Alaska Marine Highway System.

We would like to thank our partners

for contributing to the successful completion
of this superior vessel.



M/V Chenega

LOA: 235'
Service Speed: 36 Knots
Passengers: 250
Vehicles: 35 large-sized



BMT Nigel Gee and Associates Limited



DEREKTOR SHIPYARDS Since 1947

800-691-2100

www.derektor.com

Circle 222 on Reader Service Card

ACCESS THE ENTIRE WORLD WITH ONE CD

18,000 +

With C-MAP/Commercial's CM-93 electronic chart database, you receive global coverage on one CD. Our 18,000+ electronic charts make navigating commercial vessels easier and safer than ever. CM-93 gives you the most up-to-date electronic charts you'll need on every port and every harbor in the world.

on-demand

CM-93 provides daily chart corrections instantly via the Internet or e-mail. Our dedication to providing you the latest information not only includes chart updates, but also worldwide weather services.

thousands

Current North American customers...

- US Army • US Navy • Carnival Cruises • Celebrity Cruises
- Holland American Line • Princess Cruises • Royal Caribbean Cruises
- Alaska Tanker Company • Crowley Petroleum Transport
- Polar Tanker • Teekay Shipping • APL • Matson Navigation
- And Many Others

CM-93/3

...using CM-93 based systems by:

- Raytheon Marine • Sperry Marine • Kelvin Hughes • Klein Navigation
- STN Atlas • Furuno • JRC • And Others

Select a navigational system with C-MAP CM-93/3 compatibility, and you'll be navigating with confidence! Call for product information.



508.477.7537 • commercial@c-map.com
www.c-map.com • Cape Cod, MA

Contents

Government Update

10 Do You Have a Permit?

Dennis Bryant discusses the National Pollutant Discharge Elimination System (NPDES) and what it means to shipowners.

Marine Environment

25 Can a Ballast-Free Ship Work?

While much attention today is focused on the elimination of aquatic species from a ship's ballast, researchers at the University of Michigan investigate a ballast-free ship.

28 Keeping a Clean Ship

New equipment and technology designed to help shipowners meet ever-stringent environmental regulations.

NorShipping 2005

32 A Drive to Innovate

Norwegians have traditionally exhibited a propensity for forward-thinking solutions in the maritime realm, a tradition carried on with CETech's new design for a Compressed Natural Gas carrier. — By David Tinsley

Cover Story

36 X-Bow Marks the Spot

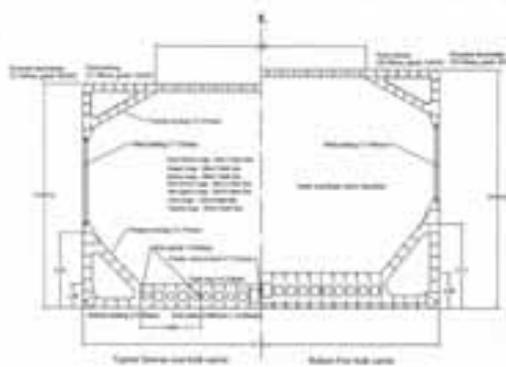
Ulstein's AX104 anchor handling vessel with the new X-Bow is really making waves, just not the kind found on the water.

Fuels, Lubes & Additives

57 RINA: Moving Toward Zero

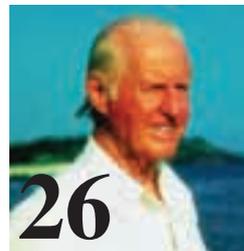
Italian classification society RINA moves toward "almost zero emission engines" for passenger and cruise ships.

25



Compressed Natural Gas (CNG) storage system of a ship. © CETech. Reproduced with permission of CETech.

28



26



36

"With ILS, we are able to compete with our biggest competitors without making huge investments."



Ulrich Freudenberger and Maike Pabst, Managing Directors

"We signed up for the ILS e-marketplace because it offers us the exposure of advertising, along with the lead generation of an aggressive marketing campaign at a fraction of the cost. It provides us with highly qualified leads and has introduced us to some significant customers that would never have known about us previously. With ILS, we are able to compete with our biggest competitors without making huge investments. The amount of business ILS has delivered is worth a ten-year subscription."

Ulrich Freudenberger, Managing Director at Inter Seas Services and Trading GmbH, NORDERSTEDT, GERMANY

We're proud to have kept Inter Seas Services and Trading GmbH steaming ahead. We thank them and all of our longstanding subscribers for letting us be a part of their success.

Inventory Locator Service,® LLC

1-800-233-3414 (North America) • 1-901-794-5000 (Worldwide) • 1-901-794-1760 (Fax) • ebusiness@ILSmart.com • www.ILSmart.com



Circle 238 on Reader Service Card

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 • Web: Internet: www.marinelink.com

FLORIDA • 215 NW 3rd St., Boynton Beach, FL 33435
Tel: (561) 732-1659 Fax: (561) 732-6984

Associate Publisher

Gregory R. Truthwein • truthwein@marinelink.com

Associate Editor • Jennifer Rabulan • rabulan@marinelink.com

Technical Editor • David Tinsley

Contributing Editor • Dennis L. Bryant
Senior Maritime Counsel, Holland & Knight

Editorial Consultant • James R. McCaul, president,
International Maritime Associates

PRODUCTION

Production Manager John Guzman • guzman@marinelink.com

Asst. Production Manager Irina Tabakina • tabakina@marinelink.com

ADVERTISING SALES

Vice President of Sales

Lucia M. Annunziata • annunziata@marinelink.com

National Sales Manager

Rob Howard • howard@marinelink.com
Tel: (561) 732-4368; Fax: (561) 732-6984

North American Sales Manager

Brett W. Keil • bkeil@marinelink.com
Tel: (561) 732-1185; Fax: (561) 732-8414

Classified Ad Sales

Dale L. Barnett • barnett@marinelink.com

Sales Administration Manager

Tina Veselov • veselov@marinelink.com

Manager, Accounting Services

Esther Rothenberger • rothenberger@marinelink.com

Manager, Public Relations

Mark O'Malley • momalley@marinelink.com

Sales Assistant

Nicole Sullivan • sullivan@marinelink.com

Classified Sales • Tel: (212) 477-6700

Manager, Information Technology Services

Vladimir Bibik • bibik@marinelink.com

CIRCULATION

mrcirc@marinelink.com

PUBLISHERS

John E. O'Malley

John C. O'Malley • 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

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 • bicom@unitel.co.kr

Business Communications, Inc., Kwangwhamun P.O. Box 1916, Seoul, Korea
Tel: +82 2 739 7840; Fax: +82 2 732 3662

Scandinavia

STEPHAN R.G. ÖRN/LEON SCHULZ • leon@stephan-orn.se
ÖRN MARKETING AB, Box 184, S-271 24 Ystad, Sweden
Tel: +46 411-184 00; Fax: +46 411 105 31

Spain

JOSE LUIS SEVA • jlseva@viaexclusivas.com

Via Exclusivas Albasanz, 14 Bis 3ª planta, 28037 Madrid, Spain
Tel: +34 91 448 76 22; Fax: +34 91 446 02 14

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

Horsepower meets brainpower.



Brains. Brawn. Crowley's ship assist and escort services has both to make sure your vessel is safe. Not only do we have the largest, most powerful fleet of tractor tugs on the West Coast, but they're all cleverly designed with fully instrumented, pilot house-controlled engine rooms. Take our newest, most advanced tug, the *Response*. Used for high-speed tanker escorts in North Puget Sound, it's all muscle. Its 7,200 horsepower engine generates a direct bollard pull of 150,000 lbs. And its unique high-lift and streamlined hull creates substantial indirect forces at high speeds more than enough to

satisfy the toughest safety requirements.

All of our technologically advanced vessels are run by expert crews that average 12 years of service. People who know Crowley know that we do things right the first time. Look for our burly, brainy tugs in the harbors of Valdez, Alaska, Seattle, North Puget Sound, Tacoma, Oakland, Los Angeles/Long Beach, and San Diego. For more information, call Todd Busch at Crowley Ship Assist & Escort Services at 1-800-248-8632. Or visit www.crowley.com.



CROWLEY[®]
People Who Know[™]

Liner Shipping • Worldwide Logistics • Petroleum & Chemical Transportation • Alaska Fuel Sales & Distribution • Energy Support • Project Management • Ship Assist & Escort • Ship Management • Ocean Towing & Transportation • Salvage & Emergency Response

© Crowley Maritime Corporation, 2005 CROWLEY is a registered trademark of Crowley Maritime Corporation

www.crowley.com



Circle 219 on Reader Service Card



Maritime Meanings

Snub From the Old Norse *snubba*, to check or rebuke; essentially to shorten, as in the nautical usage to suddenly stop a rope or cable from running out any further by taking extra turns around a bollard, etc., or by applying a cable stopper or some other means of braking its movement. A vessel snubs when it is brought up short by its anchor while pitching in a seaway.

Metaphorically, when we snub someone we give a sudden check or restraint to an assumed acquaintanceship or friendship; the disdain and contempt expressed in the snub puts a sudden end to further social intercourse.

Source: *An Ocean of Words: A Dictionary of Nautical Words and Phrases*, by Peter D. Jeans; Birch Lane Press, 1999

Is it "Adsorb" or "Absorb"?

These two words are easily confused by the simple exchange of a "b" for the "d". The differences are subtle, but important to scientists. A material is adsorbed when it is stuck on the surface of another material. This works for liquids sticking to the surface of a cloth. The liquid is absorbed when it is taken into the material like a sponge soaking up water.

Source: *Minerals Management*

LEFT: At sea aboard USS Abraham Lincoln (CVN 72) Nov. 1, 2002 - Lightning strikes on the horizon light up the bow of the aircraft carrier during a storm in the Arabian Sea. U.S. Navy photo by Photographer's Mate 2nd Class Aaron Ansarov.

CONTROL and SERVICE SOLUTIONS

Tugs • Ferries • Cruise • Workboat • Military



GOVERNOR CONTROL SYSTEMS

- *Control upgrades and engineered systems*
- *Worldwide repair/service/field support*
- *Governor replacement/exchange programs*
- *Technical assistance 24/7*

GCS is an authorized sales, service, repair and engineering center for **WOODWARD**, TDI Air Starters, **DYNALCO** Instrumentation and **GE Competitive Parts** for EMD* Engines.

For information on products and services offered by GCS, call **954-462-7404** or toll free **877-659-6328** or visit our website at **www.govconsys.com**

* EMD is a trade designator of Electro-Motive Diesel, Inc. GE/GCS are not authorized EMD distributors, nor are otherwise associated or affiliated with EMD. However, GE does represent that its replacement parts, components, subsystems and services are compatible with and usable on EMD Marine & Stationary diesel engines.



GOVERNOR CONTROL SYSTEMS, INC.

 Authorized Distributor
GE Transportation
Marine & Stationary Power

DYNALCO

 **TDI**
TECH DEVELOPMENT, INC.

 **WOODWARD**

authorized sales & service center
Member of
MSHS Group of Companies

Circle 253 on Reader Service Card

Feel comfortable with First Class Service



You can rely on – worldwide around-the-clock MAN B&W Diesel First Class Service:

- Spare parts supply
- Own spare parts production
- Technical service
- Operation and maintenance contracts
- Customer training
- Worldwide service organisation

We offer service for Diesel engines, gas and dual-fuel engines, complete marine propulsion systems, Diesel Gensets, complete Diesel power plants, cogeneration plants and exhaust-gas turbochargers.

Circle 246 on Reader Service Card

MAN B&W Diesel - a member of the MAN Group



Editor's Note

Perception versus Reality. A good deal of our daily lives is spent deciphering perception versus reality, for both business and personal reasons. For example, with historically record high oil prices, an oil hungry country at war and rapidly improving technology to discover and recover petroleum products from deep offshore waters, one would assume that a booming Gulf of Mexico is the reality. But talk to the legions of companies that serve and survive in this market, and it is not the perception that you get. But travel to this year's Offshore Technology Conference in Houston, and witness the thousands of exhibitors hosting the tens of thousands of visitors from around the globe, and the perception you get is of the former, not the latter.

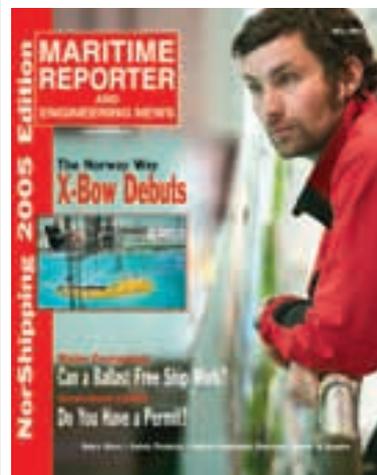
Confusing? I thought so.

Take another example: a general perception that I have heard time and again from the day I stepped into this position is that the maritime industry is "conservative." This perception is driven by the reality that many ship and boat owners maintain their business margins by relying on proven technology rather than investing immediately in the technological flavor-of-the-month. What I have not seen, however, is a lack of innovation from product and system suppliers across the spectrum, as Research and Development across the marine industry around the world is driven by increasingly stringent regulations that mandate ships operate in a safe and "environmentally friendly" manner.

The reality of this perpetual innovation is proven once again this month, starting with our cover story on Ulstein Design's development of its new AX104 anchor handling vessel featuring the X-Bow. The unique bow shape has no bulb, is slender in characteristic and slopes backwards instead of forwards (stop trying to envision and turn to pages 36-37 now). Put to the test at Marintek, one of the world's premier tank test facilities located in Trondheim, Norway, the AX104 – also one of the world's first anchor handling vessels with diesel electric propulsion – proved efficient in many different sea states. Nothing validates new technology like money, and the new design found an investor in Bourbon Offshore Norway, a subsidiary of Groupe Bourbon, which has ordered a 274-ft. vessel for delivery in 2006.



On the Cover



Øyvind Gjerde Kamsvåg, senior hydrodynamics designer at Ulstein Design, keeps a watchful eye on model tests of the new Ulstein AX104 design at Marintek in Trondheim earlier this year. The innovative vessel and its development is profiled on page 36.

- 48 **Directory: Marine Propulsion**
- 58 **Ship's Store**
- 59 **Buyer's Directory**
- 62 **Classifieds**
- 64 **Ad Index**

Subscriptions: One full year (12 issues) \$28.00 in U.S.; outside of U.S. \$52.00 including postage and handling. For subscription information, call 212-477-6700; fax: (212) 254-6271; or e-mail: mrcirc@marinelink.com

MARITIME REPORTER

AND
ENGINEERING NEWS

www.marinelink.com

ISSN-0025-3448
USPS-016-750

No. 5

Vol. 67

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.

Member



Business Publications
Audit of Circulation, Inc.

Coming in Maritime Reporter & Engineering News

June 2005 • The Annual World Yearbook

The World's Largest & Most Informative Marine Industry Annual, with topical technical and market reports including:

- Shipbuilding • Containerships • Tankers • LNG • Offshore • Cruise Ship
- Workboat Market Report, and more.

Also in this edition: RIB Report; Training & Education • Country Focus: UK

July 2005 • The SATCOM Edition

Satellite Communications increasingly impact the bottom line. Read about the leading companies. **Maritime Security: Cameras, Night Vision & CCTV** • U.S. Navy Report • CAD/CAM • 2004 Diesel Engine Buyer's Guide

www.marinelink.com

trauthwein@marinelink.com

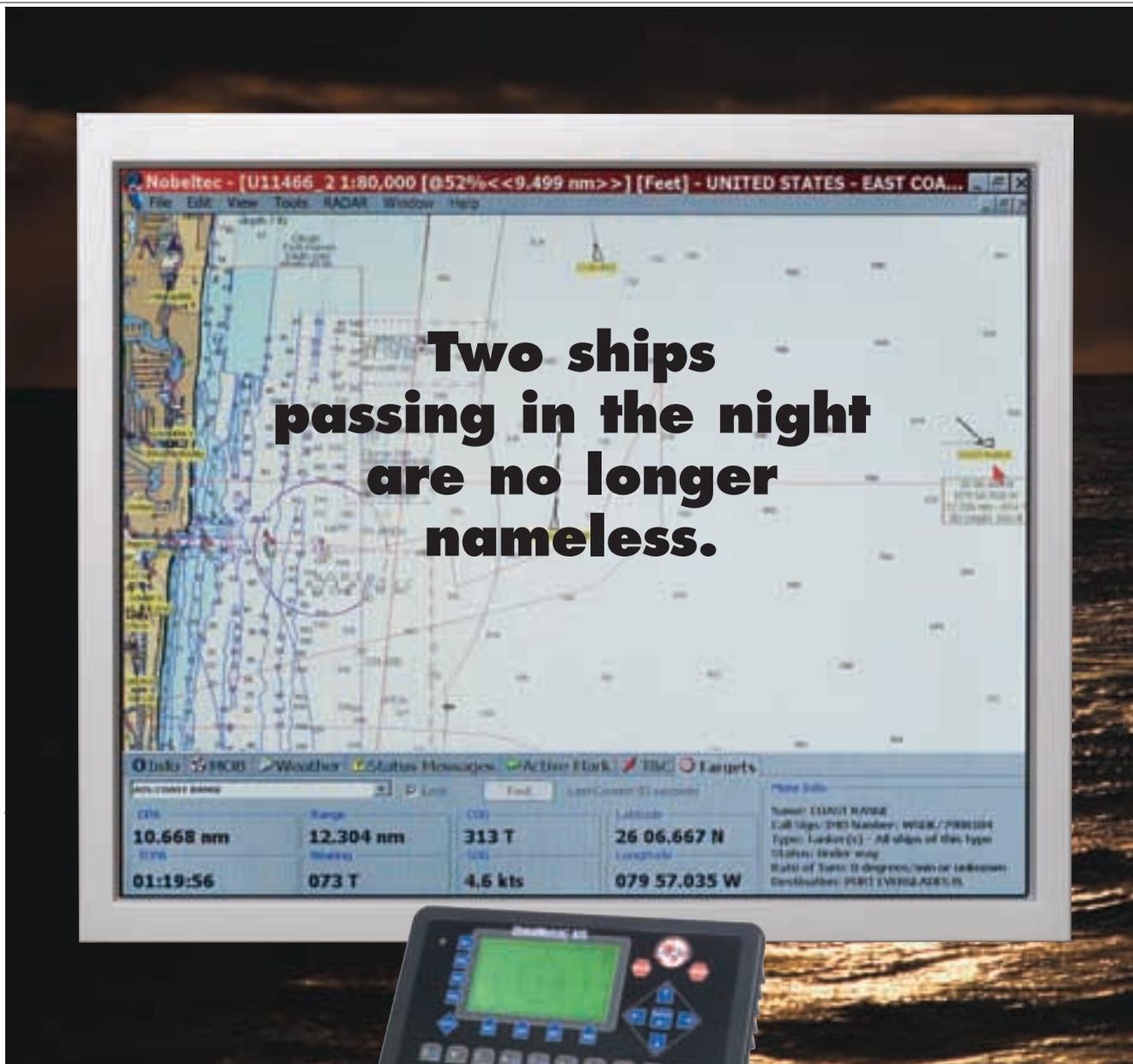
Looking for *service* reliability, we deliver it.
ABB Turbochargers

ABB

New York/NJ, Miami, Houston, Seattle/Tacoma, Los Angeles – email: turbochargers@us.abb.com

Circle 200 on Reader Service Card

ABB	35	Norwegian Shipowner's Association	26	Sener	44	Ulstein Design AS	36,40
Adsteam Marine Limited	20	NSRP	18	Siemens	13,14	Ulstein Verit	42
AEP Memco LLC	45	NSU	29	Southerly Design	22	University of Michigan	25
Aker Brattvaag AS	32,39,42	NTNU	37	Soviknes Verft	32	US Coast Guard	26,46
Alfa Laval	28	NYK Line	26	Statoil	32,40	US Navy	13
Ameron	41	ODIM	40	Stearns	46	Wappen Reederei	21
Anchor Handling Tug Supply	37	Odyssey Maritime Discovery Center	8	Strategic Marine Singapore Pte. Ltd.	22	Wärtsilä	37,48
B. Hepworth Group	44,45	Overseas Shipholding Group	14	Stromme ASA	42	Waterways Council, Inc.	45
Black Star Line	13	RNLI	45	Survival Craft Inspectorate Ltd.	46	WDOE	26
Bourbon Offshore Norway	40,42	Rolls-Royce	24,34,39,42	Syarikat Borcos Shipping Sdn Bhd.	22	Wynn Marine	44,45
BP Oil Shipping Co., USA	20	Samsung Heavy Industries	34	Telenor Satellite Services	45	Wynstruments	44
Canadian DOT	29	Schottel BmbH & Co. KG	42	Thrane & Thrane	46	Yantai Raffles Shipyard	48
Caterpillar	32,48	Sea Mar Management, LLC	47	ThyssenKrupp Marine Systems	14	Yusuf Bin Ahmed Kanoo	24
CETech	32	Seatruck Ferries	45	Totem Plus	44		
Cheniere Pipeline Company	47						
ChevronTexaco	31						
Clean Sound Cooperative, Inc.	45						
Clough Limited	35						
C-MAP	35,44						
Congressional Shipbuilding Caucus	13						
Containership Agency, Inc.	13						
Corpus Christi LNG	47						
Croatian Uljanik Yard	21						
CSD Systems	43						
Cummins	22,23,34						
Daewoo Shipbuilding	34						
Damen	20,23,24,41						
Deep Sea Seals (DDS)	48						
Department of Ecology	31						
Det Norske Veritas	32						
Dockwise Shipping BV	48						
DOD	13						
DST Shipping, Inc.	27						
Elliott Bay Design Group	45						
EnSolve Biosystems	27						
EPA	10,19						
Europipe	32						
Eutex International USA Limited	47						
Evergreen International, S.A.	26						
F.W. Hartmann	13						
Ferro Corporation	46						
Foss Maritime Co.	31						
France Telecom Mobile Satellite Communications	47						
Furuno	23						
General Dynamics	13						
General Motors Europe	21						
Grimaldi-Naples	21						
Gulf Cobla	23						
Hamburg-American Line	24						
Hansa Hamburg Shipping	21						
Hansa Line	13						
Hapag-Lloyd	24						
Havila Shipping AS	34,42						
Havyard Leirvik Shipyard	34						
Hernis Scan Systems A/S	41						
Høegh Autoliners, LNG, Fleet Services	38						
Hollyhead Towing	23						
Horizon Offshore Contractors, Inc.	8						
Howaldtswerke-Deutsche Werft GmbH	14						
International Boat Rentals, Inc.	47						
International Maritime Organization	46						
Island Tug and Barge Ltd.	8						
Jakob Hatteland Display AS	43						
Jeffboat LLC	45						
K/V Harstad	39						
Kahn Scheepvaart BV	41						
Kanoo Marine	24						
Kelvin Hughes	46						
Kirby Corporation	45						
Kleven Maritime Group	24						
Knöhr & Burchardt	22						
Knutsen OAS Shipping	26,32						
Kongsberg	34						
Kongsberg Maritime	34						
Kvaerner ASA	14						
Kvaerner Philadelphia Shipyard	14						
Kvichak Marine Industries, Inc.	31						
Leif Hoegh	32,38						
Lips/Wärtsilä	35						
Llyod's Register	43						
LMG Marine	42						
MAN B&W	8						
MarAd	8						
Marin Teknikk	34						
Marintek	36,42						
MariSan	27						
Maritima Andina	13						
McTay Marine Ltd.	23						
MEP	27,29						
Metalock Engineering	48						
Meyer Werft's Papenburg Shipyard	21						
Mitsui O.S.K. Lines	45						
MOL	45						
MSC (USA) Inc.	13						
MSRC	45						
Myklebust Verft	24						
Napa Ltd.	43						
NASSCO	20						
National Shipbuilding Company of Saudi Arabia	13						
Naval Surface Warfare Center	31						
NEI	30						
Nernis Scan Systems A/S	41						
New York Times	13						
NME	42						
NOAA	29						
Nordseewerken	14						
North German Lloyd	24						
Northrop Grumman	13						
Norwegian Coastguard	39						
Norwegian Maritime Equipment AS	46						



GlobalWatch™ AIS takes the guesswork out of vessel identification. It's easy to interface it with your AIS-compatible Electronic Chart System, and it clearly displays all sorts of critical navigational information. You'll instantly see data like the name, MMSI, draft, length, and destination of all the ships in a radius of up to 30 miles. Even dynamic data such as a ship's position, speed over ground and heading are shown. The information is real time because it's refreshed constantly. GlobalWatch adds "intelligent", dynamic data to your chart overlays.



YOUR ULTIMATE WAY OUT

ACR Electronics, Inc., 5757 Ravenswood Road, Fort Lauderdale, FL 33312, U.S.A.
 For information call (954) 981-3333 • e-mail: info8@acrelectronics.com • www.acrelectronics.com

It even offers simple text messaging on a computer-like keypad, instead of the cumbersome 9-key phone pad found on other AIS units. Just think of the benefits. You can easily navigate through heavily-trafficked commercial ports. "See" around bends in rivers to avoid near misses or collisions. Identify the position of nearby vessels in dense, blinding fog. GlobalWatch will radically change the way you view bridge electronics. And best of all, it's built by a name you already know and trust - ACR.

A Chelton Group Company

Mandated for commercial vessels; a must-have for luxury yachts

Circle 201 on Reader Service Card

Vinyard Re-elected to SCA Chair

On April 21, 2005, **Herschel T. Vinyard, Jr.**, Vice President of Atlantic Marine Holding Company, was re-elected Chairman of the Shipbuilders Council of America (SCA). **Donald T. "Boysie" Bollinger**, CEO of Bollinger Shipyards, Inc., Lockport, LA, was

elected Vice Chairman. The elections occurred during the annual SCA Spring Meeting held in Arlington, VA.

New Orleans, New York Gain in Cruise Departures

More people are choosing to depart from New Orleans and New York on their cruises than ever before.

Departures from New Orleans were up by 33 percent while departures from New York grew 27 percent in 2004, according to statistics released by the Maritime Administration (MarAd).

North American cruise passenger traffic increased overall by 12.8 percent in 2004, with more than 9.4 million passengers traveling on the 17 major cruise

lines. These figures are up from the 8.3 million passengers traveling on the same lines in 2003. Although ports in Florida continue to account for the majority of cruise passenger departures, passenger departures from Miami fell by 10 percent. The outlook was better for Fort Lauderdale and Port Canaveral where departures grew by 11 percent.

Horizon Offshore Names New CEO, CFO

Horizon Offshore, Inc. elected **David W. Sharp**, currently its Executive Vice President and CFO, as President and CEO. He was also elected to the company's board of directors for a term expiring in 2007 to fill the vacancy caused by the resignation of **Bill J. Lam** in December, 2004. The company also announced the promotion of **Ronald D. Mogel**, currently Vice President International Accounting and Tax of the company's subsidiary Horizon Offshore Contractors, Inc., to CFO.

Tug Company Honored

Island Tug and Barge Ltd. of Vancouver, B.C., received an award from the Washington Department of Ecology for excellence in marine safety and environmental stewardship. The Exceptional Compliance Program (Ecopro) Award was presented at the Odyssey Maritime Discovery Center on Pier 66, 2205 Alaska Way, in Seattle.

Increased Service Capacity

MAN B&W's Service Center Denmark expanded its activities in line with the growth in its business. Recent, large-scale, tasks like the re-engining of the passenger ferry Banasa can be done with increased speed and efficiency. As part of new structure, service operations have been refined and new quality checks introduced. This results in more and faster reconditioning and reengineering work.

"As the sole all-in-one supplier of quality parts for all MAN B&W Diesel engines at the gate of the Baltic Sea we offer a unmatched quality service and reengineering opportunity," said **Steen Hviid Mortensen**.

Vessels from an increasing range of trades and sizes have been attracted to Service Center Denmark. The location of the Frederikshavn facility in the Northern part of Denmark, at the gate to the Baltic Sea, makes it convenient for vessels using the the Scandinavian sea lanes.

Circle 68 on Reader Service Card



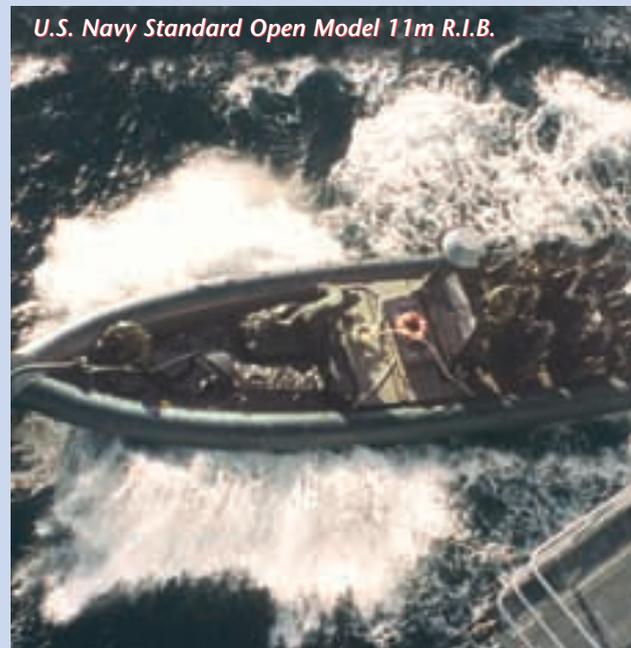
NEW! Assault 52'
Willard/Team Scarab

The Willard Marine Fleet for Port Security & Force Protection

- Willard vessels are constructed in fiberglass composites and aluminum up to 17m.
- Complete in-house engineering and prototype departments are available to fulfill specific user requirements.
- Founded in 1957 Willard Marine is U.S. owned with plants in the U.S.
- GSA contract GS-07F-0123H



U.S. Navy Standard Cabin Model 10m & 11m R.I.B.'s

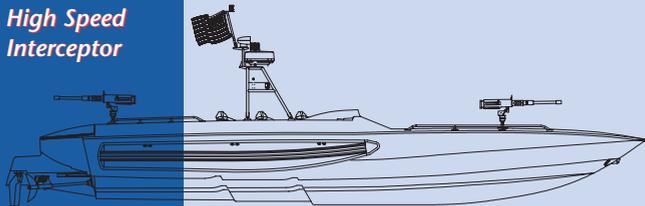


U.S. Navy Standard Open Model 11m R.I.B.



U.S. Navy Standard 7m R.I.B.'s

NEW!
Assault 43/13m
High Speed
Interceptor



Visit Us At...

Multi Agency Craft Conference (MACC)

US Special Operations Command APBI, Booth #235

Maritime Security Expo, Booth #718

1250 N. Grove St., Anaheim, CA 92806
714-666-2150 Fax 714-632-8136
willardmarine.com
Email: WebMaster@willardmarine.com





Federal Employment
Job Security
Steady Pay



"Never have to worry
about my paycheck at MSC.
Job's too important."



**MILITARY
SEALIFT
COMMAND**

**Take Command
of Your Career®**

Make the move to MSC.

If you're an experienced merchant mariner with the drive to excel, consider a career as a civilian mariner with Military Sealift Command. As an MSC CIVMAR, you'll fill an important role in our national defense – serving onboard a growing fleet of 39 ships that provide all the goods and services to keep the Navy at sea. We offer Federal benefits with steady pay, career advancement opportunities, and job security unheard of in the commercial maritime industry. To take the next step, call our toll-free number or visit our Web site. Act now and take command of your career.

Circle 252 on Reader Service Card

www.sealiftcommand.com/MR

CALL 1-888-228-5509

Military Sealift Command is an equal opportunity employer and a drug-free workplace.

Do You Have a Permit?

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.



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.

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

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.



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

Just when ship owners and operators thought that the U.S. Environmental Protection Agency (EPA) was (for the most part) a problem only for landlubbers, a court decision has come along to shake one out of such complacency.

The story opens in 1972, when Congress adopted significant amendments to the Federal Water Pollution Control Act (FWPCA), commonly referred to as the Clean Water Act (CWA). Among the various provisions in this lengthy statute was one prohibiting discharge of any pollutant from any point source into navigable waters of the United States. The term "point source" includes vessel or other floating craft. The major exception to this broad prohibition was for discharges for which the EPA had granted a permit under the National Pollutant Discharge Elimination System (NPDES).

The NPDES is a complex and detailed program for controlling discharges of pollutants into waters of the United States. It allows factories and other point sources to continue to operate, but places limits on what can be discharged and in what quantities. The EPA permits frequently require monitoring of the discharges by the permittees, along with extensive recordkeeping. The EPA has authority to make unannounced inspections and review the records. Not infrequently, a permittee is cited or fined for recordkeeping violations.

Pollutant, as defined by the FWPCA, is very broad and includes solid waste, garbage, chemical wastes, biological materials, and heat, among other things. The 1972 Act included a provision deal-

Product of choice for shipbuilders.

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

MobileMaster™ Wire Feeder Provides Reliable Performance in Harsh Environments



The MobileMaster IV Wire Feeder from ESAB is built to handle harsh environments such as construction sites, pipelines, shipyards, offshore applications, general fabrication and mobile welding rigs.

MobileMaster features a completely enclosed, impact-resistant case to protect the wire from dirt, metal grit, moisture and contaminants. The flame retardant, insulated molded composite plastic case is metal reinforced to withstand extreme abuse from drops, bumps, hot slag, grinding sparks, corrosive chemicals and more.

For more information, contact us toll free at 1-800-ESAB-123 or online at www.esabna.com.

ESAB Launches 100% Satisfaction Guarantee Program

In celebration of their 100th anniversary, ESAB Welding and Cutting Products North America is offering a revolutionary pledge to their customers: 100% Satisfaction Guaranteed. With complete confidence in their products, ESAB is the only manufacturer in the industry to offer this unique purchase protection, allowing consumers to buy completely risk free. This guarantee is a way to show how committed ESAB is to customer satisfaction. The 100% Satisfaction Guarantee applies to ESAB welding equipment, gas apparatus, hand-held plasma machines, and filler metals. The guarantee is valid for 100 days from the date of purchase.

For more information, contact us toll free at 1-800-ESAB-123, press 5, or online at www.esabna.com/100satisfactionguarantee.

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 MobileMaster™ 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



WELDING | CUTTING | FILLER METALS

Circle 229 on Reader Service Card

World Class Communications Anywhere in the World

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.

Secure Corporate Access

Digital Telephony

Broadband Internet

Real-Time Video

Circle 215 on Reader Service Card



RELIABILITY TO THE EXTREME™

www.CapRock.com

ing with marine sanitation devices, so sewage from vessels was specifically excepted from the definition of pollutant. When the EPA promulgated its regulations implementing the NPDES program, it exempted discharges of sewage from vessels, as well as effluent from properly functioning marine engines and any other discharge incidental to the normal operation of a vessel. The EPA interpreted its regulation as exempting ballast water discharges from the NPDES program.

In 1999, though, several environmental advocacy groups petitioned the EPA to repeal the ballast water discharge exemption from the NPDES program. The EPA denied the petition in 2003 and litigation ensued. On March 30, 2005, the federal district court in San Francisco granted the motion of the environmental advocacy groups for summary judgment and ordered the EPA to repeal its regulation exempting discharges from vessels from the NPDES program. Further hearings are scheduled and the EPA is expected to appeal, but this is clearly a development that deserves the attention of all owners and operators of ships registered in the United States or that call in U.S. ports.

No one doubts that nonindigenous aquatic species present a serious threat to U.S. maritime ecosystems. Ballast water discharges are an important vector

or means of transmission. The real issue is what is the best means of reducing the risk of further incursions of nonindigenous aquatic species via ballast water discharges.

The major flaws in the summary judgment decision are the court's literal reading of the FWPCA and the failure to consider the numerous developments that have occurred since the FWPCA amendments were enacted in 1972. At that time, no one (not even environmental advocates) considered ballast water to be a pollutant. Thus, it is not surprising that Congress addressed sewage discharges, while remaining silent on ballast water discharges.

When the dangers of zebra mussels and other maritime hitchhikers were recognized, Congress adopted the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 and the National Invasive Species Act of 1996. The Coast Guard was directed to establish a voluntary ballast water management program (participation in the program was mandatory for ships entering the Great Lakes and for ships entering the Hudson River north of the George Washington Bridge). The national program has recently become mandatory for all ships carrying ballast water and calling at ports or places in the United States after operating outside the U.S. Exclusive Economic Zone (EEZ).

On February 13, 2004, the international community, under the sponsorship and guidance of the IMO, adopted the International Convention for the Control and Management of Ships' Ballast Water and Sediments (Ballast Water Convention). This Convention will enter into force 12 months after ratification by 30 nations representing 35% of the world's merchant shipping tonnage. Other nations (such as Australia) and various states (such as California) have their own ballast water management requirements. While there are minor differences between the mandatory U.S. ballast water management program and the management program provided for by the Ballast Water Convention, both call for high seas ballast water exchange or equivalent measures to be undertaken by ships transiting from one location to a distant location while carrying ballast water. Ships are required to adopt and implement a ballast water management plan and to maintain records of ballast water uptakes and discharges. Experts who have analyzed ballast water exchange generally agree that, while not perfect, the program significantly reduces the risk of introduction of nonindigenous aquatic species into a new ecosystem by means of ballast water discharge. Having a NPDES permit will not further reduce the risk of introduction of nonindigenous aquatic species

into U.S. ports and waterways. The program, though, would significantly increase the bureaucratic maze for getting ships in and out of U.S. ports and would put masters and ship operators at risk of civil and/or criminal penalties related to the required monitoring process and associated paperwork. One only has to reflect on the fallout over oil record books to see where this could easily go. A final problem with the recent district court decision is that it does not limit its impact just to ballast water management. The decision directs the EPA to revoke the entire vessel exclusion found at 40 CFR § 122.3(a). If this decision stands, ships would need NPDES permits for discharges of effluent from properly operating marine engines and for any other discharge incidental to the normal operation of a vessel. Such discharges might include use of the sea chest to cool the engine, seepage from the stern tube, and fish waste routinely thrown overboard by fishing vessels. The EPA has neither the manpower nor the expertise to administer such a program expansion. One can only hope that, on reflection, the parties will develop a reasonable resolution to this new development. It behooves ship owners and operators, as well as responsible environmental advocacy groups, to meaningfully participate in this resolution process.

SALT-AWAY
Corrosion Control
SALT REMOVING TREATMENT

100% Non-Hazardous
100% Non-Toxic
100% Biodegradable

"We won't depart without a supply of Salt-Away on board..."
*Doug Sutton
VP Ops, Xdesign*

Reduce part and repair labor costs and down-time for everything where salt causes maintenance and operational problems.
The favorite salt corrosion control maintenance product of thousands of users.
Concentrate available in case packs and drums.

Salt-Away Products, Inc. • 1533 East McFadden Avenue, Suite B • Santa Ana, CA 92705
(714) 550-0987 • Fax: (714) 550-7787 • Toll Free: 888-SALT-AWAY (725-8292)
e-mail: sales@saltawayproducts.com • www.saltawayproducts.com

Circle 261 on Reader Service Card

2-PART PAINT AND EPOXY DISPENSING

Automatic or manual portable metering systems for accurately proportioning and dispensing 2-part paint, epoxy, urethane, polysulfide, and silicone

Ashby Cross manufactures a wide range of metering pumps for all types of 2-part materials

Ashby Cross Co.
28 Parker Street, Newburyport, MA 01950 USA • (978) 463-0202 • FAX (978) 463-0505
www.ashbycross.com

Circle 209 on Reader Service Card

INNOVATION • ENGINEERING • TOOLS • TRAINING

6 FROM WEEKS OF MACHINING TO 1

Climax machining solutions can improve your numbers, too.

Until Climax came on-board, it took 240 hours for a shipyard to re-machine just one submarine missile tube. That's nearly 3 man-years for a sub's usual array of 24 tubes.

In response, Climax came up with an innovative custom boring tool based on its patented technologies. Setup and monitoring are radically easier, and Climax provided on-site training. Now each tube takes a single shift five days, start to finish.

When it comes to improving their maintenance and repair, shipyards rely on Climax. The solution may range from a clever new mount for a standard Climax tool to an all-new custom machine. It may involve on-the-job consultation or a major training program like one we recently held for ten of China's largest shipyards. Today Climax is uniquely equipped to support you everywhere that machining and machine tools affect your bottom line.

Download our latest white paper, *Lean Maintenance Programs: How Creative Machining Solutions Can Help*, at www.climaxshippingsolutions.com.

USA Toll Free: 800.333.8311

Worldwide Tel: 503.538.2185



CLIMAX[®]
Portable Machine Tools, Inc.

Bringing the solution to you.

MREN0105

Kvaerner, OSG In 10 Jones Act Ship Deal

On April 14 at the Kvaerner Philadelphia Shipyard in the shadow of the Blue Goliath, more than 750 employees, state officials and other dignitaries gathered to herald a record contract signing between Kvaerner ASA and Overseas Shipholding Group,

Inc. to build 10 Veteran MT-46 class Jones Act Product Tankers, with an option for two additional vessels.

OSG plans to transfer them to another subsidiary which will bareboat charter them to subsidiaries of OSG for initial terms of five or seven years, with extension options for the charterer. The \$1 billion agreement solidifies a stable workflow at the Philadelphia shipyard

until mid-2010.

Former President **Bill Clinton**, who was responsible for enacting the National Shipbuilding Initiative in 1993 and providing the \$80 million in funding in order to provide the infrastructure, training and financial backing to help Kvaerner Philadelphia Shipyard get off the ground, served as the event's keynote speaker. "I believe every great country



Former president Bill Clinton was on hand in Philadelphia to help announce Kvaerner Philadelphia's contract to build 10 new ships, a contract potentially worth more than \$1 billion.

needs to make things. We might have to do it with fewer people and more technology, but we need to make things," he said.

Kjell Inge Rokke, the industrialist and main owner of Aker Kvaerner, believed that the Philadelphia yard could compete in the Jones Act market. Rokke thanked Clinton for his contributions to the American shipbuilding industry. He also gave thanks to the hundreds of employees and shipyard workers, whose dedication has attributed to the yard's productive revival. - J.Rabulan

Portuguese Navy Orders Two "Fuel Cell" Subs

Siemens is fitting two new U 209mod submarines for Portugal's navy with the latest propulsion and I&C equipment. The order is worth \$75.3 million and delivery of the submarines is scheduled for 2010. The contract also includes an option for the same equipment to be built into a third submarine. This option is worth around \$30 million.

The submarines will be built at the Howaldtswerke-Deutsche Werft GmbH (HDW) and at Nordseewerken in Emden. Both shipyards belong to ThyssenKrupp Marine Systems. Siemens' scope of supply includes provision of a Permasyn permanent-magnet electric motor with PEM (Polymer Electrolyte Membrane) fuel cells for supplying power, switchgear and the Nautos automation system. The electric propulsion units with permanent-magnet synchronous motors for supplying direct current are characterized by extremely low signatures, high availability, compact design and ease of operator control. A PEM fuel cell system supplies the energy, thus enabling air independent propulsion (AIP) when the submarines are submerged below water level. The

Maritime Reporter & Engineering News



Diesel Fuel Injectors...

A Flavor For Every Taste!

With the job injectors do today, you need more options!

- Can you use one that delivers 3%+ fuel savings, reduces smoke opacity by 75% and lowers particulate matter emissions by 44%? That's what you can get in Interstate Diesel's **green tag** ECOTIP® Superstack Injector.

- Our **blue tag** ECOTIP® Ultrastack Injector has an innovative in-line fuel delivery system that can give you faster needle response, optimizing fuel atomization and lowering emissions even further. This low emissions injector is now available for all Electro-Motive 645 and 710 Engines.

- Want to reduce NOx emissions by as much as 40%? Our built-to-application **black tag** ECOTIP® Special Injector can do that. Or have it designed to prevent wet stacking...reduce visible smoke...or accommodate light loads, heavy loads or long idle times. You control the design.



- Our **red tag** ECOTIP® Superstack 2000 Injector combines many of the above features in a Electro-Motive 710 low emissions injector.

And if these options aren't enough, we have more!



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 5,467,924; 5,797,427; 5,725,157; 6,007,000; 6,012,433; 6,321,723; 6,511,002

Circle 237 on Reader Service Card

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 Detroit Diesel-Allison

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) 671-6220
FAX: (713) 671-6127



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
2304 Engineers Road
Building 2, Suite 2
Belle Chasse, LA 70037
PHONE: (504) 393-2826
FAX: (504) 393-7029



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



AIP system comes from HDW, while Siemens is providing the fuel cell modules as well as the control and monitoring devices.

Circle 55 on Reader Service Card

DD(X) Program Under Budgetary Microscope

Plans to build the next generation of DD(X) destroyers is the topic of hot debate in Washington, as lawmakers, the military and the nation's shipbuilders grapple with the means to reign in production costs while maintaining a viable U.S. Navy shipbuilding base in the era of shrinking fleet size.

As corporate consolidations have effectively produced a new navy shipbuilding scenario where contracts are apportioned evenly, a plan was proposed - and subsequently set aside for now - that would have pitted Northrop Grumman and General Dynamics in a "winner take all" competition to build DD(X), a potential \$20 billion contract.

"We've known all along that a single-source shipyard for DD(X) is a bad idea," said Congressman **Gene Taylor** (D-MS), co-chairman of the Congressional Shipbuilding Caucus. "You're looking at a situation where one shipyard would likely be forced out of business. Then you're left with one place in the entire United States to build surface combatants," Taylor continued. "I just can't see how permanently limiting our ability to produce ships can be good for national security."

According to a report in the April 19, 2005 edition of the *New York Times*, the first two DD(X)'s are now supposed to total \$6.3 billion, according to confidential budget documents, up \$1.5 billion. A new aircraft carrier, the CVN-21, is estimated at \$13.7 billion, up \$2 billion. The new Virginia-class submarine now costs \$2.5 billion each, up \$400 million. The proposed "winner take all" plan was seen by the Department of Defense as an opportunity to shave \$300 million off the price of each new DD(X) guided missile destroyer.

Regardless of the outcome, it is increasingly apparent that the Navy is steadfast in its mission to further reduce the oceangoing fleet size, instead depending on a new smaller, faster, more agile and flexible fleet of vessels - such as the Littoral Combat Ship - to carry out its missions.

