

MARITIME REPORTER AND ENGINEERING NEWS

Time in drydock is money lost, so competitive ship repair yards must

Fix 'em Fast

Monitoring is Control

Advanced electronic and software packages greatly enhance shipboard maintenance control

The Electric Ship

Delivery on the promise has been slow to come

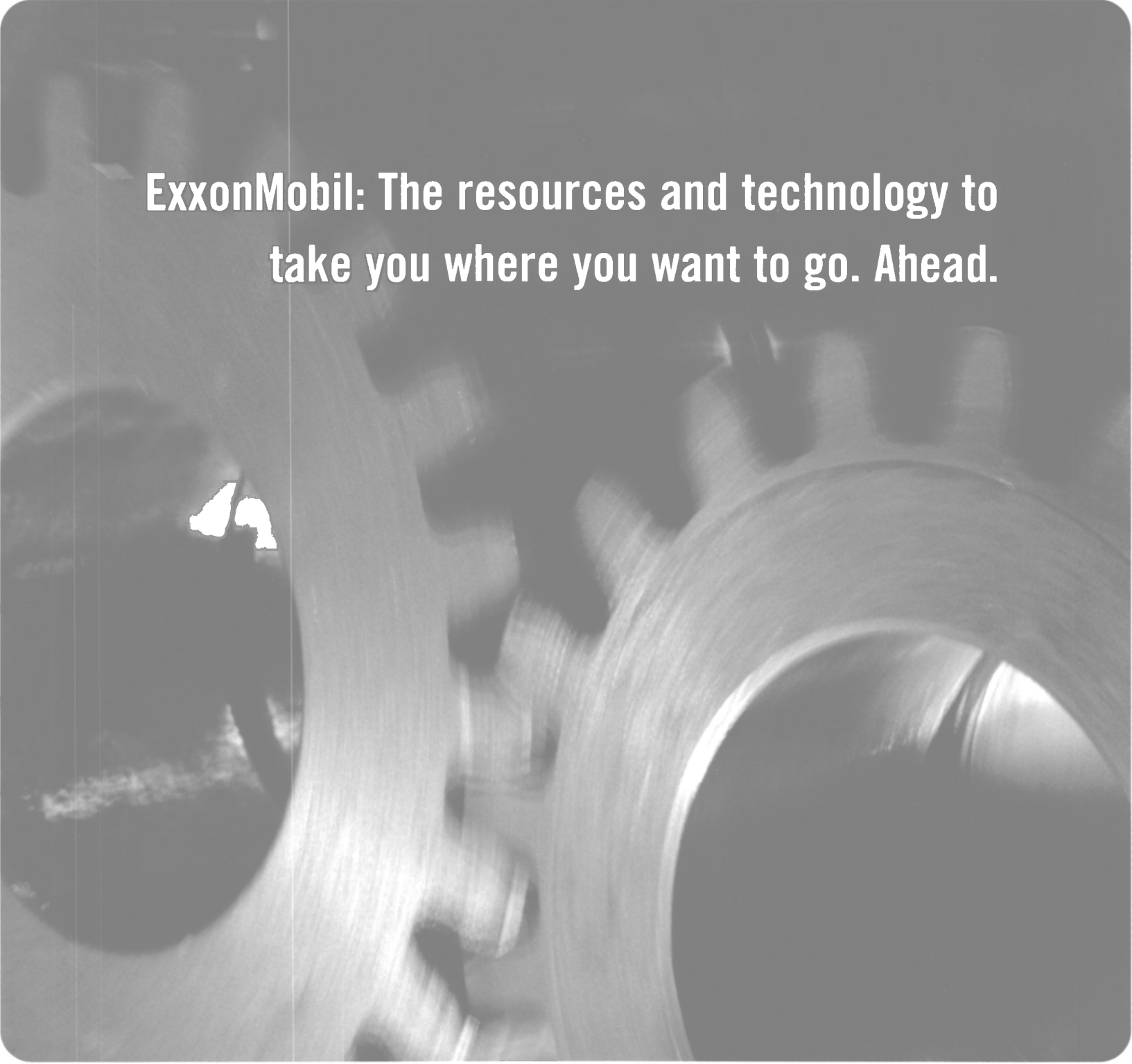
Terrorism: The Aftermath

Security solutions quickly evolve to keep commerce flowing

Workboat Report



New Trasmed Ferry Murillo Debuts • Investment in Design: Towards the Intelligent Engine • Ship's Store
Legal Beat: Duty Calculations Disputed in Drydocking Case



**ExxonMobil: The resources and technology to
take you where you want to go. Ahead.**

© 2001 Exxon Mobil Corporation

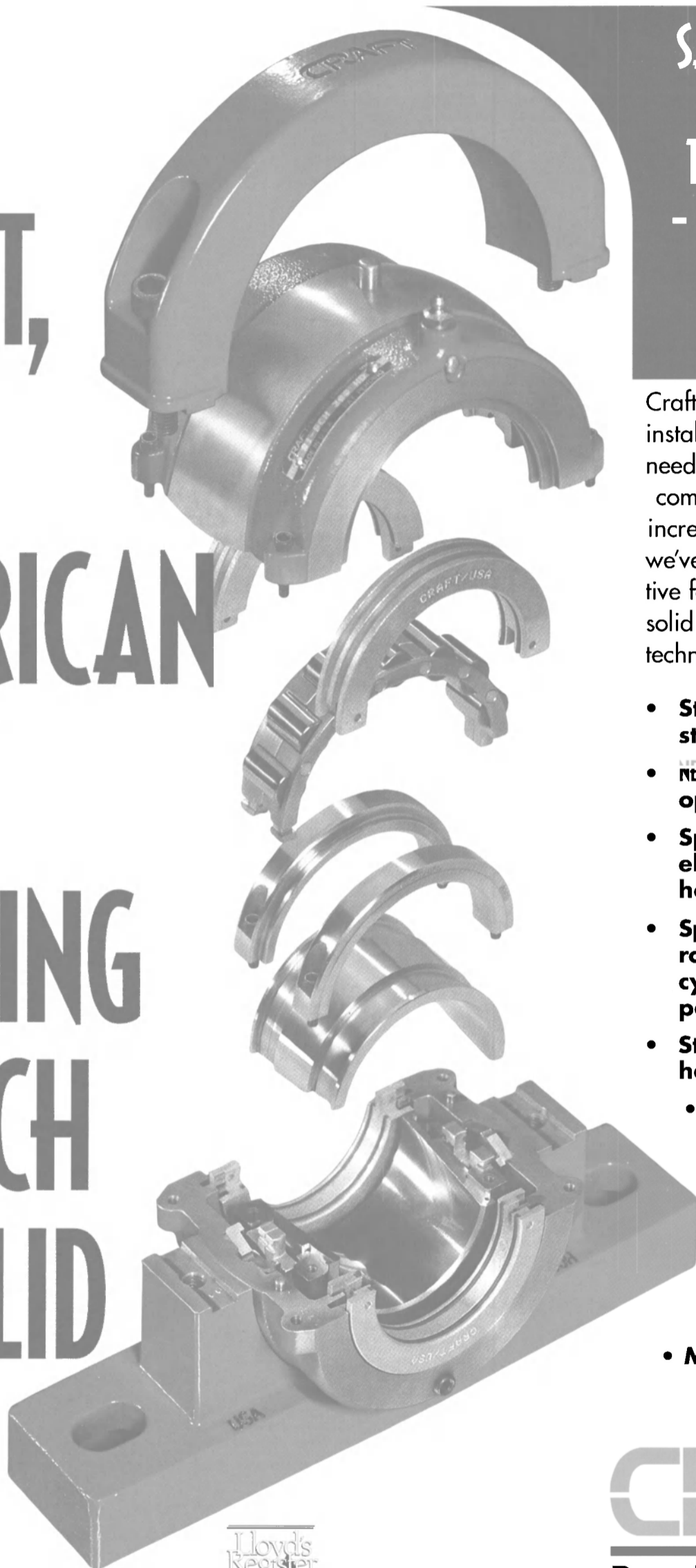
ExxonMobil combines the strengths of two of the world's leading lubricant and petroleum specialties companies. We now have greater technology and more relationships with the world's leading equipment builders. Together with our deep sector expertise, these resources keep us at the forefront of lubrication science. And we'll continue to offer Exxon and Mobil products, so you can get the same dependable brand you trust virtually anywhere in the world. As a leader in the marine lubricants industry, we're always looking for new solutions. And always moving ahead. Visit us at www.exxonmobil.com/lubes.

ExxonMobil
Marine Lubricants

moving AHEAD

Circle 245 on Reader Service Card or visit www.maritimereporterinfo.com

WHY CRAFT, THE AMERICAN SPLIT BEARING IS SUCH A SOLID IDEA.



**SAME DAY SHIPMENT
OF BORE SIZES
1 7/16" THRU 10"
- LARGER BORE SIZES
UP TO 32"
ALSO AVAILABLE.**

Craft split bearings are easy to install because they eliminate the need to remove shafts and drive components. In addition, to increase reliability and longevity, we've added a host of other innovative features. Count on Craft for solid ideas and superior American technology.

- **Strong ductile iron casting standard**
- **NEW! stainless steel casting optional**
- **Split triple labyrinth seal eliminates shaft wear and has an extended life span**
- **Split integral locking roller cage with cylindrical pockets for positive roller retention**
- **Standard base-to-center height**
 - **Metric, special applications and custom bearings also available**
- **Rapid response to all orders**
- **Complete technical support**
- **Made in America**

CRAFT

Bearing Company, Inc.

U.S. Patent No. 5,630,669, No. 5,743,659
and other patents pending.

617 Regional Drive,
Hampton, Virginia 23661
Tel (757) 838-2987 Fax (757) 838-3860
www.craftbearing.com email: info@craftbearing.com

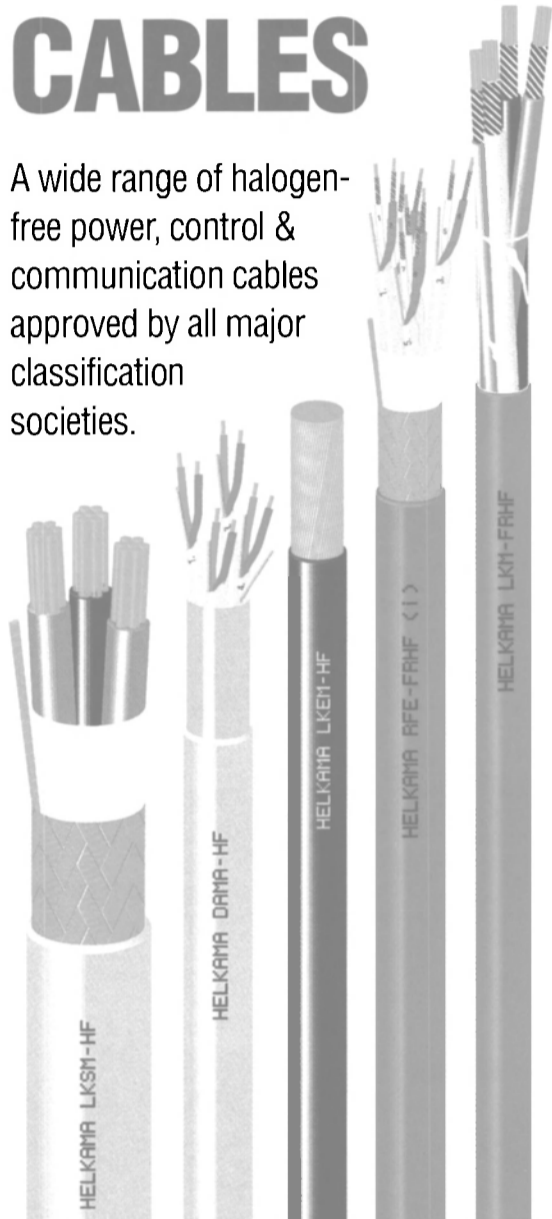


Circle 225 on Reader Service Card or visit www.maritimereporterinfo.com

THE BRAND
OF
RELIABILITY

HELKAMA SHIPBOARD CABLES

A wide range of halogen-free power, control & communication cables approved by all major classification societies.