Industry Veteran Joseph F. Daly Dies

Longtime industry veteran **Joseph F. Daly** passed away on April 2, 2005. He was 91 years old. Joseph F. Daly began his career in the transportation industry in 1947 when he joined F. W. Hartmann

directly out of the armed forces. A veteran of the U.S. Army, Daly enlisted at age 17 and returned from active duty with the rank of Captain after fighting in the Pacific during WWII.

Daly later served as President of F.W. Hartmann, a major steamship agent and freight broker that represented Hansa Line, National Shipping Company of Saudi Arabia, Black Star line, Maritima

Andina and others. F.W. Hartmann, together with Norton Lilly, would later form Containership Agency Inc. (CAI), a steamship agency representing Italian Line and Mediterranean Shipping Company. CAI later changed its name to MSC (USA) Inc., whose principal is now the world's second largest containership operator in the world. "Having served under Mr. Daly for several years,

together with **Peter W. Hartmann** and **Rolf D. Hartmann**, we developed a great respect for the integrity of this man," said **Nicola Arena**, president of MSC (USA) Inc. "He was truly a moral role model and mentor to those of us fortunate enough to have worked with him." Joseph F. Daly is survived by his wife, Virginia, two children, Michael and Peggy, and several grandchildren.

Statistically, one crankcase explosion will occur at sea each month, costing millions of Dollars in damage, weeks of refit time and, possibly, even loss of life.

And the most likely cause?

BEARING FAILURE

The **AMOT XTS-W** is a unique bearing wear sensor system for 2-stroke marine engines. It is the **only** product available that can detect the onset of bearing wear **before** expensive, potentially catastrophic, secondary damage occurs.



Extensive test bed trials and a live ship owner sea trial have shown the XTS-W to be a minor investment for major asset protection. For more information, visit www.bearingwear.com

amot

AMOT 401 First Street, Richmond, California, 94801-2906 USA +1(510) 307 8300 sales@amotusa.com www.amot.com

This Isn't Your Father's Coast Guard Manual

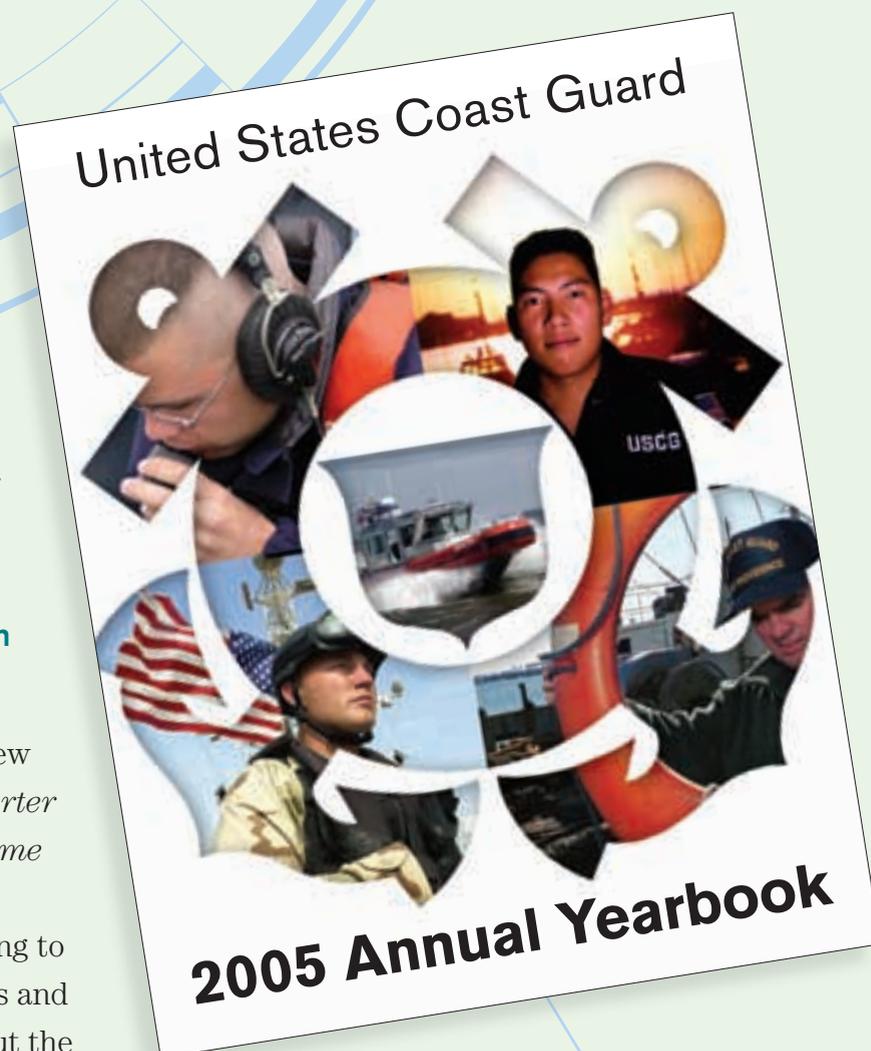
Introducing the *United States Coast Guard Annual Yearbook—Charting A New Course for the Gatekeeper of Maritime Security & Safety*

A sea change is taking place at the United States Coast Guard, and the stakes have never been higher.

The *United States Coast Guard Annual Yearbook*, premiering June 2005, takes an in-depth look at the strategies driving the **20-year, \$17 billion expansion** of America's oldest maritime service.

Written and produced by the respected editors of New Wave Media (renowned publisher of *Maritime Reporter and Engineering News*, *Marine News*, and *Maritime Security Source Book*), this valuable and insightful source will focus on how the Coast Guard is rebuilding to better protect America's coastline, shipping channels and seaports. The Yearbook will be referred to throughout the year by Coast Guard officers, procurement decision-makers, government officials, and maritime industry professionals.

For information about advertising, please contact your local sales representative or call (212) 477-6700.



Ad Close: May 16, 2005

Materials Due: May 18, 2005



NEW WAVE MEDIA
BUSINESS NAVIGATOR

MARITIME REPORTER & ENGINEERING NEWS • MARINE NEWS
MARITIME SECURITY SOURCE BOOK • USCG YEARBOOK



OLD-WORLD **charm** MEETS
MODERN **convenience**

Treat yourself to all the historic splendor of the Hotel Monteleone, a 118-year-old landmark, located in the heart of the French Quarter. Our \$65,000,000 restoration maintained our historic and architectural integrity while providing the amenities savvy travelers like yourself seek.

- Three award-winning restaurants
- World famous Carousel Piano Bar and Lounge
- 600 Deluxe sleeping rooms including 55 suites favored by celebrities, dignitaries and literary legends
- Marble and granite baths
- Luxurious Spa Aria
- Heated rooftop pool and fitness room
- In-room safes
- Iron and ironing board
- Coffeemaker, robes, hairdryer
- Minibars
- Movies on Demand
- Kids stay free
- Valet Parking



Hotel Monteleone New Orleans' Timeless Address

214 Rue Royale, New Orleans, LA 70130 • 504-523-3341 • 800-321-6710 • FAX 504-528-1019
www.hotelmonteleone.com • reservations@hotelmonteleone.com



SUMMIT
HOTELS & RESORTS

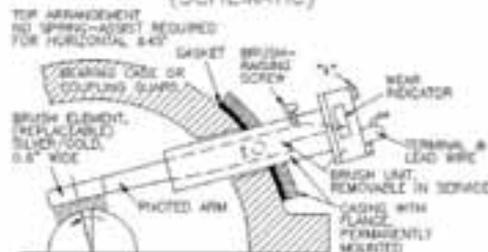


Circle 233 on Reader Service Card

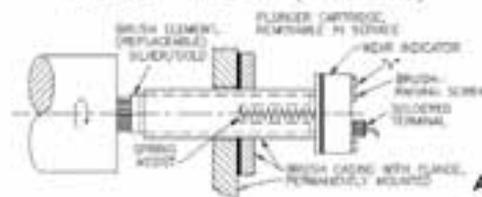
Are Stray Electrical Currents Destroying Your Machinery?

- Sohre SHAFT GROUNDING (EARTHING) BRUSHES are used on propeller shafts, turbines, generators, electric motors, gears, pumps, etc. Failure to properly ground (earth) rotating shafts can result in expensive damage to seals, bearings, and other critical components.
- Self Cleaning. Operate dry or with oil. Gold/silver composite bristles.
- Working parts are removable during operation without contacting adjacent moving parts.

"TOOTHBRUSH" TYPES "LW," "L" & "S" (SCHEMATIC)



"PLUNGER" TYPE "A" (SCHEMATIC)



ABS TYPE APPROVAL B-568026
© 2005 SOHRE TURBOMACHINERY® INC.

SOHRE TURBOMACHINERY® INC.

WARE, MASSACHUSETTS, USA 01082

TEL: (413) 967-8908 FAX: (413) 967-5846

TSOHRE@SOHRETURBO.COM WWW.SOHRETURBO.COM

Circle 268 on Reader Service Card

FACING SKYROCKETING FUEL COSTS?

DIESEL ELECTRIC HYBRID SAVES 30% • HIGH TORQUE FROM ZERO RPM • ADDS 3X TORQUE SIZE FOR SIZE TO DIESEL POWER. 50 TO 5000 HP

ADD POWER AND EFFICIENCY TO ANY APPLICATION

CALL E-POWER GROUP TODAY

314 220 2498

Circle 228 on Reader Service Card

Growing, profitable Maui business for sale.

Inter-island ferry & tour boat business in paradise

- ✓ Reputable, 20 year established business with excellent growth history
- ✓ Three 149 passenger USCG inspected vessels, largest on Maui
- ✓ Prime, front row slip location in Lahaina Harbor
- ✓ Public Utility Authorization (PUC) to operate ferry service between 2 major Hawaiian Islands
- ✓ All necessary permits and licenses to operate from one of Hawaii's hottest destinations
- ✓ Equipment, leases, agreements, good will, ongoing contracts all included
- ✓ Principle owners interested in selling part or all interest in operating corporations

Once in a lifetime offering to serious and capable buyer for part or all interest in operating corporations.

Total price \$6,000,000.



866-713-8594 Toll Free

Circle 262 on Reader Service Card

NSRP Approves 11 Ship Production Panel Projects

The Executive Control Board of the National Shipbuilding Research Program (NSRP) has selected 11 new Ship Production Panel projects, totaling approximately \$756,000, designed to reduce the costs of Navy shipbuilding and ship repair. These relatively short, low cost projects were selected to complement portfolios of larger R&D projects funded through NSRP in responding to industry-consensus priorities and the Navy customer's research areas of greatest interest.

1. Second Tier Shipyard Price Competitiveness Analysis

(Business Process Technologies Panel): U.S. commercial shipbuilding is important to maintain and modernize the industrial base for both new construction and repair of military ships and craft. The United States builds less than one percent of ships worldwide. One of the reasons given for the small amount of commercial shipbuilding in the U.S. is the view that ships are too expensive to build here. The U.S. commercial shipbuilding industry is continually asked by its prospective customers why ships are so much cheaper in foreign yards. The purpose of this study is to determine the real differences in costs for ships that could be built in the United States with similar ships that could be built in Europe, at yards and facilities similar to those in the United States.

2. All-Position Flux Cored Electrode for Welding Copper-Nickel Pipe

(Welding Technology Panel): This project aims to reduce shipyard costs by doubling the productivity of copper-nickel (Cu-Ni) pipe welding in shipyards. Processes will be developed utilizing an all-position flux cored electrode that will effectively replace most of the current welding practices employed in gas-tungsten arc welding and pulsed gas-metal arc welding. Specifically, this new electrode for flux core arc welding will be designed to provide superior out-of-position capability and substantially increased deposition rate over current practices, improved overall productivity in welding 90Cu-10Ni piping in Naval ships and excellent resistance to solidification cracking and ductility-dip cracking. If successful, this new flux cored electrode would have the same outstanding out-of-position capability and high deposition characteristics as the "E71T-1" elec-

trode used to weld steel. With the development of an all-position flux cored electrode for welding 90Cu-10Ni (C70600) piping, the expected improvements in out-of-position welding capability combined with increased deposition rate would potentially double the cost-effectiveness of installing/welding 90Cu-10Ni piping on Navy ships.

3. High Speed Narrow Groove Submerged Arc Welding (SAW) for Thin Steel Panels

(Welding Technology Panel): The objective of this project is to reduce distortion on complex panel long seams made from thin steel. Narrow groove welding procedures using advanced power supplies, flux copper backing (FCB) and precise root opening (gap) will be used to minimize single-sided, full penetration weld size and heat input on thin steel butt joints. The focus of this effort will be welding procedures for 5, 8 and 10 mm plate to target the most common thin steel applications and demonstrate the potential of the new procedures. Both conventional and advanced tandem SAW power with DC-AC or AC-AC polarity will be evaluated for maximizing travel speed and fusion quality. The current and electrode phase will be developed to control filler melting rate, base metal dilution and bead shape, and minimize heat input. A pre-gap joint preparation will permit rapid fusion of the faying edges, assure complete penetration and minimize the weld size and heat input. The effects of gap of process performance will be assessed for each plate size. The use of bevels to improve weld bead shape and quality will be evaluated to improve resistance to solidification cracking.

4. Improving the Use of Work Orders in the Shipyard by Reducing Cycle Time and Standardizing the Format

(Systems Technology Panel): A significant amount of effort is incurred in both the acquisition of material and expenditure of labor when a work-order is generated.

This project will significantly reduce the amount of non-value added activities found in the work order process by identifying a more efficient, reusable process and developing standardized terminology, templates and software to create and access work orders in the office and on board the vessel.

5. Mobile & Wireless Expansion of Shipyard Systems

(Systems Technology Panel): The goal of this project is to provide beneficial features and functions for mobile and wireless computing tailored to the needs of ship manufacturers and ship repairers. Mobile devices (PDAs) are currently in operation at various shipyards supporting the automation of labor collection and integration of that data to host systems. This project will add features and functions that will enhance this current state of automation, including a Web/browser interface that will provide the freedom to create a transaction and review information on virtually any PC or connected computing device, and use an assortment of computing devices that support a browser (desktops, laptops, PDAs, Touch Terminals, etc.). Also envisioned is a voice capability that will enable a user to speak into a PDA to create a voice file that will become part of the record in the corporate information system.

6. Reusing Ship Product Model Data

(Systems Technology Panel): With the advent of full service contracts by the Navy, shipyards are becoming increasingly responsible for the life cycle support of ships, including maintenance and logistics data over the life of the ship. Hence, it is becoming increasingly important for shipyards to efficiently integrate acquisition data with lifecycle support products. In particular, the use of Integrated Data Environment (IDE), mandated for all Category 1 acquisition programs, will serve to collect and configure engineering and design information during acquisition. The shipyards' cost and performance in these new Navy contracts will depend on the efficient incorporation of this engineering and design information. Previous NSRP projects have developed a data architecture for Integrated Shipbuilding Environment information models, which have been used to exchange design, engineering and production data. A new international standard, S1000D, is emerging as the life cycle support data standard within both the shipbuilding and aerospace domains. The objectives of this project are to investigate and report on the use of the S1000D standard (for technical documentation as well as product life cycle support data) and the feasibility of interfacing the ISE information models; propose the basis

of an architecture to transfer ISE product data and PLCS data into S1000D standard format; and provide feedback to the S1000D standards body to ensure better integration. This project also represents the first step toward the integration of engineering and logistics data domains as well as providing a common standard for ship and aircraft life cycle support needs.

7. Employee Sources & Skills Summit

(Crosscut Initiatives Panel): Crosscut Initiatives Panel conferences and surveys reveal that employee sources and skills are falling behind requirements to replace aging workers and cover workplace turnover in shipyards and throughout industry. U.S. manufacturing is in competition with other industries in the U.S. and in other nations. There is strong demographic evidence of a gap in required skills and interest in shipbuilding and manufacturing in general. This project will organize and conduct a conference that will further connect shipbuilding and repair workforce development and skills initiatives with other national manufacturing and professional-technical education initiatives to achieve a more consolidated understanding and generate a joint action plan. The summit will give the manufacturing industry, regional workforce boards and education providers the opportunity to share new employee needs, common problems and best practice solutions to achieve greater national, regional and local unity. Resulting recommendations will help reduce costs and improve efficiency in shipbuilding and repair.

8. Internet Enabled Common Parts Catalog Interface

(Product Design & Material Technologies Panel): The Common Parts Catalog (CPC), as implemented by first and second tier shipyards to date, has enormous potential for standardization across the industry. Dissemination of the information that makes up the CPC will allow vendors and shipyards to more effectively interface their systems. An Internet-based CPC interface will allow part information from the vendors and suppliers to be entered directly into a shared area that can be accessed by any shipyard for data retrieval and integration into their CPC implementations. This promotes the

sharing of data in a standardized format that is ready for immediate use in existing shipyard CPCs and significantly reduces manual re-entry of data by multiple shipyards. This project will provide vendors a direct interface into the CPC compliant standard for part descriptions, thus relieving the shipyards from the task of raw data entry; provide a central repository for the collection and collation of pertinent part data to the shipbuilding industry; and serve as a neutral collection point to allow shipyards to decide whether to include particular data or not-keeping control of parts catalogs in the hands of the shipyard.

9. Applying Statistical Process Control to Coating Activities to Assist in Lean Production Implementation

(Surface Preparation and Coatings Panel): One of the key elements of lean manufacturing principles is the reduction of work in progress. This implies getting production right the first time to reduce the levels of re-work or unscheduled work, thus making the manufacturing process lean and efficient. The goal of this project is to identify or develop a software package that will enable application of Statistical Process Control

techniques to coatings management processes in shipbuilding and ship repair. Improved process control in shipyard coatings work will reduce re-work and excessive use of paint and abrasives. Yard schedule and budget will benefit, as will the environment.

10. Applying Lessons Learned to New Building Coatings Selection and Application

(Surface Preparation and Coatings Panel): The Navy is faced with increasing costs of surface fleet maintenance, a situation aggravated by surge demands associated with the global war on terror. Ships are coming back to the U.S. for rapid refits and minimum maintenance, resulting in less than optimal coating selection and application since meeting short vessel turnaround time is paramount. There are opportunities to learn lessons from this and apply them to new vessels to optimize the applied coating scheme in order to gain maximum benefit in through-life costs. The aim here is to assess the needs of coating at new build to minimize life cycle costs for the vessel, while meeting the needs of the new building process and the associated budget restrictions. Benefits include

cost reduction through the life of the vessel by identification, management and elimination of repetitive problems. The new procedure will also enable alternative new building specifications to be evaluated and costed, allowing assessment of the impact on through-life maintenance and new building and design budgets. Previous work carried out for NAVSEA has shown that \$1 per square foot spent at the design stage can save up to \$100 per square foot through the life of the vessel in reduced maintenance costs.

11. Coordination of Shipbuilding and Repair Industry Response to EPA Residual Risk Rule

(Environmental Technologies Panel): As part of addressing residual risk requirements for shipyards, the Environmental Protection Agency (EPA) is preparing to conduct site-specific risk assessments of several shipyards. The EPA is likely to begin inputting data into air dispersion and risk assessment models based in part on information obtained from 11 private and public shipyards in the U.S. The results of these model runs will determine if further regulation is warranted to

address residual risk from shipyard air emissions. The EPA's primary focus for the Residual Risk Rule is welding emissions, leading to potential future regulation of these emissions. The EPA has agreed to review emissions data with shipyards before the actual model runs begin. The industry currently lacks the specialized expertise to effectively review these data in the context of their impact on the risk modeling results. Industry also lacks the expertise to analyze and critique the model results. This project's objective is to ensure that the EPA utilizes valid, representative data and realistic assumptions in conducting the risk analysis and to provide consultation for the industry on the model results. In the event that EPA modeling data identifies any non de minimis residual risks, the EPA will proceed with developing a new regulation that likely will contain either emission limits or work practice standards necessary to reduce individual facility emissions from welding operations below regulatory thresholds. The work done under this project will enable the shipbuilding industry to provide the most accurate data possible on which the EPA can base their regulatory decisions.

THE FULL PICTURE

LOGBOOK: 2000 HRS: HYUNDAI SHIPYARD,
ULSAN, S. KOREA

2000 SUCCESSFUL INSTALLATIONS
AND COUNTING. FULL SPEED AHEAD
— BUSINESS AS USUAL!

**SEE US AT
NOR-SHIPPING**
Hall C · Stand 01-26c

WE ARE DETERMINED
TO PROVIDE OUR
CUSTOMERS WITH
INNOVATIVE AND
DEPENDABLE
ELECTRONICS THAT
MAXIMIZE MARINE
PERFORMANCE.
BY UTILIZING OUR SIX
CORE COMPETENCIES
WE AIM TO GIVE
OUR CUSTOMERS
THE FULL PICTURE.
WWW.KONGSBERG.COM

CORE COMPETENCIES > NAVIGATION > POSITIONING > DETECTION > COMMUNICATION > AUTOMATION > HYDROACOUSTICS

KONGSBERG

Circle 244 on Reader Service Card

NASSCO Lays Keel for BP Tanker

National Steel and Shipbuilding Company (NASSCO) held a keel-laying ceremony for Hull 487, the fourth ship of the Alaska Class double-hull oil tankers being constructed for BP Oil Shipping Company, USA. BP's Site Team Member **John Penso** welded his



initials into the keel to signify the start of structural erection.

The first ship in the class, the Alaskan Frontier, was delivered in August 2004 and the second ship, the Alaskan Explorer, was delivered in March 2005. On April 10, the third ship was floated out of NASSCO's graving dock following structural erection and is being com-

pleted pier-side at the NASSCO shipyard. The third ship will be delivered later this year and the fourth ship in 2006.

Circle 12 on Reader Service Card

New Tug Named



Adsteam Marine Limited has named the first of three new tugs that are an integral part of a phased capital program to upgrade the company's fleet in its United Kingdom ports.

The state-of-the-art Adsteam Ferriby - a 24/11 class tug that takes its name from two towns that straddle its new workplace, the River Humber on the UK's east coast - underwent rigorous checking and sea trials in the Netherlands before delivery.

Built by Dutch shipbuilding specialist, Damen, in its shipyards on the Shanghai River in China, Adsteam Ferriby is identical to Barunga, which was delivered to Adsteam Marine's Newcastle operation in Australia in January 2004.

It is only the second tug of its type in the world and, at 24 m with a bollard pull of 70 tons, is specifically designed for the handling of larger, heavier vessels.

Adsteam Ferriby offers maneuverability and handling, with a potential speed of 13 knots, a stopping time of 6 seconds (from full speed) and the ability to turn through 360 degrees in just 12 seconds.

Adsteam Chief Executive Europe, **Stephen Eastwood** said: "We are delighted to officially launch this new addition to our Humber operation and anticipate that this vessel will set the standard for the future.

"We have also decided that future tugs will bear the name Adsteam, followed by a name of local significance or historic relevance to reinforce our corporate brand across the UK fleet. The villages of North and South Ferriby straddle the Humber, so we chose this name to represent the comprehensive service we offer to customers right across the river."

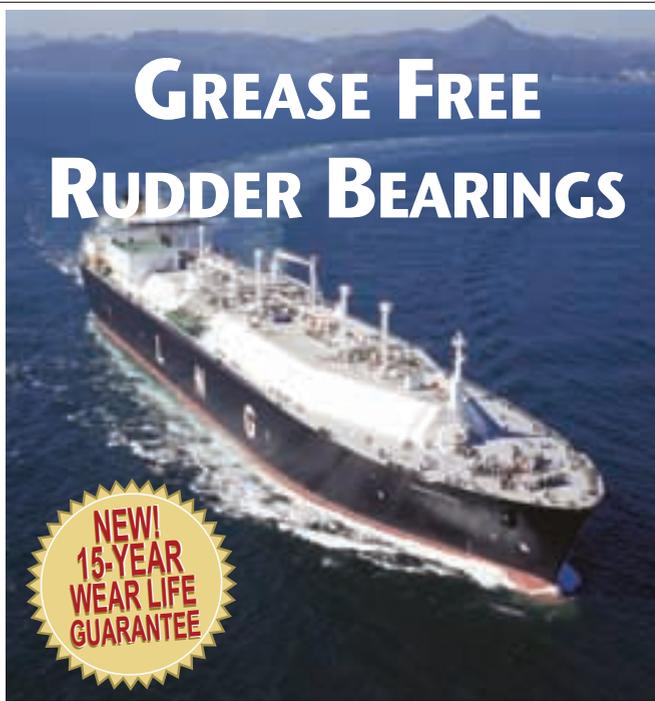
"Business on the Humber is buoyant, representing 10% of the UK's total imports and exports," Eastwood said.

Circle 14 on Reader Service Card

OIL FREE PROPELLER SHAFT BEARINGS



GREASE FREE RUDDER BEARINGS



Vessels equipped with non-metallic Thordon bearings are welcome in any port. Ship owners and Managers that specify Thordon proven oil free propeller shaft bearing systems completely avoid environmental issues, including delays and fines resulting from even a minor stern tube oil spill. Thordon SXL rudder bearings eliminate greasing systems and are now guaranteed to last 15 years in newbuild applications and twice the life of the non-Thordon bearing replaced during a conversion.



Reliability, proven long wear life and superior customer service from over 70 Authorized Distributors or Agents worldwide have made Thordon the first choice for environmentally friendly propeller shaft and rudder bearing solutions in newbuild, conversion and repair projects.

Visit our New Website
www.thordonbearings.com



THORDON

Thordon Bearings Inc.
Burlington, Ontario, CANADA
Tel: 1.905.335.1440
Fax: 1.905.335.4033
Email: info@thordonbearings.com

Circle 271 on Reader Service Card

Grande Detroit Launched



In honor of the Motor City, Grande Detroit — a new build for Grimaldi-Naples — was launched on April 16 at the Croatian Uljanik Yard in Pula. Godmother of the vessel was Ann Dickson, wife of Michael Dickinson, who is the executive director of logistics at General Motors Europe. Grande Detroit is the ninth of a 14-ship order awarded by Grimaldi-Naples the Uljanik Yard. Over a four-year period the yard has launched and delivered to Grimaldi-Naples the vessels Grande Benelux and Grande Italia in 2001, Grande Spagna and Grande Portugallo in 2002, Grande Roma and Grande Napoli in 2003 and Grande Lagos and Grande Anversa in 2004.

Grande Detroit is a 36,000 ton vessel measuring 577 ft. (176 m) long with a 102 ft. (31.1 m) beam. Built as a car carrier, Grande Detroit can carry 4,600 cars and 100 containers on on-board trailers or alternatively 256 trucks and 2,000 cars. The ship has a maximum speed of 20 knots and carries a crew of 26.

The success of these Grimaldi-Naples vessels can be attributed to their high degree of cargo flexibility which enables them to carry any size or weight of wheeled vehicle on 11 decks which can be raised to a height of 16.4 ft. (5 m) to accommodate trucks, tractors, double-decker buses, rail cars and earth moving equipment. An additional five vessels will follow Grande Detroit from the Uljanik yard for delivery to Grimaldi-Naples from 2006 to 2009.

Circle 13 on Reader Service Card

Hansa Hamburg's MS Reinbek Christened

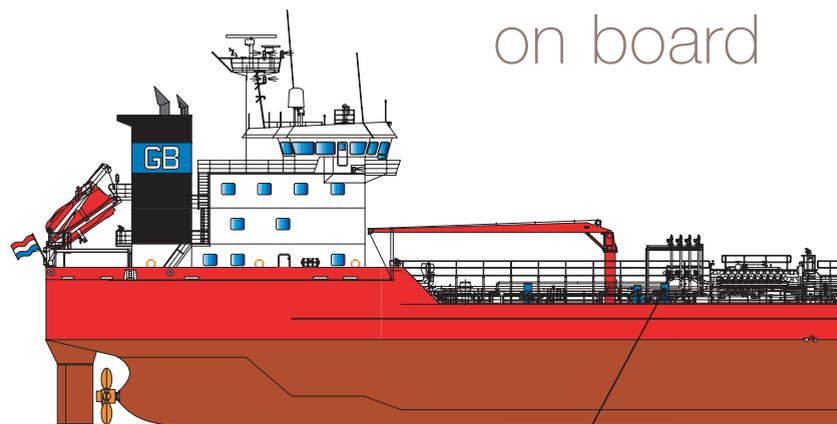
A new 1,600-TEU containership built for Hamburg-based issuing house Hansa Hamburg Shipping was recently christened MS Reinbek. MS Reinbek is the second newbuilding in a series of four identical feeder ships built at the Meyer Werft's Papenburg shipyard for Hansa Hamburg Shipping. Its christening comes six weeks after the christening of the first vessel in the series, the MS Eilbek.

MS Eilbek has already successfully

completed its second return voyage to Montreal via Antwerp and Liverpool for CP Ships. MS Reinbek has also been chartered to CP Ships, and will operate on its Northern Europe-Canada service.

MS Reinbek is a high-speed vessel, which has been built to the highest commercial ice-class specification and offers flexible cargo handling facilities. This combination of features makes it the exception among feeder vessels of this size class. The ship's technical management is in the hands of the Hamburg-based Wappen Reederei shipping com-

Precision on board



With a top reputation in chemical transport, Broere Shipping makes no compromises on tank cleaning. They choose Gunclean Toftejorg solutions from Alfa Laval.

Today Alfa Laval uses unique G-Pass software to identify and eliminate hard-to-reach "shadows" in the tanks. TRAX, another software tool, then analyzes the performance of the cleaning solution before it is installed.

"Alfa Laval's strength lies in designing installations for total performance," says Karel Vinke, Broere Cargo Superintendent. "From shadow drawings to final installation, Alfa Laval has given us full support."

Today, Broere Shipping is more effective than ever. With optimal cleaning and no downtime, their Gunclean Toftejorg systems help keep business on track.

To learn more about Alfa Laval Gunclean Toftejorg systems or the Broere Shipping installations, please visit www.alfalaval.com/marine



Gunclean Toftejorg systems

Broere Shipping uses SSt 40T dual-nozzle tank cleaning systems, plus rotary spray heads for hard-to-clean spaces like pump domes and entry hatches.



Circle 202 on Reader Service Card

Simplex-Compact® Seals

Made (only) in Germany

Sales, Spares & Service in North America
Simplex Americas LLC (only)

(908) 237 9099 info@simplexamericas.com



Circle 265 on Reader Service Card

pany. Designed for promising new markets and named in continuation of a century-old tradition, the is an elegant pairing of future-savvy high technology and shipping history. The Hamburg-based shipping company Knöhr & Burchardt Nfl., which has been contracted for the feeder's commercial management, has named its entire fleet after Hamburg river and place names ending in "-bek".

Circle 15 on Reader Service Card

Triple Blessing for Crew Boat

In some parts of Southeast Asia when a tree is to be carved into a dugout canoe, it is customary to invite the spirit to leave the tree before it is cut. Once the log has been crafted into a canoe, the spirit is invited back into the boat as its protector. Such blessing ceremonies are involved in the building and launching

Taoist **Han Beng Kuang** performs a blessing on Strategic Marines latest 40-m crew boat building in Singapore.



(left to right) Muslim representative **Haji Ali**, Strategic Marine (Singapore) GM **Paul Rudd**, Taoist **Han Beng Kuang**, **Christian Peter Goh**, **Ron Anderson** Director International for Strategic Marine and Strategic Marine Chairman **Mark Newbold**.



of boats around the world. But few offer such comprehensive blessings as was done this March in Singapore for a new 131.2 ft. (40-m) aluminum crew boat.

In the multi-cultural environment of Singapore there are multiple religious traditions. To honor this reality, Strategic Marine organized a triple blessing for the keel laying ceremony of their latest vessel that included the rights of Christian, Muslim and Taoist religions. Most of the aluminum for the boat was cut in Australia and shipped in containers to the company shipyard in Singapore for assembly. This results in a rapid and efficient construction schedule that saw much of the framing in place for the blessing.

Strategic Marine Singapore Pte. Ltd. is a wholly owned subsidiary of the Australian parent company. The parent firm has delivered more than 150 high speed aluminum vessels with 40 percent of their production going to the international market. The vessel being blessed at the Singapore yard is the second to be built there to the same specs by Southerly Design of Australia. They feature tankage for 55,000 liters of diesel fuel and 25,000 liters of fresh water. Accommodation is provided for ten crew and 80 passengers. The 89 sq. m. after deck has a 50-ton cargo capacity. The boat being blessed and scheduled for a November 2005 delivery will be powered by three V12 1350 hp (1007 kW) at 1950 rpm Cummins KTA38 M2 main engines turning into Twin Disc MG 6690SC with 2.47:1 reduction. Her sister ship, with all the same specs except for a V16 Cummins KTA50 M2 generating 1800 hp (1343 kW) at 1900 rpm as the center of the three engines, will deliver to Syarikat Borcos Shipping Sdn Bhd. this July.

Circle 21 on Reader Service Card

 **WaterWeights**
water professionals

save on load testing with
Water Weights



suspended and deck loads for all types of applications

capacities to 1,000 tons

rental, sale, lease, and turnkey service

domestic and worldwide locations

tel 888 998 3787

intl 1 909 626 8316

web www.imesinc.com



Circle 234 on Reader Service Card

Need a Lift?

If you're suffering from those load-towing blues, we have just what you need.

Allied Systems Company now manufactures **LANTEC Winches**.

With three winch models and four drive models to choose from, chances are, you'll find the machine suited to your application. Fast, safe, reliable—**LANTEC Winches** are leaders in their field.



To find out more, write, call or email:

Allied Systems
COMPANY

2300 Oregon St.
Sherwood, OR 97140, USA

Phone: 503.625.2560

Fax: 503.625.7269

Email: marketing@alliedsystems.com

Website: http://www.alliedsystems.com

Manufactured under license from LANTEC, a division of IMAC Design Group Ltd.

Circle 204 on Reader Service Card

Damen Delivers Multi Cat

In October 2004, the contract was signed between Gulf Cobla and Damen Shipyards Gorinchem for the delivery of a Damen Multi Cat 1908. The Multi Cat is amongst other duties intended to assist the Khaleej Bay. This Damen Cutter Suction Dredger 600 was built at Abu Dhabi Shipbuilding from a partial package of Damen Technical Cooperation. The dredger has a suction pipe diameter of 600 mm, a cutter power of 920 kW and a dredge pump of 1910 kW.

As the hull of the Damen Multi Cat 1908, named Tarpon Bay, was on stock a short delivery time could be offered. The crane was delivered in the last week before the delivery of the vessel, but through careful planning and preparations the vessel could be handed over on time in March 2005.

The Damen Multi Cat 1908 is one of the larger sized standard Damen Multi Cats with the following main dimensions:

Length o.a.:61.3 ft. (18.7 m)
 Beam o.a.:26.2 ft. (8 m)
 Depth at sides:9/1 ft. (2.8 m)
 Draft:7.5 ft. (2.3 m)

The major tank capacities are:

Fuel oil (own use):7.5 cu. m.
 Fuel oil cargo:46.6 cu. m.
 Fresh water (own use):0.6 cu. m.
 Cargo fresh water:14.8 cu. m.
 Ballast water:10.5 cu. m.

The Damen Multi Cat 1908 has a single chine hull with a transom stern and a mildly-formed bow. The hull is divided into five watertight compartments and is of a very strong construction with side and bottom plating of 10 mm and deck generally of 10 mm thickness and even 20 mm thickness in the area aft of the bow roller. The two push bows are fitted with cylindrical rubber fender of 380 mm diameter.

Two Caterpillar 3408C TA engines are driving fixed pitch propellers of 1300 mm diameter, through Reintjes WAF 164L reverse/reduction gearboxes. This complete installation is of standard proven design resulting in a guaranteed trouble free opera-



tion. The 1300 mm diameter propellers run in Van de Giessen nozzles which have stainless steel inner rings.

The total power is 716 bkW (960 bhp) at 1800 rpm. This propulsion installation resulted in a trial speed of 8.9 knots and a bollard pull of 12.5 tons.

The most important tool of the 'Tarpon Bay' is the hydraulic deck crane. This crane is of the knuckle boom configuration; make Effer type 65000-3S. The capacity is 7.6 ton at the maximum outreach of 25.7 ft. (8.34 m). The crane is complete with a hydraulic winch with a lifting capacity of four tons. A main

engine driven hydraulic pump supplies the power for the crane.

The wheelhouse is fitted out with a helmsman's seat, a chart table with chair and completed with time clock, barometers, binoculars etc. The communication and navigation equipment consists of a Sailor RT2048 VHF radio, a Furuno LS-6100 echo sounder, a Furuno FR-7062 radar and a Furuno GP-1650 GPS/chart plotter. This chart plotter has a six-in. display and is delivered with a digital chart card of the operating area of the 'Tarpon Bay'.

Circle 18 on Reader Service Card

The Afon Dyfrdwy: Wings Under the Bridge

Low bridges continue to challenge and limit transportation on inland waterways. Recently Hollyhead Towing of North Wales U.K. developed a self powered vessel, Afon Dyfrdwy, to transport the prefabricated wings for the new Airbus A380 from the manufacturer at Broughton, near Chester, down the River Dee (Afon Dyfrdwy is the proper Welsh name for the River Dee). Components of the aircraft are built at various locations for final assembly at Toulouse, France. After being moved one at a time down the river to Mostyn Dock the 150.9 x 39.3 ft. (46 x 12-m), 200-ton wings are transhipped on an ocean going vessel for final delivery.

The river trip requires the 189 x 48.5 ft. (57.6 x 14.8-m) boat to pass under low bridges. To meet these restrictions while transporting its cargo, the boat was

built at McTay Marine Ltd. Bromborough, U.K., with a 9-ft. (2.8-m) molded hull depth and a sophisticated ballasting system capable of taking the draft down to 4.9 ft. (1.5 m) with a 14.1 ft. (4.3-m) air draft. The ballast system can vary the boat's trim to allow for differing weight distribution between the port and starboard aircraft wings. In addition to the ballast system, the boat is equipped with a low level cargo deck with 300 ton capacity lift system. The allows a specially designed trailer to roll on with the wing. The lift system then raises the wing on its pallet allowing the trailer to be rolled off the vessel and the wing to be lowered to the deck. Heavy steel rails above the bulwarks assure that the wing will not be damaged in the event that the boat did come in contact with an overhead obstruction. At the same time attention is paid to monitoring the river depth and bottom contours with an echo-sounder with an electronic survey and route planning navigation system. Propulsive power for the boat

is provided by two Cummins KTA 19 M3 engines, 477kw each driving a pair of Type W60 Jastram azimuthing jet thrusters. These take water from the hull sides just at the chine and expel it out the bottom of the boat. Controllable vanes can direct it in any direction. Not only does this give the operator a very high level of control over the vessel's movement, it also protects the river bottom from the type of disturbance that conventional propellers could create. Environmental requirements stipulate that river silt may not be disturbed and the vessel wake must be kept to less than 30 cm in height. The main engine thrusters are located aft. An additional pair of Jastram W20 bow thrusters, each driven by a Cummins 6CTA8.3, give the operator an additional level of control and redundancy. The boat is classed, A1 IWW 'Roll on Roll off barge', LS "0", Zone 1, 'River Dee Service', + LMC UMS, E.P., A, B. UK MCA Class IX A.

Circle 17 on Reader Service Card

New French Protection Vessel



The first of two identical coast protection vessels designed and equipped by Rolls-Royce is Abeille Bourbon, a multipurpose vessels intended to prevent pollution disasters such as the Erika and Prestige.

Les Abeilles International in Groupe Bourbon will operate the new UT 515 design vessels on long-term charter to the French navy. Abeille Bourbon was built by Myklebust Verft (part of the Kleven Maritime Group) on the west coast of Norway, and the hull was fabricated in Poland. The second vessel is scheduled for delivery later this year.

The ships will be stationed at strategic locations on the French coastline, one in Brest, the other in Cherbourg. For more than 25 years coast protection has been provided by two well-known ocean-going salvage tugs, Abeille Flandres and Abeille Languedoc, which were designed and built in Ulsteinvik in Norway in 1978 and 1979 respectively and are also a UT-Design from Rolls-Royce, type UT 507. The old tugs have successfully undertaken many difficult rescue operations over the years and will remain in service, moving to other locations. The vessels are multipurpose salvage tug, coastguard and standby vessels. Among their principal roles will be assistance to vessels at sea, deep sea towing, salvage of vessels in distress, fire and flooding control and anti-pollution activity. On trials, a bollard pull of just over 201 tons was achieved, together with a speed of 19.8 knots at maximum continuous engine rating. The high speed will enable Abeille Bourbon to move quickly to an incident and its powerful pull should enable the tug to prevent a stricken vessel grounding and tow it to safety.

Abeille Bourbon is 262.4 ft. (80 m) long, and has a beam of 54.1 ft. (16.5 m)



and a service draft of about 19.7 ft. (6 m). Two Kamewa Ulstein CP propellers in nozzles are powered by four medium speed diesels producing a total of 16,000 kW. Renk combining gearboxes with power take-offs for the shaft generators were bought in and supplied by Rolls-Royce as part of the equipment package. For steering and maneuvering there are two Rolls-Royce classic rudders with independent Tenfjord steering gear. Two Kamewa Ulstein TT 2200 tunnel thrusters are located at the bow, each rated at 883 kW. There are two smaller tunnel thrusters type TT1650 of 515kW located in the skeg aft. The system is controlled and monitored by a UMAS V system.

On deck, Abeille Bourbon is essentially laid out as a deep sea towing and salvage tug. The main towing winch is a Rauma Brattvaag two drum hydraulic unit. It has a 250-ton pull on the first layer and can hold 500 tons on the brake. Each winch drum can hold 1600 m of 80 mm wire rope.

Circle 19 on Reader Service Card

Main particulars - UT 515 Abeille Bourbon

Length, o.a.	262.4 ft. (80 m)
Breadth, molded	54.1 ft. (16.5 m)
Depth, main deck	26.2 ft. (8 m)
Draft, service	19.7 ft. (6 m)
Power	16,000 kW
Bollard pull	201 tons
Speed	19.8 knots
Class Bureau Veritas - 1 3/3 * Hull* MACH, Tug/salvage tug, Unrestricted navigation, AUT, UMS, Firefighting 2, Dynapos AM/AT	

World's Largest Containership Named



Colombo Express, the world's largest containership at 1099 ft. (335 m) long, 141 ft. (43 m) wide, and able to carry 8,750 containers, was recently named. The patron of the new Hapag-Lloyd flagship was **Christiane Krumnow**, wife of the supervisory board chairman of TUI AG, **Dr. Jürgen Krumnow**.

"Global container transport remains a growth market," said **Michael Behrendt**, chairman of the executive board of Hapag-Lloyd AG. "Today's volume of 71 million standard containers is forecast to grow to almost 91 million by 2008 - an increase of almost 30% or 20 million containers. With our fleet expansion program, we are well equipped to meet the challenges of the future and fully intend to continue to expand our market position." The ship was built at Hyundai Heavy Industries in Korea. It has a capacity of 104,000 tons and can carry 8,750 standard containers. The ship's diesel has an output of 68,640 kW or 93,500 hp, providing the vessel with a speed of 25 knots.

The newbuilding with Hamburg as home port operates between Europe and Asia, calling at the ports Shanghai, Xiamen, Yantian, Hong Kong, Singapore, Southampton, Hamburg, Rotterdam, Port Klang, Singapore, Hong Kong and again Shanghai.

Hapag-Lloyd will commission seven more sister ships as well as two slightly smaller units (8,400 slots) up to 2008. This means a capacity increase of overall 86,800 slots (TEU). Hapag-Lloyd's fleet, today comprising 51 modern containerships with a total capacity of approx. 192,000 TEU, will increase to 61 units by 2008.

Containerships at Hapag-Lloyd traditionally bear the name of a city, followed by "Express". In 1886, North German Lloyd in Bremen, one of the two original companies of Hapag-Lloyd, opened its East Asia service with the steamship "Oder", calling at Shanghai, Hong Kong and Singapore as well as Colombo. In the same year, a service was set up linking Germany with Australia via Colombo. Colombo was not only an important transhipment

hub for Hapag-Lloyd in the past: it has remained a key port up to the present day. Customers are provided with seven weekly departures providing links with the world's main economic center. The port is also a significant transhipment hub for the Indian subcontinent.

Hamburg - Amerikanische Packetfahrt-Actien-Gesellschaft, known for short as "Hapag" or Hamburg-American Line, was founded in 1847 to carry emigrants to the "New World". Its greatest competitor was North German Lloyd, founded in Bremen in 1857. The companies merged in 1970 to form Hapag-Lloyd AG, which has belonged to TUI AG since 1997.

Damen Delivers Crew Boat to Kanoo Marine



After successful seatrials at the shipyard in Gorinchem, Damen has delivered the first of three new crew boats to Kanoo Marine (a division of Kanoo Shipping Agencies). The first-of-class has arrived in the Gulf and will start working soon. The second vessel is just about to leave the shipyard and the third will undergo trials in June. Kanoo Shipping Agencies (part of Yusuf Bin Ahmed Kanoo) is a longtime customer of Damen.

The company provides among others a network of ship agency's services throughout the Gulf, with fast crew boats currently operating out of Ras Tanura and Juaymah (Saudi Arabia) and Fujairah (UAE).

The new crew boats are based on the standard Damen Stan Tender 1905 design, of which already three units are in operation with other owners. The version developed for Kanoo can carry six passengers and a payload of 2.5 tons while maintaining a speed of 18 knots. The vessel's main purpose will be to transfer ship's crews and officials, as well as stores and spares.

The design philosophy to optimize for reliability and durability resulted in an oversized engine cooling capacity, redundant engine room ventilation with dust filters and redundant water-cooled air conditioning; all optimized on the basis of Kanoo's and Damen's long experience with Gulf conditions.

Circle 16 on Reader Service Card

A Ballast-Free Ship: Can it Work?

While much effort and attention is being paid to solutions to the problems inherent in a ship's ballast water - specifically the transportation and relocation of non-indigenous species and the resultant environmental harm - researchers at the University of Michigan are studying a novel concept: the Ballast-Free Ship Concept.

Rather than eliminating non-indigenous species carried in ballast water, a University of Michigan project takes a different approach - eliminating the ballast tanks that harbor foreign species. Project investigators examined the cost and technical feasibility of building a ship that eliminates ballast tanks, replacing them with a series of slow flow ballast tubes, or trunks.

The ballast-free ship concept uses a varying flow of water through the tubes to change a ship's buoyancy and maintain optimum stability. When no cargo is on board, the structural tubes are opened to the sea, and the flooding lowers a ship to its required ballast drafts.

The pressure difference between the entrance to the tubes near the bow of the ship and the exit openings near the stern produces a slow flow of water.

This flow ensures that the ballast trunks are always filled with "local" sea water-eliminating the transfer of foreign ballast water and non-indigenous species.

Results of Computational Fluid Dynamics studies and model tests have

shown the following:

- Trunk operation will result in a modest increase in required ship power;
- The need to lower the ballast tubes below the ballast draft for flooding to occur raises the cargo hold and requires that the hull become deeper to accommodate the same cargo volume;
- A new hull configuration can be accomplished by adding a few hundred tons of hull weight and extra costs of this new configuration would be offset by the elimination of a ballast water treatment system and the ballast piping within a ship's cargo region.

Evaluating Ballast Exchange

All ships entering the Great Lakes are currently required to exchange ballast water at sea using one of two methods:

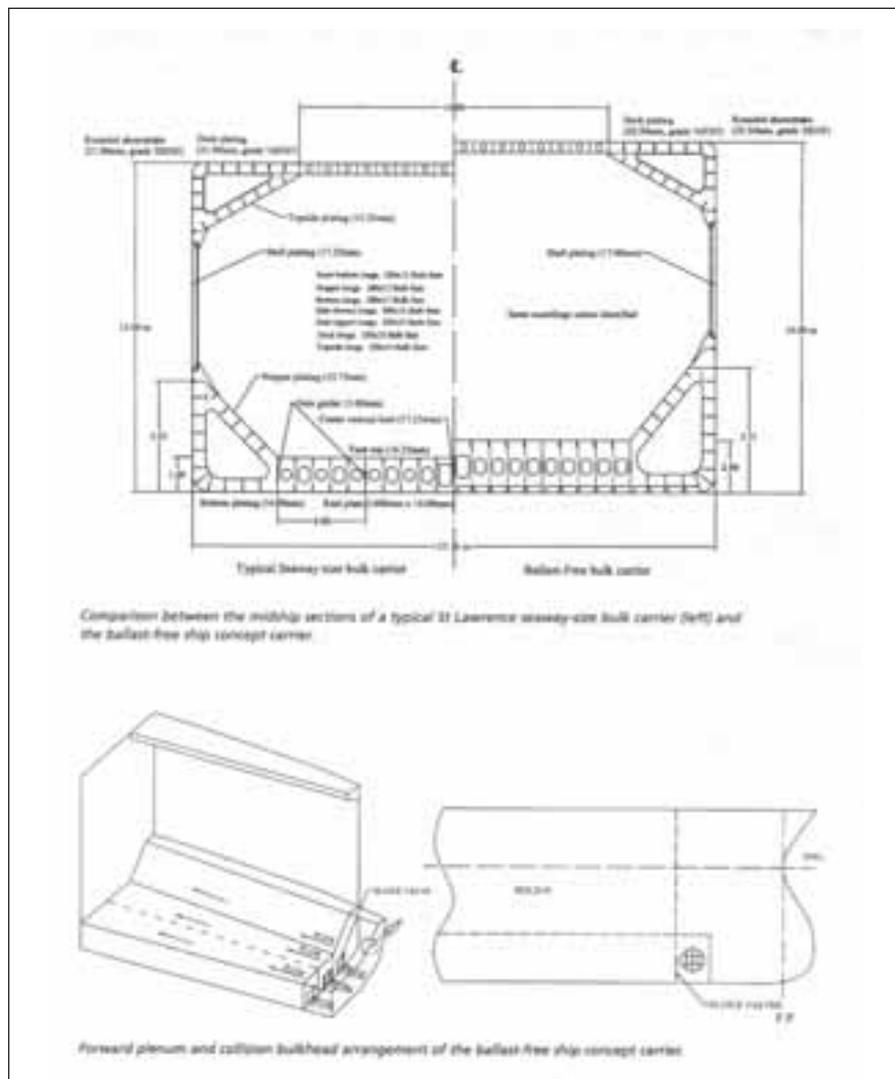
- One method involves emptying and refilling each ballast tank in succession;
- Ships that cannot use the method above, due to structural design or heavy seas, are allowed to use the flow-through method in which new ballast is pumped into a tank, forcing existing ballast to overflow through tank vents.

According to researchers at the University of Michigan, the removal of old ballast water can be improved by proper placement of the tank filling connections, design of manholes in the internal structure and placement of vents.

Using Computational Fluid Dynamics researchers have been investigating the

effectiveness of the flow-through ballast exchange method. Project investigators studied typical tank configurations and variations found on containerships and

bulk carriers. Results show that certain areas of the ballast tanks studied experience a low flow of new ballast water during the exchange process.



Oslo
+47 22 30 90 10

New York
+1 203 354 3740

Singapore
+65 6221 1877

Dubai
+971 4 391 1165

Sydney
+61 2 9217 9300

info@shipnet.no
www.shipnet.no

SHIPNET[®]
The Ultimate Computing Concept for the Shipping Industry

Financial Management



Even the best can be better

Control your future

Power

The Heyerdahl Award 2005

Last month the Expert Committee announced a short list of two candidates for The Thor Heyerdahl International Maritime Environmental Award. This year the awarding ceremony is scheduled to take place in Japan. The Heyerdahl Award's Expert Committee, lead by **Terje Staalstrøm**, have concluded a short list of two worthy candidates, who have demonstrated outstanding technical innovation and outstanding and proactive environmental policy and activities. Both candidates contribute to an improved global environment and to the development and implementation of new specific environmental measures. The candidates are:



Knutsen OAS Shipping - KVOC-system

The Norwegian company is operating the largest fleet of purpose-built DP (dynamic positioning) class shuttle tankers in the world and is nominated for their KVOC-system. The KVOC-system reduces



Following 40 days of rebuilding at Remontova yard in Gdansk, Poland, the *Siri Knutsen* was converted into a shuttle tanker. The company's KVOC tank system concept installed during the rebuilding.

VOC-emissions during loading and transport of VOC-containing cargoes by avoiding under-pressure during loading, thereby stabilizing the VOC in the liquid cargo suppressing the flashing during loading. A prototype system was installed on a shuttle tanker in 2002 and further improved systems have been installed on four additional shuttle tankers of Knutsen OAS Shipping.

NYK Line - Environmental focus and innovations

The Japanese company is nominated for their outstanding commitment to continuously improve its environmental performance beyond what is required by rules and regulations. This is clearly demonstrated and communicated in their comprehensive Social & Environmental Report, thus being a model and example for other major shipping companies. NYK is also actively participating in the development and implementation of a number of innovative technological solutions and operational procedures contributing to reducing the environmental impact of the operation of their fleet that go beyond regulatory requirements.

The Thor Heyerdahl International Maritime Environmental Award

The purpose of the Award is to contribute to an improvement of the global environment, announce the environmental benefits of shipping as a mode of transport, and to serve as an inspiration for implementing new, specific environmental measures. **Dr. Thor Heyerdahl** and the Norwegian Shipowners' Association launched the Thor Heyerdahl International Maritime Environmental Award in June 1999. From January 2003 the sponsorship behind the award was developed further, to include also the shipping classification society DNV and the household names in the marine insurance world, Skuld and Gard Services.

Evergreen Hit with \$25M Pollution Penalty

For those shipping companies that still doubt the resolve of U.S. authorities to seek and financially punish those that illegally dump in waste from ships, pay heed to the recent fine agreed by Evergreen.

The United States Attorneys from five judicial districts with major ports announced criminal charges against Evergreen International, S.A. (Evergreen). Under the terms of a plea agreement, Evergreen will pay \$25 million, the largest-ever amount for a case involving deliberate vessel pollution, and plead guilty to felony charges brought in Los Angeles; Newark, NJ; Portland, OR; Seattle; and Charleston, SC.

Evergreen pleaded guilty to 24 felony counts and one misdemeanor — five counts from each federal district involved in the case — for concealing the deliberate, illegal discharge of waste oil and for a negligent discharge in the Columbia River. The charges include making false statements, obstruction of Coast Guard inspections, failing to maintain an accurate Oil Record Book, and one negligent violation of the Clean Water Act relating to the discharge in the Columbia River. Following the guilty pleas, U.S. District Judge **Terry J. Hatter, Jr.** ordered the company to pay \$25 million to be divided equally among the five judicial districts involved. Of this amount, \$10 million will be directed to environmental community service projects in each district.

In May 2001, the U.S. Coast Guard discovered Evergreen was using bypass pipes aboard their ships to illegally discharge waste oil into the ocean without treating it in an oil-water separator.

The investigation of Evergreen ships and companies began on March 4, 2001 after the discovery of approximately 500 gallons of oil in the Columbia River near Kalama, Wash. Through vessel traffic reports and oil samples, the U.S. Coast Guard traced the spill to the Ever Group, a container vessel managed by Evergreen Marine (Taiwan) Ltd., which had negligently discharged the oil. On May 14, 2001, the Washington State Department of Ecology (WDOE) discovered a bypass pipe used by crew members on another Evergreen vessel, called the *Ever Given*, to illegally discharge waste oil into the ocean.

The violations on these two vessels led the U.S. Coast Guard to conduct "Priority One" inspections of other vessels owned, operated, or affiliated with Evergreen in various United States ports. The federal investigation was conducted with the assistance of the WDOE as well as the EPA's Criminal Investigations Division and the Federal Bureau of Investigation, and revealed that at least seven Evergreen ships (*Ever Group*, *Ever Given*, *Ever Dainty*, *Ever Refine*, *Ever Gleeeful*, *Ever Laurel*, and *Ever Reward*) regularly and routinely used bypass equipment to discharge oily waste and sludge oil while circumventing required pollution prevention equipment and concealing the discharges in fictitious logs which it knew were inspected regularly by the Coast Guard. In a factual statement filed by the court, Evergreen admitted that it knew the fictitious logs were regularly inspected by the Coast Guard.

According to a detailed factual statement filed in court and which Evergreen has admit-



Chief Warrant Officer **Stan LeCain** (left), a marine safety inspector from Marine Safety Office Mobile inspects ship documents with Petty Officer 3rd Class **Ryan Mitchell**, also an inspector from the MSO. The two conducted a follow-up examination aboard the motor vessel *San Miguel Arcangel*, a Panamanian cargo vessel detained in the Theodore Ship Channel in Mobile for deficiencies. USCG photo by PA2 Chad Saylor

ted is accurate:

- During a three-year period, Evergreen discharged waste oil and sludge through bypass equipment and without the use of required pollution prevention equipment from certain ships, with the knowledge that this pollution violated international law;

- Evergreen concealed illegal discharges in order to prevent discovery by the U.S. Coast Guard through methods that included creating fictitious Oil Record Books and destroying a bypass pipe in anticipation of a Coast Guard inspection;

- Evergreen made false statements to the Coast Guard about the operation of the oily water separator and certain engine room officers instructed crew members that if questioned by the Coast Guard they should deny any knowledge of such unlawful activities.

Four related Evergreen companies - Evergreen Marine (Taiwan), Evergreen America, Greencompass Marine, S.A., and Evergreen International, S.A. - will be bound by a detailed Environmental Compliance Plan to prevent future violations as a condition of probation. Under the terms of the proposed plan, Evergreen will need to secure every

overboard valve and flange with numbered tags and make other hardware changes to make bypassing more difficult. The compliance plan also requires that Evergreen ships visiting the United States be audited by an outside firm that will be reviewed by a special court appointed monitor.

Ship's Engineer Jailed in Dumping Case

The chief engineer the M/V Katerina — **Edgardo A. Guinto**, 49 — was sentenced to eight months in federal jail for his conviction on obstruction of justice charges in connection with his role in the bypass of the ship's oily water separator. Guinto pleaded guilty to the obstruction charge in January, admitting that he allowed the bypassing of the oil-water separator on the Katerina, that he instructed crew members to remove and conceal the bypass pipe when the ship came into Long Beach, and that he made fraudulent entries in the ship's Oil Record Book.

The captain of the Katerina, **Ioannis Kallikis**, 65, of Athens, Greece, pleaded guilty in February to an obstruction of justice charge. By pleading guilty,

Kallikis admitted that he acted corruptly and with the intent to impede a Coast Guard investigation into pollution violations by advising other crew members that officials of the operator of the ship wanted the crew to destroy the incriminating telexes. The operator of the Katerina, DST Shipping, Inc. of Thessaloniki, Greece, pleaded guilty to two felony charges related to this water pollution case. DST pleaded guilty to obstruction of an official proceeding and failing to maintain an accurate Oil Record Book. DST was sentenced to probation, during which time its ships will be subject to special scrutiny. The company also paid a \$1 million fine.

Katerina is a Maltese-flagged, 600-ft., 16,320-ton cargo ship that arrived at the Port of Long Beach on September 10

MariSan Wastewater System

Marine Environmental Partners, Inc. (MEP) designs and manufactures MariSan ballast and wastewater treatment systems that are designed to be ecologically safe and user-efficient. The MariSan wastewater system integrates a proprietary ionized air system

(IONZ) that is designed to enhance and improve coagulation and disinfection processes to lower TSS and pathogens, and as part of an advanced oxidation process, also lowers BOD levels in treated wastewaters. The ballast water system incorporates IONZ into a process system approach to eliminate more than 95 percent of invasive aquatic species, harmful bacteria and viruses. MariSan systems are fully automatic.

Circle 29 on Reader Service Card

EnSolve Wins Contract

EnSolve Biosystems won a contract option by the U.S. Navy to develop a biological treatment system to remove petroleum products from decommissioned ships prior to disposal. The Phase II SBIR grant calls for EnSolve to design a prototype system that can be used to treat the wash water generated during the cleaning process. The system would be based on EnSolve's patented biotechnology process, which uses naturally occurring microbes to consume emulsified and other hydrocarbon-based wastes in the water to meet regulatory standards for discharge.

Circle 30 on Reader Service Card

Steel SWATH Hull



For Sale!
\$3.5 million - all equipment included

Will sell partially completed hull, or will complete vessel to your engineered specifications.

Ideal Vessel For:
**Offshore Casino
Gulf Offshore
Research Vessel
Cruise Ship
and more...**

Principal Particulars	
Length Overall	237 ft. (72.2m)
Breadth	95 ft. (28.9m)
Transit Draft	12.5 ft. (3.8m)
Operations Draft	21.5 ft. (6.6m)
Transit Speed	12 knots
Installed Power	4 x 1045 kw



Atlantic Marine, Inc.

8500 Heckscher Drive • Jacksonville, Florida 32246
ph: (904) 251-1545 fax: (904) 251-3500



Circle 210 on Reader Service Card

Keeping a Clean Ship

Standards regarding a ship's disposal of waste at sea are ever tightening, a trend which has driven the development of numerous new products and systems designed to keep ship effluent increasingly clean. On the following pages are details of a number of new offerings.

EcoStream Bilge Water Treatment System

Alfa Laval's EcoStream Bilge Water Treatment Systems was designed to meet the stricter IMO requirements that took effect January 1, 2005. As of this date, all bilge water pumped overboard from all new builds and retrofits on existing ships must meet previous standards for an oil content under 15 ppm and also fulfill new standards for contaminants in the form of emulsions of oils, chemicals, detergents and other particles.

In an effort to impose stricter environmental standards, an additional IMO test



will determine new real-life operating limits for contaminants in bilge water. Alfa Laval's EcoStream, a system based on centrifugal separation, is in the process of being approved by IMO.

In the EcoStream System, untreated bilge water is filtered, preheated and fed to the cleaning module by a feed pump. An oil-in-water-monitor on the clean

water outlet is set to the required value. When the oil content is below the acceptable value, the clean bilge water goes to the clean bilge tank or is discharged overboard. If the value is too high, it is returned to the bilge water feed tank.

EcoStream uses the force of gravity to clean bilge water. However, with forces 4,000 times greater than in sedimentation tanks, cleaning is more efficient and faster. EcoStream is designed for continuous operation, even under the toughest conditions. It operates automatically in single-stage operation and handles all oil shocks, varying feed composition and rough seas without losing efficiency.

EcoStream can treat bilge water to well below IMO standards, but tough emulsions may require a further treatment phase. Although EcoStream is designed to operate without chemicals and does not include a dosing unit as

standard, feed conditioning chemicals can be added before the feed pump.

Circle 50 on Reader Service Card

Alfa Laval Ballast Water Treatment System

Alfa Laval released Alfa Laval Ballast Water Treatment System (BWT), a new system for the removal of unwanted organisms and particles without additives or chemicals. The system, which includes a

complete control system for automatic operation, is designed to meet the requirements



of the new IMO regulations for ballast water that will take effect in 2009. The major components of the Alfa Laval BWT System are a filter to remove larger organisms and particles, the modular

Total Bilge Water Solution

The Right Cleaner

OIL-XORB ERC

- Incredible Cleaning & De-Greasing Properties
- Will Not Emulsify
- Environmentally Safe
- Non-Hazardous / Non-Toxic

Discharge Polishing

OIL-XORB HRF

- Remove all Hydrocarbons to Below Detectable Limits
- Emulsion Busting Cartridges
- Class Approved

Tamper Proof Control

GCM LOCKBOX

- Complete Discharge Control
- Lockable Sealable Enclosure
- IMO 107 Compliant OCM
- Logger Output

OWS Logging

ENVIRO-LOGGER

- Avoid Inaccurate Log Books
- Record All OWS Operation
- GPS Connection For Accurate Position and Time Stamping

Vigilant Marine Systems, LLC
 170 N. Maple Street, Suite 104 • Corona, CA 92880 • +1 951-808-9940 • Fax +1 951-808-8530 • www.vigilantmarine.com

Circle 273 on Reader Service Card

Benrad Advanced Oxidation Technology (AOT) unit, and a complete system for automated operation. The AOT unit produces hydroxyl (OH) radicals that quickly break down microorganisms and bacteria by damaging the microorganisms' cell membranes. The generation of OH radicals is based on photo catalysis, a process that eliminates the need for chemicals.

Water is treated at intake to ensure that only a minimal number of viable organisms enter the tanks and to reduce sediment accumulation in the tanks. The water is treated again at discharge to ensure any potential organism growth in the tanks has been neutralized.

The automated Ballast Water Treatment System can be operated from either the bridge or the machine control room. The system requires no additional maintenance crew or maintenance skills.

A full-scale prototype system has been in operation onboard the Wallenius vessel M/V Don Quijote since September 2003. Initial tests in August 2004 showed that system efficiency was over 99 percent for phytoplankton and zooplankton.

Circle 51 on Reader Service Card

The MariSan System

Engineers and scientists from Marine Environmental Partners, Inc. (MEP) and Nova Southeastern University Oceanographic Center (NSU) have entered the second phase in the development of protocols for the testing of ballast water systems as provided for by the U.S. National Oceanic and Atmospheric Administration (NOAA) 2004 Sea Grant Award. Recently, biological, analytical and toxicological tests of MEP's MariSan ballast water treatment system were conducted onboard Carnival's Elation.

MEP's MariSan Ballast Water Treatment System was successfully operating under regulated conditions for more than a year on Carnival's Elation. The company's early research work with the prestigious Nova Southeastern University Oceanographic Center led to the Sea Grant Award for the development of protocols - based on the efficiency of MEP's MariSan technology - for the testing of ballast water systems.

The biological tests that will be conducted will identify surrogates that can be used for standardized testing; the analytical tests will establish a method-

ology to determine the chemistry that occurs in any treatment process; and the toxicological tests will define what tests are necessary and can be performed on a worldwide basis. This effort will result in methods by which all systems can be uniformly tested. The National Sea Grant College Program is a partnership between the nation's universities, the National Oceanic and Atmospheric Administration, industry, and private citizens to encourage the wise stewardship of marine resources through research, education, outreach and technology transfer. Among its varied efforts, it has established a series of National Strategic Investments such as the Sea Grant Award to enhance its research and development to respond to high priority issues.

Circle 52 on Reader Service Card

Ensolve Oily Water Separator

EnSolve Biosystems' PetroLinator biomechanical systems for bilge water treatment uses special harmless strains of bacteria that "eat" the oil and other hydrocarbon wastes contained in ships' bilge water. The system is type approved by the U.S. Coast Guard and

Canadian Department of Transport to comply with IMO standards for overboard discharge. Late last year the PetroLinator line was broadened with the addition of the PL 300 model, which is sized for vessels that produce between 500 and 1,500 gallons of emulsified bilge water per day. The compact system's modular construction makes for easy retrofit in restricted machinery spaces. "With the addition of the PL 300 to the existing PL 100 and PL 630 models, we are now in a position to offer type approved PetroLinator systems for all types and sizes of ships," said Dr. **Jason Caplan**, president of EnSolve Biosystems. The PetroLinator is designed to be virtually maintenance-free with no filters or ceramic beads to clean or replace, and is designed for round-the-clock unattended operation. Unlike most mechanical systems, the PetroLinator easily handles emulsified oil and detergents. "Typical effluent discharges from installed PetroLinator systems are typically between 0 and 5 ppm, well below the strictest standards for environmentally sensitive waterways," said Caplan.

Circle 53 on Reader Service Card

LIFE PRESERVER

Environment friendly Hydrox Bio 68 is biodegradable and has low toxicity to marine life. As a sterntube lubricant, Hydrox Bio 68 helps to keep your fleet on the move, providing effective lubrication even when significant quantities of water are present.

The result? No expensive unplanned maintenance, no interruption to your sailing schedules and a cleaner, greener ocean.

Send for a brochure today.

VICKERS LEEDS

Benjn R Vickers & Sons Ltd. Tel: +44 (0) 113 386 7654
Airedale Mills, Fax: +44 (0) 113 386 7676
6 Clarence Road, Leeds e: mktg57@vickers-oil.com
LS10 1ND England www.vickers-oil.com

BIO 68 HYDROX

Lloyd's Register ABS APPROVED FOR USE WITH RAILKO STERNSAFE™ & CY160LS

Circle 212 on Reader Service Card

**CWWS Ultra-SEP
Bilge Water Separators**

Dual Stage Ultra-SEP Bilge Water Separators are designed to optimize performance in both processing phases for separating and removing free and emulsified oils from bilge water. The first stage efficiently removes free oils using our HELI-SEP coalescing separator. The second stage - the critical component for satisfying IMO MEPC.107 (49) regulations for treating emulsified oils uses

proprietary Spir-o-Lator ultra-filtration membranes. Ultra-SEP is available in eight models with capacities ranging from 0.25 cu. m./hr to 10 cu. m./hr.

Circle 54 on Reader Service Card

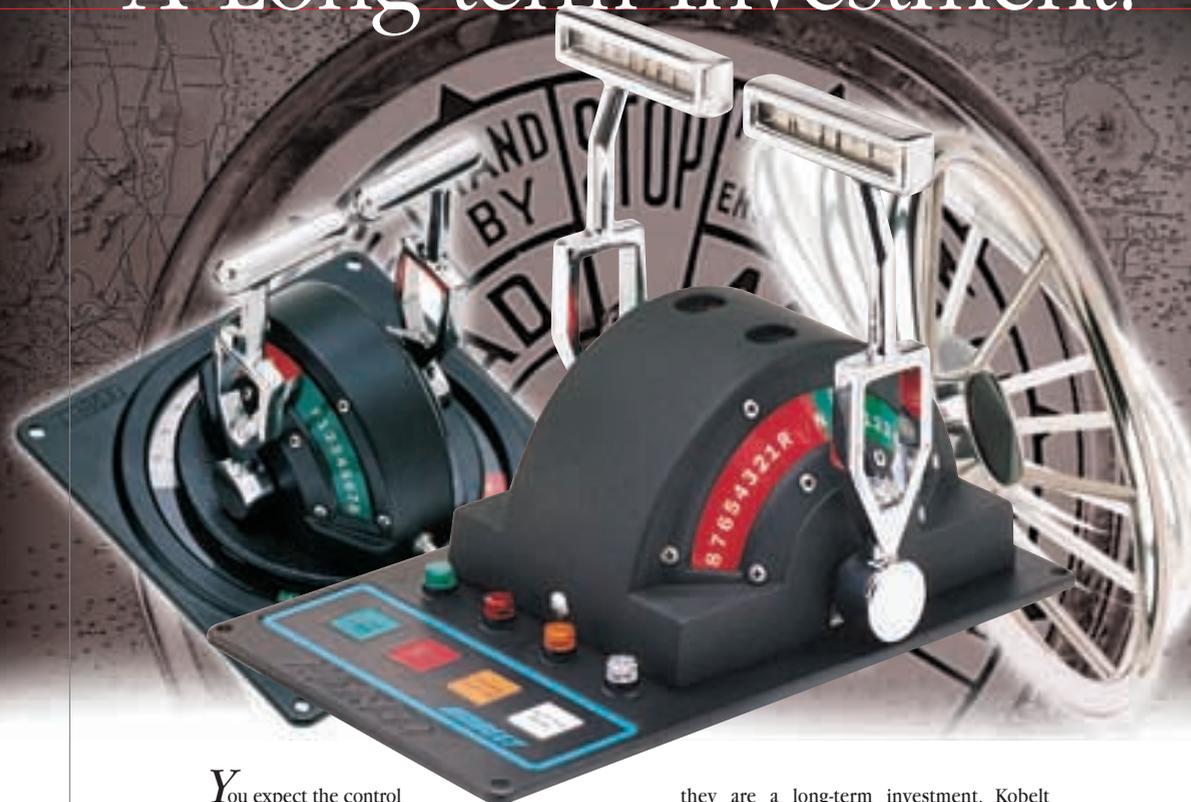
**NEI's Venturi Oxygen
Stripping System**

NEI offers its Venturi Oxygen Stripping system, a patented system that is designed to simultaneously treat vessel ballast water while protecting the

ballast tanks against corrosion. As the ballast tank begins draining, the inert gas generator turns on, and very low-oxygen is introduced into the top/void space of the ballast tank. As the ballast tank drains, the inert gas fills the void space, providing an inert gas blanket throughout the tank, a low-oxygen condition which is monitored and maintained throughout the voyage. Just before the ballast tanks are filled, the inert gas generator turns on. As water

comes into the vessel, very low-oxygen gas is mixed into the ballast piping at a preset ratio. Dissolved oxygen is lowered to a hypoxic treatment level in less than 10 seconds, and biological treatment begins immediately. The ballast tanks fill with deoxygenated water, and treatment is complete in 48 hours.

Kobelc Controls. A Long-term Investment.



You expect the control systems on your boat to provide many years of care-free boating. It's comforting to know you can always rely on Kobelt quality for exceptional value in reliability, safety and ease-of-use. Kobelt controls offer more than just a new system today...



they are a long-term investment. Kobelt Manufacturing has been producing high quality marine controls and steering for over 35 years. We back every one of our products with a 5 year warranty, along with worldwide sales and support. Contact us today!

KOBELT Quality Control



8238 129th Street, Surrey, British Columbia, Canada V3W 0A6
E-mail: sales@kobelt.com Website: www.kobelt.com
Sales: 604.590.7313 Fax: 604.590.8313

Circle 243 on Reader Service Card

Oil-Xorb ERC

The OIL-XORB ERC compound is a water-activated surfactant that separate emulsified oil from water. The compound has a strong chemical affinity for water, and will preferentially absorb and dissolve the water emulsified in the grease, oil or grime that the compound is used to clean or separate.

Oil-Xorb ERC is a surfactant system. It is biodegradable, non-flammable, non-toxic at use concentrations and is both hydrophilic (water-attracting) and oleo-phobic (oil-repelling). It thus is designed to offer excellent emulsion-breaking capability in addition to its performance as an agent for cleaning both metallic and non-metallic surfaces.

The strong chemical affinity of the Oil-Xorb ERC systems for water and the high surface energy at the Oil-Xorb ERC/hydrocarbon interface results in rapid extraction of the water from the emulsified oil, leading to a complete separation of uncontaminated oils and greases (these are now of lower density because the water has been removed) on the top, the Oil-Xorb ERCsystem in the middle, and precipitated solids on the bottom.

The compounds will maintain the separation, and can be re-used until the formulations have biodegraded to the point where their utility is lost, usually in 30 to 45 days, without any effects to the bio-environment.

The Oil-Xorb ERCsolution in most cases also removes loose corrosion (rust, scale) from metal surfaces and leaves a paintable surface protected by an inorganic micro-layer that reduces subsequent scale build-up.

- Oil-Xorb ERC is non-flammable.
- It separates solids and water from crude oil.
- It is non-toxic and low foaming.
- It biodegrades in 30-45 days after activation with fresh or salt water.
- It is a mild de-emulsifier.

Circle 66 on Reader Service Card

Researchers Honored for Advancing Navy's Environmental Efforts

Chief of Naval Research Radm. **Jay M. Cohen** presented the Vice Admiral **Harold G. Bowen** Award for Patented Inventions to three Navy researchers in a ceremony at the Office of Naval Research. The patent awarded to **Peter S. McGraw, John L. Drake, and Thomas H. Hanes** has helped the Navy find better ways to store plastic waste on board many of its ships.

The three researchers worked at the Naval Surface Warfare Center, Carderock Division, in 1995 when they were issued U.S. patent 5,411,697 for their Method for Processing Contaminated Plastic Waste.

Their work was part of the Navy's Pollution Prevention Afloat program to provide cost effective and environmentally friendly solutions to comply with U.S. laws, including individual state laws, and international treaties.

This patent was key to the development of the Plastics Waste Processor, which was developed according to a Congressional mandate.

The processor shreds the plastic into small chips, and then a separate unit melts, sanitizes and compresses the plastic waste into a sanitary disk, weighing approximately 15 pounds, which can be retained on board until a ship returns to port.

More than 650 of these devices have been installed on 189 U.S. Navy ships spanning 27 ship classes. Without this capability, ships would have to find storage space (on the order of 1,000 cubic yards every 30 days for an aircraft carrier) to retain food-contaminated waste such as packaging material from the galley.

Ships receive one or more of the units, depending on the amount of waste expected during a mission. The modular approach allowed for standardization across ship classes and simplified fleet-wide installation.

The Canadian and Australian navies have also adopted the device and it is now being considered by the cruise ship industry and Dutch navy.

This award is named in honor of Vice Admiral **Harold G. Bowen** who was the first Chief of Naval Research. He was responsible for the establishment of a "grass roots" patent system within the Navy and instrumental in the statutory creation of the Office of Naval Research, which succeeded the administratively established Office of Research and Inventions.

Kvichak Acquires MARCO Pollution Control



Kvichak Marine Industries, Inc. acquired MARCO Pollution Control, a company that designs and manufactures oil spill recovery equipment. With this, Kvichak will expand its product offering for its existing line of all-aluminum vessels used in the spill recovery industry - many of which utilize the MARCO Filterbelt module as the primary recov-

ery platform. Kvichak's first goal following the acquisition is to begin building an inventory of commonly used spare parts - with the initial focus on the one-foot and three-foot wide backing belts and filter pads used on the Filterbelt Oil & Debris Recovery System.

Circle 31 on Reader Service Card

Oil Spill Draws \$577K Penalty

Foss Maritime Co., which was responsible for a December 2003 oil spill that fouled shorelines in Snohomish and Kitsap counties, was ordered to pay nearly \$577,000 in state penalties, **Jay Manning**, director of the Department of Ecology (Ecology), announced. A Foss barge spilled approximately 4,700 gallons of heavy fuel oil while being filled at the ChevronTexaco terminal at Point

Wells in Snohomish County. A Foss employee in charge of filling the barge miscalculated the flow rate into a tank during the fuel transfer. Also, a detector and alarm to warn when barge tanks are about to overflow were improperly installed and gave no warning. Foss conducted a 115-day effort to clean up the spill, under the supervision of Ecology, the U.S. Coast Guard, Kitsap County and the Suquamish Tribe. "Foss has a record of being sensitive to the environment, but this spill simply should not have happened," said Manning. "I commend Ecology for its exhaustive and thorough investigation on the Point Wells spill," said **Bruce Reed**, vice president of operations for Foss. "The spill was an unfortunate event, and Foss has taken the lessons learned from the incident and applied them to our oil-transfer operations."

FUEL PIPES?

SHEATHED & SINGLE SKIN
DIESEL FUEL INJECTION PIPES

for Main Engine, Auxiliary & Standby Applications
Available for most Engine Types and Models

GIRO ENGINEERING LIMITED

Talisman, Duncan Road, Park Gate,
Southampton, Hants, SO31 7GA England

THE FUEL PIPE SPECIALISTS

Complete OEM Systems, Retro-Fit Kits or Replacement Parts

Stress-Free Fit UMS Monitor & Alarm Systems
Class Approved ISO 9001 SOLAS Compliant

Tel: +44 (0)1489 885288; Fax: +44 (0)1489 885199
E-Mail: giro@giroeng.com Subject Fuel Pipes
Internet: www.giroeng.com

Circle 232 on Reader Service Card

SEVERN TRENT DE NORA MARINE SEWAGE TREATMENT

Don't let confusion over discharge regulations tie up your vessel.

Treat Black and Gray water economically with the Severn Trent De Nora Omnipure Mariner

- USCG and IMO certified
- 12 persons black and gray water, 25 persons black water only treatment
- Modular design, very light weight with a small footprint
- 37"L x 34"H x 24"W
- All three components are designed to fit through hatches
- No chemical additives needed
- No sludge to remove
- No biological mass to maintain
- Minimal maintenance
- No screens or filters to clean

1110 Industrial Blvd. • Sugar Land, Texas 77478 USA
Tel: +1 281 240 6770 • Fax: +1 281 240 6762 • sales@severntrentdenora.com
www.severntrentdenora.com

Circle 263 on Reader Service Card

An Unerring Drive to Innovate

Combining experience and innovation from the shipping and offshore industries has been instrumental in developing Norwegian LNG technologies, and a national propensity for forward-thinking solutions coupled with a collaborative culture suggests a positive future for the industrial economy. In addition to direct resource exploitation to the benefit of domestic energy needs and export earnings, including a growing role as a natural gas producer, the skills, expertise and technology developed on the Norwegian continental shelf are being applied to effect worldwide in the oil and gas sectors and related businesses.

In the field of energy transportation, new initiatives emanating from Norway include innovative proposals for natural gas containment and handling. Industrial consortium Compressed Energy Technology (CETech) has prepared new designs of natural gas carrier using the compressed natural gas (CNG) method, as an alternative to transportation in liquefied form, while another, largely Norwegian grouping has drawn up a range of applications based on its pressurized natural gas (PNG) tanker concept.

CETech is a joint endeavor of prominent Norwegian organizations Statoil

and Leif Hoegh and Vancouver-based Teekay Shipping, and a project to develop and qualify CNG technology has been pursued in recent years in cooperation with a prominent classification society. In addition to a pure CNG carrier (the CNG Shuttle concept), the CETech consortium has developed proposals for a vessel, designated the Shuttle Producer, which can load both CNG and oil. Essentially a shuttle tanker incorporating a CNG storage unit, the Shuttle Producer is currently being offered in two configurations. One is arranged to carry 8,000-cu. m. of gas and 60,000 to 70,000-cu. m. of oil within an Aframax hull, and the other is dimensioned for 30,000-cu. m. of gas and 120,000-cu. m. of oil within a Suezmax hull.

Studies have indicated that CNG tankers could complement LNG carriers and pipelines in certain situations. CNG is considered best suited to moderate or short route lengths, between 300 and 2,000 nautical miles, and where the amount of gas to be transported annually is fairly small, in the range of 500-3,000-million cu. m. per year. CNG carriers could also help exploit limited or marginal gas resources that would be uneconomic to transport by other meth-

ods.

Gas is loaded at a pressure of 250-bar into banks of long, horizontal cargo 'pipes'. A CNG carrier to transport 100,000-cu m of gas would have a total of 510 cargo containment pipes, fabricated from steel. Knutsen OAS Shipping of Haugesund has developed a concept of pressurized natural gas (PNG) tanker in conjunction with Det Norske Veritas and the German company Europipe. In the PNG concept, gas is stored under normal temperature in 1,066-mm diameter vertical pipes incorporated into the ship.

No sophisticated processing is needed to maintain the gas in the containment system. Due to operation under ambient temperatures, no insulation will be required to prevent cargo heating during the voyage. PNG offers the potential of reduced capital investment in handling facilities.

Three different types of vessel have been developed, comprising an offshore loading and discharging PNG design of 290 x 54-m main dimensions, a combined terminal/offshore vessel, and a larger carrier to undertake long-haul shipments at speeds up to 17.5-knots.

Norway is said to have the second largest gas resources in Europe, after Russia, and is a major supplier of gas to



David Tinsley, technical editor

European markets, and a growing supplier to more distant markets. There are about 50 fields producing gas on the Norwegian Continental Shelf, and Norway is the third largest exporter of natural gas, after Russia and Canada. It is reckoned that only about 13-percent of total resources have been produced to date, with only a minimal amount of anticipated resources in the northernmost areas, including

the Barents Sea, having been tapped so far. There is accordingly every expectation that Norway has a long-term future as a supplier.

Cost-Competitive Anchor Handlers

The prolific output of offshore support vessels from Norway's west coast yards has long been characterized by highly advanced designs, such that the industry truly warrants its ranking as a driver of maritime technology in this demanding sector. However, the efforts of builders to meet the challenges of a market faced with intensifying price competition from eastern Asia and elsewhere has brought an added dimension to service vessel

production, in the form of designs offering the same quality and reliability but more simplicity and lower acquisition cost than the typically very sophisticated ship from Norway. Less complexity and greater flexibility in techni-

cal specification has evidently made for keener prices.

Expression of this pragmatic approach is to be found in two recent completions for U.S. principals. The 65.8-m anchor-handling tug supply vessels Donnelly Tide and Platt Tide have introduced the Aker AH-03 design concept to the Tidewater fleet, providing versatile, workmanlike new capacity for the group's operations in various waters. Following completion by Soviknes Verft, part of the Aker Yards network, Donnelly Tide was dispatched to duties off Angola, and was followed by Platt Tide from the shipbuilder's Brattvaag premises. The AH-03 type as embodied in Donnelly Tide and Platt

Tide offers a continuous bollard pull of approximately 100-tonnes and is powered by two nine-cylinder diesels of the compact MaK M25 design manufactured in Germany by Caterpillar.

Drive is through reduction gearing to a pair of nozzled, controllable pitch propellers, and the power and lines of the vessel provide for a service speed of around 13-knots, although the maximum speed is about 15-knots. Pivotal to the design's capabilities, the towing winch is of the waterfall type, consisting of two de-clutchable, towing/anchor-handling drums. The stern roller has been dimensioned for a 300-ton design load.

In addition to anchor handling and

towing, each 2,100-dwt vessel is suited to rig and platform supply operations by virtue of a 1,200-ton deck cargo capacity, plus an array of underdeck tank storage for the liquid and dry bulk consumables that are part-and-parcel of offshore drilling and production needs. Contributors to the essential properties of maneuverability and station-keeping performance are the twin, high-lift flap rudders and three electrically-driven, 590-kW transverse thrusters, two in the bow and one in the stern. Vessel motions in the often extremely arduous conditions encountered by such workhorses of the offshore industry are lessened by means of a passive roll reduction system.

Norway Centennial: 1905-2005

On June 7, 1905, the Norwegian Storting held an emergency meeting, during which Prime Minister Christian Michelsen submitted the resignation of his government.

Since Swedish King **Oscar II** could

only exercise power over Norway through its government, this meant that the King lost the ability to exercise his royal functions.

Thereafter, the Storting adopted a unanimous declaration conferring power

on the formal government "to exercise the authority vested in the King in accordance with the Constitution and the Laws of the Realm of Norway - with those changes necessitated in light of the fact that the King has ceased to function

as the King of Norway, thereby bringing to an end the union between Norway and Sweden under a single monarch."

With the help of a subordinate clause, Norway broke out of its union with Sweden ... 100 years ago this month.



His Majesty King Harald V of Norway

Norway Facts

Head of State:His Majesty
King Harald V of Norway
 Head of Government:Prime Minister
Kjell Magne Bondevik
 Area:386,958 sq. km.
 Population (2002):4,525,000
 Population per km2:11.7
 Capital city:Oslo
 Language:Norwegian (Bokmål and Nynorsk) (In some districts, Sámi is also an official language)
 State Church:Church of Norway
(Evangelical Lutheran)
 GDP (mill. USD, 2001):152,049
 GDP (per capita USD) :30,800
 Constitution Day:May 17
 Population growth(1995-2000):0.6
 Average life expectancy(2000):79

NorShipping 2005 Set for Oslo

NorShipping 2005, one of the marine industry's premiere events, is again set to take place in Norway, from June 7-10, 2005. This year's event should be particularly festive, as June 7, 2005 marks the 100th anniversary of Norway's independence.

Exhibition

Dates: June 7-10, 2005
 Exhibition Hours
 Tuesday - Thursday:10.00 - 17.00 hours
 Friday June 10:10.00 - 16.00 hours
 Entrance fee:NOK 220,- per person
(without invitation card)

For more information:
 Nor-Shipping, Norway Trade Fairs
 Tel:+ 47 66 93 91 00
 Fax:+ 47 66 93 91 01
 E-mail:tsc@messe.no
 Web:www.nor-shipping.com

WE JUST MADE OUR NO.1 POSITION EVEN SAFER

The Hammar H20 is a hydrostatic release unit, that enables liferafts and EPIRBs to surface and inflate or activate when a ship is sinking. The H20 is the world market leader and has more approvals from shipping authorities than any other release unit.

The new Hammar H20 has a 3-step coupling device

that, by eliminating the risk of incorrect installation, makes it even safer.

The new Hammar H20 has a Red Weak Link™ - but there is nothing weak about it

A brand new Hammar H20 with the Red Weak Link™ connector makes the installation easier and safer.

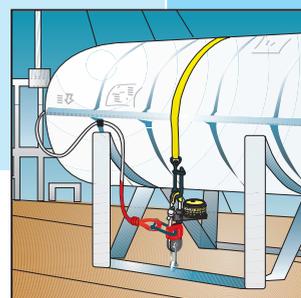
A new black thimble

The new Hammar H20 has a black thimble marked DECK which makes it easier to install.

No service or maintenance

The Hammar H20 never corrode and doesn't need service or maintenance for two years.

The Hammar H20 fits Liferafts and EPIRBs of all shapes and sizes.



HAMMAR®
 BETTER SOLUTIONS FOR SAFETY AT SEA

ORDER THE NEW H20 TODAY!

Visit our website at www.cmhammar.com for more information
 Available in U.S. from: Datrex Inc. P.O. Box 1150, Kinder, LA 70648.
 Phone 800-828-11 31 or 337-738-4511, Fax 337-738-5675. datrex@datrex.com

Circle 214 on Reader Service Card

"Now with leak detection" THE BALLAST



Smart Strain Gauge Level Sensor with Generic 4-20mA Output

Use one sensor for all shipboard liquid levels

This technology has been designed specifically for surviving the rigors of ballast tank continuous monitoring. It weighs less than 2 oz. and is constructed from 100% pure titanium.

- It's the size of your thumb
- Accuracy .25% of full scale
- 100% Titanium
- Weighs less than 2 oz.
- ABS/USCG/Lloyds approved
- FM Class 1, Div. 1 Intrinsically Safe
- Removal without tank entry
- No mercury or other contaminants
- Interfaces to your existing monitoring system
- One sensor for all shipboard liquids: fuel oil, lube oil, fresh water, black water, etc.
- Generic 4-20 mA output
- Used in 15,000 tanks worldwide

Many Options



ELECTRONIC MARINE SYSTEMS, INC.
 800 Ferndale Place
 Rahway, NJ 07065

Call today for more information!

732.382.4344
 732.388.5111 fax
emsmarcon@aol.com e-mail
<http://www.emsmarcon.com>

Circle 224 on Reader Service Card

Kongsberg Selected for Seven LNG Tankers

Kongsberg Maritime received an order for equipment for seven new LNG tankers, scheduled to be built by Samsung Heavy Industries and Daewoo Shipbuilding and Marine Engineering.

One of Kongsberg Maritime's main goals has been to develop an integrated automation system for LNG carriers. "Kongsberg is responsible for deliveries to 28 vessels currently on order or under constructions," said Vice President Sales & Marketing Asia, **Pål Rønning**.

Circle 3 on Reader Service Card

Advance for Small Product Tanker Design

As smaller single hull tankers in the 600-5,000 dwt range will soon be phased out, Rolls-Royce has introduced a family of oil product tanker designs to meet the demands of any regulations



and combine a high carrying capacity with efficiency, manoeuvrability and safety.

A design for a double hull 1,600-dwt vessel is the latest NVC-Design by Rolls-Royce. It is designed to meet the needs of the bunkering industry as it can transfer cargo from ship to ship as well as between shore installations. This design is based on the same principles as a larger product tanker of 4,450 dwt now under construction for Bergen Tankers.

The 1,600-dwt vessel has been given the type name NVC 601 PT, and is 210 ft. (64 m) overall with a molded breadth of 42 ft. (12.8 m), a summer draft of about 16.4 ft. (5 m) and a scantling draft of about 17.3 ft. (5.3 m). Fully loaded, the service speed will be about 12.5 knots. The NVC 601 PT use Ulstein Aquamaster Azipull, which provide both steering and propulsion.

A larger product tanker, which is currently under construction at a Turkish yard, is an NVC 604 PT. On an overall length of 295.2 ft. (90 m) the double hull vessel has a deadweight of 4,450 dwt and a 5,200 cu. m. capacity divided among 10 tanks, each with its own pump. The propulsion philosophy is the same, but on a larger scale, with two AZP100 thrusters powered by two Bergen C-series engines totalling 3,480 kW. This NVC-Design concept can be applied to oil product or chemical tankers in sizes ranging from the 1,600 dwt NVC601 PT up to about 20,000 dwt, the upper limit depending on the required speed and ice class.

Circle 4 on Reader Service Card

Diesel Electric OSV Building In Norway

Marin Teknikk signed a contract in March 2004 with Norway's Havyard Leirvik shipyard for a design package for the newly developed MT6010 for Havila Shipping AS in Fosnavåg. Scheduled for delivery from the yard in April 2005, the vessel is 304.9 ft. (92.95 m) overall with a 64.6 ft. (19.7 m) mid-ship beam and a 25.3 ft. (7.7-m) depth on the main deck increasing to 34.2 ft. (10.45 m) under the shelter deck forward.