By choosing HELKAMA cables you will secure the fastest and most reliable deliveries for your projects. All over the globe.

HELKAMA

Helkama Bica
Lakimiehenkatu 4, FIN-20780 KAARINA, FINLAND
Tel. +358 2 410 8700, fax +358 2 410 8750
www.helkamabica.fi
marinecables@helkamabica.fi

Circle 257 on Reader Service Card or visit www.maritimereporterinfo.com

MARITIME REPORTER

AND
ENGINEERING NEWS

ISSN-0025-3448
USPS-016-750

No. 11

Vol. 63

118 East 25th Street
New York, NY 10010
(212) 477-6700

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.

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

On the Cover: Newport News Shipbuilding recently repaired steam turbine-powered MSC prepositioning vessel SS PFC Eugene A. Obregon during a 23-day availability at the yard. The 821 x 105.5-ft. (250 x 32.1-m) vessel, which is chartered through Waterman Steamship Corporation, underwent work, which included hull and deck preservation, crane overhaul, boiler re-tubing, emergency generator maintenance and regulatory body inspections. Pictured is NNS rigger Fred Jenkins, who is performing preliminary work on Obregon's propeller in preparation for its removal.

8 Get Smart

Norwegian chem tanker specialist Odfjell is starting to see operating benefits resulting from its pioneering step toward "intelligent" engines. — by David Tinsley, technical editor

12 Rolling Along

IZAR will deliver — just 20 months after contract signing — a high-grade RoRo passenger ferry for Trasmediterranea. — by David Tinsley, technical editor

21 Ship Repair Report

— written and edited by Regina Ciardiello, senior editor

- CIT Takes Issue With Customs' Duty Calculation
- NORSHIPCO Hope Buoyed Despite Drydock Mishap
- Newport News Shipbuilding: City in A Shipyard
- Offshore Work Keeps Atlantic Marine-Mobile Humming

36 Flip the Switch?

Following many promises and plans, the "All-Electric" Navy has yet to materialize. — by Scott C. Truver

46 Workboat Report

- Accurate Cost Estimation is Crucial
- Marco Shipyard: Strong Roots, Bright Future
- Bollinger, Eastern Deliver Vessels

61 Monitoring is Control

A new tug automation system — among others — is helping ship and boat owners to better control their ships and manage expenses.

76 Terror's Aftermath: Security is Job 1

Integrating security processes into the safety management framework is a top priority for maritime companies. — by Capt. James S. Clarkson, Modern Maritime Group

Also in this Edition:

- 73 Manitowoc Nabs NYC Ferry Contract, USCG Icebreaker Contract
- 81 Buyer's Guide
- 84 Ship's Store
- 86 Classifieds
- 88 Advertising Index

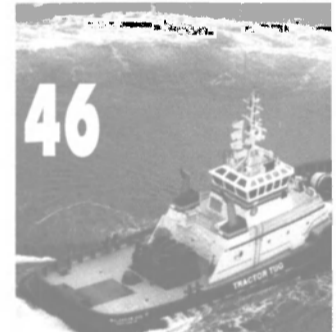
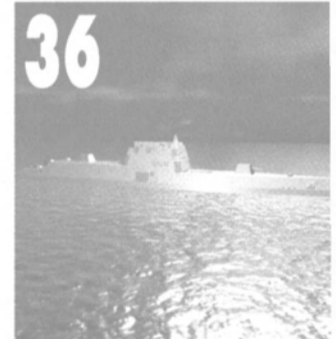
Subscriptions: One full year (12 issues) \$18.00 in U.S.; outside of U.S. \$96.00 including postage and handling. For subscription information, contact: Dale Barnett, fax: (212) 254-6271; e-mail: barnett@marinelink.com

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.

Canada Post International Publications Mail Product (Canadian Distribution) Sales Agreement No. 0970700. Printed in U.S.A.

Publishers are not responsible for the safekeeping or return of editorial material.
© 2001 Maritime Activity Reports, Inc.



Member

 BPA
INTERNATIONAL

Business Publications
Audit of Circulation, Inc.

Marine GPS

Introducing A Total Solution To GPS & AIS

And This Is Really Something To Talk About!

The introduction of the MX420 Navigation System provides a complete solution to GPS/DGPS and the new IMO requirements for Automatic Identification System (AIS). Incorporating our latest GPS technology—jointly developed with IBM—and the now legendary 'World's Most Accurate' Leica precision, we created the new MX421 Smart Antenna, once more pushing the standards of accuracy to new heights. The MX420 is the one navigator that

takes care of it all... integrating the new AIS controls and displays with all your equipment... your gyro, speed log, charting system, ARPA, satellite communication, pilot's laptop PC and a brand new **STDMA AIS Transponder**, creating a complete navigation system that is entirely IMO compliant.

The **MX420 Navigation System**: we call it a giant leap forward for navigation; you'll call it "The Great Communicator".

Call us today. We'll steer you right!

Contact Leica Geosystems: +1 310 7 91 5300 (USA - Canada), +45 4454 0300 (Denmark), +65 776 9318 (Singapore) or www.leica-geosystems.com/marine.

"IMO: 314159236, M/S JULIETTA"

"Destination: ESBJERG, ETA: 29 May, 2001 1145"

"I am a High Speed Craft"

"Course: 116°, Speed: 17.5 kn, ROT: Port 10°/min"

"I carry 156 people"

"I use GPS; Accuracy: High"

"Position: 52° 58.9876N, 4° 56.8614E"

Approved

MX420 Navigation System

GPS T3 16.0Nm

AIS SHIP

SEQUENCE: 1

MMSI 314159236

CALL SIGN YC2613

HDG110° ROT<10°

COG116° SOG17.5KM

R 1.3NmERG330

NAV ABC RTE DEF WPT GHI

WPT JKL TIDE MNO AUX POR

POS STU GPS VWX AIS YZ

E CFG C O

Leica

Marine GPS

The Complete Guide To AIS

Leica

We wrote the book on AIS. For a FREE copy go to: www.leica-geosystems.com/marine/ais/

Circle 279 on Reader Service Card or visit www.maritimereporterinfo.com

Coming in MR/EN

December 2001

GREAT SHIPS OF 2001: ANNUAL AWARDS EDITION •
Naval Architecture & Marine Engineering • **Ship's Store:**
Marine Electronics Buyer's Guide • Region Focus: China,
Japan, Korea

January 2002

BOATBUILDING YEARBOOK • Electronic Systems •

LNG Carriers • Product Focus: Marine Propulsion •
Market Quarterly: U.S. Navy & Shipbuilding Supplement
• Country Focus: Australia

February 2002

CRUISE SHIPPING YEARBOOK • Sea Technology •
Training & Education • Product Focus: Cruise & Passen-
ger Vessel Interior Design • **Country Focus: Finland**

Get connected @ www.marinelink.com

**International
Operations**

CHARLES E. KEIL, Vice President
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: bkeil@marinelink.com

**AustralAsia, Austria,
United Kingdom**

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

**Benelux
PAULA TACQ**

Maritime Media NL, Otweg 18 2771 VX Boskoop, Nether-
lands
Te: +31 172 230707; Fax: +31 172 230708

**China
TED GREEN**

Zhejiang International Advertising Corp.
596 Tiyuchang Road, Hangzhou, Zhejiang 31007
Tel: +86 571 5150937; Fax: +86 571 5150444

Germany/Switzerland

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

Italy

VITTORIO NEGRONE
Ediconsult Internazionale
Piazza Fontane Marose, 3-16123 Genoa, Italy
Tel: +390 10 583684; Fax: +390 10 566578

Japan

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

Scandinavia

STEPHAN R.G. ORN/LEON SCHULZ
AB Stephan R.G. Orn, Box 184
S-271 24 Ystad, Sweden
Tel: +46 411-184 00; Fax: +46 411 105 31

Spain

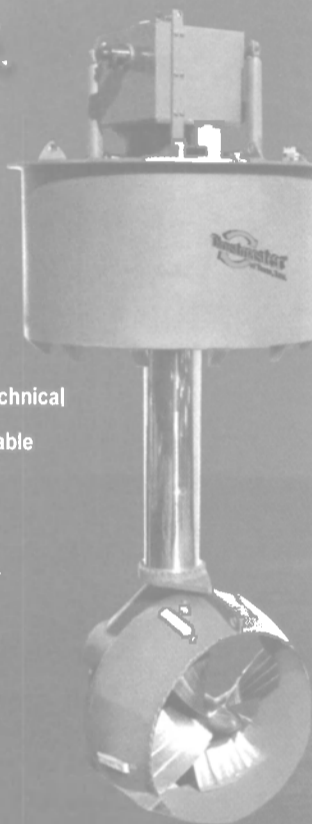
JOSE LUIS SEVA
Via Exclusivas S.L., C/ Viriato, 69 SC
28010, Madrid, Spain
Tel: +34 91 448 76 22; Fax: +34 91 446 0214

Thrustmaster of Texas, Inc.
Demand the Best

Where operators depend on reliable thruster systems in demanding conditions. No wonder Thrustmaster of Texas, Inc. is a leading supplier of retractable and transverse tunnel thrusters for crewboats and supply vessels in the world.

"Thrustmaster thrusters are easy to install and take up minimum space, and technical support is always available when needed."

Kerry Neuville,
Neuville Boat Works, Inc.



Thrustmaster of Texas, Inc. | P.O. Box 840189 Houston, Texas 77284-0189 | Ph: (713) 937-6295 • Fx: (713) 937-7962 | www.thrustmastertexas.com

Circle 326 on Reader Service Card or visit www.maritimereporterinfo.com

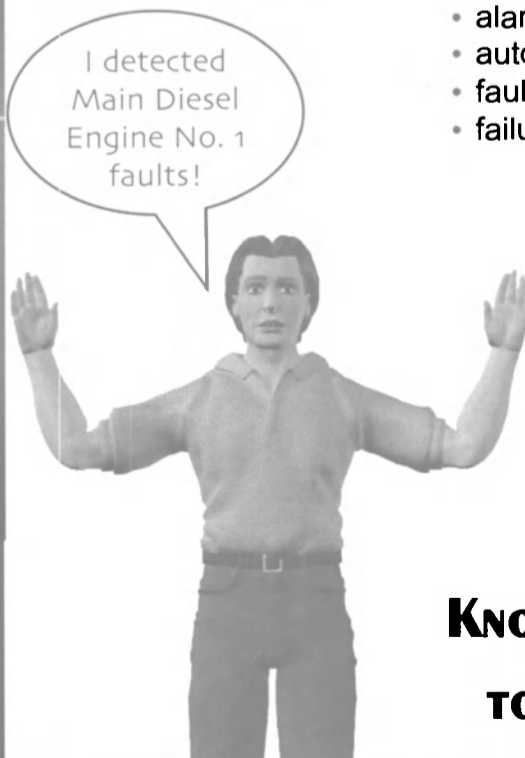
DEXTER

**DIAGNOSTIC SOFTWARE AGENTS
ARTIFICIAL INTELLIGENCE FOR:**



**MACHINE
INTELLIGENCE
IS HERE
NOW!**

163 Water Street
Stonington, CT 06378
(860) 535-3885
marketing@macsea.com
www.macsea.com



- alarm monitoring
- automatic trend analysis
- fault detection
- failure prediction