Main propulsion on the diesel electric vessel is supplied by four ABB (1825kWe) generators powered by four Cummins QSK60D(M) engines. These 60-litre IMO compliant engines can be



ZODIAC

Standard design. Standard components.

EVAC - over 7,000 marine installations
6 offices supporting 42 reps worldwide

ORCA® IIA sewage treatment systems*

- Offer a choice of 6 standard pre-engineered models
- Have improved level floats
- Have a new chlorine pump
- Have a redesigned pressure relief valve
- Are fully automatic
- Use microprocessors for control, monitoring
- Are compact lightweight
- Are easy to operate and maintain
- Operate in fresh, salt or brackish water
- Available with automatic chlorine generators

*Large ORCAs are modular



Models from
24 - 500 People

Evac toilets:

- Use only 3 pints per flush
- Is not affected by the pitch and roll of the vessel
- Use small 1.5" - 2" diameter piping
- Allow flexibility in pipe routing and vertical lifts
- Reduce sewage volume by 90%
- Reduce holding tank size by 80%
- Eliminate toilet vents
- Reduce material and labor costs
- Cut topside piping weight



Evac VT-900 Toilet

USCG/IMO and EC certified.
ISO 9001 registered.
On-staff marine engineers for technical assistance.



ZODIAC, mastering the elements

Evac Environmental Solutions - Marine Sector
1260 Turret Drive - Rockford, IL 61115 - USA
Tel.: +815 654 8300 - Fax: +815 654 8306
email: marine@evac.com
www.evac.com

Circle 230 on Reader Service Card

RESPONSE IS OUR MIDDLE NAME



For information call us at:
206-332-8076
or visit:
www.marineresponsealliance.com

Rescue Towing

Lightering

Salvage

Firefighting

Circle 247 on Reader Service Card

rated at 2095 bhp (1563 kW) at 1500 rpm or 2547 (1900 kW) at 1800 rpm. Linked to ABB electric propulsion engines and turning Lips/Wärtsilä azimuthing drives, they are expected to give the new vessel a speed of 17 knots when loaded to a 14.8 ft. (4.5-m) draft. Harbor and emergency electrical power will be provided by a Cummins KTA19DM1. The boat, to be named Havila Harmony will have accommodations for 50 people with one additional hospital bed. It will be classed DNV + 1A1- E0 - SF, Dynpos AUTR, CLEAN, COMF-V (rating 3), DK(+), hl (2,5 / 2,8). LFL*, OILREC. Letter of compliant: NAUT OSV.

Circle 6 on Reader Service Card

Major Conversion



The cable laying vessel "Normand Clipper" will undergo an extensive conversion equal to that of its sister vessel "Normand Cutter". Here is the converted "Normand Cutter" immediately after its conversion was completed in May last year. (Photo: **Harald M. Valderhaug**). The conversion (below) started at Ulstein Verft in December 2004.



Project for Solstad

Solstad chose Ulstein Verft to perform the conversion of its cable-laying vessel, Normand Clipper, and the conversion is well under way, scheduled to be completed within the end of May 2005.

Normand Clipper is being converted into a combined construction and pipe-laying vessel with a large freight capacity. This conversion will increase Solstad's capacity within various types of crane assignments, diving assignments and all types of construction work. The vessel is the sister vessel of Normand Cutter, which was converted at Ulstein Verft in 2004. "This conversion will be about as extensive as the conversion of her sister vessel, and will demand almost the same amount of working hours as when constructing a large platform supply vessel. The conversion contract for Ulstein Verft is worth around \$23.7 million," according to **Harald Møller**, Ulstein Verft's Sales Manager.

Normand Clipper was delivered by Ulstein Verft in 2001 as yard number 258. The vessel had the same employer the entire time, but this contract ran out in October 2004. The vessel has been laid up at Ulstein Verft since early last spring due to the poor cable-laying market. This is why Solstad has now chosen to convert the vessel. The shipowners have entered into an agreement with the Australian company Clough

Limited for hiring of the converted Normand Clipper.

Circle 5 on Reader Service Card

C-MAP Norway Expands

C-MAP (Norway) has established a subsidiary office C-MAP Marine Forecast AS, in Bergen Norway. As part of C-MAP's strategy to become the leading global supplier of Nautical Digital Information, C-MAP Norway has established a subsidiary office in Bergen

Protect your ship from a sea of troubles with Chockfast

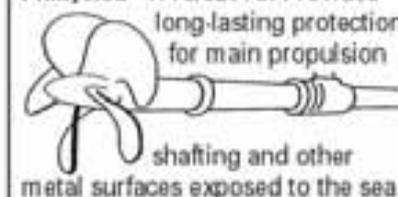
"the greatest single investment in engine security and maintenance economy."

Shipbuilders and ship owners rely on Chockfast to simplify installation and maintain performance of —

- main propulsion systems
- sterntube, strut, pintle, pedestal, rudder, ball and roller bearings
- cargo and engine-room pumps
- generators, auxiliary equipment
- steering gears ■ bow thrusters, stern winches, anchor windlasses

Knowledgeable shipbuilders and savvy mariners also rely on —

Phillyclad® 1775/620TS: Provides long-lasting protection for main propulsion



Phillybond® REPAIR COMPOUND: Smooth, non-sagging fairing compound fills pitted or damaged surfaces, weld seams, joints and cracks in castings

Phillymastic® TG-7B: Load-bearing trowelable/pumpable mastic simplifies all types of tank installations

Impax® NONSKID: For safer footing and better traction on decks, roll-on/roll-off ramps and helicopter pads



Phillyclad® 6470: Heavy-duty marine coating for propeller shaft couplings and pump impellers

When reliability cannot be compromised

ITW Philadelphia Resins
 telephone 215.855.8450
 www.chockfast.com

Circle 258 on Reader Service Card

THE SEA SWITCH TWO



Smart Electronic Level Switch with No Moving Parts

The Sea Switch Two was designed and patented for all tank applications. The Sea Switch Two offers a reliable solution for liquid level detection and control for cargo, ballast, and storage tanks, without any moving parts.

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

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

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

Call today for more information!



ELECTRONIC MARINE SYSTEMS, INC.
 800 Ferndale Place
 Rahway, NJ 07065

732.382.4344
 732.388.5111 fax
 emsmarcon@aol.com e-mail
 http://www.emsmarcon.com

Circle 225 on Reader Service Card

“X (Bow)” Marks the Spot

The model of the Ulstein AX104 anchor handling vessel with its newly developed X-Bow was first placed in the water of the drag basin at Marintek in Trondheim early in February. Prior to the test, Marintek researchers expressed a great deal of interest, but warned that a sea with high wave heights could follow the vessel's side up over the bow and impact the bridge deck. Based on test results as reported by the company, these warnings were shown to be baseless.

"The new Ulstein AX104 with its Ulstein X-Bow from Ulstein Design AS has no bulb, and has a slender, characteristic bow design with an inverted flare, in other words the bow slopes backwards instead of forwards. The intention is that this should result in less

resistance level was relatively low compared with conventional designs at the gauges that were tested. This is probably due to the gentle entry angles into the waterline," he says.

"Some of the most common accidents that occur on offshore vessels involve the sea breaking the wheelhouse's windows. This happens because ordinary, traditional hull shapes throw the sea forwards and upwards and the hull dives deeper," said Tvette. "Prior to the tests on the Ulstein AX104 model, we thought that the wheelhouse windows could also be smashed with this vessel, due to the fact that shape of the bow of the Ulstein X-bow means that no slamming occurs. Without the warning slamming gives, I thought a captain could easily run too fast and the sea would therefore be able to creep up the side of the vessel and smash in the wheelhouse windows. The tests on the model however showed that almost no sea came up onto the bridge deck at all, even in extreme weather conditions with six m significant wave height and a wave period of nine seconds. Under these conditions, the model maintained a good service speed.

The senior hydrodynamics designer at Ulstein Design, **Øyvind Gjerde Kamsvåg**, explains the principles behind the new forepart design: "A different volume distribution than usual was introduced. A much larger, much more slender, facing volume was introduced. The large volume in the bow means that the forebody floats better and dives less when it meets waves. This means that no slamming occurs and that the hull moves through the sea very gently," he says. Kamsvåg designed the hull and is happy to see that the results live up to expectations. "The model tests showed that the Ulstein X-bow functions completely as intended and I am really pleased. Even high and choppy waves did not result in sea spray on the bridge deck. I've never seen anything like it. The likelihood of extreme weather damage to the forebody will be reduced. Besides this, the smooth forepart goes all the way up to the bridge deck and this means that all the deck equipment that is normally exposed to the wind, weather, and icing is protected.

Little spray will anyway mean that



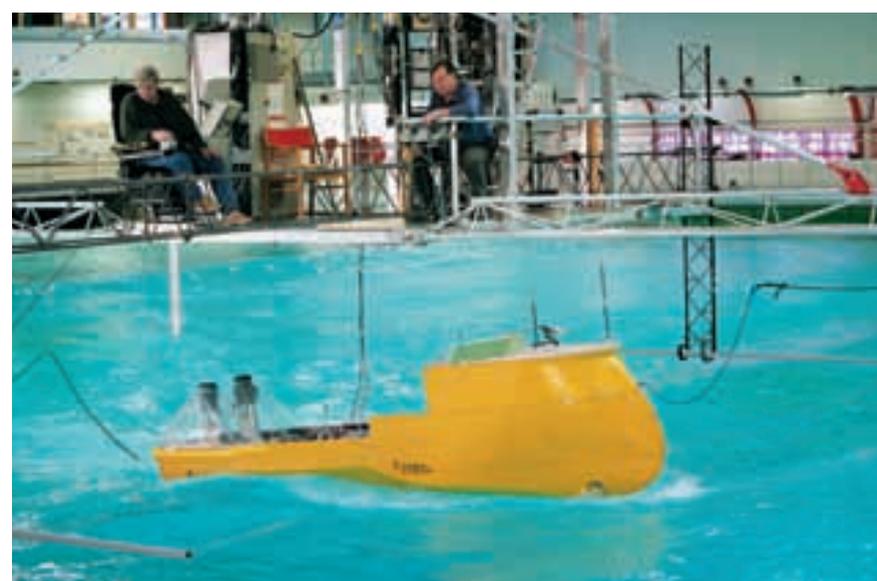
Researchers **Magnus Tvette** and **Rolf Riksheim** at Marintek looked forward to study the model tests of the Ulstein AX104.



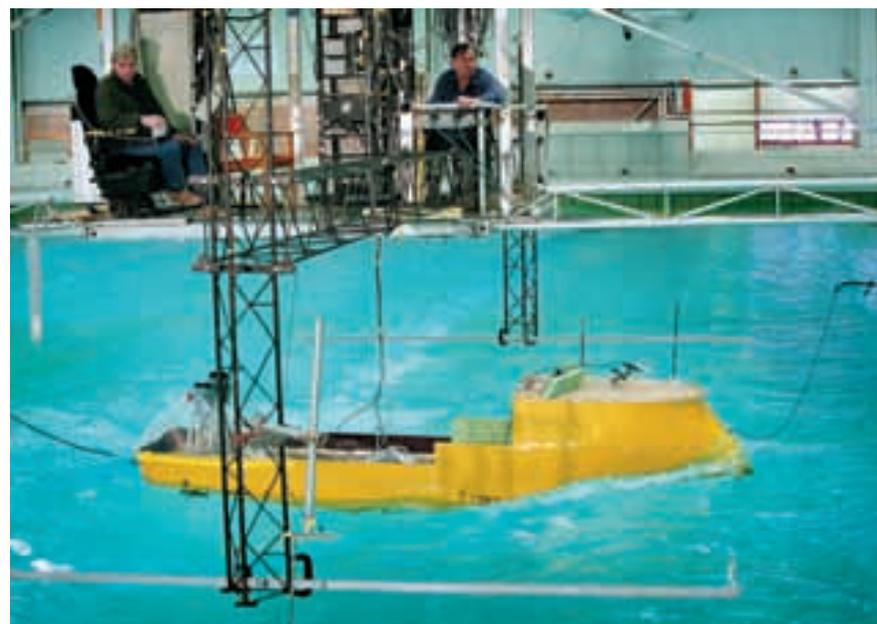
Senior hydrodynamics designer at Ulstein Design, **Øyvind Gjerde Kamsvåg**, designed the hull, and followed closely the model tests of Ulstein AX104.

loss of speed when it is moving in seas. It is an interesting idea, and we have followed the model closely through still water tests and tests with various wave heights and speeds," says the project manager at Marintek, **Magnus Tvette**. The vessel will also be one of the first anchor handling vessels in the world with diesel electric propulsion. Tvette was positively surprised by the tests with the model:

"I thought the hull design would result in some spray, but in fact the shape resulted in very good carrying. The



The model of the Ulstein AX104 with the Ulstein X-Bow proved good results in the model tests at Marintek.



there will be no problems with icing," he said.

"It is interesting and also quite nice that people are thinking new when it comes to hull design. Little work has been done on developing new hull designs for supply vessels, and there has been no focus on speed and fuel consumption.

Supply vessels have remained almost unchanged for 20 years," said **Rolf Riksheim**, a group leader at Marintek.

Wärtsilä Propulsion for New AHTS



The new Anchor Handling Tug Supply vessel of Ulstein AX104 design will be equipped with generating sets, tunnel thruster, steerable thrusters, control system and seals from Wärtsilä. In March the company received a major contract from Ulstein Verft AS in Norway for a package of generating sets, thrusters, control system and seals for an anchor-handling towing supply (AHTS) vessel ordered by Bourbon Offshore Norway AS, a subsidiary of the French marine service company Groupe Bourbon.

Due for delivery in May 2006, the new AHTS vessel is of the Ulstein AX104 design from Ulstein Design AS, with an inverted bow intended to eliminate slamming and allow higher speeds in all sea conditions.

The vessel will be one of the world's first AHTS vessels with diesel-electric propulsion. It also has innovation in safety, being equipped with a newly-developed system for safer anchor handling. It has a DP2 dynamic positioning system. Measuring 274 x 60.6 ft. (83.6 x 18.5 m), the vessel is capable of a speed of 17.5 knots. The vessel's minimum bollard pull is 180 tons.

It will be equipped with six Wärtsilä generating sets having a combined electrical output of 14,850 kW. Four of the generating sets are driven by six-cylinder Wärtsilä 32 engines and two by nine-cylinder Wärtsilä 20 engines. These will supply a propulsion and maneuvering system comprising two Lips CS3500/3500WN main steerable thrusters, a Lips CS250-250/MNR retractable bow steerable thruster and a Lips CT250M-D bow tunnel thruster. The main steerable thrusters, each with a power of 5000 kW, will have controllable-pitch (CP) propellers of 3.6m diameter running in Lips HR nozzles. The 1800 kW bow steerable thruster will be equipped with a 2.4m-diameter CP propeller, while the 1200 kW bow tunnel thruster will have a 2.5m-diameter CP propeller. The four thrusters will be fitted with JMT MkII Unnet shaft seals. The thrusters will all be controlled through a Lipstronic/T control system that provides both joystick control for maneuvering and full dynamic positioning.

Circle 11 on Reader Service Card

The 260 m ship model basin at Marintek in Trondheim is the only one of its kind in Norway, and is the largest in the Nordic countries.

In addition to this, the research institute has a 50 by 80 m sea basin. With the help of the basins, one can simulate wind, waves and currents, and test models of new vessel types before actually commencing construction of the vessels. The ship model basin at

Marintek was opened in 1939 and was originally 170 m long.

The facility was intended to serve the shipping industry and the growing shipyard industry in Norway. It has also always been used by the Norwegian University of Science and Technology (NTNU) in its teaching of shipping students.

Circle 10 on Reader Service Card

• BIODEGRADABLE • SAFE • NON-CORROSIVE •

• BIODEGRADABLE • SAFE • NON-CORROSIVE •

After

Before

• BIODEGRADABLE • SAFE • NON-CORROSIVE •

RYDLYME Marine is a safe, biodegradable marine descaler developed to dissolve calcium, rust, mussels, barnacles, and many other scale-formed mineral deposits that hinder your water based equipment.

RYDLYME Marine is effective on engines, all types of coolers, waste water piping, tube bundles, heat exchangers, and many more applications.

**DISTRIBUTORS WANTED
TERRITORIES AVAILABLE**

Safe Biodegradable Marine Descaler

www.rydlymemarine.com

Apex Engineering Products Corporation
800-451-6291 • 630-820-8888
Fax: 630-820-8886 • dpetrille@rydlyme.com

• BIODEGRADABLE • SAFE • NON-CORROSIVE •

Circle 208 on Reader Service Card

"Now with leak detection" **THE RADAR**

Smart Radar Level Sensor with Generic RS485 Output

The first flat array antenna for liquid tank gauging. This software driven array allows for each sensor to remotely configure itself for the type of product as well as the structural characteristics within each tank. It is completely self-diagnostic and is factory calibrated using a laser interferometer to .1mm. It is designed for the harshest environments and can be provided in a high temperature version to 385°F. It is intrinsically safe with Class 1, Div. 1, Group D & C approvals. As a smart sensor, all processing calculations and software are resident in the device itself, only a high level generic data output, i.e., RS485 (or others on request) is sent to the cargo control area.

Options:

- Multiple alarm set-points
- Temperature • PV Pressure • I.G. Pressure
- Tank Management Software
- Automated draft and trim

ELECTRONIC MARINE SYSTEMS, INC.
800 Ferndale Place
Rahway, NJ 07065

Call today for more information!

732.382.4344
732.388.5111 fax
emsmarcon@aol.com @-77311
<http://www.emsmarcon.com>

Circle 226 on Reader Service Card

Höegh Re-aligning for Focused Growth

After posting strong results for 2004, Leif Höegh & Co. Limited completed the final phase of its corporate re-alignment by merging all aspects of its RoRo operations in Höegh Autoliners. Supported by significant investment capital Höegh Autoliners will be focused on growth. Further newbuilding opportunities will be pursued and the last non-core vessels have been sold.

All operating activities are integrated in two separate entities to be aligned with the commercial growth strategy:

- Höegh Autoliners - a fully integrated RoRo company focused on execution of a substantial and capital intensive customer driven growth plan.
- Höegh LNG - expanding its fully integrated business model to encompass large and complex mid-stream projects.
- Höegh Fleet Services will provide ship management for RoRo and LNG vessels as before.
- Leif Höegh & Co will be a holding company without commercial operation or external visibility.
- The Höegh name and the H-flag logo will be shared.

Leif Höegh & Co has been transformed from being a broadly diversified company to one focusing on RoRo and LNG. This process has been concluded with:



- the sale of the last seven open hatch vessels at the end of 2004
- the sale of the last two large bulk carriers in March 2005
- the contracting of 20 car carriers and two LNG carriers scheduled for delivery between 2004 to 2008 - investments representing vessel values of about \$1.5 billion.

"The new management structure is a logical consequence of the implementation of the strategy to focus on RoRo and LNG," said **Thor Jørgen Guttormsen**, President of Leif Höegh & Co and new CEO of Höegh Autoliners.

"Our order-book confirms the growth ambitions and the objective is to provide customers with an even better service."

Höegh Autoliners

Höegh Autoliners developed from a niche operator into a global RoRo service provider with 50 vessels in worldwide trade systems. Höegh Autoliners will be focused on the execution of a customer-driven, far reaching and capital-intensive growth strategy.

Höegh LNG

In order to capitalize on increased global market demand for LNG, Höegh LNG has committed itself to growing its LNG fleet and related services. The company will be managed as a separate entity although ship management will be supplied by Höegh Fleet Services.

Höegh LNG operates a fleet of four LNG carriers, of which three are wholly or partly owned. Two new-buildings are ordered together with partners for delivery in January 2006 and will be employed on long-term contracts. In addition, Höegh LNG has introduced the Floating Midstream Solutions comprising innovative solutions and partnerships with industry leaders aiming at expansion in the LNG supply chain. Höegh LNG's Shuttle and Regasification Vessel (SRV) concept for offshore ports, floating LNG terminals and technology for marine transportation of compressed natural gas (CNG) are examples of current activities.

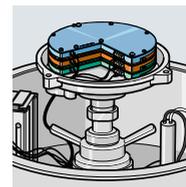
Shaping the future in tank gauging



For product information:
www.saabrosemount.com
Phone: +46 31 3370 000
E-mail: sales.srm@emersonprocess.com

SAAB ROSEMOUNT
Marine

Saab TankRadar® STaR—safety, trust and reliability.



Take a closer look inside Saab TankRadar STaR, our new tank gauging system. This is the first time Level Gauging, High Level and Overfill Alarm systems are integrated in one single unit—

designed as independent, intrinsically safe measuring channels. All functions are radar-based, taking full advantage of the benefits of radar technology—increasing safety and reliability.

There is no longer a need for an overfill alarm fitted separately from the gauging unit, which means easier installation, simplified cabling and reduced maintenance requirements.

Saab TankRadar STaR is the latest proof of our technology leadership. This innovative 3-in-1 system brings intelligence and integration to all types of cargo and tanker applications.



EMERSON. CONSIDER IT SOLVED.™

Circle 259 on Reader Service Card

K/V Harstad: New Norwegian Coastguard Vessel

Rolls-Royce provided the design and major equipment for the new Norwegian Coastguard multi-role vessel K/V Harstad built by Aker's Søviknes yard in west Norway based on steelwork from Aker Tulcea in Romania. The ship is owned by Remøy Shipping, who will operate it on long term charter to Kystvakten. K/V Harstad will undertake a variety of coastguard and EEZ (Exclusive Economic Zone) management roles. These include offshore standby and rescue, firefighting, salvage, and general law enforcement operations and fishery control.

One important duty will be pollution prevention. There is concern over the rapidly increasing oil tanker traffic from Russian ports along the coastline of northern Norway, with the risk of a disabled vessel grounding and causing an oil spill. K/V Harstad is therefore fitted for emergency towing of tankers up to about 200,000 dwt and spill clean-up. The vessel will be manned, as are other Norwegian coastguard vessels, by a combined military and civilian crew.

A new design from the burgeoning Rolls-Royce stable, the 272.3 ft. (83 m) long UT512, was developed to meet the challenging requirements. A bollard pull of about 110 tons is combined with a speed of about 18.5 knots to enable the vessel to reach the scene of an incident quickly and then tow a stricken vessel to safety. Operation along the full length of Norway's coastline and throughout the country's exclusive economic zone will involve much time spent in the Barent's Sea, so ICE 1B class has been specified, along with anti-icing measures such as heated shelters for the two MOB/boarding boats.

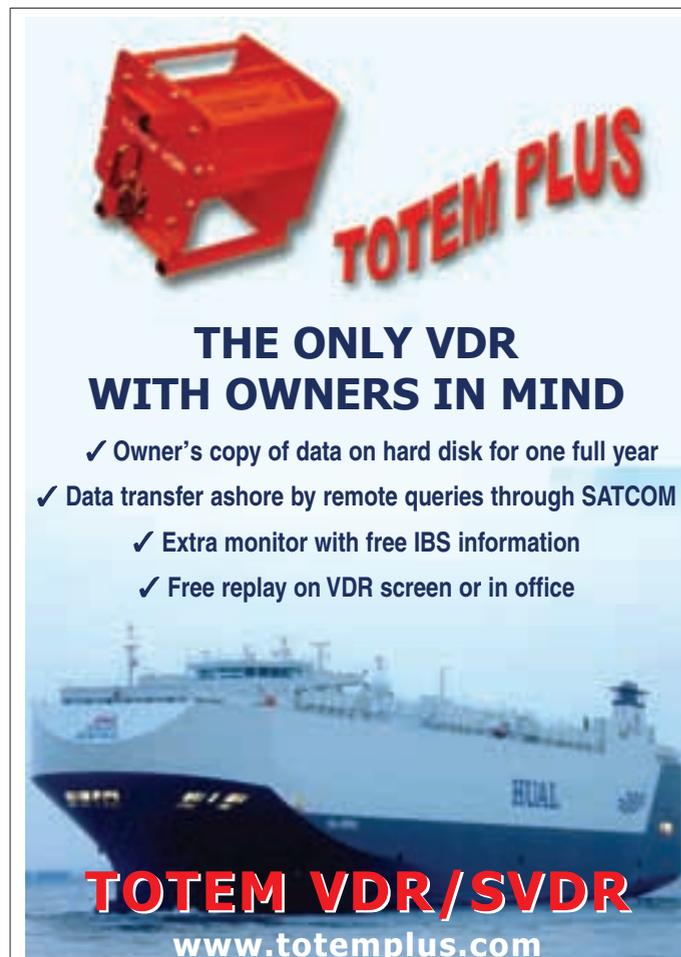
For towing and emergency work, this UT 512 design has TUG notation and includes an optimally located towing winch, a reinforced pushbow, FiFi 1 firefighting capability, a hospital, and extensive equipment including line throwing gear, a harpoon system for attaching the tow wire to stricken vessels, oil spill booms and skimmers and 1,000 cu. m. of tankage for recovered oil. For its patrol boat role it has a fore-deck mounted gun and it is equipped with fast rescue/boarding boats and a full military and civilian communications system.

The main propulsion engines will be two 8-cylinder Bergen B32:40L diesels, each developing 4,000kW, turning Kamewa Ulstein CP propellers in nozzles. Independent Tenfjord steering gears operate the high lift rudders, and there are two electrically driven

thrusters at the bow. One is a 736kW Kamewa Ulstein tunnel thruster and the other is an Ulstein Aquamaster swing-up azimuth thruster rated at 883kW. Fire pumps are driven from the main engines through power take-offs. A Rauma

Brattvaag deck machinery package has been specified, comprising a main low pressure hydraulic towing winch with a 50 tonne pull and 250 tonne brake holding load, anchor windlass, capstan and tugger winch. Towing pins and a

hydraulic deck crane are also provided. This coastguard vessel is the first to be fitted with the new Rolls-Royce Poscon2 DP system (AUTS notation), and it has a full UMAS automation system.



TOTEM PLUS

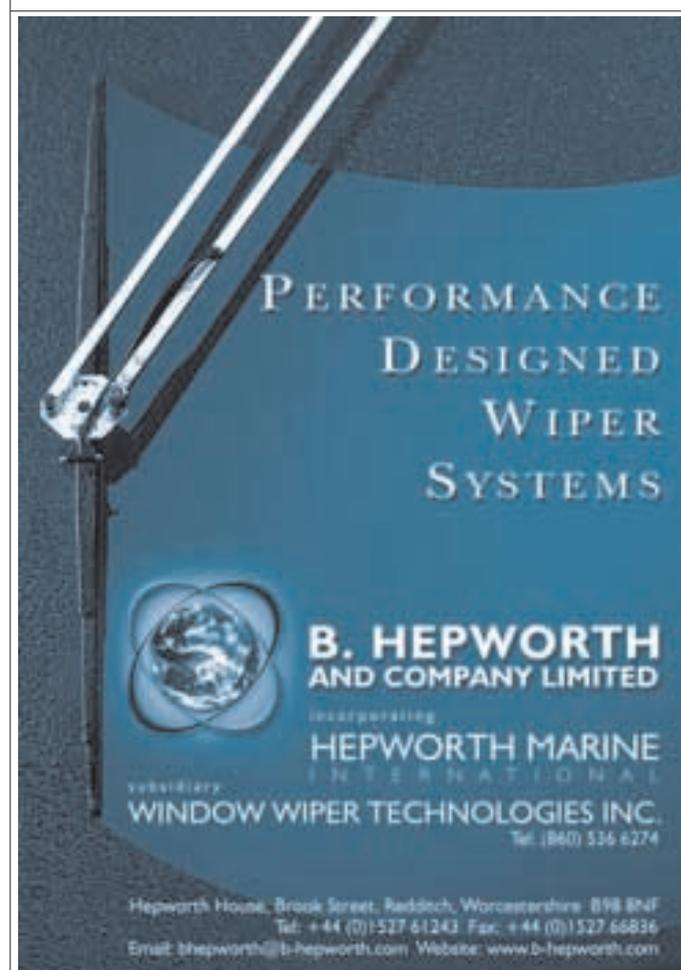
**THE ONLY VDR
WITH OWNERS IN MIND**

- ✓ Owner's copy of data on hard disk for one full year
- ✓ Data transfer ashore by remote queries through SATCOM
- ✓ Extra monitor with free IBS information
- ✓ Free replay on VDR screen or in office

TOTEM VDR/SVDR

www.totemplus.com

Circle 272 on Reader Service Card



**PERFORMANCE
DESIGNED
WIPER
SYSTEMS**

**B. HEPWORTH
AND COMPANY LIMITED**
Incorporating
**HEPWORTH MARINE
INTERNATIONAL**
subsidiary
WINDOW WIPER TECHNOLOGIES INC.
Tel: (860) 536 6274

Hepworth House, Brook Street, Redditch, Worcestershire B98 8NF
Tel: +44 (0)1527 61243 Fax: +44 (0)1527 66836
Email: bhepworth@b-hepworth.com Website: www.b-hepworth.com

Circle 211 on Reader Service Card



**THE
BUBBLER**

**Smart Pneumatic Level
Sensor with Generic
4-20mA Output**

The Bubbler is an electro-pneumatic level transmitter that allows remote level measurement using a 4-20mA analog output. The lack of air pressure poses no operational problems, due to an automatic one-way valve which closes as soon as the pressure drops below 1 bar, this prevents back flow in the bubbling line towards the transmitter. Over pressure is also protected against by an automatic one-way valve.

- It's the size of a grapefruit
- Explosion proof housing
- Accuracy .3% full scale
- Automatic over-pressure valve
- Automatic stop valve for air failure
- Automatic cleaning of bubbling line
- Connection for pressurized tanks
- 2 pair 24 VDC and 4-20mA cable
- Top or side mount

Many Options

**Call today
for more
information!**

EMS

ELECTRONIC MARINE
SYSTEMS, INC.
800 Ferndale Place
Rahway, NJ 07065

732.382.4344
732.388.5111 Fax
emsmarcon@aol.com @-mail
<http://www.emsmarcon.com>

Circle 227 on Reader Service Card

Developing Systems for Safer Anchor Handling

Barely a year ago, Statoil invited offshore players to develop solutions for safer anchor handling operations. The shipping company Bourbon Offshore Norway took up the challenge. In an R&D partnership between Bourbon Offshore Norway, ODIM and Ulstein Design the most hazardous operations have been identified and eliminated. The partners presented their total concept, SAHS, at a seminar in Ulsteinvik, Norway.

"We have many sailors at work onboard anchor handling vessels around the world and we know how hazardous this type of operation can be. When Statoil announced the challenge, we wanted to be able to involve a vessel in such a project. We wanted to contribute to making anchor handling operations safer. In partnership with ODIM, a supplier of hydraulic solutions, and the vessel design company Ulstein Design, we have come up with a total concept in which we have great faith. Our contribution to the solution has been to identify hazardous operations and be a prime mover in the project. For each of the hazardous anchor handling operations that were identified, ODIM developed a safer alternative," said Bourbon Offshore Norway's marketing director, **Trond Myklebust**. The total concept delivered by ODIM is called SAHS, an abbreviation for Safe Anchor Handling System.

Capturing Pennant Wire

One hazardous anchor handling operation is capturing pennant wire that is being winched down from a platform. The operation is currently performed by one of the crew standing and balancing on the stern roller and trying to capture the wire with a boat hook.

This hazardous situation can be eliminated by developing a new form of stern ramp. Ulstein Design designed the ramp and modified it to fit the hull, while ODIM developed the ramp further and modified the hydraulic equipment. The ramp can be tilted at both ends and can be deployed both horizontally and vertically. When the pennant wire is going to be captured the ramp is deployed five degrees over the vertical so that it hangs over. From the ramp a hydraulically steered pennant catcher is deployed, this is a T shaped capture hook with grooves underneath to hold the wire firmly

(**illustration 1**). The platform's crane operator moves the wire into the T hook. Once the T hook has been retracted into the ramp, the wire is secured.

Dragging the Anchor onto the Deck

Once the pennant wire has been secured, the anchor can be winched up to the stern roller. From this position an enormous amount of power is needed to drag the anchor over the stern roller. If the cable breaks during this operation, enormous forces will be released.

Bourbon Offshore Norway found it important to eliminate the forces needed to drag the anchor over the stern roller, and this is where the special ramp comes into its own. The ramp replaces the traditional stern roller on an anchor handling vessel. As one starts to raise the anchor chain, the ramp is again deployed five degrees over the vertical. When the anchor reaches the top of the ramp, the anchor hangs freely in the air (**illustration 2**). A camera at the stern means that you can see which way the anchor is coming up. If the anchor is laying the wrong way around, it can be dropped back down a bit and rotated using the propeller jets. Thereafter the ramp is pushed forward in over the deck and the trailing edge is raised until it lies over the horizontal. This causes the anchor to come in right over the deck without having to use the forces necessary to drag it over the edge (**illustrations 3**). Once the ramp is lying in this horizontal position, one can activate a hydraulic unit, positool - a moveable towing pin - installed in the deck right in front of the ramp (**illustration 4**). This can be moved sideways over much of the width of the deck and help to position cables and chains in the towing pins and shark jaws on deck. When the positool is not in use, it is recessed and covered by a protective cover that lies flush with the deck.

Uncoupling the Anchor from the Chain

Once the anchor is on deck, there may be rotation spin between the anchor and the cable. As the anchor is uncoupled from the chain, this twisting can cause the cable to rotate powerfully.

This operation has been made safe with the use of a spin tool (**illustration 5**). This tool normally lies flush with the deck. When it is needed, the tool is

raised up and rotated 90 degrees. The spin tool also looks like a T hook with grooves beneath that holds the cable in place. When the spin tool is lowered again in this position, the cable is locked firmly to the deck. When the cable is going to be uncoupled, the spin tool is raised a bit and the cable unwinds. The rotation is kept under control.

Positioning Equipment and Loads on the Deck

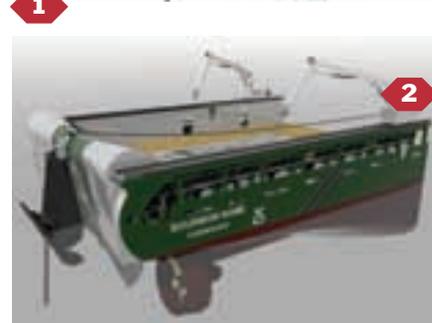
When a crew is going to move equipment and loads on deck it usually uses cranes and/or ancillary winches. These are fixed in one place on the deck meaning cables will stretch over large parts of the deck. If one of these cables breaks, a life threatening situation may arise.

This situation is resolved by locating movable tugger cranes on top of the cargo rail on each side. The cranes can be run along the entire length of the cargo rail. The cranes sit on a box that contains a control unit and ancillary winches and can be remotely controlled (**illustration 6**). The winches are used to run a cable out onto the deck, but one can also lower a cable right down and into the openings in the cargo rail. These openings house casters. With the aid of these openings you can drag heavy equipment on the deck right up to the side of the cargo rail. Cable lengths are thus shorter than if you were using fixed cranes. If a cable breaks, the consequences will be far less serious. In addition to this, the remote control capability means that the crane operator can stand at a safe distance away during such operations.

Capturing Buoys

In situations in which anchor buoys are going to be captured, two crew members usually stand on the anchor roller and try to capture the buoy by lassoing it. Bourbon Offshore Norway, ODIM and Ulstein Design have resolved this situation by moving the tugger cranes on the cargo rail to the far stern position. At the tip of the crane arm, remote controlled hooks hold the lasso. The crane arms are run out and past the buoy, one moves the crane forward, drops the hooks and the lasso falls over the buoy and captures it (**illustration 7**).

Circle 2 on Reader Service Card



New Digital TCP/IP based CCTV System Launched



Hernis Scan Systems A/S launched its next generation CCTV system server, dubbed HERNIS 500. Totally digital and Ethernet-based, it contains all benefits of its predecessor, the HERNIS 400, while being redundant and, at the same time, having the accessibility of digital IT networks.

Running on the Windows platform with TCP/IP, its flexibility and redundancy allows for future demands and upgrades.

High quality moving video-pictures in real time (2CIF, 25 pictures per second, corresponding to S-VHS video quality) simultaneously streams to/from disk as well as the system Ethernet backbone, which is easily extended with new applications, operator access points or communication nodes for camera stations.

The picture quality and data rate can be set individually and is thus suitable for a variety of user requirements. All video can simultaneously be stored and retained in full video quality (2CIF, 25 pps) for each camera for a minimum of 24 hours. Recorded images are water-marked for easy playback and searching facilities.

Circle 8 on Reader Service Card

Ameron GRE Pipe for Ballast, Healing Systems

Ameron's Fiberglass-Composite Pipe Group/Europe supplies Bondstrand Glassfiber Reinforced Epoxy (GRE) pipe for ballast and healing system for Jumbo Javelin and Jumbo Fairpartner



using new fiberglass design for bulkhead penetration. Two J-class heavy-lift vessels were completed recently at the Damen Shipyard in Galatz, Romania for Kahn Scheeptvaart BV - Rotterdam, the Netherlands. Bondstrand 2000M

Glassfiber Reinforced Epoxy (GRE) materials were identified to be ideally suited for the ballast and healing system using a unique fiberglass design for bulkhead penetration eliminating corrosion problems.

The product was selected to eliminate corrosion problems, provide a minimum service life of 30 years, reduce weight and to help reduce the presence of marine growth.

Circle 59 on Reader Service Card

Have a safe trip...
...every time

WORLD LEADER IN AIS SOLUTIONS TYPE-APPROVED DGPS WITH RAIM, BEACON AND WAAS/EGNOS

SAAB TRANSPONDERTECH

Come visit us at NORSHIPPING June 7-10
Stand no. **D08-19**  2005

www.transpondertech.se Phone +46 13 18 80 00



SAAB

Circle 260 on Reader Service Card

jhd HATTELAND DISPLAY **QUALITY LINE**
Jakob Hatteland Display AS - Åmsøen, N-5578 Nedre Vets, Norway

Approved Marine Electronic Equipment
EN60945 tested Displays, Panel Computers and Computers are mandatory for reliable and safe electronic equipment. The Jakob Hatteland Display Group is experienced and dedicated to fulfill these requirements.

Knowledge - Quality - Economy

10in, 12in, 15in, 17in, 19in, 20in, 23in, Stand-alone and Rack Mount Computers

EN60945 tested, IP66 rated, ECDIS & ARPA compliant

Approved by ABS, BV, ClassNK, DNV, GL, LRS

jhd-no@hatteland.com - Phone +47 5276 3700 - Fax +47 5276 5444

www.hatteland.com

Circle 239 on Reader Service Card

Maritime Cluster Holds Good



Bourbon Offshore Norway has ordered an ULSTEIN A102 anchor handling vessel from Ulstein Verft.

By David Tinsley

Norway's propensity for highly-capable, state-of-the-art support vessels to match the evolving needs of the offshore oil and gas industry continues to find expression in the prolific output from the country's west coast yards. As a fountainhead of offshore service vessel design, construction and technology, Ulstein Verft has provided a new showcase for its capabilities by way of the platform supply ship Bourbon Topaz. Delivered to Bourbon Offshore Norway, part of the French-controlled Groupe Bourbon, the smart new work vessel embodies the Ulstein P105 design, suited to operations worldwide as well as to deployment on the rigorous North Sea.

Groupe Bourbon has indicated an ambition to be a world leader within the offshore segment, and its Norwegian affiliate is in expansion mode. It took over a Norwegian offshore supply and support fleet through the 2003 acquisition of Havila Supply. Bourbon Topaz is the ninth platform supply vessel in the fleet, and a further P105 has been booked from Ulstein Verft. Bourbon Offshore Norway's managing director, **Jostein Saetrenes**, said it meant a lot to his company that it has been able to participate in, and contribute to the development and strengthening of the maritime cluster in the Sunnmore region of western Norway.

The 4,848-dwt Bourbon Topaz offers a high degree of cargo carrying flexibility suited to the manifold con-

sumables, materials and equipment need to sustain offshore industry activities. Her large, open deck area and substantial pipe carrying capacity over four pipe lengths complement special underdeck tankage for drilling materials, all types of liquids including methanol and glycol, and fuel.

As with many of the modern generation of Norwegian ships, she has a diesel-electric power and propulsion plant, conferring a host of operating benefits and enabling changing power needs to be more precisely and efficiently matched over the complete operating cycle. The vessel also provides a reference for the Rolls-Royce Ulstein Aquamaster Azipull system, used for her two main propulsors, and features a forward transverse thruster and swing-up thruster as a mark of her maneuvering and dynamic positioning attributes.

The construction process has entailed fabrication of the aftship in Poland and that of the forepart sections at Ulstein's Vanylven and Ulsteinvik premises, with hull assembly, outfitting and completion at Ulsteinvik. The same arrangements have been adopted for the second Bourbon P105 newbuild. The expansion-minded operator has recently also signed a contract with the Ulstein yard for one of the latter's home-grown A102-type anchor-handlers, and has taken out an option on a second such vessel.

Circle 1 on Reader Service Card

Schottel Powers Ahead

Schottel GmbH & Co. KG in Spay on the River Rhine in Germany is the headquarters of an international Group of companies with a worldwide sales and service network. Besides azimuthing propulsion systems and maneuvering devices, Schottel also supplies conventional propulsion packages with a power rating of up to 30 MW for vessels of all kinds and sizes. SCHOTTEL is showing its range of innovative products and services on stand C 03-01A within the German Group at NorShipping.

The current Schottel range encompasses in particular: Rudderpropellers (SRP) up to 6000 kW; Twin-Propellers (STP) up to 3500 kW; Navigators (NAV) up to 1000 kW; Combi Drives (SCD) up to 3800 kW in single propeller version with nozzle or twin propeller version; Podded Drives (SEP and SSP) up to 20 MW; Pump-Jets (SPJ) up to 3500 kW; Transverse Thrusters (STT) up to 1400 kW; controllable-pitch propeller plants (SCP) up to 30,000 kW; including shafting, rudder systems, and remote control devices, as well as tailor-made steering and control systems.



Drawing of a Schottel Combi Drive (twin propeller version)

Schottel recently won the order for five 425 ft. (129.5 m) double-ended LNG ferries which will be built by Aker Brattvaag AS for Fjord1 Fylkesbaatane, Norway. They will operate between Bergen and Stavanger. The vessels were designed by LMG Marine in Bergen, and extensive model testing was carried out by Marintek, Trondheim. Three ferries will be equipped with four gas-electric Schottel Combi Drives (type SCD 2020) each (4 x 2750 kW, twin propeller version). They are designed for a speed of 21 knots. The other two ferries of identical design will be equipped with four mechanical Schottel Twin Propellers (type STP 1515 - 1600 kW each), giving the vessels a cruising speed of 17 knots.

Circle 57 on Reader Service Card

Stromme Buys NME

Stromme ASA strengthened its product range of maritime equipment through the purchase of Norwegian Maritime Equipment AS (NME). Stromme has a strong sales position with shipowners, cruise and management companies and NME is well established within shipyards and offshore industry. Over the last few years both Stromme and NME have developed their own branded products in collaboration with leading manufacturers. Through our four product areas: Marine Products, Marine Spares, Marine Service and Marine & Offshore supply, will we continue to offer our clients a wide product range expertise on technical products / service and logistics.

Circle 58 on Reader Service Card

ANCHORS

ANCHOR

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

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

CHAINS

MARINE

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

P.O. BOX 58645
HOUSTON, TX 77258
sales@anchormarinehouston.com
www.anchormarinehouston.com

Circle 207 on Reader Service Card

Jakob Hatteland Display Getting the Big Picture

Jakob Hatteland Display AS (JHD) from Norway is a privately owned company that started in 1987 and has been involved in the maritime market since then. The company develops and manufactures a wide range of quality, type-approved Displays, Panel-Computers, Stand-alone and Rack-Computers for maritime and industrial applications.

Headquartered in Nedre Vats, which is between Stavanger and Bergen with Development, Production and Sales. The company also supports sales offices in Oslo; Frankfurt, Germany; and Lake Mary, FL. JHD serves the world markets, including Europe, North America, the Far-East and Australia. In 2004 more than 8,400 displays and computers were sold worldwide to the maritime market whereas Norway counted for 37 percent of JHD's total business, followed by Germany with 20 percent and the U.S. with 10 percent. The production offers 3,600 sq. m. of production ground with a capacity of more than 20,000 units per year. It is the motto "Knowledge - Quality - Economy" which stands for the mission of Hatteland Display to achieve the highest benefit for customers and users of approved maritime electronic equipment.

Knowledge is based on almost 20 years experience and the close relation to customers and to key suppliers. Already 35 percent of the products are customized. This shows a good evidence of JHD's technical expertise. JHD's homepage for example, gives plenty of information, even CAD-drawings, which can be easily accessed by visitors.

Quality is proven by the compliance to the Standard IEC945 (EN60945) test. It is mandatory for all of the JHD prod-



ucts. ECDIS products are approved in accordance to the IEC61174 standard. For MIL applications the MIL-STD 461E, MIL-STD 462E and extended environmental tests are done. All products are/will be approved by: ABS, BV, ClassNK, DNV, GL, LRS. Approximately 37,000 products produced by JHD are in use worldwide.

JHD has introduced the MMD - Maritime Multi Displays, the MIL - Military Displays and the MMC - Maritime Multi Computers - as well as the MSC - Maritime Stand-alone Computer - and the 19-in.-Rackmount Computers to the market. Displays and Panel-Computers can be offered from 10 in. to 23 in., the Computers as 19 in. rack-mount or small form-factor PCs.

The products are suitable for a great number of different applications combined with many accessories, such as ECDIS and ARPA, remote control, brackets, touch screens, sun visors, different processors and extension cards. Basically the products are available with either AC or DC power supply. JHD will introduce a new designed product range where design meets functionality. The

product is based on proven electronic equipment combined with an unseen modularity, hence easier service handling. This product range will be straight forward designed to concentrate on what is necessary: the man-machine-interface. New display products will be soon shown also for either inside or outside-use. These will be regular powered displays with the so-called bonding technology.