Real-time operation

Animated screen characters

Windows NT

Network supported

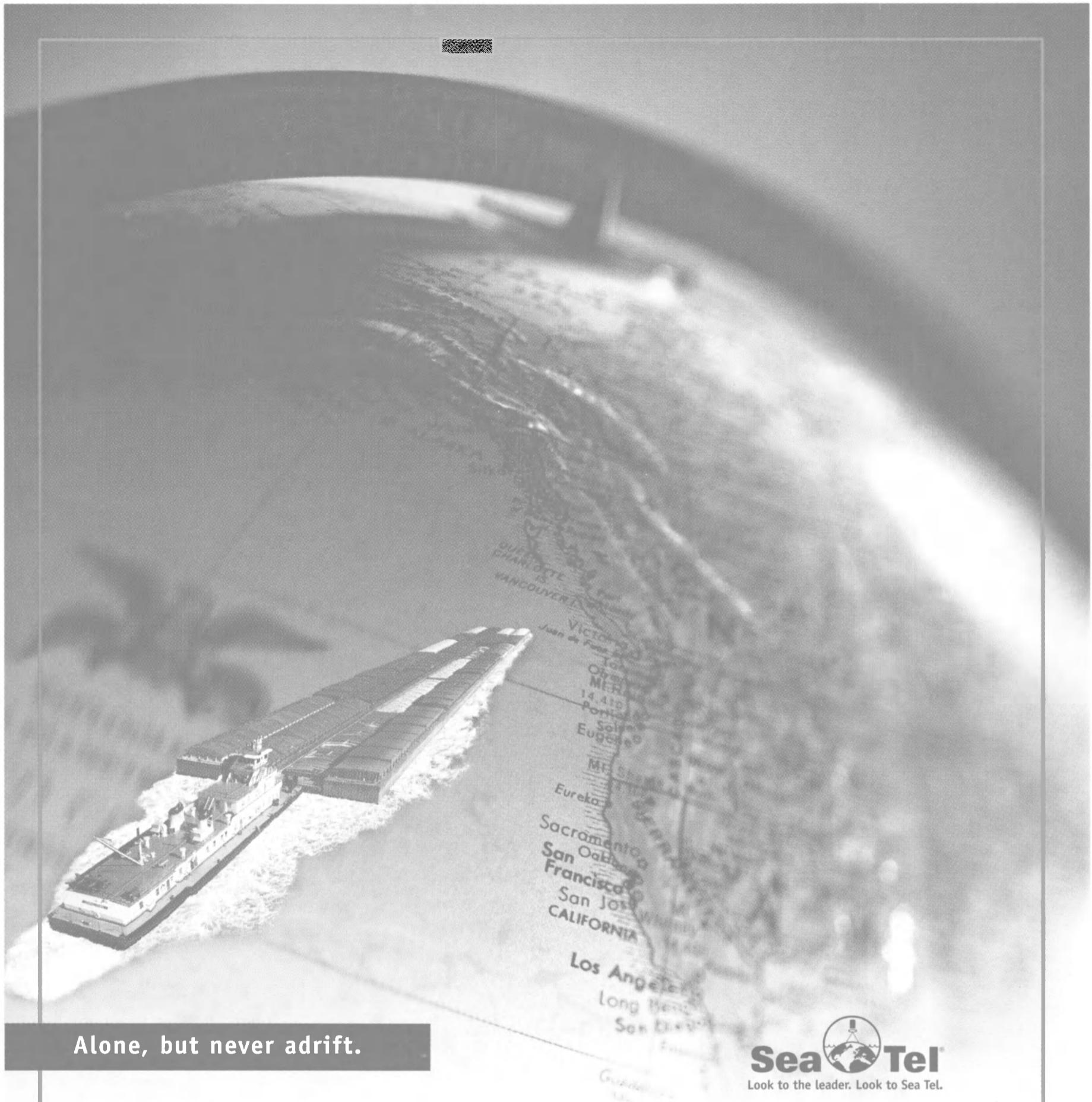
Interface to existing systems

Monitor any Machinery

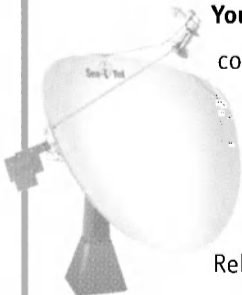
**PUT YOUR
KNOWLEDGE ASSETS
TO WORK NOW!**

Circle 282 on Reader Service Card or visit www.maritimereporterinfo.com

Maritime Reporter/Engineering News



Alone, but never adrift.



Your ships are half a world away in nasty conditions. Relax. You can depend on Sea Tel for reliable, uninterrupted satellite communications at sea. No other company has the depth and breadth of products from TV-at-Sea to mega bandwidth communications. No other company has the technology that allows you to monitor your antenna from halfway around the world. No other company even comes close for worldwide service and support. For more than two decades, twenty thousand plus large system installations prove Sea Tel is the one both navies and commercial fleets trust.

Reliability. Responsiveness. Ruggedness. When you want peace-of-mind inside, make it Sea Tel outside.

Sea Tel, Inc. 925.798.7979

www.seatel.com

Sea Tel Europe 44 (0) 2380 671155

Circle 308 on Reader Service Card or visit www.maritimereporterinfo.com

Setting A New Course

Ramifications and future fall-out on the world, nation and marine business from the terrorist attacks of September 11 will surely be a long, evolving process. It is impossible to conceive of what the next year will bring — business-wise — when it is difficult to project what is in store for the coming weeks and months. Gloom is surely the mood of the day, fed by daily reports of plummeting freight rates and oil prices, as well as Chapter 11 bankruptcy filings, such as was recently announced by American Classic Voyages and Renaissance Cruises. It is, however, more critical than ever to realize that the sun, both literally and figuratively, will rise again.

While a number of good companies today are struggling with the very real prospect of going out of business, current conditions present a good buying opportunity for well-managed companies. Consolidation of companies that own, operate, build and supply equipment and services for vessels — already a naturally occurring trend — will likely be put on the fast-track in coming months. At press time, it appears that Northrop Grumman will come out on top in the competition to buy the crown jewel of U.S. shipbuilding, Newport News Shipbuilding.

Still, the very basics of owning and operating vessels, both large and small, will be forever changed. While the marine business is not the central focus on the war on terrorism, the waterways are considered to be a viable means of delivering terror, and as such, a number of security measures are coming into place. Companies that intend to prosper would be wise to evaluate and implement the best security plans today, as the secure delivery of cargo and passengers will increasingly go to companies that have a proven commitment to delivering both securely and on time. Captain James S. Clarkson, Modern Maritime Group, writes on current security strategies for marine companies in this edition, starting on page 76.



Gregory R. Trauthwein

www.marinelink.com

trauthwein@marinelink.com

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 • Internet: www.marinelink.com

FLORIDA
215 NW 3rd St., Boynton Beach, FL 33435

ASSOCIATE PUBLISHER
Gregory R. Trauthwein • trauthwein@marinelink.com

EDITORIAL

Senior Editor
Regina P. Ciardiello • ciardiello@marinelink.com

Assistant Editor
Jennifer Rabulan • rabulan@marinelink.com

Technical Editor
David Tinsley

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

MARKETING

Vice President of Marketing
Susan Cosme • cosme@marinelink.com

Marketing Manager
Richard Grable • grable@marinelink.com
Tel: (561) 732-1659; Fax: (561) 732-6984

PRODUCTION

Production Manager
Sharon Griffin • griffin@marinelink.com

Asst. Production Manager
Oksana Martemy • martemy@marinelink.com

CIRCULATION

Circulation Manager
Dale L. Barnett • barnett@marinelink.com

ADVERTISING SALES
Vice President of Sales
Lucia M. Annunziata • annunziata@marinelink.com

Regional Sales Manager
Jennifer Truman • truman@marinelink.com

Regional Sales Manager U.S. & Canada
Brett W. Keil • bkeil@marinelink.com
Tel: (561) 732-1185; Fax: (561) 732-6984

Chief Financial Officer
Al Adinolfi

Director, New Business Development
Jean Vertucci • vertucci@marinelink.com

Electronic Product Sales
Joe Trubinsky • trubinsky@marinelink.com
Tel: (561) 732-4368; Fax: (208) 575-3217

Assistant to the Vice President of Sales
Tina Angelino • angelino@marinelink.com

Accounting Manager
Angelica Rivera • arivera@marinelink.com

Classified Sales
Tel: (212) 477-6700

PUBLISHER
John E. O'Malley
John C. O'Malley • jomalley@marinelink.com

Other Printed, Internet & Electronic Products

Publications

MarineNews



MarineNews

Published 18 times per year, MarineNews is the leading provider of information and analysis for the North American inland/offshore shallow draft market.

Electronic Products & Services



www.maritimetoday.com

Customized e-mail news service delivered twice a day, including the latest contracts, casualties, people & company reports.



www.maritimejobs.com

The marine industry's recruiting & employment resource.



www.marinelink.com

The Internet's largest marine website, recording more than 270,000 "hits" per month. Daily news, data & statistics, industry directories.

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 or visit www.maritimereporterinfo.com

TESTED BY WEATHER...

PROVEN BY TIME

Wasser moisture-cure urethanes apply easier, and cure faster than any other marine coatings. Apply Wasser MCU in port, underway, and in almost any weather, with no mixing of components or dewpoint restrictions and in humidity to 99%. With Wasser's PURQuik® Accelerator, a 3-coat system may be applied in less than a day, and immersed within one hour of completion.



IN TEST AFTER TEST,
WASSER'S COATINGS
OUTPERFORM
CONVENTIONAL EPOXIES

- higher corrosion resistance
- more flexibility
- longer color & gloss retention
- better chalk & UV resistance
- stronger intercoat adhesion

800.627.2968
253.850.2967

WORLDWIDE CONTACT INFORMATION:
www.wassercoatings.com

WASSER®

HIGH-TECH COATINGS

Member of the **WATYL**® Industrial Group

*Manufacturing
Reliable Solutions!*

Circle 366 on Reader Service Card or visit www.maritimereporterinfo.com

Wasser® High-Tech Coatings • 1004 W. James St., Suite 100 • Kent, WA 98032 • FAX: 253.850.3098

Towards the Intelligent Engine



by David Tinsley,
technical editor

Providing a beacon for the industry by embracing the world's first, fully electronically-controlled two-stroke marine engine, Norwegian chemical tanker specialist Odfjell is starting to see operating benefits resulting from its pioneering step.

Long-run performance of the system applied to the main engine of the 37,500-dwt parcel tanker Bow Cecil last fall will have a signal bearing on shipowners' future commercial uptake of the technology, as encapsulated in MAN B&W's ME diesel program. In the meantime, the engineers aboard Bow Cecil have found the electronic system to be a valuable tool in optimizing combustion performance, facilitating engine tuning and adjustments in accordance with changing operating conditions and with regularly experienced, marked variations in bunker properties. The practical goal is to achieve the best combustion at every stage in the multi-port, tramp-like trading profile that is the lot of the chemicals parcel carrier.

The constant and manifold changes in load and run-

ning speed associated with a trading pattern entailing frequent port calls and maneuvering provide a stern test of functionality, efficiency and dependability, and wholesale electronic operation under such circumstances is said to be meeting expectations. The electronic arrangements have also facilitated tuning to the widely differing ignition properties of the heavy fuel oil bunkered by the ship at seven points around the world. Furthermore, the system is regarded as an effective tool with which to meet tough criteria in certain ports on smoke emissions.

At the time of *MR/EN's* recent visit to the vessel in Rotterdam, during the course of a North European cargo discharge and loading pattern, the vessel's adapted main engine had logged nearly 4,000 running hours in full electronic mode. It is as yet too early to judge or quantify the overall impact of the flexible control methodology on fuel consumption. For sure, that will be a key determinant of the system's future selection by shipowners at large, along with considerations of rela-

tive maintenance costs and the requisite dependability.

Under the agreement between Odfjell and MAN B&W, the systems and engine proper will be scrutinized over a period of 10,000 service hours, to verify the effectiveness and reliability of the concept.

At the end of that time, Odfjell will determine whether to run the plant continuously under electronically-controlled timing of fuel injection, exhaust valves, starting valves and cylinder lubrication, or to revert to conventional actuation using the retained camshaft. Well before then, since it will likely be the best part of another year before the engine has accumulated 10,000 hours in electronic control configuration, the Norwegian firm may decide whether or not to have a current newbuild parcel tanker equipped with a wholesale, camshaft-less ME engine. The current application of the concept in a demanding service environment at sea is the vital precursor to any move towards instilling true 'intelligence' in a low-speed propulsion diesel, whereby an engine would self-adjust



DRILL RIG CONSTRUCTION & REPAIR

- New Construction & Repair
- Column Construction & Repair
- Worldwide Service




FULL SERVICE SHIPYARD

Marine Engineering & Design

Rig Construction... See New Designs

Barge Construction





SHIP REPAIR "ACCEPTING THE CHALLENGE"

- Topsides Repair ■ Steel & Piping
- Electrical Troubleshooting ■ ASME Coded
- Boiler Repair ■ Pressure Vessels ■ Pumps
- Valves ■ Diesel Engine Repair / Installation



a BGI company

www.unitedmarineinc.com

P.O. Box 22077 ■ Beaumont, Texas 77720

409-833-7070 ■ mail@unitedmarineinc.com

800-824-SHIP

Fax 409-833-0744

and self-protect to changing conditions, and would thereby warrant and justify the designation 'Intelligent Engine'.

For its part, MAN B&W believes that the IE concept offers the potential for reduced overall fuel consumption, because of the possibility to optimize fuel injection characteristics at many different load conditions, whereas a conventional engine is optimized for the guarantee load, typically at 90-100 percent maximum continuous rating (mcr). The designer and licensor also anticipates advantages in operational safety and flexibility, not least for slow running, while the ability to set up the engine to meet varying exhaust gas emission limits arising from local controls is likely to become an increasingly important factor in favor of the IE system and ME engine versions.

Bow Cecil is a modern tanker, having been completed in 1998 by west Norwegian builder Kvaerner Floro, now Kleven Floro. The vessel's 14,200-bhp (11,520-kW) 6L60MC engine had been delivered with an ordinary camshaft system, but also prepared for fitting with the necessary IE elements. The electronic fuel injection and exhaust valve control systems are fitted on the engine's upper gallery, in parallel with the conventional camshaft.

Since the initial conversion to electronic format in the course of the vessel's trading operations in South-East Asia in November 2000, the installation has been switched several times back and forth between electronic and camshaft operation. Crew familiarity is now such that changeover can be accomplished in about one hour 40 minutes, possibly taking around 30 minutes longer when personnel less conversant with the system are involved. Since March this year, the vessel has been run continuously with her engine under electronic control, representing an unbroken service period accounting for 3,180 of the 3,960 hours clocked up at the time of *MR/EN's* visit.

High-Speed Debut on the Lakes



MTU Friedrichshafen has broken new ground for the latest high-speed diesel technology, landing a deal whereby its potent 8000-series engines will be used to power a large catamaran ferry intended for Lake Ontario operation. A 32,800-kW plant based on four examples of the 20-cylinder engine has been nominated for an Austal 282-ft. (86-m), RoRo equipped catamaran, designed to transport 774 passengers and 227 cars, or 10 trucks plus 70 cars, at a cruising speed of 42-knots. The vessel is intended to forge a new fast ferry link between Rochester and Toronto next summer, offering a 2.5-hour waterborne route alternative to a typically five-hour road journey.

The installation signals the incursion of high-speed diesel machinery into a market segment hitherto regarded as the province of powerful, medium-speed engines and gas turbines. It also highlights MTU's early commercial success with

November, 2001

the 20V8000, which had attracted 32 engine sales in a period of little more than 12 months since its September 2000 unveiling at the SMM Exhibition in Hamburg.

The 8000-series ranks among the world's first four-stroke engines in the 8,000-10,000 kW segment to

Would you like to know her better? Our lifeboats we mean!

OEM licensee/lifeboat manufacturer for Fassmer and Survival Craft

Call us now at
(65) 887 5034
for full details.

Wolong International Pte Ltd
151, Chin Swee Road, #03-14, Manhattan House, Singapore 15176
Tel: (65) 887 5034 Fax: (65) 887 5043 Email: wolongintl@pacific.net.sg
Factory: Yuecheng Town, Jiangsu, China

Wolong International

Circle 343 on Reader Service Card
or visit www.maritimereporterinfo.com

Can ABS Type Approval Help Save Me Money?

ABSolutely!

With ABS Type Approval you can avoid the need for unnecessary or duplicate reviews of your product, saving you both time and money. This makes ABS Type Approval the best choice on your pathway to certification and compliance. For more information contact us at:

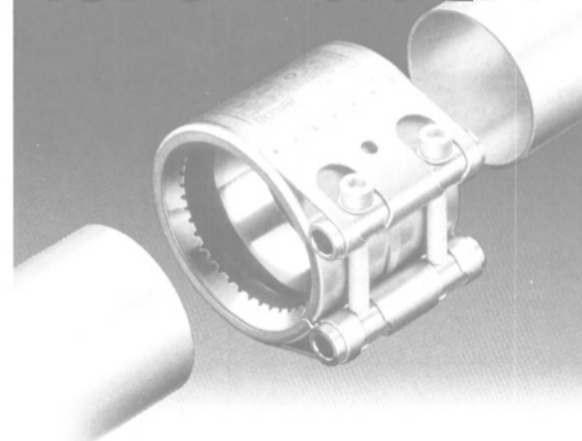
Tel: 281-877-6018
Fax: 281-877-6012
Email: type_approval@eagle.org



www.typeapproval.org

Circle 204 on Reader Service Card
or visit www.maritimereporterinfo.com

Why wait for a welder?



Join and seal pipes in less than 15 minutes



With a NORMACONNECT® coupling and a torque wrench, anyone can connect high-pressure pipes in minutes — and they'll stay sealed.

Rugged NORMACONNECT® couplings are 70% lighter than welded flange joints and take up 40% less space. They also:

- reduce noise and dampen vibration
- save time previously spent on welding and x-rays
- compensate for misalignment, angular deflection and variances in pipe O.D.
- eliminate the pipe grooving and end treatment necessary with other couplings
- feature a patented double-lip seal
- are available in all IPS nominal O.D.'s, from 3/4" to 48" (26.9mm to 1220mm)
- are rated at 16 bar to IPS 8.0" (219.1mm) by all major marine approval bodies.

For metal-to-metal, metal-to-plastic and plastic-to-plastic joints, you'll save time and money with NORMACONNECT® Pipe Couplings. They're used on everything from ocean-going passenger ships (e.g., the first ones built in the U.S. in 40 years) to semi-submersible oil rigs.

For more information, contact NORMA Products or our marine distribution partner, W&O Supply.



W&O Supply
Engineered Products Division
Phone: (334) 438-2810
Fax: (334) 438-2817
e-mail: epdivision@wosupply.com

NORMA®.

A WORLD OF INNOVATIVE SOLUTIONS.

NORMA PRODUCTS (U.S.), INC.
Phone: (800) 406-6762
Fax: (248) 668-9523
Website: www.norma.de
e-mail: npus@normatech.com



Circle 293 on Reader Service Card
or visit www.maritimereporterinfo.com

Investment in Design

incorporate common-rail fuel injection. This system offers considerable flexibility in matching fuel injection parameters to prevailing operating conditions and changing requirements. Compared with conventional arrangements, higher injection pressures are available, even at

low engine speeds, enhancing overall fuel-burning efficiency and environmental compatibility. Compact size in relation to delivered power has also been a central tenet of the 20V8000 design project, mindful of the space constraints of the vessel types forming its target

marine markets.

The debut order for the design announced at last year's SMM show entailed four units at the 9,000-kW rating to provide an enormous propulsive power concentration of 36-MW in a mega-yacht of 453 ft. (138 m) contract-

ed by German shipbuilder Lürssen Werft. Besides the new catamaran RoRo ferry application, subsequent business has included a commitment to the 20-cylinder engine of 9,000-kW output for a series of all-diesel corvettes ordered by a navy in the Far East. MTU is now pursuing new opportunities for the 20V8000 in diesel-electric propulsion systems and as landside power generation plant, and also plans to roll-out 12V and 16V versions in due course.

Lift | Lower | Pull | Position



Linepull: 1/2 Ton to 100 Tons plus!



HYDRAULIC HOIST

Designed, engineered and manufactured from stocked, standard components.

Priced right, built right and delivered right on time!

Phone (604) 530-0737

Fax (604) 530 2889



RAIL CAR PULLER

LANTEC IMAC

GEAR DRIVES
WINCHES & HOISTS
BRAKES & CLUTCHES

5827 Production Way
Langley, British Columbia
Canada V3A 4N5


Driven to Excellence

www.lantecgear.com
email: sales@lantecgear.com



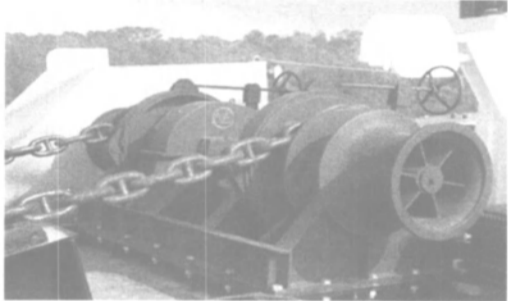

TRACTION WINCH

Circle 277 on Reader Service Card
or visit www.maritimereporterinfo.com



Jered Industries, Inc.

NETEC Products
Winches/Windlasses/Capstans/HPUs
Brunswick, Georgia
912-262-2000

Marine Enterprises, Inc.
Electric and HVAC
Turnkey Installation Services
Vanceleave, Mississippi
228-826-1007

Booth # 2139 at International WorkBoat Show

Circle 304 on Reader Service Card
or visit www.maritimereporterinfo.com

**REQUIRED
ON EVERY
U.S.C.G.
CUTTER
AND NAVY
VESSEL**

SYNTHO-GLASS®

WATER ACTIVATED

Pipe Repair Tape

SYNTHO-GLASS® is a fiberglass cloth pre-impregnated with a water activated resin that hardens in only 30 minutes!!!

1. NO measuring or mixing!!
2. Bonds to almost any surface
3. 6 different types of kits
4. Available in lengths from 5 to 50 feet.

APPLICATIONS

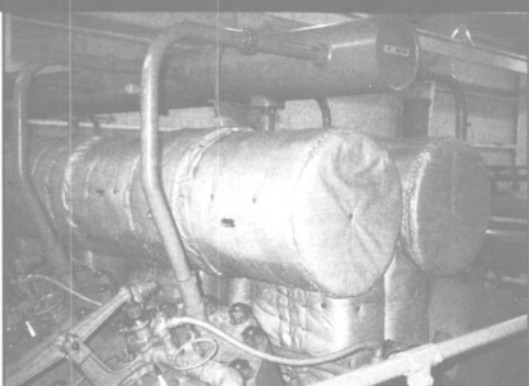
- Emergency repair
- Corrosion protection
- Underwater repairs
- Reinforcement of corroded or damaged pipes

- Steam & leaking Hydraulic line repairs
- Repair pipes from 1/2 to 36 inches
- Irregularly shaped repair pipes

Neptune Research, Inc.
Tel: 800-328-0090
Fax: 561-683-8366
Web: www.NeptuneResearch.com

Circle 291 on Reader Service Card
or visit www.maritimereporterinfo.com

HOLD THE HEAT !