Circle 56 on Reader Service Card

CSD to Exhibit RISE Sealing System

At booth C 03-22F CSD Systems the fire-safe RISE sealing system for cable and pipe penetrations will be presented. Most recently the system was tested and approved as fire-safe sealing system for penetrations that carry both plastic and metal pipes through A60 decks and bulkheads. This solution offers freedom when designing of installing fire-safe pipe penetrations.

The RISE system consists of firesafe



protective sleeves that are split lengthwise and are simply placed around the cables. Once the cables to be ducted have been packed in this way, the remaining space is filled up with empty filler sleeves. Lastly, the penetration is closed off with a 2 cm thick layer of fire resistant, water repellent and gas tight FIWA compound. In order to be able to add extra cables at a later date, it is only necessary to cut away the FIWA com-

pound at both sides of the penetration. Then the extra cables can be passed through the exposed opening, after which the penetration is re-closed with FIWA compound. The RISE system has been subjected worldwide to extremely severe testing. For the fire tests, the harshest possible test conditions were chosen that also mirrored reality as closely as possible. In addition, the penetrations had to undergo heavy impact and vibration tests, thermal and dynamic cycle tests, and research was performed into ageing aspects, toxicity and fume tightness.

Circle 60 on Reader Service Card

LR, Napa Announce Software Contract

Napa Ltd and Lloyd's Register signed a contract to extend the use of NAPA, Napa Ltd.'s ship modelling software package. Lloyd's Register has adopted the NAPA system for statutory compliance calculations for all classed ships throughout its global network of offices.

Napa Ltd has also committed to help develop new NAPA 'Manager' applications specifically for the use of Lloyd's Register. These new applications will be made available to other NAPA users, such as shipyards, making it easier for them to ensure that Lloyd's Register-classed ships are in compliance with statutory rules and regulations and reducing approval times.

"Both companies look forward to the upcoming collaboration on the Manager development project. The development phase of the project is expected to last for two years. The first pilot versions will be delivered to Lloyd's Register in April 2005," said **Matti Salo**, President of Napa Ltd.

Circle 61 on Reader Service Card

	<h1>MARK VAN SCHAICK BV</h1> <h2>CRANKSHAFTSPECIALIST</h2>			<ul style="list-style-type: none"> ✓ Crankshaftrepair (max. length 12000 mm) ✓ Repair of engine- and industrial parts ✓ Connectingrod repair ✓ Lineboring ✓ Technical consultants ✓ Marine and industrial spare parts ✓ Whitmetal bearings ✓ Hardchromeplating ✓ In Situ machining ✓ Camshaftrepair 	 <p>Connectingrod repair of any kind</p>
	<p>Office and workshop Nieuwe Waterwegstraat 7 3115 HE Schiedam Holland - www.markvanschaick.nl</p>	<p>Harbournr. 535 (Port of Rotterdam) Telephone : +31 (0)10 4090599 Telefax : +31 (0)10 4090590 E-mail : info@markvanschaick.nl</p>			

Circle 250 on Reader Service Card

C-MAP Offers ENC for Malaysia, Malacca Straits

C-MAP said the first Electronic Navigational Charts (ENC) covering Malaysian waters has been released.

C-MAP Malaysia has secured an agreement to provide official charts cov-

ering Malaysian waters, extending C-MAP's coverage of the major shipping routes of the world. C-MAP will make available Malaysian ENC data to end users in the encrypted system ENC format, which is supported by C-MAP's Real Time Updating Service. This

enables users to log on the C-MAP server and download Notices to Mariners. Vessels equipped with type-approved ECDIS systems operating in Malaysian waters can now utilize the full potential of their systems in this region.

Circle 62 on Reader Service Card

Totem Plus

Totem Plus is dedicated to develop, market and support new generation total package systems of marine control and automation products for the operation of commercial ships in the maritime industry. New items of interest in NorShipping include: Totem VDR/SVDR; Integrated Engine Monitoring Alarm and Control System (IMACS); and Totem AIS-VTS: AIS based Vessel Traffic System:

Circle 63 on Reader Service Card

Hepworth to Launch New Products in Oslo

At NorShipping 2005 Hepworth (on stand B03-20) plans the launch of two new products from the B Hepworth Group. Hepworth Marine International will focus on a high-tech sound-proofing coating called Silent Running, while Wynn Marine will present its next generation in wiper/bridge equipment control systems, the Series 6000. The B Hepworth Group will also highlight its structure and market position at NorShipping 2005, one year on from the merger of Hepworth Marine International and Wynstruments, the parent company of Wynn Marine.

Wynn Marine's next generation in wiper/bridge equipment control networks, the Series 6000 builds on the success of the Series 3000 digital network control system. This enhanced digital network can control up to 50 wipers individually or in groups and is now even easier to install. Brand new control panels, smaller in size and designed to fit almost anywhere on a bridge, provide an improved user interface for simple operation.

Circle 64 on Reader Service Card

Sener to Preview FORAN V. 6.0 at NorShipping

Sener will unveil FORAN V. 6.0 at NorShipping, a new ship design product that the company claims will be a revolutionary way to define internal hull structure. Version 6.0 features a new module with interactive 3-D environment and innovative methods for cable and cable tray definition and equipment layout.

The new version also features more components in the sketches and drawings, enhanced 2-D and 3-D drafting functionalities, new automatic generation of 2-D drawings directly from the 3-D model, new automatic build strategy sketches, additional tools for mechanical design.

Circle 65 on Reader Service Card

NEW! 

Teak DeckTM Sealant in Chubs



- ◆ Teak Deck Sealant is now packaged in Chubs for use in the boat building industry.
- ◆ Teak Deck Sealant is the innovative alternative to two-part products.
- ◆ Silicone based, cures in 24* hours, is sandable and non-corrosive.
- ◆ Meets or exceeds requirements of Federal Specifications TT-S-0027, Type II, and Military Specifications C-18255E (Ships), Type II.

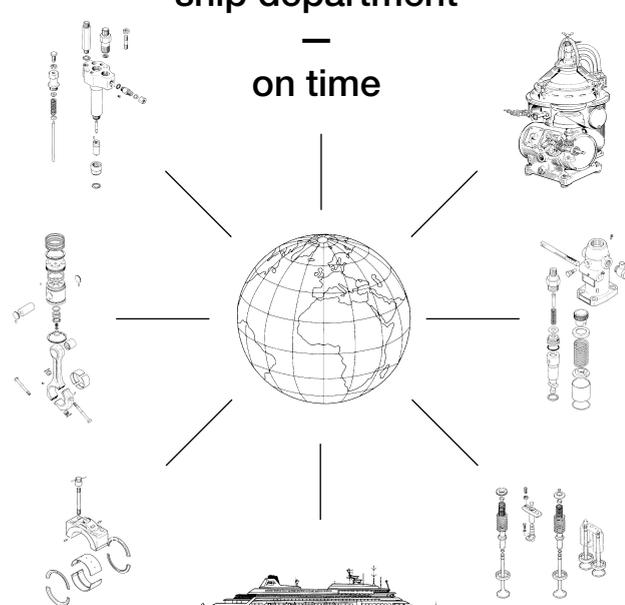
Manufactured in America by Life Industries Corporation
2081 Bridgeview Drive, Charleston, SC 29405
800.382.9706 Fax 843.566.1275
www.boatlife.com

© Life Industries Corporation *Curing time subject to atmospheric conditions.

Circle 213 on Reader Service Card

Worldwide spare parts deliveries for the ship department

—
on time



MOTOR-SERVICE AB

Mölna Fabriksvägen 8 • SE-610 72 Vagnhärad • Sweden
Phn: +46 156-340 40 • Fax: +46 156-209 40
www.motorservice.se • sales@motorservice.se

Circle 254 on Reader Service Card

Marine Deck Hardware and Equipment

- ◆ **ANCHORS:** ◆
50 to 80,000 Lbs. - New and Used
Stockless - Danforth - L.W.T. - Malls - Snug Stowing
- ◆ **CHAIN** ◆
1 1/4" to 5 1/2" - New and Used
Stud Link - Cast Steel - Grades 2 and 3 - Oil Rig Quality for Moorings, Towing, Barge Handling, Ship's Replacement
- ◆ **WINCHES - WINDLASSES - CAPSTANS** ◆
Vertical or Horizontal Hand, Electric, Diesel, Hydraulic or Repowered to your specs
- ◆ **HATCHES - WATERTIGHT DOORS** ◆
MANHOLE COVERS - SCUTLES - PORTHOLES ◆
All Sizes - New or Reconditioned
- ◆ **PANAMA CHOCKS - DOUBLE BITTS** ◆
SINGLE BITTS - CAST STEEL CLEATS AND KEVELS ◆
All Sizes Available, New & Used
- ◆ **FENDERS PNEUMATIC** ◆
For Rent or Sale
All Sizes, New & Used

GIGANTIC INVENTORY NEW & USED
Call Toll-Free (800) 322-3131

IN STOCK NOW
In the West Coast, East Coast and The Gulf

WE ARE DIRECT FACTORY DISTRIBUTORS & IMPORTERS

THE MARINE & OIL INDUSTRIES FOR OVER 35 YEARS

WATERMAN SUPPLY CO., INC.
P.O. BOX 598
WILMINGTON, CA 90748
PH: (310) 522-9698
FAX: (310) 522-1043

Circle 276 on Reader Service Card



MARINE SWITCHBOARDS & CONTROL SYSTEMS

for
Work Boats
Luxury Yachts
Sportfishing Boats
Commercial Vessels
Research Vessels
Military Vessels
Gaming Vessels

INDUSTRIAL POWER SYSTEMS, INC.

Marine Division
3010 Powers Ave #16
Jacksonville FL 32207
(904) 731-8844
marine@ipssjax.com
www.ipsswitchgear.com

Designers and Manufacturers of Quality Electrical Controls and Switchgear

ABS • ABYC • BV • DNV • IEEE
Lloyds • MCA • UL • USCG

American Quality and Craftsmanship Since 1981



Circle 235 on Reader Service Card

Hayashi to Retire at MOL

George Hayashi announced he is retiring from his official duties as a member of the Board of Directors and Deputy President of Mitsui O.S.K. Lines, Chairman of its Liner Division, President and CEO of MOL (America) Inc., and Chairman of MOL (Europe) B.V., effective June 23, 2005. He will continue in his role as Chairman of MOL (America) Inc. Hayashi is stepping down after spending more than seven years with MOL. Including his 34 years at APL, Hayashi retires having spent nearly 42 years in the liner business. He will be succeeded as President and CEO of MOL (America) Inc. by **Osamu Suzuki**, newly promoted to MOL Managing Executive Officer. Suzuki joined MOL in 1973.

MSRC, Clean Sound Merge

The Marine Spill Response Corp. (MSRC) and Clean Sound Cooperative Inc. said that the two companies have merged effective April 1, 2005. MSRC, founded in 1990, is a national not-for-profit response company that owns and operates a fleet of dedicated Oil Spill

Response Vessels (OSRV), ocean going barges, shallow water skimming systems, other response equipment and enhanced communications capabilities throughout the United States. Clean Sound Cooperative, Inc. was established in 1971 by the oil industry for the purpose of responding effectively to marine oil spills in Washington State. The former members of Clean Sound are also members of MPA.

Circle 32 on Reader Service Card

Knoy to Head WCI

Waterways Council, Inc. (WCI) named **Mark Knoy**, President of AEP Memco LLC as its next Chairman of the Board. Knoy succeeds **Berdon Lawrence**, Chairman of Kirby Corporation, as WCI's Chairman.



EBDG Adds Staff

Elliott Bay Design Group announced that **David Smith** has joined the firm as Project Manager. Smith brings over 25

years of shipyard design and construction experience to the team and has worked in shipyards across the country. **John Farmer** joins the team as a Designer II. John has a BS in mechanical engineering technology from Purdue University and over 10 years of 3-D design and surface modeling experience. **Alisha Lamb** has been promoted to Designer III. Lamb joined EBDG in 2003 and has been actively supporting the firm's design team.

VT Halmatic Names New Tech Director

VT Halmatic said that Professor **Bob Cripps**, currently Engineering Manager at the RNLi, will be joining VT Halmatic as Technical Director as of May 9, 2005. Cripps worked at Lloyds before moving to the RNLi and has extensive technical knowledge and experience of small craft and composite technology.

Hepworth Names Thijssen

The B Hepworth Group has appointed **Bert Thijssen** as Marketing Director for both Hepworth and Wynn. Thijssen brings 30 years of marine experience

and has been charged with providing marketing direction and active sales support, as the new structure of the B Hepworth Group emerges.

Jeffboat Appoints Linzey

Jeffboat LLC appointed **Jerry R. Linzey** as its Senior Vice President, Manufacturing. Linzey brings more than 20 years of skills to the company.

Seatruck Adds Vessel

Seatruck Ferries will introduce a third vessel onto to its Heysham — Warrenpoint service in the summer of 2005. **Lembitu**, to be renamed **Challenge**, will join the Seatruck fleet on a two-year charter, allowing an additional 25,000 units per year. Seatruck recently announced a newbuild program that will see two purpose-built vessels entering service in 2007.

Telenor Selected

Telenor Satellite Services was chosen as a premier service provider of the next generation of mobile satellite communications, Inmarsat's Broadband Global Area Network (BGAN).

Circle 46 on Reader Service Card



FOR SALE
CRANE BARGES, DECK BARGES, CREW BOATS, and TUGS
Most Built And Maintained By
Tutor-Saliba

For the Richmond, CA Bridge Project

For Detailed Listing and Pricing information, please visit our website at www.merrillmarine.com
or call Pete Merrill at 800/394-6674 or e-mail at pete@merrillmarine.com



Circle 251 on Reader Service Card

Gelcoat Patch to Improve Repairs

A new "Ultimate Patch Booster PL 604-2" additive from Ferro Corporation is designed to improve the application, appearance and longevity of gelcoat repairs. The new additive causes the components that primarily affect gelcoat appearance to concentrate on the surface exposed to air, instead of the surface against the mold. To compensate for the relatively thin application of gelcoat sprayed over repairs, it also forms an air barrier that retards evaporation of VOCs until the gelcoat surface has leveled-out and the gelcoat molecules have fully cross-linked.

Circle 37 on Reader Service Card

New Sailor VHF Radio

Thrane & Thrane introduced its new VHF radio — the Sailor RT5022 — that offers a number of new features. It has built-in DSC (Digital Selective Calling) Class A. The Sailor RT5022 comes with a new replay feature that allows the operator to repeat an incoming message in case the operator did not understand the message in the first instance, a valuable safety tool. To enhance ease-of-use, the Sailor RT5022 has been simplified and the functionalities most often used are operated by large tactile buttons and knobs and a large separate display.

Circle 39 on Reader Service Card

Stearns VR Rescue Vests

The Stearns VR Versatile Rescue Vest combines excellent buoyancy, strong construction and durable materials with overall comfort and flexibility. Approved by the U.S. Coast Guard, the vest is designed especially for use by fire departments, public safety units, and search and rescue operations.

The Model I650 VR Rescue Vest provides up to 25 lbs. of buoyancy, extra shock protection, a rugged 420 Denier nylon pack cloth shell for strength and durability, and a soft 200 Denier nylon liner for comfort. The bright red outer shell is designed for daytime visibility, while SOLAS-grade 6755 3M Scotchlite Reflective Material on the front and back makes it easy to spot at night. The vest's thin, low profile design adds cushioning while permitting unrestricted freedom of movement and a chest pad that covers the front split when the vest is worn. The Stearns VR can easily be customized for the best fit by quickly adjusting four front straps, a waist belt and crotch straps that prevent the vest from riding up, and by modifying the stainless steel hardware in the elastic shoulders.

Circle 41 on Reader Service Card

New Rescue Boat in NorMar Range

Norwegian Maritime Equipment AS extended its range of rescue boats with a small model designed for outboard propulsion. The boat, denominated Normar 425, is a GRP rescue boat with a capacity of six persons. It measures 14 x 6 ft. (4.25 x 1.84 m) and weighs 697 lbs. (316 kg), excluding engine and fuel.

The stability of the boat is ensured by the particular design, as the outer and inner hulls are shaped in separate mold, then connected to shape the seats and buoyancy tanks. The buoyancy tank provides sufficient buoyancy to float the boat at flooded condition with all persons onboard. The boat can be delivered with or

1



2



3



4



without engine, and has a full SOLAS and BV-EC approval.

Circle 42 on Reader Service Card

Safer Lifeboats

Survival Craft Inspectorate Ltd. of Aberdeen, U.K., announced the installation of its 400th Safelaunch lifeboat release hook mechanism since the product was launched last year. The unit design was introduced in early 2004 and was developed to eliminate the risks that ships' crews and offshore platform workers face when entering lifeboats during drills and routine maintenance. Safelaunch release hook mechanisms provide a visual assurance that the boat is safely secured before being entered.

An improved release cam mechanism is designed to provide superior contact between engaged components and is believed to be more robust and less vulnerable to critical tolerances, misuse or neglect.

Each Safelaunch release hook features a color-coded indicator that shows the status of the release cam and can be seen from outside the boat. Survival Craft Inspectorate designers also introduced a through hook locking pin that guarantees positive safety during maintenance and boarding drills.

Circle 43 on Reader Service Card

New Cold Water Immersion Suit

The Cold Water Immersion Suit from Stearns meets or exceeds the new 2006 mandate from the International Maritime Organization, requiring marine shipping operations to provide this type of life-saving outerwear for everyone aboard a vessel that is operating in cold waters.

The Model 1590 suit is made with 5mm stretchable, fire retardant neoprene that provides high-performance protection against hypothermia.

The Model 1590 suit comes in bright international orange and provides a generous fit in all sizes for easy donning in emergencies.

The suit covers the wearer from head to foot, including a face shield for spray protection, insulated five-finger gloves, inflatable head support, ankle and wrist adjustments for a snug fit, and durable non-slip soles.

Other important features include a handy pocket for approved flashlights, SOLAS-grade 3150 PS 3M Scotchlite Reflective Material, and a SOLAS whistle. The suit comes in four sizes to fit children from 39 in. tall weighing 44 lbs. to adults over 75 in. tall weighing up to 375 lbs. Each suit also comes in its own color-coded storage bag for easy size determination.

Circle 44 on Reader Service Card

Kelvin Hughes S-VDR

Kelvin Hughes installed its first fully approved S-VDR onboard vessels belonging to Singapore's World-Wide Shipping.

Although the equipment meets and exceeds the requirements of IMO Performance Standard - MSC 163(78) for Simplified Voyage Data Recorders, Kelvin Hughes offer a number of options which further enhance the performance and operational capability including a communications package with the ability to provide remote diagnostics of on board equipment performance.

Circle 38 on Reader Service Card

FERC Approves Texas LNG Facility

The Federal Energy Regulatory Commission approved several new natural gas projects, including the construction of a new marine terminal for liquefied natural gas (LNG) and expansion of a previously approved LNG project that will increase and enhance the energy infrastructure in the Gulf Coast region of the United States. The Commission authorized Corpus Christi LNG to construct and operate an LNG terminal to import, store and vaporize approximately 2.6 billion cu. ft. (Bcf) of LNG per day. In addition, the Commission authorized Cheniere Pipeline Company to construct and operate a 23-mile, 48-in. diameter pipeline that would extend from the proposed terminal and interconnect with various interstate and intrastate pipeline facilities in San Patricio County, TX.

The Corpus Christi project is the fourth new LNG terminal approved by the Commission. It will include the construction of an LNG marine terminal consisting of a turning basin and two protected berths; three 160,000 cu. m. storage tanks, LNG vaporization and sendout facilities.

Six Vessels Acquired

Effective March 31, 2005, International Boat Rentals, Inc. has acquired six mini-supply vessels from Sea Mar Management, LLC. The fleet of vessels consisted of two 130's, one 140 and three 145-ft. mini-supply vessels.

"While the addition of these six vessels brings our total number of mini-supply vessels up to 10 and our total fleet up to 51, it more importantly increases our marketability by giving us the ability to offer our clients a greater

range of vessel without having to begin a newbuild program. These vessels are in unbelievable condition and have all of the modern amenities that the newbuilds have.

The acquisition also comes to us at a convenient time, as we are slowly going to begin scrapping some of the older vessels in our fleet or moving them out of the Gulf of Mexico into other markets," said **Steve Williams**, President/CEO

Eutex Announces New Distributor

Eutex International USA Limited announced the distributorship of Cortem UK Limited (Hazardous Area Products). Cortem are a specialist manufacturer of hazardous area products for the oil, gas and petrochemical industries including lighting, control panels, terminal boxes and custom built design solutions.

France Telecom Offers Improved SkyFile

France Telecom Mobile Satellite Communications designed new features for its free SkyFile software package, making e-mailing at sea even easier and more practical and providing seafarers with communications solutions as efficient and rapid as those used on land.

SkyFile is France Telecom Mobile Satellite Communications' proprietary software solution enabling the transfer of e-mails, faxes and SMS via Inmarsat and Iridium mobile satellite terminals. The new version compresses data sent by up to 90 percent, speeding up transfer times and reducing communications costs. The software also includes a SPAM filter and a black & white list option for better management of incoming e-mails.

Circle 67 on Reader Service Card

You may never buy another drill.



If you're tired of replacing electric drills, try a Lamina portable hydraulic drill. They're built for hard, continuous use (10 years min.) and fast payback – in drydock, or even at sea.

- drill or tap through solid steel... up, down or sideways
- compact and portable
- 6 heads, quick-change tools
- low maintenance, easily rebuilt
- meet U.S. and global standards

For reliable drilling, year after year, call Anchor Lamina today. And ask about our convenient rent-to-own program.

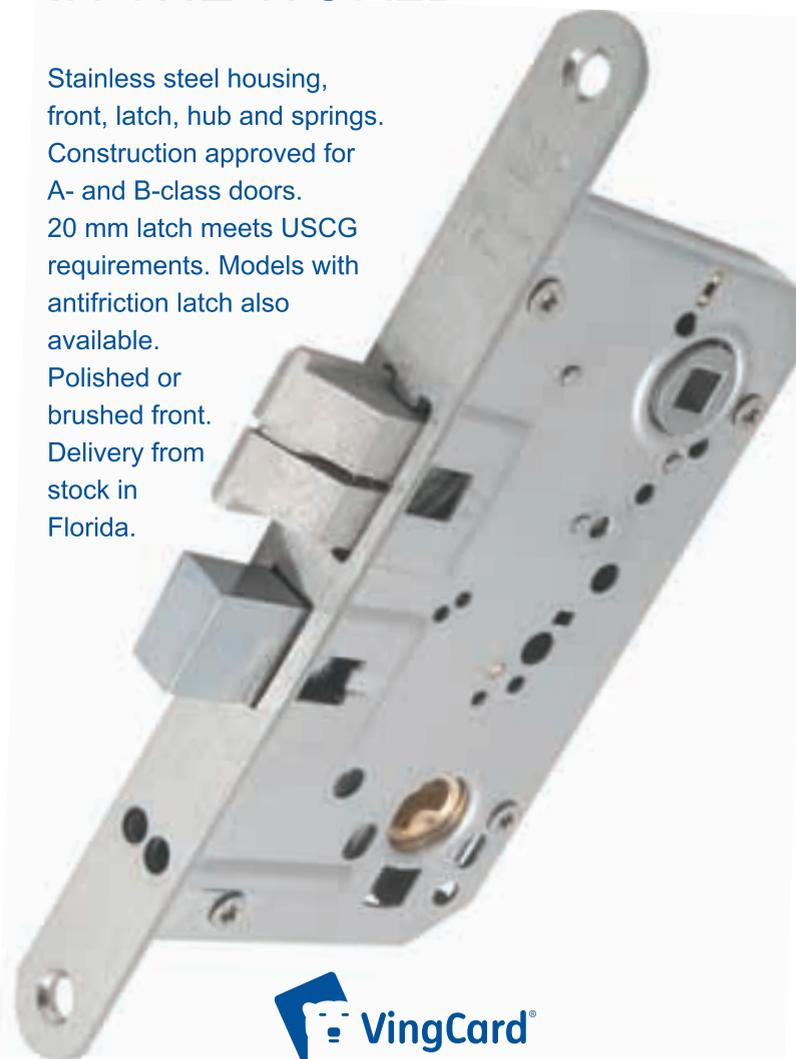
 **Anchor Lamina Inc.**
Lamina Hydraulics™

Call toll-free: 1-800-652-6462
or visit our website: www.anchorlamina.com

Circle 206 on Reader Service Card

THE BEST MARINE LOCK IN THE WORLD

Stainless steel housing, front, latch, hub and springs. Construction approved for A- and B-class doors. 20 mm latch meets USCG requirements. Models with antifriction latch also available. Polished or brushed front. Delivery from stock in Florida.



 **VingCard®**
Marine

www.vingcardmarine.com

Phone: (954) 920 0772 Fax: (954)920 2446 E-mail: marinesales.usa@vingcard.com

An ASSA ABLOY Group company

ASSA ABLOY

Circle 274 on Reader Service Card

Yacht-Carrying Pioneer Powers Up

Wärtsilä won an order to supply the 19.7 MW power plant for a 673.6 x 105.6 x 19 ft. (205.3 x 32.2 x 5.8 m) yacht carrier contracted by Dockwise Shipping BV to be built at Yantai Raffles Shipyard in China, due for delivery in autumn 2006.

The cargoes of yachts will be loaded by floating them over the deck, which measures 541 x 101.7 ft. (165 x 31 m), while the vessel is ballasted down. This vessel is the first to be designed and built for carrying luxury yachts. Dockwise has built up the yacht transport business since 1987 and owns four converted semi-submersible vessels dedicated to this business. The new vessel will be employed in carrying yachts primarily across the North Atlantic with monthly sailings between Florida/Caribbean and the Mediterranean. The vessel will have a service speed of 18 knots.



The new yacht carrier will be equipped with a 19,680 kW diesel-electric plant for propulsion, ancillary electrical power, and all shipboard electrical services. The plant will be powered by two Wärtsilä 12V38B main diesel generating sets, two Wärtsilä 6L20 auxiliary generating sets, and a 300 kW emergency generator set.

The yacht-carrying dockship of Dockwise Shipping BV will be equipped with a Wärtsilä diesel-electric power plant, Lips pull thrusters, Lips transverse thruster and Sternguard seals.

gency/harbor generating set. The generating sets will supply twin Lips CS3500 pull thrusters for propulsion.

Maneuverability will be enhanced by a 1.64 MW Lips CT225 transverse bow thruster. The two 5.1 MW azimuthing pull thrusters will each be equipped with a 4 m-diameter Lips skewed, pulling, controllable-pitch propeller and Sternguard MK2M shaft seals.

This is one of the first vessels to be equipped with Lips pull thrusters. The propeller is arranged ahead of the pod to achieve the best overall hydrodynamic efficiency and steering at high ship speeds.

Circle 22 on Reader Service Card

Caterpillar Debuts C9 Marine Genset

Caterpillar Marine Power Systems now offers the new C9 genset package that combines the Cat C9 auxiliary engine with a Cat generator for a complete, ready-to-install package. The IMO-compliant package was available beginning in March 2005.

Caterpillar gensets arrive at the shipyard as one complete unit, including the engine, generator, coupling and other mechanical additions. The only steps performed outside of the controlled Caterpillar factory environment are installation and required onboard functional tests. The factory-packaged gensets use only Caterpillar parts.

Caterpillar designed for the installation to be especially easy by mounting the C9 genset on base rails with internal vibration isolators already installed. With the base rails distributing the genset's weight over a large area, vessel builders can install the generator just about anywhere. There is usually no need to mount the genset to structural beams.

The 8.8-liter displacement C9 genset provides electrical power on demand for a variety of vessels, including yachts, supply vessels, crew boats, tugboats and ferries.

The C9 genset is available in six ratings (three 60 Hertz ratings at 1800 rpm and three 50 Hertz ratings at 1500 rpm) and features a choice of keel cooled or heat exchanger cooling options. Its weight ranges from 3865 pounds to 4195 pounds (1753 kg to 1903 kg).

The C9 genset features elements of Caterpillar's ACERT Technology, which combine to minimize smoke and reduce emissions, making the genset IMO compliant and capable of meeting all current emission

regulations. The technology provides advancements in fuel delivery, electronics, air management and combustion chamber design. In addition, ACERT Technology provides a clear path to meet future emission regulations.

Circle 28 on Reader Service Card

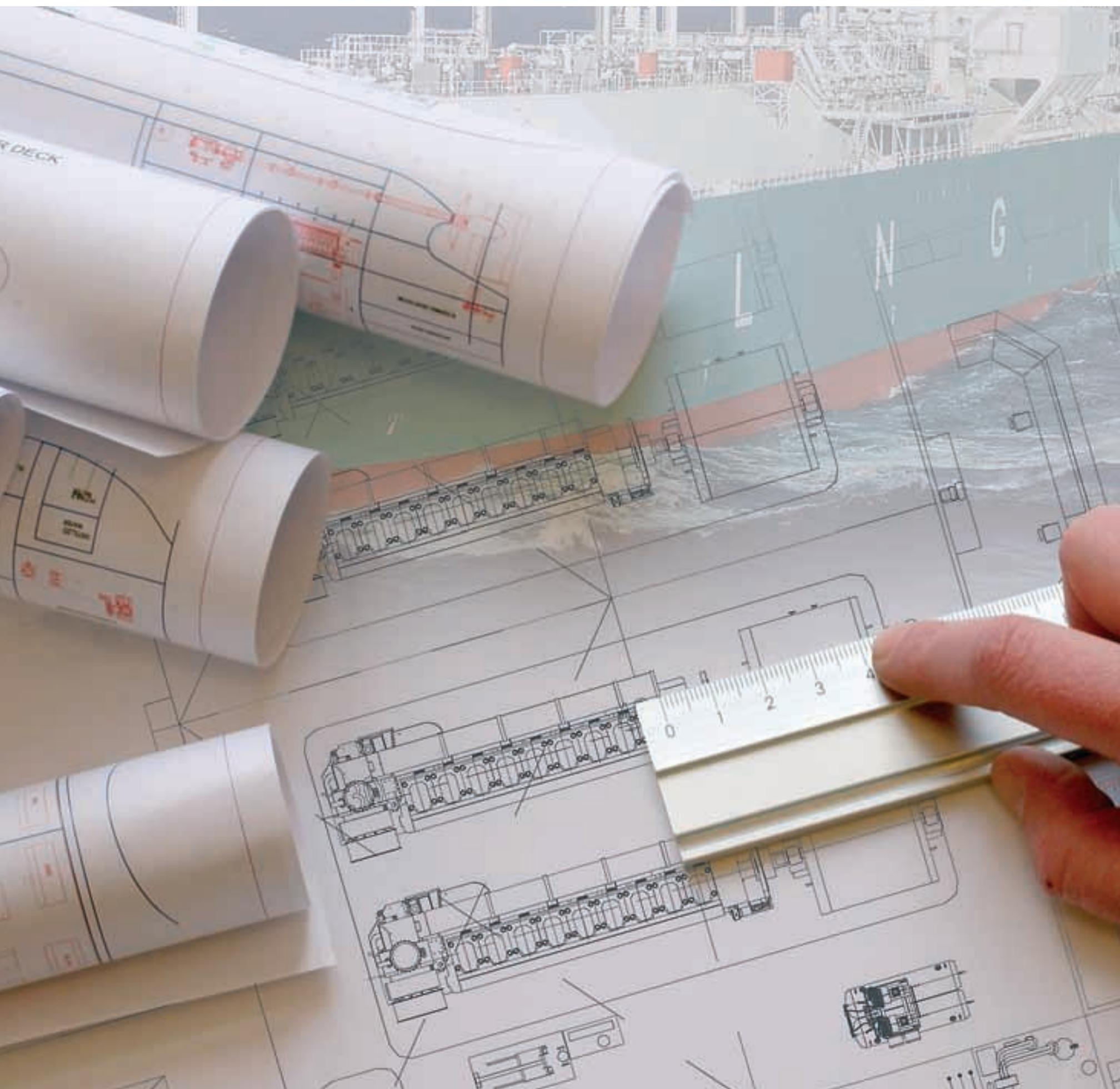
Table 1						
C9 Genset Ratings and Fuel Consumption						
	ekW at 0.8 pf	KV·A	Aspiration	rpm	U.S. gph	L/h
60 Hertz	175	219	TA	1800	13.7	51.8
	215	269	TA	1800	16.9	63.8
	250	313	TA	1800	17.9	68.1
50 Hertz	150	188	TA	1500	10.9	41.6
	175	219	TA	1500	12.9	47.7
	200	250	TA	1500	14.2	53.7

ekW - electrical kilowatts
 TA - turbocharged aftercooled
 L/h - liters per hour
 U.S. gph - U.S. gallons per hour
 pf - power factor

HMS Endurance Get New Sterntube Seals

Metalock Engineering UK's expertise in deep hole drilling in-situ is not frequently called for but recently it was put to the test for Deep Sea Seals enabling them to retrofit new sterntube seals to HMS Endurance, the Royal Navy's Ice Patrol and Research vessel. A Class 1 Icebreaker, the ship was originally built in Norway in 1990, HMS Endurance had been experiencing oil leaks to sea and oil ingress to its sterntube lubricating system. Deep Sea Seals (DSS) were called in to supply and install new outboard and inboard seals and all the necessary pipework to connect with the tanks for the inboard lubricating system. DSS fitted an AC/Mk2 Coastguard anti-pollution seal system which differed from the existing system and required modified pipework. Previously, only a single barrier seal had been used which was fed by a gravity lubrication system. The new AC system needed to be pump fed. The new pipe configuration necessitated through-hole access holes in the aft and forward prop shaft bearing bosses, and new drilled and tapped holes for the outboard AC seal. This work was contracted to Metalock Engineering who, in addition, undertook responsibility for the new pipework (seal pipes) and necessary tanks installation.

Circle 23 on Reader Service Card



Greater earning power

Dual-fuel-electric machinery, combining multiple WÄRTSILÄ® dual-fuel engines with an electric propulsion system, enables LNG carrier operators to get more out of their ship than with a traditional steam turbine installation. Higher efficiency and the increase in the ship's cargo carrying capacity pave the road to substantially higher revenues. At the same time, exhaust gas emissions are significantly reduced and machinery redundancy improved. Wärtsilä dual-fuel engines run primarily on gas, but can alternatively be operated on MDO or HFO. This gives operators full flexibility to select the most economical fuel. The Wärtsilä service network with more than 6000 professionals worldwide provides the best support for your machinery and propulsion system anywhere at any time.

For more information please visit www.wartsila.com/LNG

Circle 275 on Reader Service Card

Directory: Marine Propulsion Spares & Repairs

AAF International (American Air Filter)

10300 Ormsby Park Place, Suite 600
Louisville, KY 40223-6169
www.aafintl.com
Deborah Marshall
Tel: 888-388-0529
Fax: 888-398-0529
email:dmarshall@aafintl.com
Products: Air Filtration products

ABB Inc. - B. U. Turbocharger

1109 Howard St.
Deer Park, TX 77536

www.abb.com

Michael Kriner
Tel: 281-930-8383
Fax: 281-930-9595
email:atc.houston@us.abb.com
Products: New turbocharger sales, spare part sales, and service for all ABB turbochargers.

AccuTech Marine Propeller, Inc

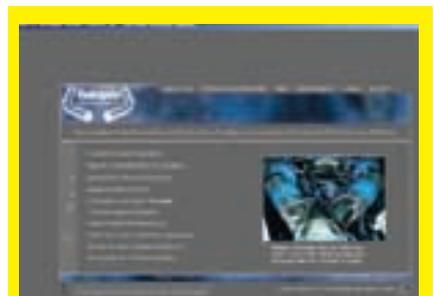
121 Lafayette Rd.
North Hampton, NH 03862
www.accutechmarine.com
Larry Kindberg

Tel: 603-964-3682

Fax: 603-964-3697
email:larry@accutechmarine.com
Descr: Marine propeller sales, service, consulting, Prop Scan ISO tuning.
Products: Michigan Wheel, Hall & Stavert, VEEM, Henley, Hawboldt, Ellis propellers.

Allen Gears Ltd

Atlas Works
Pershore, Worcestershire WR10 2BZ UK
www.allengears.com
Rory Cull



DeAngelo Marine Exhaust

3330 S.W. 2nd Ave.
Ft. Lauderdale, FL 33315
www.deangelomarine.com
Mariano Soto
Tel: 954-763-3005; Fax: 305-436-3712
email:sales@deangelomarine.com

DeAngelo Marine Exhaust, The premier marine exhaust company, with over 80-Yrs combined experience designing, fabricating, and repairing marine exhaust systems. Our lead times are the best in the business. We offer a full-service Engineering department that will survey your system, design, and customize the system or component for your application.

Circle 47 on Reader Service Card

Tel: +44 (0) 1386 562512

Fax: +44 (0) 1386 554491

email:sales@allengears.com

Products: Gearbox repair, overhaul, re-engineering, spare parts

AmBoss Corp

427 Honespot Road

Stratford, CT 06615

www.ambosscorp.com

Bryan Wilson

Tel: 203-380-2466

Fax: 203-380-2522

email:ambosscorp@msn.com

Descr: Distributor of Diesel Engine Parts and accessories

Products: Diesel Engine Parts and accessories for most European Diesel Engines, as well as Caterpillar, Cummins, etc.

AMT Power Systems

P. O. Box 1442

Coos Bay, OR 97420

www.harborside.com/~wrightcb/resume...

William J. Wright, P.E. Mechanical/Marine

Tel: 541-267-2588

Fax: 541-267 2588

email:wrightcb@charter.net

Descr: Surveyor & inspector of marine machinery

Products: Expert surveys and testimony on machinery damages and repairs

Applegate Industrial Materials, Inc.

P.O. BOX 428

Baton Rouge, La 70821+0428

www.the-flex.com

Bob Applegate

Tel: 225-336-4116

Fax: 225-336-4317

email:info@the-flex.com

Descr: marine exhaust components

Products: stainless steel mufflers, flex connectors, thermal insulation blankets

Bollinger Propellers

615 Destrehan Ave

Harvey, LA 70059

www.bollingershipyards.com

John Kelly

Tel: 504-340-0621

Fax: 504-371-7406

email:johnk@bollingershipyards.com

Products: Propellers, Vessel new construction and repair

Bosch Rexroth Corporation, Pneumatics

1953 Mercer Road

Lexington, KY 40511

www.boschrexroth-us.com

Tim Rockidge

Tel: 859-254-8031

Fax: 859-254-4188

email:tim.rockidge@boschrexroth-us.com

Descr: Manufacturer of pneumatic and electronic marine propulsion controls including valves, actuators and control systems.

Products: Pneumatic and electronic propulsion control valves, actuators and systems.

Brady Diesel, LLC

Post Office Box 4417, 2133 Denley Road

Houma, LA 70361

Robert J. Parr, Sales & Service Coordinator

Tel: 985-873-7847



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

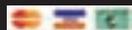
WANT SUPERIOR QUALITY
WANT SUPERIOR SERVICE
CALL SUPERIOR ENERGIES, INC

1-800-BUY-SEI-1

P.O. Drawer 386, Groves TX 77619

Telephone: (409) 962-8549 Fax: (409) 962-4027

Website: www.insulationsei.com



Circle 269 on Reader Service Card

ROBOTIC

Saddle and Hole Cutter NEW from Jesse Engineering



- Match branch and saddle with PC-Based control
- Inch/metric selectable
- Language selectable
- Cut and bevel pipe from 32mm to 1200mm
- New cuts

Patent Pending



SHAPING THE WORLD AROUND YOU

+01-253-922-7433

machinery.info@JesseEngineering.com | www.JesseEngineering.com

Jesse Engineering manufactures pipe benders, pipe shop equipment and PipeShop® software.



Circle 240 on Reader Service Card

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.

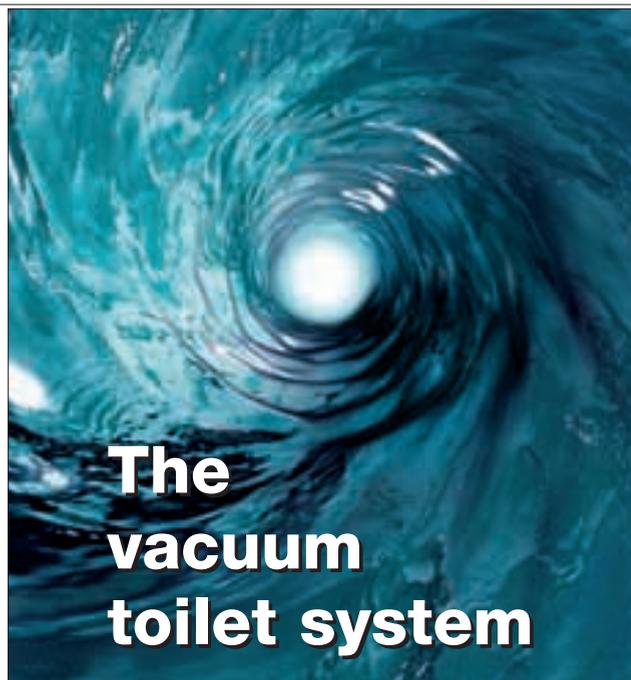
1-800-962-9696

www.wosupply.com

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

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

Circle 220 on Reader Service Card



The vacuum toilet system

JETS VACUUM AS
P.O.Box 14
N-6069 HAREID
Tel.: +47 70 03 91 00
Fax: +47 70 03 91 01
E-mail: post@jets.no



www.jets.no

Circle 241 on Reader Service Card



Scardana Americas Brokerage

123 Churchill St.
Greenfield Park, Quebec J4V 2M1 Canada
Philip Rink
Tel: 450-465-2480; Fax: 450-671-3898
Email: service@scardana.com
www.scardana.com

Since 1974, Scardana has evolved to a primary North American sourcing and location service, for ships' and stationary power plant, spare parts and replacement equipment, including main and generator engines. Scardana provides spare parts to tankers in the Alaska trade, to bulk carriers in U.S. Gulf, cruise ships in Florida and the Caribbean, to Navy cargo ships in Norfolk, Great Lakes carriers on the St. Lawrence and anchor handling tugs on the Grand Banks.

Circle 48 on Reader Service Card

Fax: 985-876-4845

email: bdrjparr@gpsnet.biz

Descr: Cummins Authorized Marine & Industrial Dealer

Products: Cummins, Detroit Diesel, Twin-Disc

CADEA

Trg M Pavlinovica 6
Split, 21000 Croatia
www.cadea.hr
Gojko Magazinovic
Tel: +385 21 490 151
Fax: +385 21 490 154
email: info@cadea.hr

Descr: Engineering services

Products: Propulsion shafting torsional vibration analysis and shafting design

Caribbean Trading Co LLC

P. O. Box 4978 Industrial Estate No. 4
Sharjah, U. A. E.
www.nautilusweb.com
Vishal Nazareth
Tel: + 9716 533 6334
Fax: + 9716 533 6553
email: caribbean@emirates.net.ae

Descr: Marine Spares, Personal Safety Products, Drydock Steps

Products: Local manufacture of Rubber Products; V/V seats, Gaskets; Vulcanizing; Mechanical Seals

Cast Iron Welding Services Ltd

Samson Road, Hermitage Industrial Estate, Coalville
Leicestershire, LE67 3FP UK
www.castronwelding.co.uk
John Downs
Tel: +44 (0)1530 811308
Fax: +44 (0)1530 835724
email: sales@castronwelding.co.uk

Descr: Speciality weld repairer of cast iron components

Products: Cast Iron Cylinder head and turbocharger casing repairs

Caterpillar Marine Power Systems

Neumuhlen 9
Hamburg, 22736 Germany
www.cat-marine.com
Tel: 1-800-321-7332
Fax: +49 40 2380-3535
email: Cat_Power@Cat.Com

Descr: Caterpillar Marine Power Systems handles sales and service activities for Cat and MaK branded marine products, providing premier power solutions and customer service from a single source for global commercial/ocean-going and pleasure craft markets.

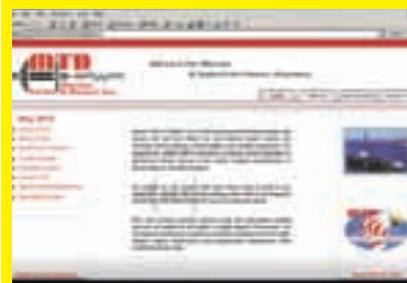
Products: Marine Propulsion Engines, Marine Generator Sets, Marine Auxiliary Engines

Climax Portable Machine Tools, Inc.

2712 E. 2nd Street
Newberg, OR 97132
www.cpmpt.com
Steve Muhr
Tel: 503-538-2185
Fax: 503-538-7600
email: info@cpmt.com

Descr: Climax Portable Machine Tools is a professional, full service provider of on-site machining solutions, offering specialized engineering consulting services, customized training programs and a comprehensive line of portable machine tools.

Products: Standard Products Include Portable Boring Machines,



Marine Turbo & Diesel Inc.

1090 7th St.
Richmond, CA 94801
Tel: 510-236-3525
Fax: 510-236-3576
Email: info@marineturbodiesel.com
www.marineturbodiesel.us

Marine Turbo & Diesel, Inc. is a full service provider that maintains and repairs two and four stroke low and medium speed marine and industrial diesel engines, turbochargers, and related equipment. Our experienced, skilled staff of mechanics is lead by service engineers or technicians factory trained by the worlds leading manufacturers of diesel engines and turbochargers. We provide on site service with work crews ready to travel to any destination required. We furnish traveling crews able to accompany a vessel from one port to another to carry out underway repairs.

Circle 49 on Reader Service Card

AutoBoreWelders, Flange Facers, Valve Repair Machines, Lathes; customized equipment solutions, and training.