INSULTECH Thermal Blankets were used on a D-R TCV-10 Sectional Manifold. Blankets were custom fit via CAD.

INSULTECH Thermal Blanket Insulation helps solve repeated problem insulation areas.

- Manifolds
- Turbochargers

- Piping
- Exp. Joints

- By-Pass Piping
- Gas Turbines



Shannon Enterprises of W.N.Y., Inc.
75 Main Street, North Tonawanda, New York 14120-0199
(716) 693-7954 • Fax (716) 693-1647 • www.blanket-insulation.com
Representative Inquiries welcome

Circle 312 on Reader Service Card
or visit www.maritimereporterinfo.com

FGH Announces Two New Contracts

Halter Marine, Inc. the vessel segment of Friede Goldman Halter, Inc. announced that it has signed a contract with an undisclosed customer to build a 332 x 74 x 25 ft. (101.1 x 22.5 x 7.6 m), double-skin, clean oil tank barge with an estimated 80,000 BBL capacity. This vessel meets the requirements of the OPA 90. Double skin barges and tankers are gradually replacing the single skin fleet, and are more "environmentally friendly."

This barge is similar in design to one currently under construction at the Halter Gulfport, Miss. facility.

Construction will begin at Halter's Gulfport, Miss. facility and take approximately 12 months. Although no new jobs will be created, the project is expected to sustain the facility's current workforce.

Anil Raj, COO said, "With multiple shipyards, our Halter Marine Company has the nation's largest experienced workforce and capacity for building double-skin barges. We are able to offer deliveries to meet the deadline and constraints of the Oil Pollution Act of 1990."

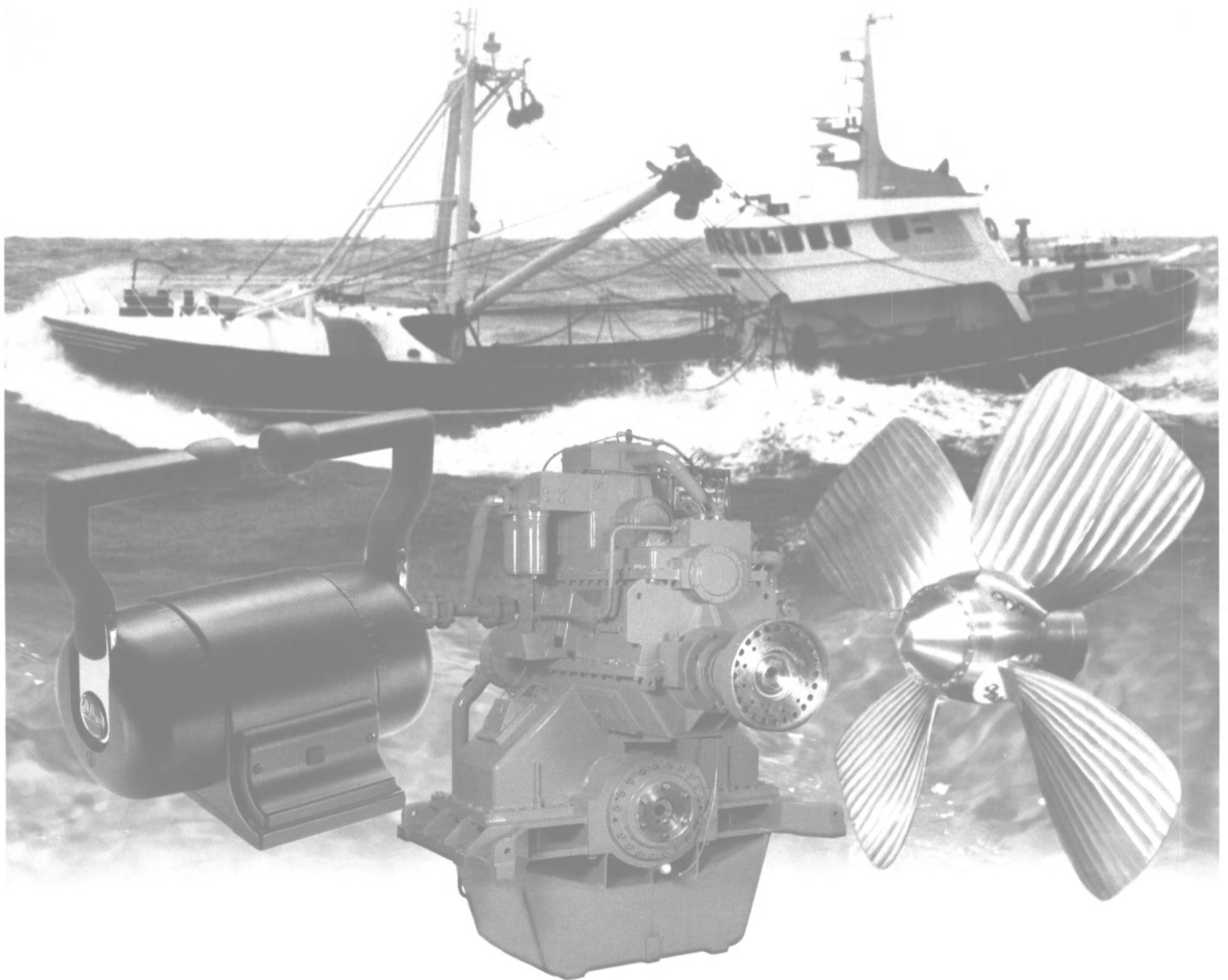
The Shipbuilders Council of America (SBC), in its October 3, 2001, statement, echoed earlier warnings from the Maritime Cabotage Task Force and the National Defense Transportation Association's Sealift Committee that construction of double-hulled tankers must increase dramatically to avoid a shortage of US-flagged ships. It is anticipated that demand could exceed supply by as much as 24 percent in the next three years.

Friede and Goldman, Ltd. the design engineering segment of Friede Goldman Halter, has also been awarded a new contract with a major drilling contractor to perform the design engineering for the upgrade of a drilling unit. The upgrade includes a new cantilever beam design as well as reinforcement of the hull. The two new contracts will have a value of approximately \$7.5 million.

Circle 15 on Reader Service Card
www.maritimereporterinfo.com

Maritime Reporter & Engineering News

10



Perfect propulsion partners.

Correct Combination

From fishing boats to icebreakers, from tugs to tankers, the correct combination of propulsion system components is vital for performance, reliability and safe operation.

Transmission Leader

ZF Marine Group is the world leader in the design and manufacture of marine gearboxes for all types of vessels. Pace-setting technology that now embraces complete propulsion systems which include fixed-pitch and controllable-pitch propellers, surface-drives and marine controls.

Propulsion Partnerships

Naval architects, boat builders, engine manufacturers and operators now have the opportunity to select the optimum propulsion system from a single source. New partnerships forged by ZF Marine incorporate the knowledge, expertise and product ranges of three innovators in marine propulsion technology - Piening Marine Technic, Faster Propulsion System and Mathers Controls - to bring you ZF Marine Technic, ZF-FPS and ZF Mathers.

Perfect Packages

Each of our partners places a wealth of experience at your disposal. Together we can offer the ideal package to suit your exact propulsion requirements - either for new-buildings or re-powers.



Propulsion

For further information, please contact :

ZFI Marine U.S. Headquarters

3131 SW 42nd Avenue,
Fort Lauderdale FL 33312.
Phone: (954) 581-4040 Fax: (954) 581-4077

ZFI Marine Gulf Coast

161 James Drive West,
Suite 120, St. Rose, LA 70087.
Phone: (504) 443-0501 Fax: (504) 443-0504

ZFI Marine West Coast

1095 Andover Park East,
Seattle WA 98188.
Phone: (206) 574-0375 Fax: (206) 574-0868

ZFI Marine North East Coast

20 Walling Ford Way,
Shamong NJ 08088.
Phone: 609-268-9186 Fax: 609-268-0544

Visit our website - www.ZF-Marine.com

Circle 145 on Reader Service Card or visit www.maritimereporterinfo.com

Vessel of the Month

IZAR Races Ahead With New Transmed Ferry

By David Tinsley

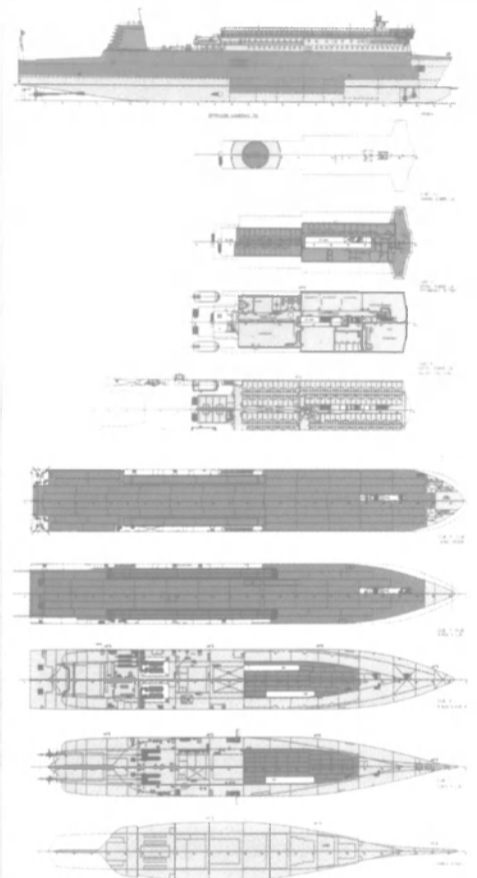
Testament to the Spanish state-owned group's determination to raise performance throughout the organization,

IZAR is on track to deliver a high-grade RoRo passenger ferry only 20 months after contract signing. The launch of the 6,300-dwt Murillo a month ahead of schedule has also underscored the latent

scope of the shipyard at Seville, where a substantial upgrading and modernization program has been set in motion. Earlier concerns over work continuity at the premises, Spain's furthest inland shipbuilding facility, have been allayed by the decision to entrust Astillero Sevilla



RO-PAX • 550 Passengers • 1,900 Lm trailers • 396 Lm Cars



Kobelco 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

with the production of 70 double-bottom blocks for LNG carriers to be constructed by other yards within the group. Moreover, the agreement recently signed by IZAR with an Algerian ferry operator means that Seville is set to be entrusted with an additional RoRo, which will follow on from the yard's assignments in gas tanker block fabrication. Compania Trasmediterranea's 590.5-ft. (180-m) Murillo, and the 475.5-ft. (145-m) newbuild to be laid down for Algiers-based ENTMV, underscore the yard's advance in the RoRo and passenger ship sectors.

Investment to the tune of more than \$20 million is being spent on the yard to

Circle 276 on Reader Service Card or visit www.maritimereporterinfo.com

CARHARTT EXTREMES®

The Best Workwear For Extreme Conditions.

There's workwear...and then there's high-performance workwear. The kind that will

BI-SWING BACK AND PLEATED
ELBOWS FOR EASE OF MOVEMENT

stand up to cold, wet, icy

conditions, and still allow a professional to get a job done in comfort. That's why Carhartt makes Extremes®. Extremes have 1000 denier Cordura® outer shells that resist abrasions, punctures and tears as well as provide superior wind and water resistance. Extremes also have arctic-weight linings for

NYLON OUTER SHELL
FOR WIND, WATER AND
TEAR RESISTANCE

1000 DENIER CORDURA®
NYLON FOR DURABILITY

warmth and triple-stitched seams for

durability. It's tough working in extreme conditions, but it's a whole lot easier when you wear the best, Carhartt Extremes.



We are a proud supporter of the NHTSA and the NFPA.

(800) 833-8118 www.Carhartt.com

Carhartt
Original Equipment for the American Worker.™



Circle 216 on Reader Service Card or visit www.maritimereporterinfo.com

Vessel of the Month

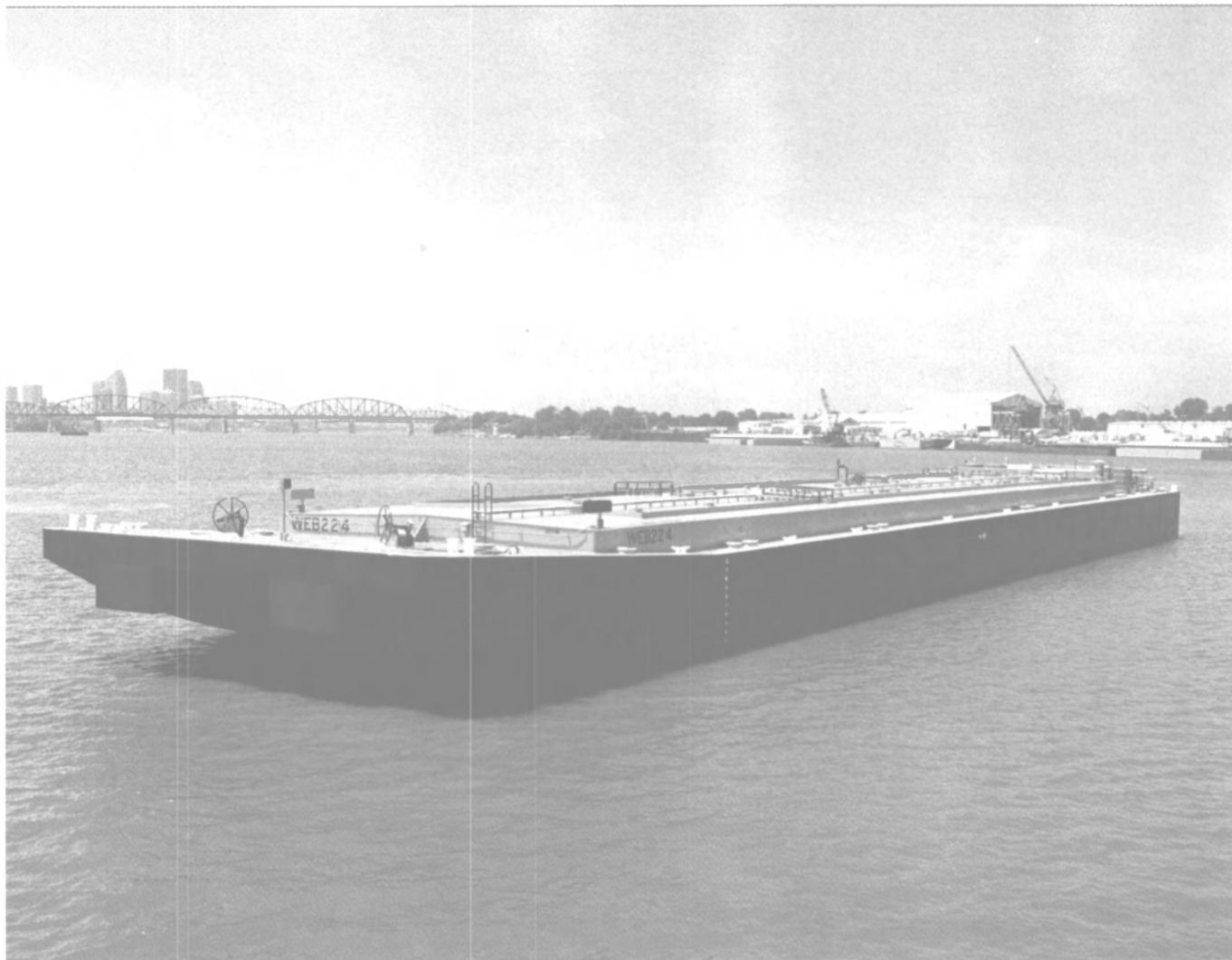
sharpen its competitiveness in the market for medium-sized vessels. Moreover, a plan for the construction of a new lock of 115 ft. (35 m) width figures prominently in proposals by the authorities to improve maritime access to the port,

along with the deepening of the fairway from 21 to 28 ft. (6.5 to 8.5 m).

While boosting the port's commercial scope, realization of the project would of course significantly increase potential newbuild size from IZAR's Seville facil-

ity, and better enable the yard to act on the opportunities it perceives in target markets.

The shipyard plays a vital role in the local economy and gives added industrial dimension to the Guadalquivir, which



provides Seville with a 98-km conduit to the sea. Murillo is one of the largest vessels that can be delivered from the shipyard, given the present constraints imposed by the width of the lock connecting the industrial port area with the tideway. Its beam of 80 ft. (24.3 m) at main deck level is the practical maximum for transit through the existing lock.

The design used by IZAR for a series of RoPax ferries built for the U.K. owner Cenargo International, manifested in the 22,152-gt Dawn Merchant and Brave Merchant of 1998-99, and in the Northern Merchant and Midnight Merchant of 2000, has provided the basis for the Tramed ferry Murillo. The latter employs the same hull form and main dimensions, although the hull envelope has been optimized in the Spanish ship with increased RoRo capacity, surmounted by more passenger accommodation. There are also differences in the equipment specification.

Having an existing template, though, has undoubtedly contributed to the yard's efficient production of the latest vessel. At the time of *MR/EN's* visit, IZAR yard management expected to be ready to deliver Murillo ahead of the contractual delivery date. Tramed had initially looked to phase the vessel into service in May 2002.

Two large, tilting ramps are located on either side of the garage section to provide conduits for freight transfer between the main and upper deck levels. As key elements of the cargo access equipment outfit designed and supplied by MacGregor to ensure the expeditious working of the ship in port, the ramps and integral end-flaps measure 180 ft. (54.9 m) overall, and offer a driveway breadth of 10 ft. (3.2 m). Each ramp can be lowered at either end by means of disconnecting hinges, and stows flush

Blessey Marine Services hasn't asked us to build a single barge. They've asked us to build a fleet.

Since 1991, Jeffboat has built over 30 hot-oil and clean-service tank barges for Blessey Marine Services. The reason they keep coming back to us is the same reason you should come to us for your tank barge needs. Jeffboat barges are built

to last. By experienced and dedicated barge builders using quality materials and state-of-the-art systems and processes. Whether you want to build a fleet of tank barges or just one, give us a call at 812-288-0200.

JEFFBOAT

America's largest inland shipyard.

Circle 270 on Reader Service Card or visit www.maritimereporterinfo.com

in the upper deck when not deployed, forming a watertight closure. Hoisting and lowering is affected by means of a wire system anchored at the deckhead, passing around sheaves and attached to pulling cylinders mounted within the ramp structure.

A hallmark of the preceding series of vessels delivered to Cenargo was the thoroughness with which the design was developed in respect of pertaining and foreseen regulations relating to passenger-carrying ferries. Accordingly, features such as flood control doors and associated, half-height longitudinal bulkheads have been perpetuated in Murillo.

The jalousie-type, MacGregor flood control doors are arranged at the fore and aft ends of the longitudinal bulkheads which run for about half the length of the main deck, bordering the lanes on to which the tiltable ramps land. In the deployed position, the jalousie doors form barriers between each half-height bulkhead and the side shell, and are watertight at their base and vertical sides. When open, the flood doors stow parallel to the deckhead, ensuring unobstructed internal RoRo cargo movement and distribution via the hoistable ramps.

In the Dawn Merchant series, Cenargo chose to leave the underdeck spaces void, in keeping with the short-haul, fast-turnaround nature of its Norse Merchant Ferries' operating network. However, in Murillo's case, the lower hold volume has been used to augment revenue-earning capacity. By incorporating two short car deck levels in the underdeck areas available in the foreship section, the designers have provided an extra 396 car lane-m to supplement the 1,900 trailer lane-m on the main and upper decks. Fixed ramps are arranged between the main deck and deck 2, and between deck 2 and the tank top.

Another key difference that will influence the working of the ship in relation to the modus operandi applied to the British series is the concentration of all RoRo traffic movements on and off Murillo across a stern ramp. By comparison, the Cenargo sisters were delivered in drive-through configuration. Once again, the requirement for both bow and stern door access in the previous series was determined by the nature of the Irish Sea and English Channel trades, where rapid turnarounds in port and high ship productivity are operational and commercial necessities.

The Spanish vessel's hydraulically-actuated stern ramp/door has been constructed in one main section, hinged at the stern threshold and incorporating shore-end flaps and internal bridge plates to ensure smooth vehicle transition. Its overall length is 57 ft. (17.5 m),

and the stern opening provides a free height of 17 ft. (5.2 m) and clear breadth of 59 ft. (18 m) for freight.

Murillo has a longer superstructure than the earlier ships from Seville, since it has been fitted with accommodation

for 546 passengers, more than double that incorporated in the Dawn Merchant class, and a factor of the different trading scenarios and operational objectives of the respective owners. Cabin berths are provided for a total of 396 passen-

gers, including 300 in four-berth cabins and 76 in two-berth cabins.

A Wartsila-Lips package encompassing main and auxiliary engines, and shafts and propellers has been supplied to the new Trasmediterranea vessel.

BEYOND THE HORIZON

...WHERE COMMUNICATION HAS NO BOUNDARIES

As a global, multi-network satellite equipment and service provider, Stratos uses state-of-the-art to offer its users complete solutions for wireless and secure voice, fax, data, and IP network connections.

Give us your remote communications challenge and we will provide the solution.

Call Now: 1 888 766 1313 (Toll Free)
1 709 748 4233 (Worldwide)

STRATOS

WWW.STRATOS.CA

Circle 319 on Reader Service Card or visit www.maritimereporterinfo.com

PLASMA™ 12 x 12™

**50% Stronger,
20% Less Expensive,
And It's Repairable.**

Puget Sound Rope's patented Plasma™ and 12 x 12™ processes convert Spectra® Fiber into ropes that are up to 50% stronger than conventional HMPE fiber ropes. The 12 x 12™ feature makes them the first truly repairable braided ropes. That means you'll save time. And money.

Puget Sound ROPE

Anacortes, WA USA
360.293.8488 • Fax 360.293.8480
www.pсроpe.com

The Cortland Companies: Cortland Cable • Cortland Fibron BX • Puget Sound Rope

Spectra® is a registered trademark of Honeywell International

© 2001 Performance Materials

SPECTRA FIBER

Circle 224 on Reader Service Card or visit www.maritimereporterinfo.com

Vessel of the Month

ENREC

Power Systems



World Wide Service center for
EMD_x, CAT_x, Alco_x
Diesel Engines

New Power Assemblies and Parts Available

1.800.851.6732

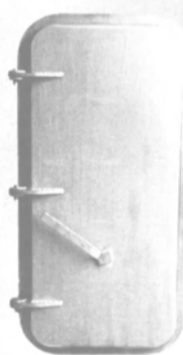
www.nrecps.com // power@nrecps.com

We Specialize in Engine Overhauls & Remanufacturing
Re-powers & New Construction, Dyno Testing, Warranty
ABS Approved for Marine Propulsion, Guaranteed
Performance, Drilling & Power Generation, Engine/Alarm
Control Panels, Complete Ship's Alarm System's.

Electrical Manufacturing Division
Phone Home Technology
Satellite - Cell Phone - Fax

Circle 295 on Reader Service Card
or visit www.maritimereporterinfo.com

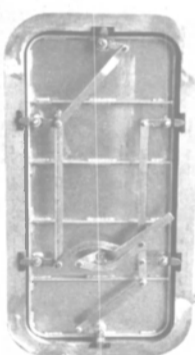
A tradition of quality



Bulkhead door
(front view)

Manly products are custom fabricated to a variety of standard designs and sizes, or built entirely to client specified design.