CST-Cincinnati

5757 Mariemont Avenue
Cincinnati, OH 45227
www.cst-cincinnati.com
Robert Rye
Tel: 513-527-8631
Fax: 513-527-8635
email: rrye@cst-c.com

Descr: Marine Gear Manufacturer

Products: Diesel, Turbine Gear Systems. CODOG, CODAG, COGAG, CODAD

DeAngelo Marine Exhaust

3330 S.W. 2nd Avenue
Ft. Lauderdale, FL 33315
www.deangelomarine.com
Mariano Soto
Tel: 954-763-3005
Fax: 305-436-3712
email: sales@deangelomarine.com

Descr: Marine exhaust design and manufacturing

Products: Complete line of marine exhaust systems and related accessories

Deutz Corp

3883 Steve Reynolds Blvd
Norcross, GA 30093
www.deutz.com
Ragnar Radtke
Tel: 770-564-7130
Fax: 770-564-7116
email: radtke.r@deutz.com

Descr: Subsidiary of Deutz AG, Germany

Products: Marine Diesel Engines from 300 to 5,000 bhp

Duramax Marine LLC

17990 Great Lakes Parkway
Hiram, OH 44234
www.DuramaxMarine.com
Lewis Foster
Tel: 440-834-5400
Fax: 440-834-4950
email: lfoster@duramaxmarine.com

Descr: Global manufacturer of products for the recreational, commercial and military marine markets.

Products: Manufacturer of Johnson Cutless shaft bearings, shaft seal systems, DuraCooler Keel Coolers, Rubber Dock Bumper, Johnson Commercial Stuffing boxes and various impact systems.

Fuel Separation Technologies

991 Alaska Ave, E.
Port Orchard, WA 98366
Bill Burchett
Tel: 360-871-0134
email: wgbe@hotmail.com
Descr: Marine Services
Products: Fuel Water Separators

General Thermodynamics Corporation

65 Drinkwater Road
Hampton Falls, NH 03844
www.generalthermo.com
Charles Leto
Tel: 603-772-9800
email: sales@generalthermo.com

Descr: Manufactures and distributes BMEP Engine Cylinder Balancer
Products: BMEP Engine Cylinder Balancer

Giro Engineering Ltd

Talisman, Duncan Road, Park Gate
Southampton, Hants SO31 7GA UK
www.giroeng.com
Chris Galley

Tel: +44 1489 885 288

Fax: +44 1489 885 199

email: giro@giroeng.com

Descr: Fuel Injection Pipe Specialists

Products: Giro Engineering Ltd design and manufacture sheathed and unsheathed fuel injection pipes for diesel engines from 5 to 25,000 hp to SOLAS regulations.

All systems go.

HRU
The "Hydrostatic Release Unit" is an important safety feature of the release system that guards against premature release. Our engineers are certified to carry out this required service.

FIRE
Fire suppression systems vary from one manufacturer to another. Our engineers have the expertise to service all types of fire suppression systems to ensure proper emergency operation.

HOOK/DAVIT
The hook release and davit systems are very sophisticated systems. Our factory trained and certified engineers can repair and maintain these complex systems.

STRUCTURAL
Our service engineers are trained to carry out structural and osmotic repairs in accordance with FRP procedures including hull refurbishment, fire retardant paint and gelcoats.

PROPULSION
Lifeboat engines are designed to be dependable under adverse conditions. Our technicians and large parts inventory give us the ability to service any lifeboat propulsion system.

For more information call:
(360) 293-3994

TechnoFIBRE
Americas Inc.
www.technofibreamericas.com

Circle 216 on Reader Service Card

See us at
Nor-Shipping
2005 June 7-10
Stand no.:
C04-17

No. 1

in maritime equipment

Safety Equipment

- Lifeboats – totally enclosed / partially enclosed / open
- Freefall Lifeboats
- Rescue / Fast Rescue Boats
- Davits - ship and rig davits / rescue boat davits / liferaft davits
- Automatic Release Hook

Deck Equipment

- Marine Cranes • Offshore Cranes
- Anchors • Chains
- Fi-li pump sets • Fenders

Other Equipment

- Reverse Osmosis Plants
- Sewage Treatment Plants
- Accommodation Modules
- Marine Compressors
- Various Maritime / Offshore Equipment

Manufacturing and supply
Rental Installation Service

Click or call us

NORWEGIAN

maritime equipment

Member of the Stramme Group

P.O. Box 244, 5480 Husnes, Norway
Tel. +47 53 47 95 00 - Fax +47 53 47 34 99
E-mail: nme@nme.no www.nme.no

Circle 255 on Reader Service Card

Directory: Marine Propulsion Spares & Repairs

Glendinning Marine Products, Inc.

740 Century Circle
Conway, SC 29526
www.glendinningprods.com
John Glendinning
Tel: 843-399-6146
Fax: 843-399-5005
email:sales@glendinningprods.com
Descr: Manufacturer of electronic engine controls and shore power cable handling equipment

Products: CABLEMASTER, "Complete Controls" Electronic Engine Control, Hosemaster, High-Performance Control Cables

Government Liquidation

15051 N Kierland Blvd # 300
Scottsdale, AZ 85254
www.govliquidation.com
Customer Relations
Tel: 480-367-1300
Fax: 480-367-1450

email:info@govliquidation.com

Descr: Military surplus once the property of the US Armed Forces available through internet auctions.

Products: Boats & Marine Equipment such as Boats, Barges, Motors, Generators, Propellers, Buoys

Hawboldt Industries

P.O. Box 80, 220 Windsor Road
Chester, NS B0J1J0, Canada
www.hawboldt.ca

Richard MacLeod

Tel: 902-275-3591

Fax: 902-275-5014

email:richard.macleod@hawboldt.ca

Descr: Manufacturer of marine equipment

Products: propellers, shafting, bearings, packing boxes, winches, windlasses, hose/net drums, haulers, cranes

Industrial Power Systems Inc

3010 Powers Avenue

Jacksonville, FL 32207

www.ipswitchgear.com

Glenn Beaupre

Tel: 904-731-8844

Fax: 904-731-0188

email:marine@ipsjax.com

Descr: Manufacturer of quality marine switchboards and electrical controls since 1981.

Products: Marine electrical controls, switchboards, variable frequency drives, scr drives, AC & DC motors

In-Place Machining Company

3811 N. Holton Street

Milwaukee, WI 53212

www.inplace.com

Jonathan Eder

Tel: 414-562-2000

Fax: 414-562-2932

email:help@inplace.com

Descr: In-situ alignment and all types of machining to crankshafts, shaft journals, line boring of stern tubes, Metalstitch repairs to cracks

Products: In-Place Machining and Alignment,

IOP Marine A/S - Obel-P-Products

Engager 7

Brøndby, 2605 Denmark

www.obel-p.com/marine

Sune Lilbaek

Tel: +45 44 98 38 33

Fax: +45 44 98 11 25

email:marine@obel-p.com

Descr: Supplier to 2- and 4-stroke engines since 1969

Products: High Pressure Power-supply Units & Fuel Valve Test Equipment

Isotta Fraschini Motori SpA

Viale De Blasio

BARI, 70123 Italy

www.isottafraschini.it

Umberto Brandini

Tel: +39 080 5345000

Fax: +39 080 5311095

email:com@isottafraschini.it

Descr: Manufacturer Diesel Engines and Gensets

Products: High Speed Diesel Engines - Generator sets - Pumping units - Industrial - Off road and Rail application engines

ITW Philadelphia Resins

130 Commerce Drive

Montgomeryville, PA 18936

www.Chockfast.com

Stan Nelson

Tel: 215-855-8450

Fax: 215-855-4688

email:sales@itwprc.com

Descr: Manufacture of Epoxy products

Products: Chockfast, Impax coatings and Philybond repair products

Janelle Engineering, Inc.

2190 Pagoda Lane

Punta Gorda, FL 33983

www.jeipower.com

Gerard Janelle

Tel: 941-623-0444

Fax: 240-376-1463

email:jei@jeipower.com

Descr: Propulsion Testing

Products: Fuel Reduction System

Jensen Maritime Consultants, Inc.

4241 21st Ave. West, Suite 404

Seattle, WA 98199

www.jensenmaritime.com

Jonathan Parrott

Tel: 206-284-1274

Fax: 206-284-2556

email:jparrott@jensenmaritime.com

Descr: Naval Architecture/Marine Engineering

Products: Vessel Design and Engineering

Kobelco Eagle Marine, Inc.

366 Fifth Avenue, Suite 312

New York, NY 10001

www.kobelcoeagle.com

David Hawkins

Tel: 212-967-5575

Fax: 212-967-6966

email:hawkins@kobelco-eagle.com

Descr: Maker of Stern Tube Seals & Bearings

Products: Oil & Water Lubricated Shaft Seals and Bearings

Leistriz Corporation

165 Chestnut Street

Allendale, NJ 07480

Circle 270 on Reader Service Card

Circle 221 on Reader Service Card

Circle 257 on Reader Service Card

Circle 248 on Reader Service Card

www.leistritzcorp.com/pumps
 Jeffery De Vaul
 Tel: 201-934-8262
 Fax: 201-934-8266
 email:staff@leistritzcorp.com
 Descr: Screw Pump Manufacturer
 Products: Screw Pumps for lube oil, diesel oil, fuel oil, hydraulic oil & cargo applications

Lemag, Inc.

PMB 182, 250 'H' Street
 Blaine, WA 98230-4033
 www.lemag.de
 Todd Haff
 Tel: 604-980-1281
 Fax: 604-980-1341
 email:lemaginc@shaw.ca
 Descr: Distributor of Lehmann & Michels engine analysis equipment
 Products: Marine Diesel Engine

MainTech Maintenance, Inc.

2821 Harvard Avenue
 Metairie, LA 70006
 www.maintech-usa.com
 Bill Ostby
 Tel: 504-454-3609
 Fax: 504-454-3257
 email:bnotsby@maintech-usa.com
 Descr: Computerized Maintenance Management Systems
 Products: Marine Diesel Engines, Gas Turbines, Podded Propulsion, Propellers, Gears, Waterjets, Bearings, Electric Drives, Thrusters, Turbocharger

MAN B&W Diesel A/S

Tegholmmsgade 41
 Copenhagen, 2450 Denmark
 www.manbw.com
 Annelise Brincker
 Tel: +45 33 85 11 00
 Fax: +45 33 85 10 30
 email:manbw@manbw.dk
 Products: Marine Diesel Engines, Propellers, Turbocharger

MAN B&W Diesel Ltd

Bramhall Moor Lane, Hazel Grove, Stockport
 Cheshire, SK7 5AQ UK
 www.manbw.com
 Charles Foulkes
 Tel: +44 161 483 1000
 Fax: +44 161 487 1465
 email:sales@manbwtd.com
 Descr: Manufacturer of Diesel engines
 Products: Marine Diesel Engine

MAN Diesel Inc

102 N Union St
 Alexandria, VA 22308
 www.manbw.com
 Frank K McGrath
 Tel: 703-548-0053
 Fax: 703-548-4736
 email:fmcgrath@manbwus.com
 Descr: Manufactureres of high, medium, and low speed diesel engines
 Products: Marine Diesel Engines, Gear

Marine Turbo & Diesel Inc.

1090 7th St
 Richmond, CA 94801
 www.marineturbodiesel.com
 Jorgen Regstad
 Tel: 510-236-3525
 Fax: 510-236-3576
 email:info@marineturbodiesel.com

Meenu Ship Spare Parts LLC.

P.O.Box: 48747,
 DEIRA, 48747
 DUBAI, U.A.E.
 Indranathan
 Tel: +9714 2717584
 Fax: +9714 3559746
 email:paim@emirates.net.ae
 Descr: We are Suppliers of ships spares parts, main engine, diesel generators, pumps, separators, air compressors, turbochargers, fenders, container lashings, anchor and anchor chains etc., new/reconditioned/used secondhand spares.
 Products: ships spares parts, main engine, diesel generators, pumps, separators, air compressors, turbochargers, fenders, container lashings, anchor and anchor chains

Mid Atlantic Repair

175 Sportsman Ave.
 Freeport, N.Y. 11520
 midatlan@optonline.net
 Alex J. Duschere
 Tel: 516-551-6427
 Fax: 516-868-7308
 email:midatlan@optonline.net
 Descr: Marine Fabrications and Repairs
 Products: Propellers, Shafts, Bearings, Rudder

Motor-Services Hugo Stamp, Inc.

3190 SW 4th Avenue
 Fort Lauderdale, FL 33315
 www.mshs.com

Are Friesecke
 Tel: 954-763-3660
 Fax: 954-763-2872
 email:are.friesecke@mshs.com
 Descr: Motor-Services Hugo Stamp (MSHS) specializes in the overhaul, repair, maintenance and testing of diesel engines, turbochargers and filtration equipment. MSHS maintains an extensive inventory of marine diesel spare parts. We offer worldwide service.
 Products: Marine Diesel Engines, Podded Propulsion, Bearings, Thrusters, Turbocharger

NautiCAN R&D Ltd.

P.O. Box 428 115 Kelvin Grove Way
 Lions Bay, BC V0N 2E0 Canada
 www.nautican.com
 Josip Gruzling
 Tel: 604-921-1920
 Fax: 604-921-1925
 email:josip@nautican.com
 Products: High-Efficiency Nozzles, Triple Rudders, Skewed Propellers, and Hydralift Skegs

New Engalnd Pump & Valve, Inc.

36 Industrial Park Road
 Niantic, CT 06357
 www.nepv.com
 Odd A. Brevik
 Tel: 860-739-2200
 Fax: 860-739-2270
 email:nepv1@yahoo.com
 Descr: Pump & valve service, manufacturing of pump parts, builder of pump skid
 Products: Torishima pumps, pump skids, reverse osmosis pumps, complete pump repair service.

Proper Pitch LLC

19 Dixon St. Po Box 314
 Selbyville, DE 19975
 www.properpitch.com
 Scott Stewart
 Tel: 3020-436-5442/800-238-1462
 Fax: 302-436-6306
 email:scott@properpitch.com
 Descr: full service propeller sales and reconditioning facility
 Products: Propellers, shafts, cutlass bearings, couplers, rudders, struts, zincs etc.

Railko Limited

Boundary Road, Ludwater
 High Wycombe, Buckinghamshire HP10 9QU UK
 www.railko.co.uk
 Phil Cumberlandidge
 Tel: +44 (0) 1628 524901
 Fax: +44 (0) 1628 810761
 email:info@railko.co.uk
 Descr: Manufacturers of Composite Marine Bearings for oil and water lubricated propeller shafts, rudders and deck machinery.
 Products: Bearing

Ram Turbos Inc.

790 #40 Mullett Rd
 Port Canaveral, FL 32920
 Dwight a. Ramirez
 Tel: 321-868-2920
 Fax: 321-868-2921
 email:ramturbo@bellsouth.net
 Descr: Engine Spares
 Products: Turbochargers , Mahle Pistons

Rolls-Royce Marine AS, Engines

P.O.Box 924 Sentrum
 Bergen, Norway
 www.rolls-royce.com
 Tone Lundekvam
 Tel: +47 55 53 62 07
 Fax: +47 55 53 61 04
 email:tone.lundekvam@rolls-royce.com
 Descr: Manufacturer of four stroke diesel engines for diesel and heavy fuel. Main propulsion engines in the range from 1215-9000kW and generator sets from 1,000-9,000 kW. Gas engines from 2,200-8,500 kW for onshore and offshore installations.
 Products: Bergen K, B and C engines for marine and power generation market

Royston Marine Limited

Walker Riverside, Wincomblee Road,
 Newcastle Upon Tyne, NE6 3PF U.K.
 www.royston.co.uk
 Sarah Wade
 Tel: 44 (0) 191 2958000
 Fax: 44 (0) 191 2958001
 email:sarah.wade@royston.co.uk
 Descr: Repair, maintenance and installation of diesel engines, turbochargers, generators and fuel injection equipment.
 Products: Cummins, Volvo Penta, Bosch, Perkins, Woodward Diesels (Lucas Bryce), Niigata Power Systems

Savage Prop Shaft Straighteners

4855 Chaincraft Rd.
 Cleveland, Oh 44125
 www.savagepress.com
 Daniel Wolbert
 Tel: 216-587-2885
 Fax: 216-587-0613
 email:sales@savagypress.com

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 Website: www.inplace.com

Circle 236 on Reader Service Card



Good-looking boat?

Don Sutherland
 Photographing boats
 and maritime activities.
 Anywhere.
 ssuthe7880@aol.com

Visit the galleries:
www.don-sutherland.com

Circle 223 on Reader Service Card

Directory: Marine Propulsion Spares & Repairs

Descr: Hydraulic Straightening Press Mfr.
Products: Shaft

Scardana Americas Brokerage

123 Churchill St
Greenfield Park, Quebec
J4V 2M1 Canada
www.scardana.com
Philip Rink
Tel: 450-465-2480
Fax: 450-671-3898
email:service@scardana.com

Simplex Americas LLC

79 Old Clinton Road
Flemington, NJ 08822
www.simplexamericas.com
Donald W. Vogler
Tel: 908-237-9099
Fax: 908-237-9503
email:info@simplexamericas.com
Descr: Exclusive Simplex Sales and Service
Products: Simplex Stern Tube Seals, Bearings, Oily Water Separators

Simplex-Turbulo Company Limited

Wherwell Priory, Wherwell
Andover, Hampshire, SP11 7JH UK
www.simplexturbulo.com
Jonathan Parr, General Manager
Tel: +44 (0)1264 860186
Fax: +44 (0) 1264 860180
email:spares@simplexturbulo.com
Descr: Supplier of marine and diesel components
Products: sterntube seals, oily-water separators, stabilizers, fuel injection equipment, bearings, valves, cylinder liners, piston rings, reconditioning, turbocharger spares

Superior Energies, Inc.

P.O. Drawer 386
Groves TX 77619
www.insulationsei.com
Sean Scott
Tel: 409-962-8549
Fax: 409-962-4027
email:sei@insulationsei.com

The Falk Corporation

3001 West Canal Street
Milwaukee, WI 53108
www.falkcorp.com
Timothy Vail
Tel: 414-937-4592
Fax: 414-937-4143
email:tvail@falkcorp.com
Descr: Producer of Power Transmission Equipment
Products: Marine Reduction Gear Drives, Spares, and Bearings

The Hilliard Corporation

100 West 4th St
Elmira, NY 14902
www.hilliardcorp.com
Rob Doud
Tel: 607-733-7121
Fax: 607-735-0836
email:hilliard@hilliardcorp.com
Products: Couplers, Brakes, Clutches

Thordon Bearings Inc.

3225 Mainway
Burlington, ON L7M 1A6 Canada
www.thordonbearings.com
Craig Carter
tel: 905-335-1440
fax: 905-335-4033
email:info@thordonbearings.com
Descr: Manufacture oil free prop shaft and grease free rudder bearings
Products: Bearing

Thrustmaster of Texas, Inc.

12227 FM-529
Houston, TX 77041
www.thrustmastertexas.com
Bert Ault
Tel: 713/937-6295
Fax: 713/937-7962
email:Bert@ThrustmasterTexas.com
Descr: Manufacturer of Thrusters
Products: Podded Propulsion, Thruster

Toyo Marine & Industrial (S) Ltd.

Block: 3005, Ubi Ave. 3, #03-86
Singapore, 408861 Singapore

www.toyomarine.com
Francis Kua
Tel: +65-67481588
Fax: +65-67489711
email:toyomarine.ind@pacific.net.sg
Descr: Supplier of marine diesel engine spare parts
Products: Yanmar, Daihatsu, Akasaka, Hanshin, Niigata, Matsubara engines

Ultra Dynamics Marine, LLC

1110A Claycraft Road,
Columbus, Ohio 43230
www.ultradynamics.com
Jim Campbell
Tel: 614-759-9000
Fax: 614-759-9046
email:sales@ultradynamics.com
Descr: UltraJet waterjet propulsion systems spares
Products: UltraJets, waterjet propulsion systems, jet drives, marine controls, joystick controls, marine hydraulics.

Voith Turbo Inc.

25 Winship Road
York, PA 17402
www.voith.com
Lee Erdman
Tel: 717-767-3225
Fax: 717-767-3210
email:lee.erdman@voith.com
Descr: Marine drive systems supplier
Products: Voith Schneider Propeller / Voith Turbo Coupling / Hycon / Safeset / Highly Flexible Couplings

W.K.M. Cornelisse Trading B.V.

P.O. Box 146
Gorinchem, 4200 AC
The Netherlands
www.wkmcornelisse.com
Willem Cornelisse
Tel: +31-345-517122
Fax: +31-345-684230
email:info@wkmcornelisse.com
Descr: Marine wholesales company
Products: diesel engine spare parts, aux. equipment, battery nav lights

Wärtsilä Corporation

P.O.Box 196
Helsinki, 00531 Finland
www.wartsila.com
customerservice.marine@wartsila.com
Tel: +358 10 709 0000
Fax: +358 10 709 5700
email:customerservice.marine@wartsila.com
Descr: Wärtsilä is The Ship Power Supplier for builders, owners and operators of vessels and offshore installations. We are the only company with a global service network to take complete care of customers' ship machinery at every lifecycle stage.
Products: Marine Diesel Engines, Propellers, Gears, Shafts, Waterjets, Bearings, Thrusters, Rudders, Turbocharger

Wartsila Lips Inc

3617 Koppens Way
Chesapeake, VA 23322
www.wartsila.com
Karl Russell
Tel: 757 966 5427; Fax: 757 558 3627
email:karl.russell@wartsila.com
Descr: Marine Propulsion solution systems - Defense
Products: Marine Diesel Engines, Podded Propulsion, Propellers, Gears, Shafts, Waterjets, Bearings, Thrusters, Rudder

Yard Engineering

11 / 4 Tower Court, Noble Park
Melbourne, Vic 3174 Australia
www.yardeng.com
Golam Chowdhury
Tel: +61 3 9701 5433; Fax: +61 3 9701 8051
email:sales@yardeng.com
Descr: Distributors for Propellers
Products: Autoprop, Varifold folding propellers

ZF Marine, LLC

3131 SW 42nd Street
Fort Lauderdale, FL 33312
www.zf-marine.com
Joe Hudspeth
Tel: 954-581-4040; Fax: 954-581-4078
email:info.zfmarine@flauderdale.zf.com
Descr: Marine Propulsion Systems
Products: Transmissions, Propellers, Controls, Shaft Brakes

Portable Diesel Pumps In Stock, Ready to Ship!



Trash Pump



Fire Pump



Diaphragm Pump



Pump Accessories

The Next Generation In Power & Pumps

(800) 709-0671
info@gppmb.com

CALL FOR A QUOTE TODAY!



ask about 6-100 kVA generators

For Specs visit www.gppmb.com

Headquarters
(908) 964-0700

2365 Route 22
Union, NJ 07083

Circle 245 on Reader Service Card

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: www@alliedship.com Website: www.alliedship.com

Circle 203 on Reader Service Card

SKOOKUM® BLOCKS & RIGGING



SHACKLES — "GOLD STANDARD", forged from the finest alloy steel. Available all styles. Safety pin available in capacities up to 210 ton.

FAIRLEADS — Timken bearing equipped. Deck and flange mounted. 4" through 48" sheave diameters. Roller fairleads also available.

BLOCKS — All bearing types available. 4" through 36" models, capacities 5 ton through 75 ton for single sheave styles. Capacities up to 500 ton in multiple sheave models.

SHEAVES — Choice of manganese or cast steel, all types of bearings.

Stock or Custom Engineered

Proved dependable throughout the world — in the roughest, toughest applications

Call for FREE Catalog: 1-800-547-8211 • www.skookumco.com

Circle 266 on Reader Service Card

www.marinesigns.com

Marine & Offshore Signage Experts

Moving forward with Maritime Associates' new expanded technology and capabilities will supply ALL your signage needs, including complete shipboard conversion projects and sign upgrading services.

What can we do for you?

Call us today or visit our website to order online.

Ask for your FREE CD Product Guide



Maritime Associates, Inc.
P.O. Box 1788, Crystal Bay, NV 89402 USA
775-832-2422 • Fax: 775-832-2424
E-mail: maritimeas@charter.net

Circle 249 on Reader Service Card



General Ship Repair
Steel Work
Piping and Valve Overhaul
Welding Of All Types, ABS Certified
Electrical
Mechanical Services
Voyage Repairs

Military Ocean Terminal Bayonne
Unit # 8 - Foot of 32nd Street
Bayonne, New Jersey 07002
Tel: 201.858.8552/3 Fax: 201.858.8509

Circle 256 on Reader Service Card

Detroit Diesel Offers New Maintenance Brochure

Detroit Diesel recently published a Performance Products Maintenance Solutions brochure for its complete line of Detroit Diesel, MBE and MTU engines. There are no specs to check or manuals to reference, as these are the chemicals and parts that are designed for your engine.

The 12-page, four-color brochure features: Oil, oil filters and oil analysis kits; Fuel filters; Coolants, coolant analysis kits and SCA's; Filters and elements; Starters and alternators; Engine brakes; Cold weather starting aids; Appearance packages; Air compressors; Charge air coolers; Adhesives, sealants and more

Detroit Diesel maintenance products are engineered specifically for Detroit Diesel, MBE and MTU engines to maximize performance.

Circle 24 on Reader Service Card

GE Delivers for DD(X) Test Site



GE Transportation's marine gas turbine business delivered its LM500 aeroderivative Auxiliary Turbine-Generator Set (ATGS) for installation at the U.S. Navy's DD(X) next-generation destroyer land-based test facility in Philadelphia. This marks the first use of GE's LM500 genset for an electric drive application.

The ATGS was selected to be a part of the DD(X)'s Integrated Power System Engineering Development Model land based test program being conducted by Northrop Grumman and the U.S. Navy. Northrop Grumman Ship Systems in Pascagoula, Miss., is the DD(X) prime contractor and design agent.

The LM500 generator set produces about 3.8 MW of electrical power at 100 degrees f ambient temperature. "Development of the LM500 auxiliary turbine generator set for the DD(X) program was truly a collaboration between several GE Centers of Excellence - GE Transportation in Evendale, Ohio and Lynn, Mass. and GE Energy in Houston, Texas," said **Jeff Martin**, director of U.S. government programs for GE Transportation's marine gas turbine

GE Gets GL Certification

GE Transportation's marine business received certification from Germanischer Lloyd (GL) for its 8, 12 and 16 cylinder, medium-speed diesel engines. "By obtaining the prestigious Germanischer Lloyd certification, we continue to reinforce GE's commitment to offering customers low life cycle cost diesel engines that can operate on inland waterways virtually anywhere in the world," said **John Manison**, manager of GE Transportation's marine and stationary power business. "GE diesel engines also hold other certifications including the Central Commission for Navigation of the Rhine, MAPROL and EPA Tier 1. In addition, our engines are currently EPA Tier 2-capable," Manison added.

The GE 7FDM engine models are avail-

able in 8, 12 and 16 cylinder configurations, for power ranges from 1,403 bhp/1,004 kW to 4,500 bhp/3,355 kW. These four-stroke, turbo-charged and after-cooled medium-speed diesels are designed for the most demanding applications.

Circle 25 on Reader Service Card



business. "We tapped into GE's outstanding resources to ensure the latest systems engineering and manufacturing technologies were applied for this project."

Circle 26 on Reader Service Card

AMOT signs agreement with MAN B&W

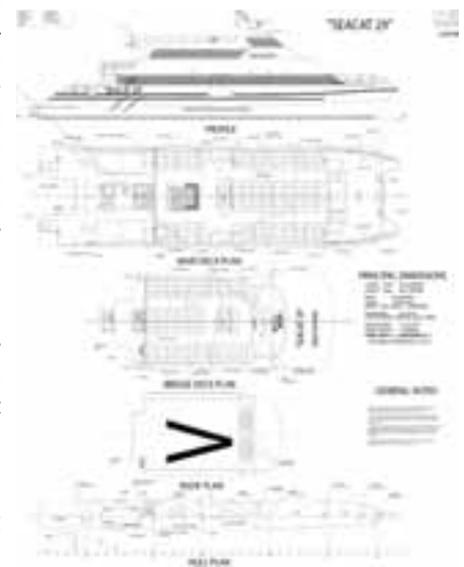
The AMOT XTS-W Bearing Condition Monitoring System has been added to the Extent of Delivery list for all MAN B&W two-stroke engines under a new cooperative agreement between the two companies.

Now an approved option for all new two-stroke engines built by MAN B&W and its licensees around the world, the XTS-W system is the only product to be so listed for detecting bearing wear. The agreement also contracts MAN B&W to provide technical support to AMOT who is allowed to market the product for installation in new engines.

Circle 27 on Reader Service Card

Vietnam to China Fast Ferry Link

North Vietnam's Halong Bay, about 170 km north of Hanoi, is famously beautiful as represented in art forms from ancient poetry to modern movies. The most common popular image is of a small boat drifting lazily through an azure sea amidst towering jade-forested limestone islets. With the launching of a high speed ferry service between Halong Bay and Feng Cheng (Fangchenggang) in China a very new maritime dimension will be introduced to the waters of the area. The new catamaran vessel is under construction at the Tambac Shipyard in Haiphong, Vietnam to a design by SeaSpeed of Australia and Paul Birgan with joint marketing by **John Lim** of Naval-Consult of Singapore. Designated the SeaCat29, the boat is 98.4 x 27.8 ft. (30 x 8.5-m), overall, with a 9.2 ft. (2.8-m) molded depth. The owner is the Vietnam Shipbuilding Corporation. Propulsion will be provided by a pair of Cummins KTA50M2 main engines each generating 1875 hp (1399 kW) at 1950 rpm. The engines will turn in ZF gears with 1.833:1 reductions and coupled to model HM651 Hamilton jets. Electrical power will be provided by two 68.5 generator sets. Deck equipment is supplied by Hypac of Australia. Operating with a crew of eight the boat will carry up to 211 passengers. Circle 20 on Reader Service Card



Tron S-VDR CAPSULE for Simplified Voyage Data Recorder



Visit our stand
No. C01/28i
at Nor-Shipping

The float away solution with added safety

- FRM / FINAL RECORDING MEDIUM
- EPIRB w/GPS RECEIVER
- EASY RETRIEVABLE
- VISUAL IDENTIFICATION
- 7 DAYS DISTRESS TRANSMISSION
- WELL PROVEN DESIGN
- EASY INSTALLATION
- EASY INTEGRATION



JOTRON Electronics a.s P.O.Box 54, N-3280 Tjodalynng, Norway
Tel: +47 33 13 97 00 Fax: +47 33 12 67 80 E-mail: sales@jotron.com www.jotron.com

Circle 242 on Reader Service Card

SNAME

MARITIME TECHNOLOGY CONFERENCE & EXPO & SHIP PRODUCTION SYMPOSIUM

October 19-21, 2005

Houston, Texas

2005



Topics Include

- Energy Transportation
- Hydrodynamics
- Offshore Structures
- Operations
- Propulsion
- Ship Design & Technology
- Ship Production
- Ship Structure
- Small Craft
- Technical & Research Presentations



Over 50 technical papers and presentations on all applications of maritime offshore technology.

Attend the popular Ship Production Symposium.

Exchange ideas and network with leading maritime professionals.

Visit over 200 booths at the Expo, serving the shipbuilding, design, technology and production sectors of the industry.



Who should attend

- Admiralty Lawyers
- Industry Regulators
- Managers/Directors of Engineering & Technology
- Marine Engineers & Scientists
- Maritime Professionals
- Naval Architects
- Naval Engineers
- Ocean Engineers
- Offshore Industry Professionals
- Oil Company Executives
- Shipbuilders/Boatbuilders
- Shipowners/Operators
- Students



**Visit www.sname.org
for more information**

Interested in booth space?



SMTC&E

SNAME Maritime Technology Conference & Expo and Ship Production Symposium



Contact Rob Howard at Maritime Reporter at (561)732-4368 or howard@marinelink.com

RINA: Moving Toward Zero Emission Engines

Italian classification society RINA has type-approved a device which is described as a significant step towards the "almost zero emission engine" for passenger and cruise ships. The system, known as Turbo-transducer, was developed by Italy's Mec System and applies micro-emulsion technology to marine diesel engines to deliver significant reductions in smoke visibility and NOx emission without increase in fuel consumption.

"We focused on our target to provide the basis for an "almost zero emission" cruise ship or ferry more than three years ago," said RINA's Corporate Affairs & Communication Manager Mario Dogliani.

The micro-emulsion technology approved by RINA produces a micro-emulsified fuel, using HFO and demineralized water to feed the diesel engines. The fuel is composed of homogeneous micro cells with a diameter of between 0.10 and 0.50 microns formed of water enclosed in a film of organic liquid fuel.

"One of the problems in obtaining a micro-emulsified fuel is to make it stable," said Ernesto Marelli, Mec System's CEO and owner. "This type of technique has been in use since 1980 in power plants ashore but has never yet been maritized reliably. We now believe Mec System has overcome all the technical problems, and we have proven that it works and provides benefits working with the four-stroke engines typically used on board passenger ships." In this new system a special device, the Turbo-transducer, processes combustion fluids through inverted flow coaxial cavitation chambers activated by magneto-mechanic structures designed to specific mechanical criteria. Fuels, waste or even sludge compounds and water are combined to build a single fuel.

Fluids flowing through the Turbo-transducer are instantaneously combined and reach the engine as a stable and very homogeneous micro-emulsion due to the very high atomization and fluid acceleration achieved in the Turbo-transducer.

Tests on board ships as well as at the work bench ashore (totaling some 500 running hours) have been carried out by Mec System, RINA, Wärtsilä and other partners within a pan-European R&D project aimed at identifying technologies and reference standards for low-emission passenger ships.

The atomized-stabilized micro-emulsion technology, together with some adjustments in certain components of

the engines to best exploit it, proved to be straightforward in terms of retrofitting, and very efficient. Based on this, RINA developed a certification scheme specifically geared to existing ships (although applicable to newbuildings as well) named IET "Innovative Environmental Technologies".

"The concept is very simple", explains Dogliani. "The standard envisages three elements for improved environmental performance:

- a target reduction in emissions
 - the procedures and skills to achieve it, and
 - the periodic monitoring and maintenance to keep it over a period of time.
- Once retrofitted, the engine's emissions reduction target should be achieved, without increasing CO2 emissions, and IET certification achieved.

Circle 54 on Reader Service Card

Bio-Gem's Safe Lube

Safe Lube is a line of high performance vegetable oil based lubricants for those seeking alternatives to petroleum based products. Safe Lube features a line of products that are non-toxic, biodegradable and do not use synthetics or petroleum source chemicals. Available in different viscosities, the performance additive package is mixed with either de-gummed soy or canola oil for the base oils with zero hydrocarbon additives. Safe Lube products are designed to increase seal life and resilience, and have a longer fluid life with improved tool performance. Safe

Fuel Savings with Improved Hull Form

Deltamarin, well known for delivering high-performance hull designs for the ferry and cruise ship market, offers its most recent invention: the interceptor configuration. Interceptor is a plate, a simple solution, which can be designed and installed easily even to existing ships. It is an immersed plate under the transom which is faired into the hull forward, normally for a rather short distance.

As a simple construction piece it is relatively easy to manufacture and the weight is only a few tons. The payback time becomes short.

The optimum design for the fairing for the first test cases was carried out and verified with Rans-type CFD code by Safety at Sea in Glasgow.

The model tests at Marin in

Wageningen for a passenger cruise vessel showed an improvement of up to 10% in propulsion power. The reference level was reached with a ducktail and the interceptor was installed under the ducktail. The performance level with the reference hull shape without interceptor was already considered good in comparison to present industry standard.

Other areas of potential fuel savings include all recesses, fin stabilizers, sea chests, bow thruster tunnels, surface roughness of hull and painting systems.

Savings of 10-18 percent have been reached with the best combinations of bulbous bow, ducktail, interceptor/trim wedge and optimized recesses.

Circle 98 on Reader Service Card

Lube Gear Lube combines the advantages of a blended vegetable oil base with a extreme pressure performance package compounded from botanical sources.

Circle 97 on Reader Service Card

New Cylinder Lubricant for Low-Sulfur Fuels

Total Lubmarine developed a new lubricant designed for use with low-sulfur fuels. Talusia LS 40, has completed in-service tests and is approved by MAN B&W and Wärtsilä Sulzer

designs. Talusia LS 40 is designed for engines operating continuously with low-sulfur fuel.

Total Lubmarine updated and improved its DIAGOMAR Plus marine lubricants analysis service by adding a new lubricants test and by making the reports faster to use and easier to understand. The main improvements are the addition of the PQ index, the inclusion of a simple visual interface that indicates where action needs to be taken, and access to all historical ship analysis results.

Circle 96 on Reader Service Card



THE CANADIAN INSTITUTE OF MARINE ENGINEERING
EXTENDS A CORDIAL INVITATION TO ALL OF
OUR AMERICAN NEIGHBOURS
WITH MARITIME INTERESTS TO VISIT US IN CANADA'S CAPITAL
FOR OUR THREE DAY ANNUAL TECHNICAL CONFERENCE

MARI-TECH 2005

June 1 to 3, 2005 • Crowne Plaza Hotel, Ottawa, Ontario

- MARINE SUPPLIERS' SHOW - EQUIPMENT AND SERVICES EXHIBITORS
 - AN OUTSTANDING PROGRAM OF TECHNICAL PAPERS
 - THEME FOCUSED ON MARITIME SECURITY AND LOGISTICS
 - ACTION PACKED "PARTNERS' PROGRAM" IN AND AROUND THE CAPITAL
- MEET THE LEADERS OF CANADA'S MARITIME FORCES AND POLICY MAKERS

To register for the Conference call Al Kennedy (Mari-Tech 2005 Registrar) at (613) 521-8713
or Fax (613) 521-8100. For Hotel reservations call the Crowne Plaza at (613) 237-3600.

FULL DETAILS OF THE CONFERENCE PROGRAM AND ASSOCIATED ACTIVITIES
CAN BE OBTAINED BY VISITING THE MARI-TECH 2005 WEB SITE AT
<http://www.maritech.ca>

Circle 278 on Reader Service Card

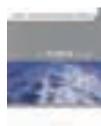
Products



ARL

For shipyards and designers who want to achieve new levels of efficiency, ShipConstructor is the 3D Product Modeling and Product Data Management (PDM) system that scales from a one-man shop to the largest operation. ShipConstructor is easy to use and maintains the high level of flexibility.

Circle 101



Caterpillar

From propulsion engines to drive line and electronic control systems, from auxiliary power units to generator sets, Cat Marine offers a complete line of systems. ACERT Technology is the product of \$500M investment structured on broadest product, application and manufacturing base in the industry.

Circle 102



Cole Hersee

Cole Hersee introduces its Recessed Toggle Switch for marine applications. It is comprised of a standard toggle switch centered at the bottom of a plated steel bowl measuring .892 in. deep. This new design prevents accidental actuation of the switch by passengers.

Circle 103



Mark van Schaick

Grinds up to 12000 mm length with its crankshaftgrinder! Read more soon in this magazine about their new workshop and our worldwide activities. Mark van Schaick : taking good care of your crankshafts. Also specialized in repair of connectin-grods with serrated caps and line-boring of engineblocks.

Circle 104



Northern Lights

New York Water Taxi implements Northern Light's M33C Commercial Diesel Generators. With each M33C, there is a naturally aspirated four-cylinder Luger diesel engine that provides the torque and efficiency commercial operators require.

Circle 105



Mack Boring

Mack Boring & Parts Company has established a Commercial Marine Sales Division. The new division will distribute large-bore commercial marine engines from Mitsubishi, servicing Maine to North Carolina. Mack Boring will carry and service Mitsubishi engines ranging from 400 hp to 2,000 hp.

Circle 106



Midwest

Mid-West Instrument introduces its new Model 123 Differential Pressure Gauge. This new gauge uses the same sensing and output method as the Model 120. Like the Model 120, the Model 123 is available in aluminum or 316/316L stainless steel bodies, 316 S.S. springs and internal parts, and a wide variety of elastomers.

Circle 107



Desmond Stephan

The performance of the Swirl-Off tool is dependent on the power it receives from your disc sander, grinder, polisher, or drill motor. The higher the RPM the faster the material will be removed. The tool will give its performance when a disc sander with speeds from 1500 to 4000 rpm are used.

Circle 108



Peck & Hale

Peck & Hale is a designer and manufacturer of cargo securing systems for the Defense and Transportation industries. Peck & Hale offers a comprehensive service for the design, supply, refurbishment and replacement of equipment for all types of cargo securing systems.

Circle 109



Redwise

Redwise Maritime Services of Baarn, the Netherlands, provides a top quality take-over, sail-over, hand-over service for virtually every type of vessel, wherever you need it picked up or delivered. In addition to ship delivery, Redwise is also active as a specialist recruitment agency for mariners operating.

Circle 110



Seapost

H.O. Bostrom's engineers have an understanding of ergonomics and carefully study a seat's function, shape and positioning. The SeaPost series seats are "marinized" to withstand their environment. They use non-corrosive hardware and a two-coat metal finish, which includes a phosphate base coat.

Circle 111



Seacor

Seacor Environmental Products provides oil spill containment and cleanup equipment, marine security and force protection/security barriers, consumable supplies and ancillary equipment for oil & hazardous materials spills. The products team supports international and domestic clients.

Circle 112



Smith Hamm

Throughout their fabrication and welding facilities, their machine shop and supply division, Smith Hamm is experienced in all phases of petroleum, chemical, plant, marine and offshore work.

Circle 113



Totem

Totem Plus is introducing its new DNV certified Personal Computer- Totem PC TPC 1.2. Totem PC is a PC compatible computer system designed to be used in maritime environment. The computer is based on Intel computer technology and incorporate Intel 856G chipset.

Circle 114



Van der Velden

Van der Velden Marine Systems has announced the introduction of a new and highly innovative EPS. Using a pioneering construction and the very latest materials, the EPS thruster offers major benefits to shipowners and naval architects in terms of performance, noise, weight and robustness.

Circle 115



Enmet

Enmet's Spectrum SP with internal pump and a uniquely designed sample head was developed to meet these demanding requirements. Spectrum SP features a backlit digital display, dual-level alarms and a rechargeable battery.

Circle 116



DieselCraft

Dieselcraft Fluid Engineering of Auburn, Ca. has developed a new Two Stage Diesel Fuel Purification System. Stage one is a high-speed centrifuge separator that removes 99.9% of water and 95% of solid contaminants in diesel fuel. Stage two will address degradation, oxidation and repolymerization in fuel.

Circle 117



VingCard

VingCard Marine's North American and Caribbean Service Centre is situated in Dania, Florida. The Dania office stocks a complete range of TrioVing and VingCard traditional products. Contact our Sales Manager at: marinesales.usa@vingcard.com for further information.

Circle 118



Omnithruster

For 25 years, Omnithruster has been a company in the development of (waterjet) maneuvering systems. Omnithruster's unique patented designs, which provide diverse maneuverability and auxiliary propulsion, have been the installation choice on vessels worldwide.

Circle 119



Mastervolt

Mastervolt has introduced the new Whisper 8 and 10 kVA generator sets which bridge the gap between the popular 6 kVA and the 12 kVA Ultra. The newly developed sound shields make the generators run quietly. The advanced DDC system, the Digital Diesel Control, are delivered as standard with the generator sets.

Circle 120



SDT

The Sherlog TA, as required by the IACS Unified Rule Z.17, and Russian Register, has been formally Type Approved by Lloyd's Register, ABS, DNV and Hellenic Register. It offers a software routine, dedicated to hatch cover ultrasonic tightness testing to memorize, log and download to PC all measured survey data.

Circle 121



Kroy

Kroy has introduced the new K4100 desktop label printer which features auto sizing, quick response and fast print speeds, scaleable and downloadable fonts, enhanced memory and a print resolution of 300 dpi. The K4100 can be connected to a PC for customized label, wire wrap and shrink tube applications.

Circle 122



Graco

Graco has introduced a data recording kit designed to record critical application information on its Reactor proportioning system. The kit records the volume of material sprayed, target and actual A and B pressures, primary temperatures of the A and B components as well as hose temperature.

Circle 123



Ecom

The ecom i.roc x 10-Ex is a compact, industrial PDA based on a Pocket PC. It features three modes of communication-integrated WLAN 802.11b, Bluetooth and IrDA infrared port. Three different versions of the i.roc x 10-Ex meet the diverse needs and requirements of industry for ex-areas or unclassified areas.

Circle 124



Konrad

The Konrad 520 Stern Drive is designed and engineered for people that play hard and work hard. Whether you want to relax and cruise all day or if your living depends on your stern drive, the 520 is for people who need Durability, Dependability and Performance.