Inquire about the many special features and options, such as customized windows, out-of-square frames, hatches, manholes, doors and much more.



Bulkhead door
(back view)

20 Brooksbank Avenue
PO Box 86788
North Vancouver, BC
Canada V7L 4L3

Phone: (604) 984-4635
Fax: (604) 983-2713
email: info@manly.com
www.manly.com

MANLY MARINE

Circle 284 on Reader Service Card
or visit www.maritimereporterinfo.com



MCS
MARITIME COMMUNICATION SERVICES

HARRIS

Satellite Communications

- Ships, Rigs, Platforms, Buoys
- Broadband Services Via C and Ku Band
- Customized Private Global Networks
- Voice, Data, Internet, and Video Services
- Complete Worldwide Coverage

Harris Maritime Communication Services, Inc
1025 W. NASA Boulevard | Melbourne, FL USA 32919
www.mcs.harris.com | mcsweb@harris.com
1-321-674-4750 | Fax: 1-321-674-4751

Circle 255 on Reader Service Card
or visit www.maritimereporterinfo.com

WINCHES * RATCHET TURNBUCKLES * TENSORS



*Designed to Exceed
Your Demands*
www.patterson.com



W. W. PATTERSON COMPANY
* 3 Riversea Roads *
Pittsburgh, PA 15233
PHONE: (800) 322-2018
FAX (412) 322-2785

Circle 36 on Reader Service Card
or visit www.maritimereporterinfo.com

whereby the propulsion plant has been dimensioned to ensure a rapid service speed of 22.8-knots. Despite the increase in both RoRo intake and passenger capacity, its speed has only been penalized by about half a knot compared with the Cenargo ships. Four nine-cylinder examples of the Wärtsilä 38-series engine drive pairs of Lips controllable pitch propellers through Reintjes reduction gearboxes.

The nomination of the 380-mm bore, medium-speed design in its original A version, as opposed to the 10-percent more powerful B-type, gives unit ratings of 8,075-bhp (5,940-kW) and a consequent, overall power concentration of 32,300-bhp (23,760-kW). All four engines were produced in the Netherlands at Wärtsilä's modernized Zwolle plant.

The rotational energy of the prime movers will be harnessed to greater purpose through the expedient of a power take-off (PTO) on each gearbox. In each case, this will drive a shaft alternator sized to give 1,400-kW at 1,800-rpm, serving at-sea electrical power needs. Additional and alongside electrical energy requirements will be covered by an auxiliary installation based on three 1,360-kW Wärtsilä diesel gensets. The preceding RoPax quartet from Seville had a more extensive shaft alternator installation, using four such units, with a commensurate reduction in the auxiliary engine outfit.

Murillo's pair of 1,300-kW bow tunnel thrusters from Brunvoll will place a substantial, intermittent load on the system, in conferring the requisite maneuverability to which the vessel's flap-type rudders and variable pitch main propellers will also be contributory. In the interests of both passenger comfort and freight security, the Trasmediterranea ferry has been fitted with Mitsubishi retractable fin stabilizers, while vessel movements during loading and unloading will be kept within certain criteria through the intervention of an automatic, Interling anti-heeling system.

Murillo, named after the 17th century painter from Seville, is to be phased into the route network linking Spanish mainland Mediterranean ports with the Balearic Islands. The vessel will be the third, full-displacement RoRo passenger ferry newbuild to have been commissioned into the Balearic traffic since the summer of this year, when sisters Sorolla and Fortuny were introduced. The latter, each arranged for 1,000-passengers and about 98 trailers plus 165 cars, were delivered by privately-owned shipbuilder Hijos J.Barreras, in Vigo, and the IZAR yard at Puerto Real, respectively.



DEUTZ Power For A World Class Performance

The 1015M Series

- ▶ Water-cooled Four Stroke V6 & V8 Engines From 364 To 590 HP
- ▶ Compact Design & Low Engine Weight Drastically Reduce Installation Costs & Space Requirements
- ▶ Water-cooled Turbocharger And Exhaust Manifolds Greatly Increase Engine Room Safety And Reduce Operating Noise Level & Radiated Heat
- ▶ Extremely Low Operating Costs Due to Low Fuel & Oil Consumption
- ▶ Easily Accessible Service Points Provide Simple & User-friendly Maintenance Operations
- ▶ Fully IMO Certified
- ▶ Outstanding Product Support With Over 1500 Locations Worldwide & Certified Expertise In DEUTZ Know-how
- ▶ Visit Us Today At www.deutz.com For More Detailed Information
- ▶ 24 Hrs Emergency Parts & Service Information Call 1-800-241-9886

“We Move Your World”

Circle 232 on Reader Service Card or visit www.maritimereporterinfo.com



3883 Steve Reynolds Blvd Norcross, GA 300
Tel: 770-564-7100 Fax: 770-564-7222

Vessel of the Month

Although Murillo embodies a different design to that of the two new RoPax sisters, she similarly displays the requisite flexibility to enable use in different services with impunity.

Significant in a Balearics context is the vessel's design draft of 21 ft. (6.5 m).

compatible with the needs of working into the Menorcan port of Mahon. Sorolla and Fortuny have been assigned to the prime routes connecting Barcelona and Valencia with Palma di Mallorca.

Compania Trasmediterranea sees a clear link between this year's improve-

ment in revenues and economic performance and its investment in new ferries of higher standard and increased capacity, efficiency and productivity.

Main Particulars - Murillo	
Classification	Lloyd's Register
Length o.a.	590.5 ft. (180 m)
Length b.p.	553 ft. (168.7 m)
Breadth, to main deck	80 ft. (24.3 m)
Depth, to main deck	13 ft. (9.6 m)
Design draft	21 ft. (6.5 m)
Deadweight, design draft	6,300 dwt
Passenger capacity	546
of which, cabin berths	396
RoRo capacity	1,900 trailer lane m + 396 car lane m
Freight intake	142 trailers
Main engines	(4 sets) Wartsila 9L38A
Maximum output, four engines	32,300 bhp(23,760 kW)
Service speed, design draft @ 85 percent mcr	22.8 knots

The perfect match for your repair needs.

At Bollinger, Repair is never a gamble.

With 14 locations throughout the Gulf Coast, you're never far away. And, Bollinger's combination of experienced people and modern efficient facilities puts your vessel back on the job—on time and on budget.

Whether it's routine maintenance or emergency repairs, Bollinger's team is ready, and with ISO 9001 certification, you can be sure your repairs are to exacting specifications.

Bollinger Repair. We've Stacked the Odds in your Favor.

The International WorkBoat Show
NEW ORLEANS
Visit us at booth #1335

8365 Highway 308 South • Lockport, Louisiana 70374
Telephone: (985) 532-2554 • Fax: (985) 532-7225 • www.bollingershipyards.com

Timothy Graul Marine Design Specializes In Variety

For the past 20 years, Timothy Graul Marine Design (TGMD), based in Sturgeon Bay, Wisc., has designed a full spectrum of vessels, most recently the three-mast wood schooner Denis Sullivan. The vessel, which is a re-creation of a 19th Century Great Lakes cargo schooner sailed last winter from ports in Florida and this summer has called upon a variety of Great Lakes ports.



The 83-ft. (25.2-m) Evening Star was designed by Timothy Graul Marine Design for Shoreline Marine of Chicago.

Other vessels recently completed by TGMD designs include a 96-ft. (29.2-m) aluminum research catamaran for the University of Miami's Rosenstiel School of Marine and Atmospheric Science; a 120-ft. (36.5-m) ferry barge and 55-ft. (16.7-m) towboat for the State of Illinois built by Serodino of Chattanooga. In addition, Bay ship recently delivered the 83-ft. (25.2-m) Evening Star to Shoreline Marine of Chicago. The vessel, which was designed by TGMD, is USCG-certified for 340 passengers for architectural tours and sightseeing cruises. Another significant segment of TGMD's business is engineering conversions and repowering of vessels. On specific project that is currently underway will result in a 20-year-old boat that will be delivered next season with new engines, more passenger space and greater speed.

Circle 10 on Reader Service Card
www.maritimereporterinfo.com

Circle 214 on Reader Service Card or visit www.maritimereporterinfo.com

NASSCO Wins \$708M T-AKE Contract

On October 18, 2001, the Naval Sea Systems Command (NAVSEA) awarded of a \$406.9 million contract for the detailed design and construction of the lead ship of the T-AKE Auxiliary Cargo and Ammunition Class to National Steel and Shipbuilding Company (NASSCO) of San Diego, CA. With the exercising of a contract option of \$301.6 million for the follow ship, the cumulative deal is more than \$708 million for NASSCO.

Major subcontractors are IMECO of Iron Mountain, MI; Hopeman Brothers Marine Interiors of Waynesboro, VA; Alstom Power Conversion Inc. of Philadelphia, PA; B.F. Goodrich, Fairbanks Morse Engine Division of Beloit, WI; Point Eight Power Inc. of Belle Chasse, La.; Lake Shore Inc. of Kingsford, Mich.; Performance Contracting Inc. of San Diego, Calif.; John Crane-LIPS of Scarborough, Maine; and SIPCO of Willis, Texas.

The T-AKE Class was designated the "Lewis and Clark" to honor the two explorers who led a visionary project that was to become one of American history's greatest adventure stories. The first ship will be Lewis and Clark (T-AKE 1) and the second ship will be Sacagawea (T-AKE 2).

The ships are designed to provide a two-product shuttle ship replacement for the aging Combat Store (AFS) and Ammunition (AE) shuttle fleet ships. The vessels will be built almost entirely to commercial ship standards, manned by Government civilian mariners, and operated by the Military Sealift Command. The ships will have the capacity to handle ammunition and combat stores-including dry, frozen and chilled products, spare parts and consumables. Designed to operate independently for extended periods at sea while providing replenishment services to U.S. and NATO ships, the Lewis and Clark class ships will directly contribute to the ability of the Navy to maintain a forward presence. These ships will provide logistic lift from sources of supply either in port or at sea from specially equipped merchant ships. They will transfer this cargo (ammunition; food; limited quantities of fuel; repair parts; ship store items and expendable supplies and material) to station ships and other naval warfare forces at sea. As a secondary mission, these ships may be required to operate in concert with a T-AO class ship as a substitute station ship to provide direct logistics support to the ships within a battle group. The T-AO class ship, which carries liquid cargo, and the T-AKE class ship, which carries dry cargo, when operating together in lieu of a station ship, will provide the

battle group with products equivalent to an AOE 1/6 class (fast combat support ship).

The lead ship and first follow ship are scheduled for delivery in March 2005 and September 2005. The contract includes options for up to 12 ships.

Manitowoc Tapped To Build USCG Icebreaker

The Manitowoc Company, Inc. also said that the United States Coast Guard has awarded Manitowoc Marine Group an \$82.4-million contract to build a new

Great Lakes ice breaker. The new vessel will measure approximately 240 x 60 ft. (73.1 x 18.2 m), and will displace 3,500 long tons. In addition to breaking ice to keep shipping lanes open on the Great Lakes, the multi-mission vessel will service aids to navigation, as well as per-

Reduce Your Engineering, Solve Your Sanitation Needs

EVAC's vacuum collection sewage systems are specifically designed for the marine industry. They use standard designs and components requiring no special engineering.