Circle 125

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 Nicole Sullivan at sullivan@marinelink.com

AIR CONDITIONING & REFRIGERATION

Adrick Marine Corp., P.O. Box 1549 , N.Massapequa, NY 11758, 631-491-9475, 631-491-9478, adrick1976@aol.com

Bailey Refrigeration, 4986-1 Euclid Road, Virginia Beach, VA 23462
Cospolich Refrigeration, 14695 Highway 61, Norco, LA 70079
Stork Bronsverk Inc., 3755 C Boul. Matte, Brossard, Quebec J4Y 2P4, Canada

AIRHORNS/SIGNALING EQUIPMENT

Airchime Manufacturing Co., 5478 267th St., Gloucester Industrial Estate., Langley, BC V4W 3S8, Canada
Kahlenberg Brothers Co., P.O. Box 358, Two Rivers, WI 54241

ALARMS, FACTORY-MUTUAL APPROVED
NREC Power Systems, 5222 Hwy 311, Houma, LA 70360

ALUMINUM BOATS

Island Boats, 6806 Highway 90 East, New Iberia, LA 70560
Metal Craft Marine Inc., 347 Wellington St., Kingston, Ontario K7K 6N7, Canada

Sea Ark Marine, P.O. Box 210, Monticello, AR 71655-0210

William E. Munson Co., 18130 Sunset Way, Edmonds, WA 98026

ANCHORS & CHAINS

GJ Wortelboer Jr. B.V., P.O. Box 5003 , 3008 AA Rotterdam, Netherlands

ANTIFOULING

Hempel Coatings , 600 Conroe Park N. Dr, Conroe, TX 77303

ATTORNEYS

Gordon & Elias LP, 5821 SW Freeway Suite 422, Houston, TX 77057

AUCTIONEERS

Henderson Auctions, 13340 Florida Blvd., Livingston, LA 70754
Tranzon Veneubid, 908 Town and Country Blvd. Suite 120, Houston, TX 77024

AUTOPILOT SYSTEMS

ComNav Marine Ltd., 13511 Crestwood Pl., Ste 15 15, Richmond, BC V6V 2G1, Canada
Mackay Communications, 2721 Discovery Dr., Raleigh, NC 27616-1851

BALLAST

Ballast Technologies, 4620 S. Coach Dr., Tuscan , AZ 85714
Redlan Genstar Inc., Executive Plaza IV, Hunt Valley, MD 10912-1031

BEARING- RUBBER, METALLIC, NON-METALLIC

Cooper Bearing, 5795 Thurston Ave., Virginia Beach, VA 23455
Craft Bearing, 5000 Chestnut Ave., Newport News, VA 23605
Duramax Marine LLC, 17990 Great Lakes Parkway, Hiram, OH 44234, 440-834-5400, 440-834-4950, Contact: Richard Spangler

BILGE SYSTEMS

Coffin World Water Systems, 326 S. Dean Street, Englewood, NJ 07631

BOATBUILDER

Gladding Hearn, 1 Riverside Ave., Somerset , MA 02725
Kvichak Marine, 469 NW Bowdoin Place, Seattle, WA 98107
Sea Ark Marine, P.O. Box 210, Monticello, AR 71655-0210
Washburn Doughty, P.O. Box 296, E. Boothbay, ME 04544
Willard Marine Inc., 1250 N. Grove St., Anaheim, CA 92806

BOLLARDS

Maritime International, Inc., 204 Ida Rd., Brossard, LA 70518

BRIDGE SUNSCREENS

Martek Marine Blinds, Unit 46, Century Business Centre, Maversway, Rotherham, South Yorkshire S63 5DA, UK

BROKERS

Merrill Marine Services, Inc., 7909 Big Bend Blvd, Webster Groves, MO 63119, 800.394.6674, 800.230.5377 , pete@merrillmarine.com, Contact: Peter C. Merrill , www.merrillmarine.com

BULKHEAD SEALS/PANELS

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

Thermax, 3115 Range Rd, Temple, TX 76501

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
Cadmatic , Ostra Strandgatan 72 (Vita Huset), FI-20810 Turku, Finland
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
Superior Lidgerwood Mundy, 1101 John Ave., Superior , WI 54880

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

CARGO MONITORING & CONTROL SYSTEM

Hermatic Inc., 4522 Center St., Deerpark, TX 77536

CARGO SECURING SYSTEM

Peck and Hale, 180 Division Street, W.Sayville, NY 11796

CAST IRON REPAIR

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

CHAINS

G.J. Wortelboer, Postbus 5003, 3008 AA Rotterdam, Netherlands

CLASSIFICATION SOCIETY

American Bureau of Shipping, 16855 N. Chase Drive, Houston, TX 77060

Lloyds Register Americas, Inc., 1401 Enclave Pkwy., Ste.200, Houston, TX 77077

CLOSED CIRCUIT TELEVISION

Hernis Scan Systems A/S, Postboks 619, NO_4809 Arendal, Norway

CNC PLATE CUTTING

Advanced Fabricating Inc, PO Box 3721, Galveston, TX 77552

COATINGS/ CORROSION CONTROL/PAINT

Chugoku Marine Paints, P.O. Box 73 , 4793 , Netherlands
Ferro Corp., 1301 North Flora St., Plymouth, IN 46563
Flow International Corp., 23500 64th Ave., South Kent, WA 98059
Mascoat Products, 4310 Campbell Rd, Houston, TX 77041
Mr.Longarm, Inc., P.O.BOX 377, Greenwood, MO 64034-0377

NAPASCO, INC., 213 Main Project Road, Shriever, LA 70395, 985-449-0730, 985-449-0740, napasco@napasco.com, Contact: Pam Bartell, www.napasco.com

Sherwin Williams, 101 Prospect Ave., Cleveland, OH 44115
Sigma USA, P.O. Box 816, Harvey, LA 70059
Soken Trade Corp./Noxudol, 15934 S. Figueroa Street, Gardena, CA 90248

COMMUNICATIONS

Inmarsat Ltd, 99 City Rd., London EUY 1AX, UK
L-3 Communications, 6000 Fruitville Road, Sarasota, FL 34232
Mackay Communications, 2721 Discovery Dr., Raleigh, NC 27616-1851
World-Link Communications, 74 Main St., Framingham, MA 01701

COMPOSITE SHAFTS

American Vulkan, 2525 Dundee Rd, Winter Haven, FL 33884

COMPUTER/ COMPUTER SOFTWARE

Creative Systems Inc., P.O. Box 1910, Port Townsend, WA 98368

ShipConstructor, 304-3960 Quadra Street, Victoria, BC V8X 4A3, Canada
Spec Tec , Professor Koth's Yvee, 1366 Lysaker, Norway

CONSOLE- GMDSS

Mackay Communications, 2721 Discovery Dr., Raleigh, NC 27616-1851

CONSULTANTS

Captain R.J. Underhill & Associates, P.O. Box 1030, Groves, TX 77619
Elliot Bay Design Group, 5301 Shishole Ave. NW, Ste. 200, Seattle, WA 98107
Hornblower Marine Services, P.O. Box 112476, Campbell, CA 95011-2476

CONTROL SYSTEM-MONITORING/STEERING

Alma Impex, Inc., 4000 Brodertown Ave., Suite 15, Sayreville, NJ 08872

Amot Controls, 8640 N. Eldridge Parkway, Houston, TX 77041
Electronic Marine Systems, 800 Ferndale Pl., Rahway, NJ 07065
Electrowave U.S.A., 6125 W. Sam Houston Pkwy., Ste 406, Houston, TX 77041

G.R. Bowler, 2261 Lake Rd., Ontario, NY 14519
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

MMC International, 60 Inip Dr, Inwood, NY 11096
Prime Mover Controls, 3600 Gilmore Way, Burnaby, BC V5G 4R8, Canada
Totem Plus Ltd, P.O. Box 164 , Herzliya 46100, Israel

CORROSION CONTROL

Apex Engineering Products, 1241 Shoreline Dr., Aurora, IL 60504
Furuno USA Inc., 4400 NW Pacific Rim Blvd, Camas, WA 98607

Ultra Strip, 3515 SE Lionel Terrace , Stuart, FL 34996

COUPLERS- TUQ & BARGE

Intercontinental Engineering , PO Box 9055 , Kansas City, MO 64168

COUPLINGS

American Vulkan, 2525 Dundee Rd, Winter Haven, FL 33884
Centa Corp., 815 Black Hawk Drive, Westmont, IL 60559
Mapeco Products, 91 Willenbrock Rd., Unit B, Oxford, CT 06478

MMC International, 60 Inip Dr, Inwood, NY 11096

CRANE - HOIST - DERRICK - WHIRLEYS

DMW Marine, LLC, 1123 Street Matthews Road, Chester Springs, PA 19425
E. Crane, 241 Executive Dr., #3, Marion, OH 43302

CRANE TESTING

Imes Inc., 5139 Brook Street Suite E, Mont Claire, CA

CRANKSHAFT REPAIR

In-Place Machining, 3811 N. Holton St., Milwaukee, WI 53212
Walz & Krezner, 91 Willenbrock Rd., Oxford, CT 06478

CUTTING & WELDING MACHINES

Bug-O-Systems, 3001 W. Carson St., Pittsburgh, PA 15204
ESAB Cutting Systems, 411 South Ebenezer Road, Florence, SC 29501

DECK MACHINERY- CARGO HANDLING EQUIPMENT

Allied Shipbuilders Ltd., 1870 Harbour Road, Vancouver V7H 1A1, Canada

Burrard Iron Works Ltd., 220 Alexander Street, Vancouver, BC V6A 1C1, Canada, 604-684-2491, 604-684-0458, sales@burrardironworks.com

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
DMW Marine, LLC, 1123 Street Matthews Road, Chester Springs, PA 19425

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

Intercontinental Engineering , PO Box 9055 , Kansas City, MO 64168

Markey Machinery, P.O. Box 24788, Seattle, WA 98124

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

Rapp Hydema, 4433 27th Ave. West, Seattle, WA

98199, (206) 286-8162, (206) 286-3084,

scotta@rappus.com

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

Smith Berger Marine, 7915 10th Ave. S., Seattle, WA 98108
Superior Lidgerwood Mundy, 1101 John Ave., Superior , WI 54880
W.W. Patterson, Inc, 3 Riversea Rd, Pittsburgh, PA 15223

DESALINATION - REVERSE OSMOSIS

Reverse Osmosis of S.F., Inc., 150 SE 29th Street, Ft. Lauderdale, FL 33316
Reverse Osmosis of South Florida, Inc., 150 S.E. 29th St., Fort Lauderdale, FL 33316

DESIGN PUBLICATIONS

SNAME, 601 Pavonia Ave, Jersey City, NJ 07306

DETECTOR DOG TEAMS

American Detection Technologies, Inc., 415 Main St. (3rd flr), Worcester, MA 01608

DIESEL CYLINDER INDICATORS

General Thermodynamics Corp., PO BOX 642, Hampton Falls, NH 03844

Kiene Diesel, 325 S. Fairbanks St., Addison, IL 60101

DIESEL ENGINE OVERHAUL

Detroit Diesel Corporation, 13400 Outer Drive West, Detroit, MI 48329-4001

Motor-Services Hugo Stamp, 3101 S.W. 3rd Ave., Ft. Lauderdale, FL 33315

DIESEL ENGINE- SPARE PARTS & REPAIR

Alma Impex, Inc., 4000 Brodertown Ave., Suite 15, Sayreville, NJ 08872

Caterpillar, Inc., P.O. Box 610, Mossville, IL 61552-0610

Chris Marine AB, Box 9025, 200 39 Malmo, Sweden
Cummins Marine, 4500 Leeds Ave., Ste 301, Charleston, SC 29405

Man B&W Diesel, 17 State St., NY, NY 10004

Man B&W Diesel A/S, Telgholmsgade 41, Copenhagen SV DK-2450, Denmark

Man B&W Diesel AG, Stadtbachstrasse 1, Augsburg D-86153, Germany

Marine Exhaust Systems of Alabama, P.O. Box 698, 757

Nichols Ave., Fairhope, AL 36533

Marine Turbo & Diesel Inc., 1090 7th St., Richmond, CA 94801
Mariso USA, Inc., 100 Davidson Ave., Somerset, NJ 08873

Motor-Services AB, Box 2115 , Ronninge S- 144 04, Sweden
Motor-Services Hugo Stamp, 3101 S.W. 3rd Ave., Ft. Lauderdale, FL 33315

Scardana Americas Bkg., 502 Empire St. , Greenfield Park JAV 1V7, Canada

Wartsila Diesel, 201 Defencse Hwy, Annapolis , MD 21401

DIESEL FUEL DEFENSATION

Algae X International, P.O. Box 4011, Fort Myers Beach, FL 33932

DIGITAL TORQUE METER SYSTEMS

Instruments, Computers & Controls, 78 Londonderry Tpke, Hookset, NH 03106

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

Juniper International, 72-15 Metropolitan Ave., Middle Village, NY 11379

Manly Marine, P.O. Box 86788, N. Vancouver, BC V7L 4L3, Canada

Mapeco Products, 91 Willenbrock Rd., Unit B, Oxford, CT 06478

Pacific Coast Marine, 4314 Russell Road, Mukiteo, WA 98275

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

Walz & Krezner, 91 Willenbrock Rd., Oxford, CT 06478

DRAFT INDICATORS

King Engineering, PO BOX 1228, Ann Arbor, MI 48108-1625, 734-662-5691, 734-662-6652,

marine@king-gage.com, Contact: Mike Welch, www.king-gage.com

DRIVES

Allied Systems, 2300 Oregon St., Sherwood, OR

DRIVESHAFTS

The Cline Company, 600 Buncombe St., Greenville, SC 29602

DRUG TEST KITS

Sun State Specialty K-9s, 1500 Beville Road, Daytona Beach, FL 32114

EDUCATION

Massachusetts Maritime Academy, 101 Academy Drive, Buzzards Bay, MA 02532

ELECTRIC MOTORS

Ward Leonard, 401 Watertown Rd, Thomaston, CT 06767

ELECTRICAL EQUIPMENT

MMC International, 60 Inip Dr, Inwood, NY 11096

ELECTRONIC CHARTS

C- Map Commercial, 133 Falmouth Rd, Mashpee, MA 02649

EMERGENCY DISTRESS SIGNAL

Greatland Laser, LLC., 4001 West International Airport RD, Anchorage, AK 99502, 907-245-4475,

907-245-4599, laser@alaska.net, Contact: Jim O' Meara, www.greatlandlaser.com

EMPLOYMENT

All American Marine, P.O. Box 191237, Tillman's Corner, AL 33619

ENGINEERING PUBLICATIONS

SNAME, 601 Pavonia Ave, Jersey City, NJ 07306

ENGINES

Dynamold, Inc., 2905 Shamrock Ave., Fort Worth, TX 76107
FDGM, Inc., 800 Principal Court, Suite C, Chesapeake, VA 23320

Giro Engineering Limited, Talisman, Duncan Road, Park Gate, Southampton, Hants SO31 7GA, UK

Markisches Werk Halver Gmbh, Box 1355, Halver D-58543, Germany

ENVIRONMENTAL SOLUTIONS

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

EVAPORATORS

Alfa -Laval Separation, Inc., 955 Meams Rd., Warminster, PA 18974

Sasakura Engineering , 7-32 Takeshima, 4-Chome, Nishiyodogawa KY Osaka555, Japan

EXHAUST

American Vulkan, 2525 Dundee Rd. Winter Haven, FL 33884
Applegate Industrial Materials, P.O.BOX 428, Baton Rouge, LA 70821-0428

Marine Exhaust Systems of Alabama, P.O. Box 698, 757

Nichols Ave., Fairhope, AL 36533

EXPANSION JOINTS

Applegate Industrial Materials, P.O.BOX 428, Baton Rouge, LA 70821-0428

Tranter PHE, Inc, PO Box 2289, Wichita Falls, TX 76307
Tranter, Inc., P.O. Box 2289, Wichita Falls, TX
76307, 940-723-7125, 940-723-1131,
www.tranterphe.com

HEAT TREATING SERVICES & SUPPLIES
Mannings USA, 200 Richards Ave, P.O. Box 896,
Dover, NJ 07802-0896, 973-537-1576, 973-537-1581,
sales@manningusa.com, Contact: Daniel
Ciarlariello, www.manningusa.com

HEAVY FUEL TREATMENT

Algae X International, P.O. Box 4011, Fort Myers Beach, FL
33932

HIGH SPEED FERRY BUILDERS

Incat Australia Pty. Ltd, 18 Bender Marine, Hobart 7009,
Australia

HMI CONTROLS DISPLAY

Azonix-Dynalco, 3690 NW 53rd St., Ft. Lauderdale, FL 33309

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

HORNS/WHISTLES

Airchime Manufacturing Co., 5478 267th St., Gloucester
Industrial Estate., Langley, BC V4W 3S8, Canada
Kahlenberg Brothers Co., P.O. Box 358, Two Rivers, WI 54241

HOSES/NOSE FITTINGS

JGB Enterprises, Inc., 115 Metropolitan Dr., Liverpool, NY
13088

HVAC

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

HYDRAULIC SYSTEMS

Anchor Lamina, 38565 Country Club Drive, Farmington Hills, MI
48331

INFRARED IMAGING EQUIPMENT

Flir Systems, 16505 SW 72ND AVE, Portland, OR 97224

INSPECTION EQUIPMENT

Staveley Instrument, 421 N. Quay St., Kennewick, WA 99336

INSULATION

Shannon Enterprises of W.N.Y., Inc., 162 Sweeney Street, PO
BOX 199, North Tonawanda, NY 14120-0199

Superior Energies Inc., 3115 Main Ave., Groves, TX
77619

INSURANCE SERVICES

WQIS, 80 Broad St., 21st Floor, New York, NY 10004

INTERIORS

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

Lit Industries, 516 Costner School Rd., Bessemer City, NC
28016-9801

JOINER PANELS/FURNITURE

Thermax Marine-Panel Specialists, Inc., 3115
Range Rd., Temple, TX 76501, 254-774-9800, 254-
774-7222, thermax@panelspec.com, Contact: John
Hutchinson, www.thermaxmarine.com

JOINER- WATERTIGHT DOOR-PANELING-

CEILING SYSTEM

Walz & Krezner, 91 Willenbrock Rd., Oxford, CT 06478

K-9 DETECTION

Sun State Specialty K-9s, 1500 Beville Road, Daytona Beach,
FL 32114

KEEL COOLERS

Duramax Marine LLC, 17990 Great Lakes Parkway,
Hiram, OH 44234, 440-834-5400, 440-834-4950,
Contact: Richard Spangler

LASER ALIGNMENT

Ludeca, Inc., 1425 NW 88th Ave, Miami, FL 33172

LEAK REPAIR

Indumar Products Inc., 2500 Tanglewilde, Suite 260, Houston,
TX 77063

LIFEBOAT TESTING

Imes Inc., 5139 Brook Street Suite E, Mont Claire, CA
Water Weights, Inc., 5139 Brook St., Ste E, Mont Clare, CA
91763

LIFEBOATS/DAVITS

Umoe Schat-Harding, Inc., 912 Hwy 90 East, New Iberia, LA
70560

LIFEBOATS/RAFTS

DBC Marine Safety Systems, 101-3760 Jacombs Rd.,
Richmond, BC V6V 6T3, Canada
Viking Life Saving Equipment, 1400 NW159th Street Suite 101,
Miami, FL 33169
Willard Marine Inc., 1250 N. Grove St., Anaheim, CA 92806
Wolong International, 151 Chin Swee Road #03-14, Manhattan
House, 169876, Singapore

LIFESAIVING EQUIPMENT

C.M. Hammar AB, August Barks Gatan 15, 421 32 Vastra
Frolunda, Sweden
Steams Manufacturing Comapny, P.O. Box 1498, St. Cloud, MN
Umoe Schat-Harding, Inc., 912 Hwy 90 East, New Iberia, LA
70560
Viking Life Saving Equipment, 1400 NW159th Street Suite 101,
Miami, FL 33169

LIFT EQUIPMENT TESTING

Water Weights, Inc., 5139 Brook St., Ste E, Mont Clare, CA
91763

LIGHTING PRODUCTS

Phoenix Products Co., Inc., 8711 West Port Avenue,
Milwaukee, WI 53224

LIGHTING SYSTEMS/ EQUIPMENT

ACR Electronics Inc., 5757 Ravenswood Rd., Ft. Lauderdale ,
FL 33310-5247
L.C. Doane, P.O. Box 975, Essex, CT 06426
Maritime Associates, P.O. BOX 1788, Crystal Bay,
NV 89402, 775-832-2422, 775-832-2424,
maritimeas@charter.net

LINE & NET CUTTERS

Spurs Marine, 201 S.W. 33rd St., Ft. Lauderdale, FL 33315

LUBRICANTS/LUBRICATION SYSTEMS

Benjamin R. Vickers & Sons Ltd., Airedale Mills, 6 Clarence
Road, Leeds, W. Yorkshire LS10 IND, UK

MACHINERY MAINTENANCE, REPAIR & TESTING

Mackay Communications, 2721 Discovery Dr., Raleigh, NC
27616-1851

MANEUVERING EQUIPMENT

Schottel GmbH & Co. KG, Mainzer Str 99 , D-56322-Spay/Rhine,
Germany

MARINE DECKING & FLOORING

Lonseal Flooring, 928 East 238th Street, Carson, CA 90745

MARINE ELECTRONICS

ACR Electronics Inc., 5757 Ravenswood Rd., Ft. Lauderdale ,
FL 33310-5247

Comark Marine, 93 West Street, Medfield, MA
02052, 800-280-8522, 508-359-2267,
sales@comarkcorp.com

Hatteland Display, Bogstadveien, 19 , N-0355 Oslo, Norway
Jotron Electronics, Box 85 , NO-328OT Jodalynj Norge,
Norway
Marine Electronic Solutions, 1522 Crabapple Cove,
Jacksonville, FL 32225

Reson Inc., 100 Lopez Road, Goleta, CA 93117
Saab Marine Electronics, Box 13045, 402 5Goteborg, Sweden

MARINE ENGINEERING

Elliot Bay Design Group, 5301 Shishole Ave. NW, Ste. 200,
Seattle, WA 98107
Ocean Crest, 2 Pidgeon Hill Dr. , Sterling, VA 20165

MARINE EQUIPMENT

Scardana Americas Bkg., 502 Empire St. , Greenfield Park J4V
1V7, Canada
Waterman Supply, P.O. Box 596, Wilmington, CA 90748

MARINE FURNITURE

Deansteel Mfg., 111 Merchant St., San Antonio, TX 78204

MARINE HARDWARE

HMS Marine Hardware, 333 W. Merrick Road, Valley Stream, NY
11580-5219

MARINE MANAGEMENT

Hornblower Marine Services, P.O. Box 112476, Campbell, CA
95011-2476

MARINE POWER PLANT SYSTEMS

Auramarine Ltd., Box 849 , FI-20101 Turku, Finland

MARINE SERVICES

International Shipping Agency, Freeport Harbour
Complex,Bldg.#2,Ste.#9, Freeport F41109, Bahamas

MARITIME TRAINING & SCHOOLS

Maine Maritime Academy, MMA, Casine, ME 04420-5000
Marine Safety International, Marine Terminal , Laguardia Airport,
NY 11371

MONITORING SYSTEMS

American Vulkan, 2525 Dundee Rd, Winter Haven, FL 33884
Governor Control Systems, 3101 SW 3rd Avenue, Ft.
Lauderdale, FL 33315

Mackay Communications, 2721 Discovery Dr., Raleigh, NC
27616-1851

Michael J. Erland, 7001 Flewlynn Rd, Ottawa, Ontario K2S 1B6,
Canada

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

Reson Inc., 100 Lopez Road, Goleta, CA 93117

MOORAGE FACILITY

Sea Ark Marine, P.O. Box 210, Monticello, AR 71655-0210

MOTOR PROTECTION

Marine Safe Electronics, 261 Millway Ave. #12, Concord, Ontario
L4K 4K9, Canada

NAMEPLATES AND PLACARDS

Horizons ISG, 18531 South Miles Road, Cleveland, OH

NAV/COMM EQUIPMENT

C- Map Commercial, 133 Falmouth Rd, Mashpee, MA 02649
Chartco, New North Road, Hainault, Ilford Essex 166 2UR, UK
Hagglunds Drives Inc., 800 Ferndale Pl., Rahway, NJ 07065
Furuno USA Inc., 4400 NW Pacific Rim Blvd, Camas,
WA 98607

Hose-McCann Telephone Company, 1241 W. Newport
Center Drive, Deerfield Beach, FL 33442, 954-429-
1110, 954-429-1130, mchp@hosemccann.com

Mackay Communications, 2721 Discovery Dr., Raleigh, NC 27616-
1851

NAVAL ARCHITECTS, MARINE ENGINEERS

A.K. Suda, Inc., 3004 19th St., Metairie, LA 70002-4989
Aker Marine, 1818 CORNWALL AVE, VANCOUVER, BC V6J 1C7,
Canada

Band, Lavis, & Associates, Inc., 900 Ritchie Hwy, Suite 203,
Severna park, MD 21146

Bay Engineering, 253 N. First Ave., Sturgeon Bay, WI 54235
Bristol Harbor Group, Inc., 103 Poppasquash Rd., Bristol, RI 02809
C. Baxter & Associates, P.O. Box 9006, Mobile, AL 36609
CDI Marine Co., 9550 Regency Square Blvd, Ste 400, Jacksonville
, FL 32222

Computer Sciences Corporation-Advance Marine Center, 1201 M
St. SE., Washington , DC 20003
Elliot Bay Design Group, 5301 Shishole Ave. NW, Ste. 200,
Seattle, WA 98107

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

John J. McMullen Associates, 4300 King St., Suite 400, Alexander,
VA 22302
John W. Gilbert Associates, 75 Terry Drive, Suite 200, Hingham,
MA 02043

Kvaerner Masa Marine Inc., 201 Defense Highway, Ste 202,
Annapolis, MD 21401

MCA Engineers, Inc., 2960 Airway Ave., #A-103 , Costa Mesa, CA
92626

MIL Systems, 200-1150 Morrison Drive, Ottawa, Ontario K2H 8S9,
Canada

Nautical Designs, Inc., 2101 S. Andrews Ave., Ste 202, Fort
Lauderdale, FL 33316

Robert Allan Ltd., 1639 W. 2nd Avenue Ste 230, Vancouver, BC,
Canada

The Glosten Associates Inc., 600 Mutual Life Bldg., 605 First Ave.,
Seattle, WA 98104

Vizag marine Consultants, 8913 Riverview Park Drive, Raleigh, NC
27613

VUYK Engineering, P.O. Box 204 , 9700 AE Groningen,
Netherlands

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

NAVIGATION

CornNav Marine Ltd., 13511 Crestwood Pl., Ste 15 15, Richmond,
BC V6V 2G1, Canada
D & B Technologies, 1458 OCEAN SHORE BLVD #132, ORMOND
BEACH, FL 32176-3613
Nauticast AG, Mariahilfer Strasse 50/211, A-1070 Vienna, Austria

OIL SPILL RESPONSE

Donjon Marine, 1250 Liberty Avenue, Hillside, NJ 07205
Marine Spill Response Corporation, 220 Spring Street, Suite
500, Herndon, VA 20170

OIL/WATER SEPARATORS

Alfa -Laval Separation, Inc., 955 Meams Rd., Warminster, PA
18974
MMC International, 60 Inip Dr, Inwood, NY 11096

PAINT APPLICATOR

Mr.Longam, Inc., P.O.Box 377, Greenwood, MO 64034-0377

PAINT MARKERS

Sakura of America, 30780 San Clemente St., Hayward,
CA 94544, 800-776-6257, 510-475-0973,
customerservice@sakuraofamerica.com

PARTS LOCATOR SERVICE

Inventory Locator Service, 8001 Centerview
Parkway Suite 400, Memphis, TN 38018, 901-794-
5000, 901-794-1760, ppugh@ilsmart.com

**PIPE FITTINGS/CUTTINGS/CONNECTING/
SYSTEMS**

Jesse Engineering, 5225 7th St., E. Tacoma, WA
98424, 253-922-7433, 253-922-2536,
tmorgan@jesse-wallace.com

RAMCO Manufacturing Co., 365 Carnegie Ave., Kenilworth, NJ
07033

PIPE LEAK REPAIR

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

PLANNED MAINTENANCE SYSTEMS

Design Maintenance Systems, Inc, 340 Brooksbank Ave,
Ste.100, North Vancouver,BC VTJ 2C1, Canada

PNEUMATIC LINE THROWERS

Restech Norway A/S, Box 624, NO-8001 BODO, Norway

PORT DEVELOPMENT

Sasakura Engineering , 7-32 Takeshima, 4-Chome,
Nishiyodogawa KY Osaka555, Japan

PORTABLE FOAM APPLICATORS

IMSSCO Corporation, 2040 Harbor Island Drive, Ste. 201 A,
San Diego, CA 92101

PORTABLE VENTILATORS

Americ Corp, 785 Bonnie Lane, Elk Grove Village, IL 60007

PREVENTATIVE MAINTENANCE

Marine Safe Electronics, 261 Millway Ave. #12, Concord, Ontario
L4K 4K9, Canada

PROPELLERS

Rice Propulsion, Av. Rios Espinoza 88, Mazatlan,
Sin. 82180, Mexico, 8778396304, 011526699842533,
rice@ricepropulsion.com

PROPULSION EQUIPMENT

ABB Turbocharger, Inc., 1460 Livingston Ave., North Brunswick,
NJ 08902

Alstom Power Conversion, 3 Ave. Des Trois Chenes, 90018
Belfort Cedex, France

Brunvoll A/S, P.O. Box 370, N-6401 Molde, Norway
Caterpillar, Inc., P.O. Box 610, Mossville, IL 61552-0610

Cummins Marine, 4500 Leeds Ave., Ste 301, Charleston, SC
29405

CWF Hamilton Co., P.O. Box 709 , Christchurch, New Zealand
Fincanteri, Diesel Engine Div., GMT, Bagnoli della, Rosandra
3334 Trieste, Italy

Hagglunds Drives Inc., 2275 International Street, Columbus, OH
43228

Harbormaster Marine, Inc., 31777 Industrial Rd., Livonia, MI
48150

Karl Senner Inc., 25 W Third, Kenner, LA 70062

Kawasaki Heavy Indust., World Trade Center Bldg., 4-1
Hamamastu-cho, 2-chome, Minato-ku Tokyo 105-6116, Japan

LA.ME Srl. Marine Division, Via della Fornace 4, Opera (MI),
Italy

Man B&W Diesel, 17 State St., NY, NY 10004

Man B&W Diesel A/S, Telghelmsgade 41, Copenhagen SV DK-
2450, Denmark

Man B&W Diesel AG, Stadtbachstrasse 1, Augsburg D-86153,
Germany

Mapeco Products, 911 Willenbrock Rd., Unit B, Oxford, CT
06478

Markisches Werk Halver GmbH, Box 1355, Halver D-58543,
Germany

Napier Turbochargers, P.O. Box 1, Waterside , South Lincoln
LN5 7FD, UK

Nya Berg Propulsion AB, Box 1005, 430 90 Ockerö, Sweden
Philadelphia Resins, P.O. Box 309 , Montgomeryville, PA 18936

Rolls-Royce Commercial Marine, 10255 Richmond Ave., Ste
101, Houston, TX 77042

Schottel GmbH & Co. KG, Mainzer Str 99 , D-56322-
Spay/Rhine, Germany

Ultra Dynamics Marine, LLC. (UltraJet), 1110A Claycraft Road,
Columbus, OH 43230

Voith Schiffstechnik GmbH & Co., P.O. Box 2011, 89510
Heidenheim, Germany

Wartsila Corporation, Box 244, FI-65101 Vasa, Finland
Wartsila Lips, 3617 Koppens Way, Chesapeake, VA 23323

ZF Marine Group , Eherst. 50, 88046 Friedrichshafen, Germany

PROPULSION MONITORING

Azonix-Dynalco, 3690 NW 53rd St., Ft. Lauderdale, FL 33309

PUMP-REPAIR-DRIVES

Scardana Americas Bkg., 502 Empire St. , Greenfield Park J4V
1V7, Canada

Wooster Hydrostatics, 4570 West Old Lincoln Way, Wooster,
OH 44691

PUMPS

Mack Boring & Parts Company, 2365 Rout 22, Union, NJ 07083

RADARS-ARPAS

Furuno USA Inc., 4400 NW Pacific Rim Blvd, Camas,
WA 98607

REMANUFACTURED PUMPS & MOTORS

Wooster Hydrostatics, 4570 West Old Lincoln Way, Wooster,
OH 44691

REMOTELY OPERATED VEHICLES

Seabotix Inc., 1425 Russ Blvd. T112D, San Diego, CA 92101

RIGID INFLATABLE BOATS

Willard Marine Inc., 1250 N. Grove St., Anaheim, CA
92806

ROPE-MANILA-NYLON-HAWSERS-FIBERS

Marlow Ropes, South Road, Halisham, East Sussex BN27 3JS,
UK

<

SHIP MANAGEMENT

Eurasia Group, 22A Floor Chinachem Exchange Sq., 1 Hoi Wan St., Quarry Bay, Hong Kong

SHIP REPAIR

HALIFAX SHIPYARD, 3099 BARRINGTON ST, HALIFAX, NS, Canada
Manitowoc Marine Group, 1600 Ely St., Marinette, WI 54143-2434
Mark Van Schaick BV, Nieuwe Waterwegstraat, 3115 HE Schiedam, Harbour 535/Port Of Rotterdam, Netherlands
OCEAN TECHNICAL SERVICES, MILITARY OCEAN TERMINAL BAYONNE UNIT #8-FOOT OF 32ND STREET, BAYONNE, NJ 07002
R&R Maintenance Inc., 5700 Proctor St. Extension, Port Arthur, TX 77642
United Marine Enterprises Inc., P.O. Box 22077, Beaumont, TX 77720

SHIP SIMULATORS

Kongsberg Maritime AS, PO Box 1009, 3194 Horten, Norway

SHIPBUILDING-REPAIRS, MAINTENANCE, DRYDOCKING

Atlantic Marine, Inc., P.O. Box 3202, mobile, AL 36652
Austal USA, 100 Dunlap Dr., Mobile, AL 36633
Bayonne Drydock, PO Box 240, Bayonne, NJ 07002-0240
Blohm & Voss, P.O. Box 10 07 20, D-20005 Hamburg, Germany
Blount Marine, 461 Water St., Warren, RI 02885
Bollinger Lockport & Larose, P.O.Box 250, Lockport, LA 70374
Curacao Drydock Co., Box 3012, Willemstad, Curacao, Netherlands Antilles
Damen Shipyards, P.O. Box 1 Gorinchem, 4200AA Holland, Netherlands
Detyens Shipyards Inc., 1670 Drydock Ave., Bldg 236, North Charleston, SC 29450
Fincantieri Cantierieri Navali Italiani Spa, Merchant Shipbuilding Div., 34123 Trieste, Italy
In-Place Machining, 3811 N. Holton St., Milwaukee, WI 53212
Leevac Industries, LLC, P.O. Box 1190, Jennings, LA 70546
Motor-Services AB, Box 2115, Ronninge S- 144 04, Sweden
Newport News Shipbuilding, 4101 Washington Ave., Newport News, VA 23607
United Defense, 1525 Wilson Blvd., Ste 700, Arlington, VA 22209-2444
United Marine Enterprises Inc., P.O. Box 22077, Beaumont, TX 77720
VT Halter, PO Box 3029, Gulfport, MS 39505
Washburn Doughty, P.O. Box 296, E. Boothbay, ME 04544

SHIPYARDS

Alabama Shipyard, P.O. Box 3202, Mobile, AL 36652
Atlantic Marine, Inc., P.O. Box 3202, mobile, AL 36652
Kvaerner Masa-Yards Oy, BOX 132, FI-00151, Helsinki, Finland
Leevac Industries, LLC, P.O. Box 1190, Jennings, LA 70546
Offshore Inland, 3521 Brookdale Dr. S., Mobile, AL 36618
R&R Maintenance Inc., 5700 Proctor St. Extension, Port Arthur, TX 77642
United Defense, 1525 Wilson Blvd., Ste 700, Arlington, VA 22209-2444

SIGNS & LABELS

Horizons ISG, 18531 South Miles Road, Cleveland, OH

SILENCERS

EM Products & Cowl Silencer Div. Phillips and Temro Ind., 5380 Cottonwood Lane, Prior Lake, MN 55372, (952) 226-8105, (952) 440-3400, hentig@phillipsandtemro.com, Contact: Bob Hentig, Sales Mgr. Marine Products, www.phillipsandtemro.com
Silex Inc., 6659 Ordan Dr., Mississauga, ON L5T 1K6, Canada

SILICON BRONZE

Atlas Metal Sales, 1401 Umatilla St., Denver, CO 80204, 800-662-0143, 303-623-3034, jsimms@atlasmetal.com, Contact: Jerry Simms, www.atlasmetal.com

SIMULATION TRAINING

Marine Safety International, Marine Terminal, Laguardia Airport, NY 11371

Maritime Institute of Technology, 5700 Hammonds Ferry Rd., Linthicum Heights, MD 21090
Poseidon Simulation AS, Box 89, NO-8370 Leknes, Norway
Transas Marine Overseas Ltd., 12 Obukhovskoy, Oboroni, St. Petersburg 193019, Russian Federation

SLIDING DOORS

Walz & Krezner, 91 Willenbrock Rd., Oxford, CT 06478

SOFTWARE

Creative Systems Inc., P.O. Box 1910, Port Townsend, WA 98368
Design Maintenance Systems, Inc, 340 Brooksbank Ave, Ste.100, North Vancouver, BC V7J 2C1, Canada
Loadmaster International, St. Varvsgarten 11B SE, 211 19 Malme, Sweden
Resurgence Software Inc., 2021 Lakeshore Dr., Ste 21D, New Orleans, LA 70122

STEERING GEARS/ STEERING SYSTEMS

Jastram Engineering, 467 Mountain Hwy, North Vancouver, BC V7J 2L3, Canada
Kobelt Manufacturing Co., Ltd., 8238-129 Street, Surrey, BC V3W0A6, Canada
Offshore Inland, 3521 Brookdale Dr. S., Mobile, AL 36618

STERN TUBE BEARINGS/ BUSHES

Duramax Marine LLC, 17990 Great Lakes Parkway, Hiram, OH 44234, 440-834-5400, 440-834-4950, Contact: Richard Spangler

Orkot Composites, 2535 Prairie Rd, Unit D., Eugene, OR 97402
Thordon Bearings Inc., 3225 Mainway, Burlington, Ontario L7M 1A6, Canada

STERN TUBE SEALS

Superbolt, PO Box 683, Carnegie, PA 15106

STRAINERS

Hellan Strainer, 3249 East 80th St., Cleveland, OH 44104

SURFACE PREP TOOLS

Aurand Mfg., 1210 Ellis St., Cincinnati, OH 45223
Dalseide Shipping Services, NO-5397, BEKKJARVIK, Norway
Flow International Corp., 23500 64th Ave., South Kent, WA 98059

SURVIVAL EQUIPMENT

Brookdale International, 1-8755 Ash St., Vancouver, BC V6P 6T3, Canada

TANK LEVELING INDICATORS

Ian Conrad Bergan, 3119 North Davis Highway, Pensacola, FL 32503, 850-434-1286, 850-434-1246, sales@icbergan.com, Contact: Ron Monell, www.icbergan.com

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

Saab Marine Electronics, Box 13045, 402 5Goteborg, Sweden
Technical Marine Services, 6040 North Cutter Circle, Portland, OR 97217

TESTING SERVICES

Wyle Laboratories, 7800 Govern's Dr. S.W., Huntsville, AL 35807

THRUSTER SYSTEMS

Omnithruster, 2201 Pinnacle Parkway, Twinsburg, OH 44087, 330-963-6310, 330-963-6325, widmer@omnithruster.com, Contact: Kurt Widmer, www.omnithruster.com

TOWING EQUIPMENT

Allied Shipbuilders Ltd., 1870 Harbour Road, Vancouver V7H 1A1, Canada

TRAINING

International Maritime Training, 910 SE 17th St., Ste 200, Fort Lauderdale, FL 33316
LSI Lockmaster Security, 1044 S. Main Street, Nicolasville, KY 40356
Massachusetts Maritime Academy, 101 Academy Drive, Buzzards Bay, MA 02532
SUNY Maritime College, 6 Pennyfield Ave, Bronx, NY 10465-4198
USMMA- Global Maritime and Transportation School, 300 Steamboat Rd., Kings Point, NY 11024

TRAINING VIDEOS

Coastal Training Technologies Corp., 500 Studio Drive, Virginia Beach, VA 23452
Moxie Media, PO Box 10203, New Orleans, LA 70181

TRANSMISSIONS

Karl Senner Inc., 25 W Third, Kenner, LA 70062

TRAVEL SERVICES

Griffin Americas, 3648 Greenbriar Drive, Houston, TX 77098
MarineTravel Services, 200 Golden Oak Court, Suite 120, Virginia Beach, VA 23452

TURBOCHARGERS

ABB Turbo Systems AG, CH 5401, Baden, Switzerland

TURBOCHARGERS- REPAIRS

Motor-Services Hugo Stamp, 3101 S.W. 3rd Ave., Ft. Lauderdale, FL 33315
Napier Turbochargers, P.O. Box 1, Waterside, South Lincoln LN5 7FD, UK

ULTRASONIC TESTING

M.A.C.E, 5910 NE 15th Ave., Fort Lauderdale, FL 33331

UNDERWATER SURVEILLANCE SONAR

C-Tech LTD, P.O.Box 1960, Cornwall Ontario K6H6N7, Canada

VACUUM EQUIPMENT

Industrial Vacuum Equipment Corporation, N8091 Maple Street, Ixonia, WI 53036, 800-331-4832, 920-261-7117, randy@industrialvacuum.com

VACUUM TOILET SYSTEM

Envirovac Inc, 1260 Turret Dr., Rockford, IL 61111
Jets Vacuum Sewage System, P.O. Box 14, N-6060 Hareid, Norway

VALVES & FITTINGS

Leslie Controls, 12501 Telecom Dr., Tampa, FL 33637

VENTILATION SYSTEMS / PRODUCTS

Delta T Systems, 858 West 13th Court, Riviera Beach, FL 33404
Dry Air Technology, 313 North Oak St., Burlington, VA 88233

VIBRATION ANALYSIS

Ludeca, Inc., 1425 NW 88th Ave, Miami, FL 33172
Maritech, LLC, 100 Powermill Rd., Acton, MA 01725

VISCOMETERS

Cambridge Applied System, 196 Boston Ave., Medford, MA 02155

VOYAGE DATA RECORDERS

Rutter Technologies Inc., 22 Pearl Place, P.O.BOX 427, St. John's NL A1C 5N8, Canada

WASTE WATER TREATMENT

FAST@Systems, 8229 Brentwood Industrial Drive, Brentwood, MO 63144, 314-645-6540, 314-645-6131, solutions@marinefast.com, Contact: Alan Fleischer, www.marinefast.com

RWO, Leerkampe 3, D-28259 Bremen, Germany
Severn Trent Da Nora, LLC, 1110 Industrial Boulevard, Sugar Land, TX 77478

WATER JET CLEANING

Flow International Corp., 23500 64th Ave., South Kent, WA 98059
Gardner Denver Water Jetting Systems, 12300 N. Houston Rosslyn Road, Houston, TX 77086

WATER PURIFIERS

Alfa-Laval Separation, Inc., 955 Meams Rd., Warminster, PA 18974

Everpure, 502 Indiana Avenue, Sheboygan, WI 53081, 866-873-7506, 866-203-7361, customerservice@plymouthwater.com, Contact: Jerry Letcher, www.everpure.com

Gardner Denver Water Jetting Systems, 12300 N. Houston Rosslyn Road, Houston, TX 77086

Offshore Marine Labs, 2000 West 135th St, Gardena, CA 90249
Reverse Osmosis of S.F., Inc., 150 SE 29th Street, Ft. Lauderdale, FL 33316

Reverse Osmosis of South Florida, Inc., 150 S.E. 29th St., Fort Lauderdale, FL 33316

WATERTIGHT CLOSURES

Walz & Krezner, 91 Willenbrock Rd., Oxford, CT 06478

WINCHES & FAIRLEADS

Allied Systems, 2300 Oregon St., Sherwood, OR
Burrard Iron Works Ltd., 220 Alexander Street, Vancouver, BC V6A 1C1, Canada, 604-684-2491, 604684-0458, sales@burrardironworks.com
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
Intercontinental Engineering, PO Box 9055, Kansas City, MO 64168

Jearnar Winches, 1051 Clinton St., Buffalo, NY 14206

Markey Machinery, P.O. Box 24788, Seattle, WA 98124

MMC International, 60 Inip Dr, Inwood, NY 11096

Rapp Hydema, 4433 27th Ave. West, Seattle, WA 98199, (206) 286-8162, (206) 286-3084, scotta@rappus.com

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

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

Superior Lidgerwood Mundy, 1101 John Ave., Superior, WI 54880

Timberland Equipment Ltd & Almon Johnson, 459 Industrial Ave., Woodstock, ON N4S 7Z2, Canada

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

Rapp Hydema, 4433 27th Ave. West, Seattle, WA 98199, (206) 286-8162, (206) 286-3084, scotta@rappus.com

WINDOWS

Deansteel Mfg., 111 Merchant St., San Antonio, TX 78204

Garibaldi Glass, 7344 Winston Street, Burnaby, British Columbia V5A 2G9, Canada

WINDSCREEN & WINDOW WIPERS

Bae Systems, 550 South Fulton St., Mt. Vernon, NJ 10550

Hepworth Marine International, Hepworth House, Brook St.,

Redditch, Worcestershire B98 8NF, UK

Wynn Marine, Ltd., Wynn House, Lansdown Estate, Cheltenham, Gloucestershire, UK

WIRELESS MONITORING SYSTEMS

Michael J. Erland, 7001 Flewlynn Rd, Ottawa, Ontario K2S 1B6, Canada

There's only one thing with a stronger international presence than MARITIME REPORTER.
Empower your ad with superior circulation.
Call: 212-477-6700

MARITIME REPORTER AND ENGINEERING NEWS

THE MARITIME GROUP
118 East 25th Street, New York, NY 10010
Tel: 212-477-6700, Fax: 212-254-6271, E-mail: info@marinelink.com



Products & Services

ALUMINUM BOATS FOR SEVERE SERVICE

WORKSKIFF[®]

INC.

- Premium marine grade 5086 aluminum
- All-welded construction
- 16 to 27 ft. models
- Flexible options
- Trailerable
- Unsinkable

WWW.WORKSKIFF.COM
INFO@WORKSKIFF.COM

1-800-745-1727
GSA# GS-07F-0063J

American Heavy Industries
**MARINE & SHIPBOARD
ELEVATORS**

3411 Amherst Street Norfolk, VA 23513
(757) 858-2000 (Office) (757) 858-2000 (Fax)
www.AmericanHeavyIndustries.com
sales@americanheavyindustries.com

SEASCHOOL[®]

•USCG Approved OUPV to MASTER/MATE 200 GRT
STCW-95 BST

Call Today: 1-800-237-8663
www.seaschool.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
253-858-8481 Fax: 253-858-8486

DAVIT SALES INC.
&
DAVIT ENGINEERING
Naval Architects & Marine Engineers

CRANE TYPES
FIXED BOOM
TELESCOPIC BOOM
KNUCKLE BOOM

MARINE CRANES
MARINE ENGINEERS
OIL SPILL 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: DAVITI@AOL.COM

**SHAFT HORSEPOWER
SYSTEMS**

Starting at under **\$6000.00**

Directional Display

HORSEPOWER
HP HOURS
RPM

TORQUE
ENGINE HOURS
TOTAL REVOLUTIONS

INTERFACE TO FUEL FLOW
METERS & OTHER DEVICES
STAND ALONE RPM SYSTEMS

Our system is repeatable, reliable & affordable, and can also be customized for other applications

Some of the benefits of our system include:

- Improves fuel efficiency
- Displays diagnostic information
- Provides data comparison

Menu driven PLC

Saving fuel, Saving time, Saving money

Hillhouse Industrial & Marine, Inc.

RJHICC@aol.com
www.Industrial-Marine.com

Tel 603-485-8181
Call 603-566-4330

Products & Services

North American Cutting Systems
CNC Plasma, Oxyfuel and Laser Cutting Systems



831-338-8250 / FAX 831-338-8024
nacs@prodigy.net
www.nacuttingsystems.com

ANKER MARINE PAINTS

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 Fax: 203-226-5246
ankermarinepaint@earthlink.net

Navy - Fire Pumps

300 Gallons Per Minute
Applied Energy Corp. - 719-200-5221 - Jim
JTP.COM/APPLIED/PACO.HTML

TANKS Custom Fuel Cell Bladder Tanks
Diesel or Gas

- Impact Resistant
- Non-Exploding
- Vibration Proof
- Lightweight
- Fully Baffled

MADE TO FIT
WORK BOATS, PATROL
BOATS, RACE BOATS.

ATUL 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



Insurance is supposed to be based on **Uberrimae Fidei** or utmost good faith but it hasn't always worked out that way. If you doubt this just ask Eliot Spitzer the NY Attorney General.

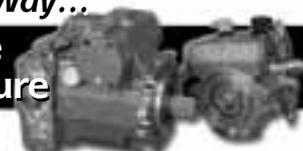
• **'Gotcha'** covers a number of fascinating subjects including: the CIA's involvement in the theft of high value yachts to smuggle narcotics, the collapse of the old London Salvage Association, the fraud and "trickle-down-corruption" that has tainted the Lloyd's Agency System.

• The cover-up of Arthur Andersen's last fraud involving the Lloyd's List, the American Society of Appraisers and the American Institute of Certified Public Accountants brought threats against his life.

Available through your local bookstore or visit:
www.iuniverse.com www.bn.com

'Gotcha' @ www.gotcha-edgeary.com
Published by iUniverse.com, Inc.
ISBN: 0-595-32740-0. \$18.95
204 pages Trade Paperback

**The Wooster Way...
Performance Under Pressure**



Wooster Hydrostatics, an independent remanufacturer of hydrostatic pumps and motors, uses only genuine OEM replacement parts. We are dedicated to providing our customers superior service and a quality product that meets or exceeds OEM standards.

WOOSTER
HYDROSTATICS
Performance Under Pressure

Wooster, Ohio Service Center
330-263-6555 • 800-800-6971
Fax 330-263-4463 • www.woosterhydrostatics.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

Redwise
GLOBAL SHIP DELIVERY & CREWING

Redwise Maritime Services B.V. Eemweg 8, 3742 LB Baarn
P.O. Box 20, 3740 AA Baarn, The Netherlands
Phone +31 (0)35 54 80 500 (24 hrs). Fax +31 (0)35 54 80 511

info@redwise.nl www.redwise.nl

AETNA ENGINEERING
A DIVISION OF FIREBOY-INTEX



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 49544 USA
Toll Free: 1-800-776-7962 Fax: (231) 223-8467
Email: aetnaengineering@fireboy-intex.com
Web: www.fireboy-intex.com

Peck & Hale 180 Division Avenue, West Sayville NY 11796
Tel: (631) 589-2510 Fax: (631) 589-2925
Web Site: www.peckhale.com
e-mail: sales@peckhale.com

Release-A-Matic H44 R.A.M. Hook

Features:

- Quick disconnect
- Remote release or disengagement
- Place loads where access is restricted
- Saves Manpower
- Wide range of angles of release

101 Applications!!

- Towing
- Fishing
- Maritime
- Boating
- Construction
- Lifeboats
- Material Handling
- Laboratory
- **Lifeboat Davit Release**

Materials: Heat Treated Forged Steel
Finish: Zinc or Cres.

Strength:	S.W.L.	M.B.S.
H44-3L	2,000 lbs.	8,000 lbs.
H44-3	4,500 lbs.	18,000 lbs.
H44-9	18,000 lbs.	71,700 lbs.

Peck & Hale is your Full Service Cargo Securing Systems and Equipment Supplier!
Military • Maritime • Railroad • Aircraft Applications
Sockets • Hi-shock Chain • Wire & Web Lashing Tiedowns

SPAR ASSOCIATES, INC. 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
Visit our web site: www.SPARUSA.com

Custom Fit Blanket Systems For The Marine Industry



Blanket Designs to 2000F - Acoustic/Thermal

INSULTECH
Removable, Reusable Blanket Insulation

ENGINE EXHAUST
RECIP ENGINES
MANIFOLDS, SILENCERS

HANNON ENTERPRISES OF W.V. INC.
75 Main Street, North Tonawanda, NY 14120-0199
(716) 693-7954
Fax (716) 693-1647
www.blanket-insulation.com
Representative Inquiries welcome

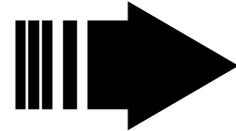
INFORMATION

SHOWCASE

GET FREE INFORMATION ONLINE at: www.maritimeequipment.com/mr

Get Free Information Fast

Circle the appropriate Reader Service Number
on the opposite page or visit
www.maritimeequipment.com/mr



Page	Advertiser	Product	R/S#	Page	Advertiser	Product	R/S#
6	ABB Turbocharger Systems AG	turbochargers	200	50	Jesse Engineering	robotic engineering	240
7	ACR Electronics	electronics	201	50	Jets Vacuum AS	toilet systems	241
21	Alfa Laval Tumba AB	marine & diesel equipment	202	55	Jotron Electronics a.s.	safety products and systems	242
54	Allied Shipbuilders Ltd.	deck machinery	203	30	Kobelt Manufacturing	steering and propulsion controls	243
22	Allied Systems	deck machinery	204	19	Kongsberg Maritime	ship systems and simulators	244
15	Amot Controls	bearing condition monitoring system	205	54	Mack Boring & Parts Company	pumps and generators	245
47	Anchor Lamina	hydraulic drills	206	5	MAN B&W Diesel A/S	turbochargers	246
42	Anchor Marine	anchors and chains	207	34	Marine Response Alliance LLC	hazard response	247
37	Apex Engineering/Rydlyme	biodegradable marine descaler	208	52	Marine Turbo & Diesel, Inc.	diesel engine distributor	248
12	Ashby Cross Company	adhesives	209	57	Mari-Tech 2005	exhibits and conferences	278
27	Atlantic Marine	shipyard	210	54	Maritime Associates	safety products and signage	249
39	B. Hepworth and Co., Ltd.	windscreen & window wipers	211	43	Mark Van Schaick BV	crankshaft repair services	250
29	Benjn R Vickers & Sons Ltd.	lubricants	212	45	Merrill Marine Marketing & Capital Group	vessel brokers	251
44	Boatlife Industries	teak deck sealant chub	213	9	Military Sealift Command	employment	252
33	C.M. Hammar AB	life saving equipment	214	4	Motor Services Hugo Stamp Inc.	diesel engine spare parts	253
11	Caprock Communications	satellite communications	215	44	Motor-Service Sweden AB	spare parts deliveries	254
51	Capsante/Technofibre	lifeboat and davit maintenance	216	51	Norwegian Maritime Equipment AS	safety equipment	255
13	Climax Portable Machine Tools, Inc.	portable machine tools	217	54	Ocean Technical Services, Corp.	ship repair	256
1	C-Map Commercial	electronic charts	218	52	Pacific Coast Marine	doors & hatches	257
3	Crowley Maritime Corporation	marine logistics/transportation	219	35	Philadelphia Resins	propulsion	258
50	CSD North America	pipe and cable sealing systems	220	38	Saab Rosemount Tank Radar AB	marine electronics	259
52	Deansteel Mfg.	windows/doors & frames/galleys	221	41	Saab TransponderTech AB	AIS solutions	260
C2	Derecktor Shipyards	shipyard	222	12	Salt Away	salt removal	261
53	Don Sutherland Photography	photography	223	17	Sea Link of Hawaii, Inc.	business for sale	262
33	Electronic Marine Systems	the ballast	224	31	Severn Trent De Nora, LLC	sanitation systems	263
35	Electronic Marine Systems	the sea switch II	225	25	ShipNet	integrated maritime software solutions	264
37	Electronic Marine Systems	the radar	226	22	Simplex Americas, LLC	stern tube and shaft seals	265
39	Electronic Marine Systems	the bubbler	227	54	Skookum	rigging products	266
17	E-Power Group	hy-brid power	228	56	SNAME	design and engineering publications	267
10	ESAB Welding & Cutting Products	welding & cutting products	229	17	Sohre Turbomachinery	grounding and earthing brushes	268
34	Evac Environmental Solutions	sanitation and vaccum systems	230	50	Superior Energies, Inc.	insulation manufacturers	269
C4	GE Aero Energy	engines	231	52	Superior Energies, Inc.	insulation manufacturers	270
31	Giro Engineering Ltd.	fuel injection pipe specialists	232	20	Thordon Bearings Inc.	stern tube bearings	271
17	Hotel Monteleone	hotel	233	39	Totem Plus Ltd.	control systems, marine software	272
22	Imes, Inc.	lifeboat and crane testing	234	28	Vigilant Marine	oily water filtration	273
44	Industrial Power Systems	switchboards & control systems	235	47	VingCard Marine	marine locks	274
53	In-Place Machining	crankshaft repair	236	49	Wartsila	propulsion systems	275
14	Interstate Diesel	fuel injectors	237	44	Waterman Supply	marine equipment	276
2	Inventory Locator Service	parts locator	238	8	Willard Marine, Inc.	RIB manufacturer, boatbuilder	277
41	Jakob Hatteland Display AS	maritime multi-display	239				

The listings above are an editorial service provided for the convenience of our readers.

Products & Services



**WORLD-WIDE TURN-KEY TOW-DELIVERIES, TOW-
PREPARATIONS, ANY DWT, SURVEY-& INSURANCE
ASSISTANCE, DEMO-VESSEL & EQUIPMENT SALES.**
<http://www.nordicship.com>

U.S.C.G. LICENSE
ABOUT TO BE
Revoked or Suspended
Put a fighter in your corner
Protect your ticket
Call Today (727) 580-4576
ADMINISTRATIVE LAW HEARING REPRESENTATION

Tired of nautical reproductions



Maritifacts has only **authentic marine collectibles** rescued from scrapped ships: navigation lamps, sextants, clocks, bells, barometers, flags, binnacles, telegraphs, portholes & more. Current Brochure - \$1.00.

www.maritifacts.com / maritifacts@aol.com

MARTIFACTS, INC.

P.O. Box 350190 Jacksonville, FL 32235-0190
Phone/Fax: (904) 645-0150

Many Styles Available

Bunk Curtains

Mylar Sun Screens

Porthole Curtains

IMMEDIATE DELIVERY ON SELECTED STYLES

(718) 983-5600 (800) 336-6857 Fax (718) 983-9127
Website: metromarine.com E-mail: sales@metromarine.com
METRO MARINE DESIGN ASSOCIATES MADE IN THE USA

FOR SALE

MODELS

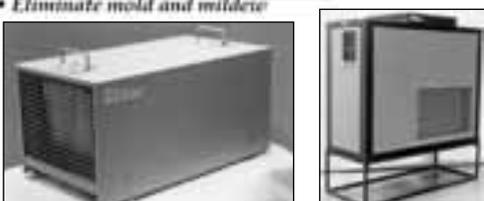
QUEEN MARY 2
THE Authorized model

ORDERS are now being accepted:
Please visit our WEBSITE.
phone: 1(305)386-1958
fax: 1(305)380-9056
replicas@maritimereplicas.com

WWW.MARITIMEREPLICAS.COM

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
www.ebacusa.com

Ebac Industrial Products, Inc.
704 Middle Ground Blvd.
Newport News, VA 23606
Telephone: 800-433-9011
Fax: 757-873-3632

Muldoon Marine Services
COMMERCIAL DIVING - NONDESTRUCTIVE TESTING

UWILD Surveys
Approved By All Major Class Societies

Nondestructive Testing
Topside and Underwater

Ship Maintenance
Propeller Polishing, Hull Cleaning, Etc.

24-Hour: (562) 432 5670
Long Beach, CA
www.muldoonmarine.com



BIGTOP
FABRIC STRUCTURES

weather shelter - 36'W x 150'L x 34'H

- Modular
- Multi purpose
- Relocatable
- Affordable
- Fast delivery
- Turnkey
- Large Doors
- HVAC

paint/prop sheds blast containment any width, length, or height

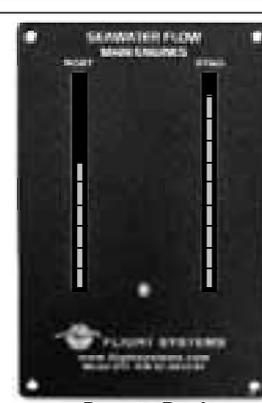
GREAT SHELTERS -- FACTORY DIRECT!

www.bigtopshelters.com
sales@bigtopshelters.com • PH 800-277-8677

New for 2005

Model 612 SEAWATER FLOW MONITOR

Instantly know when Cooling Water flow is restricted to Engines - HVAC - Generators



Remote Dual Display Shown

A removable anti-fouling sensor probe in the intake line senses water velocity **without moving parts**. Programmable logic unit with built-in "thermometer-style" display sends alarm & event outputs to remote display or data collection system.

2 Year Warranty. In stock, immediate delivery.
Factory Direct: \$650 Remote Display: \$160 (Dual: \$196)

FLIGHT SYSTEMS
800-403-3728 www.flightsystems.com

CAMAR International Corp.
120 Davis Steet, Douglas, MA 01516

FMS REPAIR PARTS
For Ex-USN Ships In Foreign Navies



The most complete stock of MILSPEC replacement parts and components for:

- Blowers & Compressors
- Steam Turbines
- Pumps
- Steam Valves
- Steam Boilers

Rotating Equipment Specialists

For Sales, Service and Support Call
(800) 352-7629
or fax to (508) 752-5687

Nameplates and Placards that last a lifetime.
Look no further than metalphoto

If you need...

- 20+ year outdoor life
- survival in a corrosive environment
- chemical and abrasion resistance
- resistance to salt spray & sunlight
- to meet Government or Mil-Specs
- to satisfy UID requirements

specify metalphoto

For Information about Metalphoto On-Demand Systems and/or Authorized Converters
call: 1-800-482-7758 or email: info@metalphoto.com
Please refer to ID Code "MR505" for specifications & FREE samples!

Vessels for Sale/Charter • New/Used Equipment

(2) AMCON 150 ANCHOR WINCHES



2 Drum, Air Controlled
GM diesel, torque conv
recond \$89,500.00 / ea.
FOB: Seattle, WA

New / Used
Berger Fairleads / Deckleads
Large Inventory In Stock
Rental / Sales



RASMUSSEN EQUIPMENT COMPANY

(800) 227-7920 • info@rasmussenco.com • www.rasmussenco.com

Skagit Model G70 4D Anchor Winch

We also supply . . .

- Barges
- Lashing Gear
- Synthetic Rope
- Wire Rope

Berger Fairleads - Deckleads
Diesel - Hydraulic - Air
Winches



In Stock
Ready to Ship

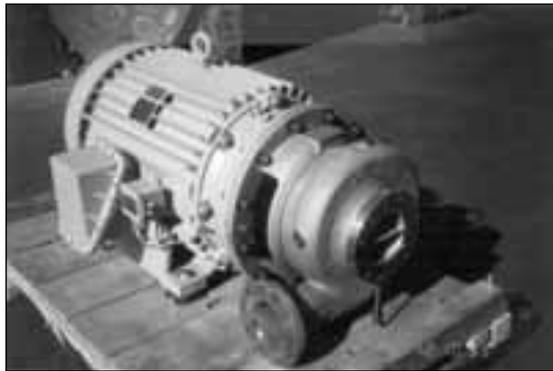
Rental / Sales

RASMUSSEN EQUIPMENT COMPANY

(800) 227-7920 • info@rasmussenco.com • www.rasmussenco.com

NEW FIRE PUMPS

1,000 G.P.M. at 125 P.S.I. - 6" IN x 5" OUT
Driven by a Low Noise 150 H.P. 440 Volts Elect. Motor
Titanium casing, totally enclosed motors.
Ideal for MARINE or INDUSTRIAL USES
COMPLETE MANUAL and CURVES AVAILABLE



WATERMAN SUPPLY CO. INC.

910 MAHAR AVE • WILMINGTON, CA. 90748

Phone : (310) 522-9698 Fax: (310) 522-1043

e-mail: waterman@bigplanet.com

**FOR
CHARTER**



400 Passenger High-Speed Catamaran

Gladding & Hearn "INCAT" is available for charter/lease Oct. 2005 through May 2006. The "Millennium" has a top speed of 35 knots and a service speed of 33 knots. First-Class amenities, A/C or heated interiors, outside sundeck seating, three levels, two bars and restrooms.

This vessel is in pristine condition and operates on a 51 mile route between Rhode Island and Martha's Vineyard.

For more information contact Charles Donadio
at (401) 255-9118 or visit our website at
www.vineyardfastferry.com



110' Live-a-board Dive yacht.
Vessel is ready to go For Charter or For Sale



125' Crew Boat (3) 3412 825 HP
CAT ENGINES



116' Live-a-board Dive yacht.
Vessel is ready to go For Charter or For Sale

SEACRAFT SHIPYARD CORPORATION

Repair • Conversion • Construction

P.O. Box 1550 • 3820 Lake Palourde Road

Amelia, Louisiana 70340

Phone (985) 631-2628 • Fax (985) 631-3513

Email: steven@seacraftshipyard.com

Website: www.seacraftshipyard.com

Vessels and Equipment For Sale



116' Aluminum Vessel can be completed as a
Diner Cruise, Party Fisher, Personal Yacht,
Live-a-board Dive yacht, etc



60' Aluminum Sport Fisherman
Hull built by Halter, Ready for completion



195' & 166' Supply Vessel • Both vessels are
all CAT power



Gears



Generators



Propellers



S/S Shafts



CAT Engine/Parts

Vessels for Sale/Charter • New/Used Equipment

CONTACT: KEN HUSKEY

Ken@DeliverItVi.com
340-776-8660

WORLD-WIDE CHARTER

- DOMINICA FLAG
- CREWED CHARTER



M/V CAPTAIN JOHNNY 1

176' SUPPLY VESSEL

20' x 26' 100-TON CAPACITY STERN RAMP
DUAL CATERPILLAR D399 DIESEL ENGINES
DRY DOCK COMPLETED - MARCH 2005

AVAILABLE FOR: CONTAINER SHIPPING <> SURVEY WORK
SEMI-TRAILER TRANSPORT FOR AUDIO/VISUAL PRODUCTIONS
CABLE LAYING <> OFFSHORE SUPPORT

EQUIPMENT FOR SALE

Phone (616) 392-2958, Fax (616) 392-5054

Email - Imc@lakemicontractors.com Website - www.lakemicontractors.com



Floating Drydock - New Construction
8' Pontoons - 23' Wingwall Hgt. 74' Between
Wingwalls - 150' Long Located in MI
Delivery Available at Additional Cost



84' Model Bow - Twin Screw
Flanking Rudders, Elevating Pilot House
Tow Winch - Located in Michigan



79' Model Bow - 98 Ton Twin
16V149's - 2400 hp, Smatco
Towing Machine - Kort Nozzles
Located in Florida



55' Model Bow - Twin 12V71's
800 hp - Located in Florida



155' x 50' x 12'5" ABS'd Deck
Barge - Located in Michigan



Specializing In Barges



- Single or Double Hull, Inland or Ocean-Going
- Design, Construction & Modification
- Chartering, Sales & Brokerage

Ask for Bill Gobel

503-228-8891 1-800-547-8258

3121 SW Moody Avenue, Portland, Oregon 97239

There's only one thing with a stronger international presence than **MARITIME REPORTER**. Empower your ad with superior circulation. Call: 212-477-6700



THE MARITIME GROUP
118 East 25th Street, New York, NY 10010
Tel: 212-477-6700, Fax: 212-254-6271, E-mail: info@marinelink.com

Employment/Recruitment

AB'S, CAPTAINS, ENGINEER'S, MATES, QMED'S, TANKERMAN

ARE YOU LOOKING FOR A BETTER JOB?
MORE MONEY? WE ARE DISCREET..
EMPLOYERS LOOKING FOR A CREW?

LET US MAKE THE CONNECTION FOR YOU!!

PROGRESSIVE MARINE PERSONNEL SERVICE

TEXAS (281) 689-7400 FAX (281) 689-7711
LOUISIANA (504) 834-1114 FAX (504) 834-1181
WASHINGTON (206) 524-6366 FAX (206) 524-4544

ELECTRICAL ENGINEER, GS-850-13 (\$74,782 - \$97,213pa)
U. S. Coast Guard Engineering Logistics Center, Baltimore, MD. Fulltime on Deepwater Project. Work includes, but not limited to the planning, coordination, investigation, preparation and evaluation of feasibility studies, specifications, design layouts, RFDs, and test procedures for electrical machinery and equipment installed or to be installed on Coast Guard's Deepwater surface assets.

Visit www.usajobs.opm.gov
<http://www.usajobs.opm.gov>
Ann.# CG-05-0809-NEJF.
EOE

USCG LICENSED FIRST AE / RELIEF CH ENG

Position available immediately. UL Motor license and experience with Wartsila propulsion required. Also accepting applications for Ch Mate AGT. Company paid H&D, RX, 401-K.

Send inquiry to:

Vessel Management Services Inc.

POB 770254

New Orleans La70177

Attn Ray

Fax: 504-945-9876 • Ph 504-945-9181

Employment/Recruitment

Positions Available:

**Captains • Mates
Pilots • Engineers
Tankerman • AB's
QMED's • OS's**

ATT: All boat companies. When you are in need and your boat can't move, call for all crew members - trip or permanent. We are here for you.

BUCCANEER



CREWING

Buccaneer Crewing
The Offshore Employment Specialists

866-675-6300
Fax: 251-442-3696
jobs@buccaneercrewing.com
www.buccaneercrewing.com

When you are injured, turn to the attorneys you can trust.

If you are seriously injured while on the job, you need an attorney right away to look out for your interests. After an injury, your company will quickly begin an investigation to build a case. You need immediate representation and help. You need the 28-combined years of experience of Gordon & Elias LLP.

- ◆ No recovery , no fee
- ◆ We answer the phone 24/7
- ◆ We fly to you, or fly you to us - at our expense
- ◆ We provide cash advances to help you with your bills (at a 0% interest rate) in jurisdictions where this is allowed.*

Gordon & Elias L.L.P.
Attorneys at law

5821 Southwest Freeway Suite 422 Houston, TX 77057
713-668-9999 / 713-668-1980 (fax)
Email: rtelias@gordon-elias.com
Website: http://www.gordon-elias.com

Call now for free consultation.

800-491-3377

We work hard for you to make sure you get everything you deserve.

All Attorneys licensed to practice by the Supreme Court of Texas. Steve Gordon - Of counsel - Board Certified - Personal Injury Trial Law - Texas Board Of Legal Specialization. Other attorneys not certified by the Texas Board of Legal Specialization except as noted.

* All cash advances will be reasonable and necessary living and medical expenses related to your accident and will only be made in compliance with State Bar rules.

MarineNews
Whether it's a job, vessel, product or service
MarineNews is the place to look.

- VESSELS FOR SALE
- EMPLOYMENT GUIDE
- MARINE MARKETPLACE
- CLASSIFIEDS

**maritime
recruiters**

Administration – Construction
Crewing – Engineering
Finance – M & R
Operations – Sales

(Established 1969) P O Box 260 • Mercer Island, WA 98040 • 206-232-6041

HELP WANTED



VANE BROTHERS

Over a Century of Maritime Excellence
Baltimore ★ Norfolk ★ Philadelphia

THE VANE BROTHERS COMPANY is recruiting qualified candidates for positions on marine transport vessels operating along the Northeastern Atlantic Seaboard.

Tug Masters and Mates

Must possess a valid OUTV (Operator of Uninspected 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

Must possess current MMD; experience preferred.

Vane Brothers Co. offers a highly competitive salary program and excellent employee benefits. If you have the skills and experience to qualify for any of these positions, please contact **Scott Bennett**, Fleet Coordinator, at 410-735-8249, or the Operations Department at 410-631-5096 x 249 or call 1-800-252-5096.

www.vanebrothers.com



Port Captain



Great Lakes Fleet/Key Lakes Inc. has an immediate full time position for a Port Captain, in the Operations Department in its Duluth, MN office. Individual should possess a minimum of a Mates license with five years sailing experience on Great Lakes, self-unloading bulk carriers and be able to demonstrate an understanding of bulk cargo operations, ship handling, terminal operations, etc.

This position reports directly to the Fleet Administrator, the senior shoreside manager in charge of fleet operations. Applicant will be responsible for assisting with the daily operations and shoreside oversight of the deck department operations of the Great Lakes Fleet of eight self-unloading bulk carriers.

Job Responsibilities to include: meet ships and interact with crew, track and document vessels' performance, assist with implementation of company policies, assist with Union/Labor issues, liaise with traffic department, assist with tugs and harbor movements.

We offer competitive salary commensurate with experience, and an excellent comprehensive benefits package. Qualified candidates submit resume to:

Great Lakes Fleet/Key Lakes, Inc.

212 S. 37th Ave. W, Suite 200

Duluth, MN 55807

Attn: Operations Dept.

M/F/D/V EOE

Employment/Recruitment

Director, International Business Development and Area Manager for Mexico needed by owner/operator of deepwater offshore supply company in Covington, Louisiana. Position requires Bachelor's degree in Business Admin. or Finance and 2 years experience in job offered or offshore supply vessel industry management. Must read, write, and speak Spanish and must read and speak Portuguese. Requires 25% travel to Mexico, Central America, or South America.

Please send resumes to
Hornbeck Offshore Services, Inc.,
Attn: Louis Buisson, 103 N. Park Blvd.,
Covington, LA 70433.

Long's Marine Staffing

Openings available, throughout the US, for the following positions: AB/OS, QMED, Lic/Unlic Eng., Tankerman, exp. Deckhands, Captains, Mates & Pilots.
Call Marie@251-476-4933
or email mpresley@longshrs.com

EOE

MARITIME INJURIES

Schechter, McElwee & Shaffer's attorneys have over 70 years of combined experience representing injured seamen, offshore workers and longshoremen 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, L.L.P.
Houston & Galveston, Texas
Nationwide 24-hour help line
1-800 282-2122
(713) 524-3500
Website - www.smslegal.com



KBR is a global engineering and services company. We are currently seeking personnel for Overseas Opportunities in the Middle East and Central Asia.

KBR is looking for candidates in the following positions:

- Diesel Mechanics - Job Req. # 145774
- Diesel Powered Generator Mechanics - Job Req. # 134174
- Recovery Drivers - Job Req. # 146087
- Water Purification Specialists (ROWPU) - Job Req. # 145754

The successful candidate must be willing to deploy to the Middle East for a one year open-ended contract after at least 14 days of processing in Houston.

Apply online at:

<http://apply.kbrjobs.com>

Source Code 59208

KBR | We Deliver

KBR is a drug-free workplace and is an equal opportunity employer committed to workplace diversity. ©2005 KBR. A Halliburton company. All rights reserved.

Title of Job: Marine Operations Manager
Location of Position: SF Bay Area Offices, On the Embarcadero, San Francisco, CA
Reports to: Director of Marine Operations
Type of Position: Regular, Full Time, Salaried

Job Description:

Come work for the premier passenger vessel excursion company on the west coast! This is an excellent opportunity for a creative manager who can think "out of the box" and put his or her engineering talents to use in upgrading Hornblower's fleet of dining yachts and fleet facilities. With eight vessels spread over three port locations within the San Francisco Bay Area, challenges abound for a marine manager well versed in engineering design concepts and a desire to push the envelope. The candidate should have sufficient background and experience to successfully negotiate the following challenges:

- Management and supervision of engineering upgrades to various Hornblower yachts, to include re-powering, new HVAC, ADA upgrades, and interior re-design.
- Management and supervision of the renovation and rebuilding of existing Hornblower fleet facilities located within the San Francisco Bay Area.
- Selection, purchasing and specifying of equipment and materials to upgrade dining yachts while meeting Coast Guard regulatory requirements.
- Development of vessel design concepts, both for new vessel construction and existing vessel enhancements, to include the latest state-of-the-art "green" construction techniques.
- Management and supervision of security upgrades and enhancements to Hornblower fleet facilities within the San Francisco Bay Area.
- Development of safety, security, and environmental management plans required by various regulatory bodies.

A familiarity with Coast Guard regulations - safety and security - for domestic passenger vessels is desired, as well as strong technical writing skills.

Hiring Requirements:

- Bachelor's Degree in an engineering discipline is desired.
- Five years experience in a marine operations or technical engineering position.
- Coast Guard Licensed Master 100-ton and/or 1600-ton or Engineer desired.
- Enrollment in pre-employment and random drug testing program required.
- AUTOCAD experience desired.

To apply for this position, please go to www.hornblower.com or call 1-866-263-2685



Tropical Shipping, a leader in the ocean freight industry, has the following career opportunities available at our sunny West Palm Beach, FL location.

Marine Mechanic

\$2,500 sign-on bonus! Qualified candidates will have experience rebuilding & repairing diesel engines and pneumatic & hydraulic systems. Experience in all areas is not necessary; we will train the right person. Marine experience is a plus.

Management Trainee, Marine Department

Qualified candidates will have 3 years combined experience as a licensed Marine Engineer aboard motor vessels and shore side supervisory experience for vessel repair and maintenance. Bachelor's degree in Marine Engineering Technology or related field required. Great opportunity!

We offer an excellent compensation/benefits package, including relocation and 401(k). Send your resume with salary requirements to careers@tropical.com; fax: (561) 840-2956 or apply on-line at www.tropical.com. EOE/DFWP

Professional

YOU COME TO US
16 courses to choose from
at our facilities in Reno, Nevada or Griffin, Georgia.

WE COME TO YOU

Abaris Onsite: Quality training conveniently held at your facility for multiple students.

Abaris Direct: Consulting services aimed at finding solutions for your specific problems.

ABARIS TRAINING The Leader in Advanced Composite Training Since 1983.

Contact us for a complete course catalog.
800-638-8441
www.abaris.com

Naval Architects  Marine Engineers

M. ROSENBLATT & SON

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

GRANDALL
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.grandalldrydock.com

 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 • ISLANDIA, NY • LAKEHURST, NJ • PASCAGOULA, MS • SEVERNA PARK, MD • WASHINGTON, DC
BREMERTON, WA • PHILADELPHIA, PA • PATUXENT RIVER, MD • PORTSMOUTH, VA • SAN DIEGO, CA

Visit us at our web site at: <http://www.cdi-gs.com> Email: cdi-gs@cdicorp.com

LASER & OPTICAL ALIGNMENT
of shafts, bearings, couplings, & rudders
3D Hull Scanning

Aiman Co., Inc.
(813)-715-4600
www.aimanalignment.com

 **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@bristolharbortgroup.com
www.bristolharbortgroup.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

John S. Boland President P.O. Box 612
Pascagoula, MS 39568

 **Alan C. McClure Associates, Inc.**
Naval Architects • Engineers

2880 South Gessner • Suite 104 • Houston, Texas 77063
Tel: (713) 789-1848 • Fax: (713) 789-1347 • E-mail: info@acmcclure.com

The ultimate stop for solving marine propulsion shafting vibration or design problems

CADEA www.cadea.hr

Tom M. Pavlinovic • Bill Zimm • Croatia
Phone: +385 21 490 151 • Fax: +385 21 490 154

 **GHS**
General HydroStatics

Ship Stability and Strength Software
Creative Systems, Inc.
Custom GHS™

P.O. Box 1910 Port Townsend, WA 98368 USA
phone: (360) 385-6212 fax: 385-6213
email: sales@ghsport.com
www.ghsport.com/ghs

 **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

 **CHILDS ENGINEERING CORPORATION**
WATERFRONT ENGINEERING • DIVING INSPECTION

BOX 333 MEDFIELD, MA 02052 (508)359-8945

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

LEGAL NETWORK

 **SOS**

1-800-3-MAY DAY
• KNOW YOUR LEGAL RIGHTS •

The SOS Number.
Dont Leave Port
Without It!
1-800-3-MAY-DAY

NATIONAL
24-HOUR HELPLINE
NO RECOVERY-
NO FEE

INJURED AT SEA?

Experienced Maritime Lawyers
Representation Nationwide
Cappiello Hofmann & Katz

360 West 31st Street New York, NY 10001
17 Academy Street Newark, NJ 07102

Call for a FREE telephone consultation
1-800-3-MAY DAY • 1-800-362-9329
www.chklawfirm.com

CUNNINGHAM & WALKER
MARINE CONSULTANTS, INC.

 **NAVAL ARCHITECTURE & MARINE ENGINEERING**
MARINE HVAC ENGINEERING
MARINE ELECTRICAL ENGINEERING

1762 PROVIDENCE HOLLOW LANE, JACKSONVILLE, FL 32223
TEL 904 292 9293 FAX 904 824 1423

DM Consulting, Inc.
12344 Ocean Blvd - San Diego, CA 92129

Dry Dock Training and Conferences
Ph: 858-705-0760 • Fx: 858-538-5372
Jstiglich@aol.com
www.drydocktraining.com



Professional

CUNNINGHAM MARINE HYDRAULICS CO., INC.

Service Parts Repair Consulting

Authorized Sperry - Decca - C. Plath Dealer

CMH HELE-SHAW, INC.



201 Harrison Street
Hoboken, N.J. 07030
(201) 792-0500 # (800) 322-2641
FAX # (201) 792-7716

E-Mail Address:
cmh@cmhusa.com

G&C GIBBS & COX INC

NAVAL ARCHITECTS & MARINE ENGINEERS

www.gibbscox.com

Email: 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 | WEB

Naval Architects | Marine Engineers | Ocean Engineers

John J. McMullen Associates, Inc.
An Employee Owned Company

JJMA

Since 1957-
Commercial and Naval Ship Design, Detail Design and Construction
Program Support, Marine Consulting, Pollution Prevention Programs

**Naval Architects
Marine Engineers
Program Support Specialists**

Alexandria, VA • Washington, DC • New York, NY
Newport News, VA • Pascagoula, MS • Pittsburgh, PA
Philadelphia, PA • Port Hueneme, CA • Bath, ME
New Orleans, LA • Jacksonville, FL • Groton, CT

Corporate Headquarters:
4300 King Street Suite 400
Alexandria, VA 22302

Business Development: (703) 933-6690
Fax: (703) 933-6777
Web Site: www.JJMA.com
Email: Marketing@JJMA.com

SPECIALISTS IN THE DESIGN OF:

- OFFSHORE SUPPORT VESSELS
- TUGS AND TOWBOATS
- BARGES
- HIGH SPEED CRAFT
- NAVAL VESSELS
- CRIBBOATS
- SPECIAL PURPOSE VESSELS
- YACHTS



DESIGN, CONSULTING, SURVEYING AND DRAFTING SERVICES

GUARINO & COX, LLC
Naval Architects, Marine Designers and Consultants
838 Lulu Drive North, Suite 2, Woodville, LA 70077
Telephone (504) 626-5600 Fax (504) 626-5616

JOHN W. GILBERT ASSOCIATES, INC.
Naval Architects Marine Engineers



(781) 740-8193
FAX (781) 740-8197

75 Terry Drive, Suite 200
Hingham, MA 02043

Fleetway Inc.

- Marine Engineering • Naval Architecture
- Life Cycle Support



Suite 200, 155 Chain Lake Drive, Halifax, Nova Scotia, Canada B3S 1B3
Phone: (902) 494-5700 Fax: (902) 494-5792

Ideas Engineered Into Reality

GUIDO PERLA & ASSOCIATES, INC.

NAVAL ARCHITECTS,
MARINE, MECHANICAL & ELECTRICAL ENGINEERS

701 Fifth Avenue, Suite 1200 Phone: 206-768-1515
Seattle, WA 98104 http://www.gpai.com

MSC MARINE SYSTEMS CORPORATION
MARINE ENGINEERS / NAVAL ARCHITECTS

HM&E Design Inspection **Drawings Vibration** **Logistic Support Testing Programs**

68 FARGO STREET, BOSTON, MA 02210 INFO @ MSCORP.NET
TEL (617) 542-3345 FAX (617) 542-2461 WWW.MSCORP.NET

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

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

MCA CONSULTANTS, INC.
Marine - Structural - Naval Architects

Structural Engineering - Finite Element Analysis

Ship Surveys - CADD / Production Drawings

Hull Monitoring Systems - Software Development

Serving the Marine Community Since 1972

2960 Airway Ave, Suite A-103 Costa Mesa, CA, 92626
info@mcaco.com 714 - 662 - 0500 www.mcaco.com

GEORGE G. SHARP, INC.



100 CHURCH 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

MARINE SYSTEMS • ANALYSIS & DESIGN

JMS

NAVAL ARCHITECTS
SALVAGE ENGINEERS
the sea going naval architects

Engineering & Design For:
• New Build • Modifications
• Repairs • Shipyard Support

860-448-4850 • JMSnet.com

Ocean Marine

Brokerage Services

Commercial Vessel Brokers

FISHING VESSELS & OILFIELD VESSELS

E-MAIL: comboats@oceanmarine.com
Web: www.oceanmarine.com
CALL 985-448-0409 Fax: 985-448-1070

Professional

NEW YORK CITY DEPARTMENT OF TRANSPORTATION

STATEN ISLAND FERRY OPERATIONS DECKHANDS & MATES

The New York City Department of Transportation's Staten Island Ferry Division seeks candidates for the following positions:

DECKHANDS: Salary \$37,342. Operate gates, gangplanks, aprons and bridges; handle lines; assist passengers; clean vessels; act as a lookout; operate fire-fighting equipment; participate in fire and lifeboat drills;

QUALIFICATIONS: 2 years of full-time satisfactory experience as a deckhand acquired within the last 10 years.

MATES: Salary \$42,978. Responsibilities include Deckhand assignments and instructions; oversees embarking and disembarkment of passengers; participates in fire, lifeboat and emergency drills; assumes responsibility for the safety and care of floating property of the Department of Transportation; prepares accident reports, maintains records and makes reports as necessary; performs related duties.

QUALIFICATIONS: Candidates must possess a valid U.S. Coast Guard license as Inland Mate of Steam and Motor Vessels of any Gross Tons, or higher, with an endorsement as Radar Observer and three years experience as deckhand. License must be kept for duration of employment.

REQUIREMENTS: Subject to background investigation, medical and drug screening. City residency required within 90 days of appointment. Excellent benefits package.

Forward resume to:

Josephine O'Connell
NYC Dept. of Transportation
Personnel Division
40 Worth Street, Room 801
New York, NY 10013

or E-mail to joconnell@dot.nyc.gov

EQUAL OPPORTUNITY EMPLOYER



Seamen's Church Institute of New York & New Jersey



Center for Maritime Education

Deep-sea. Coastal, and
Inland Simulator Training

Marine Fire Fighting (Inland)

Radar Renewal

Full course listings at:

www.seamenschurch.org

New York City Paducah, KY Houston, TX
212-349-9090 270-575-1005 713-674-1236

Schrider

Naval Architects

& Associates, Inc.
Marine Engineers

P.O. Box 2546

Daphne, AL 36526

E-mail: info@schrider.com

Office: (251) 621-1813

Fax: (251) 626-1814

Technical and Managerial Solutions for Shipyards & Vessel Owners

Selling your vessel or marine equipment is easy!



A classified ad in **MarineNews** is one of the fastest and cheapest ways to sell any marine item... whether it's new or used equipment... a commercial vessel... or any kind of service.

Each month the classified section in **MarineNews** is read by over 22,000 marine industry buyers... ship and boat owners... shipyards... boatyards. Its 18 times a year frequency means your ad gets results... **fast!** **MarineNews** reaches the entire North American marine industry.

Experience the selling power of **MarineNews** classifieds! Contact a **MarineNews** representative today!

Florida Office
Tel: 561-732-1659

New York Office
Tel: 212-477-6700

E-mail: info@marinelink.com

Coast Guard/State Pilotage License Insurance

Worried about defending your license or yourself in a hearing conducted by the Coast Guard, National Transportation Safety Board or a State Pilotage Authority, which could result in license revocation, suspension or assessment of a fine/money damages against you personally?

Stop worrying. Insure yourself and your license with a Marine License Insurance Policy. For more information, contact R.J. Mellusi & Co., 29 Broadway, New York, N.Y. 10006, Tel (212) 962-1590 Fax (212) 385-0920, E-mail: Rjmellusi@sealawyers.com



TECHNOLOGY ASSOCIATES

NAVAL ARCHITECTS • MARINE ENGINEERS
MARITIME SOLUTIONS



Tel: 504-282-6166
Fax: 504-282-6186

New Orleans, LA
www.NavalArchitects.US



INJURED?

For The Representation You Need And The Results You Deserve, Call:

TYLKA LAW FIRM

Lawrence M. Tylka

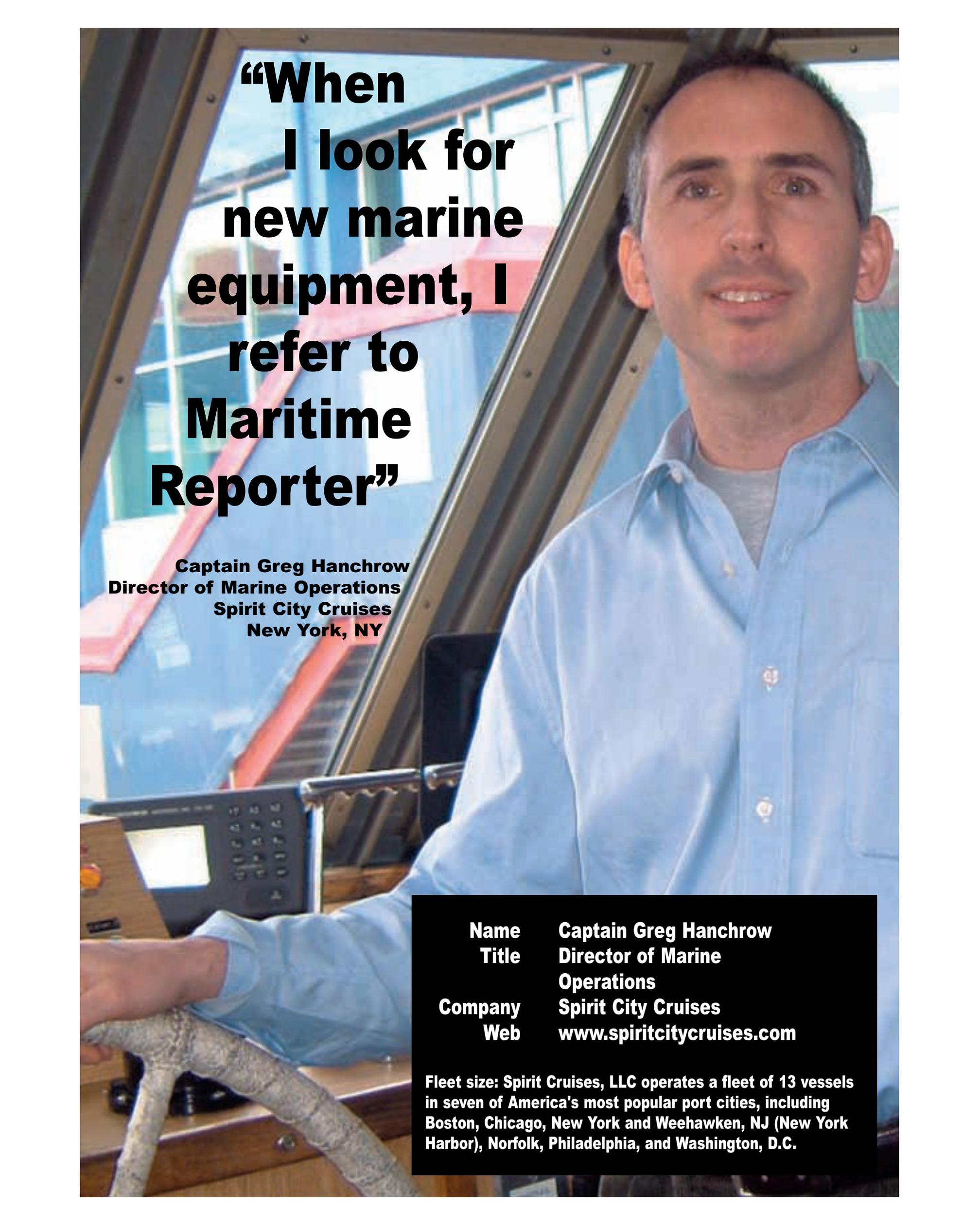
National: (877) 228-9552 Galveston: (409) 762-0066

Houston: (877) 762-0066 Fax: (409) 762-7333

E-mail: Tylkalawcenter@sbcglobal.net

Over 20 years experience in maritime representation.

Not certified by the Texas Board of Legal Specialization

A photograph of Captain Greg Hanchrow, a man with short dark hair and a light blue button-down shirt, sitting at the helm of a ship. He is looking towards the camera with a slight smile. The background shows the ship's deck and railings through a large window.

**“When
I look for
new marine
equipment, I
refer to
Maritime
Reporter”**

**Captain Greg Hanchrow
Director of Marine Operations
Spirit City Cruises
New York, NY**

Name Captain Greg Hanchrow
Title Director of Marine
Operations

Company Spirit City Cruises
Web www.spiritcitycruises.com

Fleet size: Spirit Cruises, LLC operates a fleet of 13 vessels in seven of America's most popular port cities, including Boston, Chicago, New York and Weehawken, NJ (New York Harbor), Norfolk, Philadelphia, and Washington, D.C.



Reach your full potential.

It's not about winning one race, it's about doing the same job for 25 years over and over again, as efficiently as possible. That's why we're bringing our experience and innovation to LNG shipping companies through our integrated gas turbine propulsion systems.

The GE combined cycle propulsion plant is based on the world's best selling gas turbine, GE's LM2500, which successfully powers a wide range of commercial vessels. In very large LNG carrier designs, gas turbines can provide up to 10% more cargo capacity as compared to other propulsion systems. With world-class experience both on land and at sea, GE's LM2500 gas turbines can enhance overall performance through lower fuel consumption, lower emissions, and more efficient use of space—thereby providing customers an economical alternative to conventional propulsion systems.

Gain the competitive edge. Visit gepower.com



GE imagination at work

Circle 231 on Reader Service Card