EVAC systems:

- Use only 3 pints/flush of fresh water
- Clean with a 5 nozzle flush ring
- Use small, 1.5" - 2" diameter piping
- Piping can be flexible with 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 90 TOILET

EVAC ORCA® II A Marine Sanitation Devices:

- Are fully automatic
- Use microprocessors for control, monitoring
- Are compact and lightweight
- Are easy to operate and maintain
- Operate in fresh, salt or brackish water
- Are U.S.C.G. Certified and IMO approved
- Available with automatic chlorine generators
- Optional 3-piece modular units



ORCA II A (165-500 PEOPLE)



ORCA II A (12-70 PEOPLE)

Over 5,500 installations worldwide. Contacts include AMCV/Ingalls cruise ships, Atlantic Marine Coastal Queen project, U.S. Navy/Avondale shipyard LPD-17 vessels and more.

For a FREE color brochure including dimensions and technical specifications, contact us.

ENVIROVAC INC.
Rockford, IL 61115 U.S.A.
888-GET-EVAC (438-3822) • 815-654-8300
Fax: 815-654-8306
E-mail: marine@evac.com

--Serving the marine industry for 20 years

Please see us at Work Boat, Booth 537

Circle 243 on Reader Service Card or visit www.maritimereporterinfo.com

Kahlenberg
SINCE 1895

USCG/IMO CERTIFIED SOUND SIGNALS

Kahlenberg Sound Signals have set the standard for quality and reliability for over 100 years.

- Air and Electric Horns
- Electric Piston Horns
- Air/Steam Whistles
- Signal Timers
- Controls and Accessories



T-3A "Chimetone" Air Horn



M-511 Signal Controller



KPH-130
Piston Horn



KB-20
Electric Horn

www.kahlenberg.com

Kahlenberg Brothers Company, P.O. Box 358, Two Rivers, WI 54241 USA, 920-793-4507, Fax: 920-793-1346

Circle 273 on Reader Service Card or visit www.maritimereporterinfo.com

forming search and rescue, pollution control, security, and law enforcement duties from its homeport of Cheboygan, Mich.

The vessel will be built at the company's Marinette Marine shipyard, and is

expected to take more than three years to complete. The new ice breaker, which will be delivered in 2005, replaces the Mackinaw, a 290-ft. (88.3 m) Coast Guard cutter that was constructed in 1944.

Austal Wins Two Contracts

Australian shipbuilder Austal Ships and its U.S. subsidiary, Austal USA, have each secured contracts for new vessels. Austal USA - which was the creation of a new shipyard in conjunction

with Bender Shipbuilding in Mobile, Ala. - has signed a contract for a 112-ft. (34 m) dinner cruise vessel with Island Queen Cruises of Miami, Fla. The yard has already enjoyed considerable success, and is counting on its innovative high-speed craft to catch on for U.S. military work. The new order increases Austal USA's production to four vessels, adding to the two 150 ft. (45.7 m) crew-supply vessels and the 82 ft. (24.9 m) passenger catamaran currently under construction. Due for delivery in November 2002, the dinner cruise catamaran will operate in the Miami and Biscayne Bay area, offering a variety of charter options appealing to corporate and large private groups.

The vessel design centers on a Main Deck dining area for up to 200 seats and will also feature a large Upper Deck with bar and dance area and an open Sun Deck. Finishes such as stainless steel railings throughout, coupled with Austal's flair for interior design will significantly enhance the overall experience on-board. The hulls will be fitted out for a galley, a wash-up space and bathrooms. The catamaran will be powered by two Caterpillar 3406C diesel engines, each rated at 310 bhp, driving FP propellers through Twin Disc Marine gears. Financing for the project was provided by Caterpillar Finance of Nashville, Tenn.

Austal Ships' new contracts comprise an order for three 156 ft. (47.5 m) passenger catamarans for New World First Ferry of Hong Kong, with an option for a further four vessels on completion of the first three.

Senesco Signs Contracts

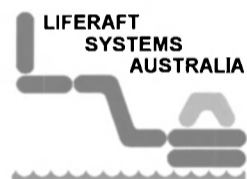
Southeastern New England Shipbuilding Corporation (SENECO) signed contracts for the construction of three barges and pier floats that have an estimated value of approximately \$3 million. The first contract is for the Hughes Marine out of New Jersey. The contract calls for the construction of a 160 ft. (48.7 m) deck barge. This project, the fourth such project Senesco has handled for Hughes, is expected to take eight weeks.

The second contract with Cashman Equipment of Boston is for the construction of two identical deck barges that are 180 ft. (54.8 m) in length and have heavy deck loading capabilities. The vessel will be used as a construction barge and will be able to hold 4,000 lbs. per sq. ft. Delivery is scheduled for February and March. The final contract is for the construction of pier floats for the MacMillian Pier Reconstruction in Provincetown, Mass. The contract is with AGM of Mashpee, Mass. This project is scheduled to be completed by spring 2002.



Because people like to see where they are going!

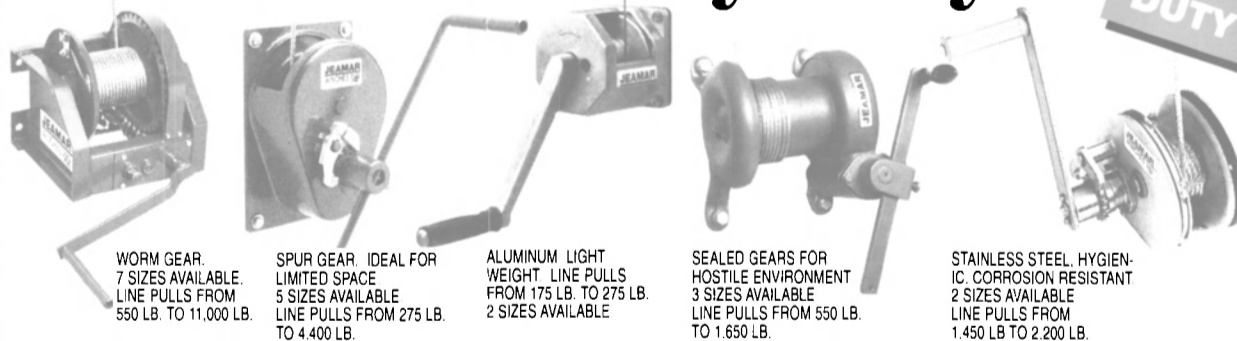
AUSTRALIA:
5 Sunmont Street, Derwent Park
Tasmania 7009 Australia
Tel: +61 3 6273 9277
Fax: +61 3 6273 9281
E-mail: info@LSAMES.com
Web Site: www.liferaftsystems.com.au



EUROPE:
P.O. Box 617, Woking
GU21 1GU England UK
Tel: +44 788 158 8119
Fax: +44 1483 851 1402
E-mail: t.harris@LSAMES.com
Web Site: www.liferaftsystems.com.au

Circle 368 on Reader Service Card or visit www.maritimereporterinfo.com

When We Say 'Heavy Duty' We mean 'Heavy Duty'!



Heavy duty applications require precise, dependable and continuous performance. Our Heavy Duty Hand Winches are designed to deliver just that!

At Jeamar our Engineers and Designers are constantly striving to develop new ideas that result in better and more reliable products for our customers.

- Eleven different models - a hand winch for any application.
- Line pulls from 175 lbs. to 11,000 lbs.
- High Drum to Rope ratios.
- Non-recoil Automatic Braking is standard, prevents recoil.
- Conforms to world wide standard DIN 15025.
- Fast delivery on all models.

1051 Clinton Street, Buffalo, New York, U.S.A. 14206
Toll Free: Tel: 1-877-884-8118 • Fax: 1-877-569-9909
web site: www.jeamar.com • Email: sales@jeamar.com



Jeamar Winches

Send for our catalogue for full details!

Circle 269 on Reader Service Card or visit www.maritimereporterinfo.com

Ship Repair & Conversion

CIT Takes Issue With Customs' Duty Calculation in Dry-Docking Case

By Thomas Z. Cheplo,
Dyer Ellis & Joseph

The vessel repair statute (Section 466 of the Tariff Act of 1930, 19 U.S.C. § 1466) requires the payment of a 50 percent ad valorem duty on the cost of foreign equipment purchased for, or expenses of repairs made to, U.S.-flag vessels in a foreign country. The purpose of the vessel repair statute is to protect U.S. shipyards and to discourage vessel operators from taking their vessels abroad for the purpose of obtaining less expensive foreign repairs. The U.S. Court of International Trade determined that "section 1466 expresses the legislative policy designed to provide maximum protection to American shipyards." *Mount Washington Tanker Co. v. United States*, 505 F. Supp. 209, 214 (1980), *aff'd*, 665 F.2d 340 (C.C.P.A. 1981). In the court's view: "It cannot be questioned that the protection of the domestic shipbuilding and repair industries was of paramount importance in the enactment of this legislation."

The U.S. Customs Service interprets and applies the vessel repair statute through letter rulings, but its interpretations of the statute have not been without controversy. One frequently contested issue concerns the manner in which Customs determines duties in connection with dry-docking expenses. Such expenses, or portions thereof, are not necessarily related to dutiable repairs that might be performed simultaneously with non-dutiable inspections and/or modifications for the convenience of the vessel owner. The leading case in this area is *Texaco Marine Services, Inc. v. United States*, 44 F.3d 1539 (Fed. Cir. 1994), in which the Federal Circuit determined that the cost of dry-docking

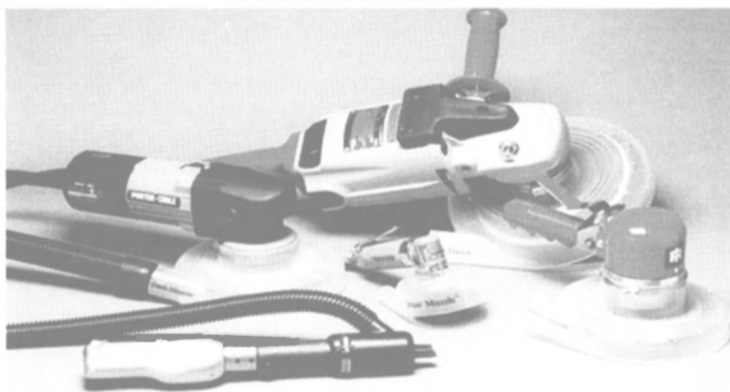
and any costs related to dry-docking are dutiable repairs, provided that such costs would not have been incurred "but for" the dutiable repairs. Application of the "but-for" test is relatively simple in situations where the dry-docking is undertaken to perform either dutiable repairs or non-dutiable inspections and/or modifications, but becomes complicated where both dutiable and non-dutiable work is performed during the dry-docking (so called "mixed purpose" dry-dockings).

In a recent ruling, the Court of International Trade found the pro-rata apportionment used by the United States Customs Service in its application of the *Texaco* "but for" test to be "arbitrary, capricious, and in violation of the classification designated by *Texaco*." *American Ship Management, LLC v. United States*, Consolidated Court No. 99-03-00151, slip op. 01-105 (Ct. Int'l Trade, decided Aug. 17, 2001). The court denied *American Ship Management's* motion, and Customs' cross-motion, for summary judgment, stating that triable issues of material fact remain regarding the determination of dutiable expenses related to the dry-docking.

The *American Ship Management* case involves two vessels that were put into dry-dock to comply with mandatory United States Coast Guard and American Bureau of Shipping inspection and modification requirements. While in dry-dock, the vessels underwent dutiable repairs in addition to the non-dutiable inspections and modifications. To calculate

the total value of dutiable dry-docking expenses, the Customs Service used a pro-rata apportionment formula whereby it divided the cost of dutiable repairs by the sum of the total cost of dutiable repairs and the

DUSTLESS DIE GRINDERS, ANGLE SANDERS AND NEEDLE SCALERS!



Flexible • Transparent • Retrofits over 1200 tools in Minutes



The Dust Muzzle
\$24.95



The Chip Muzzle
\$59.95

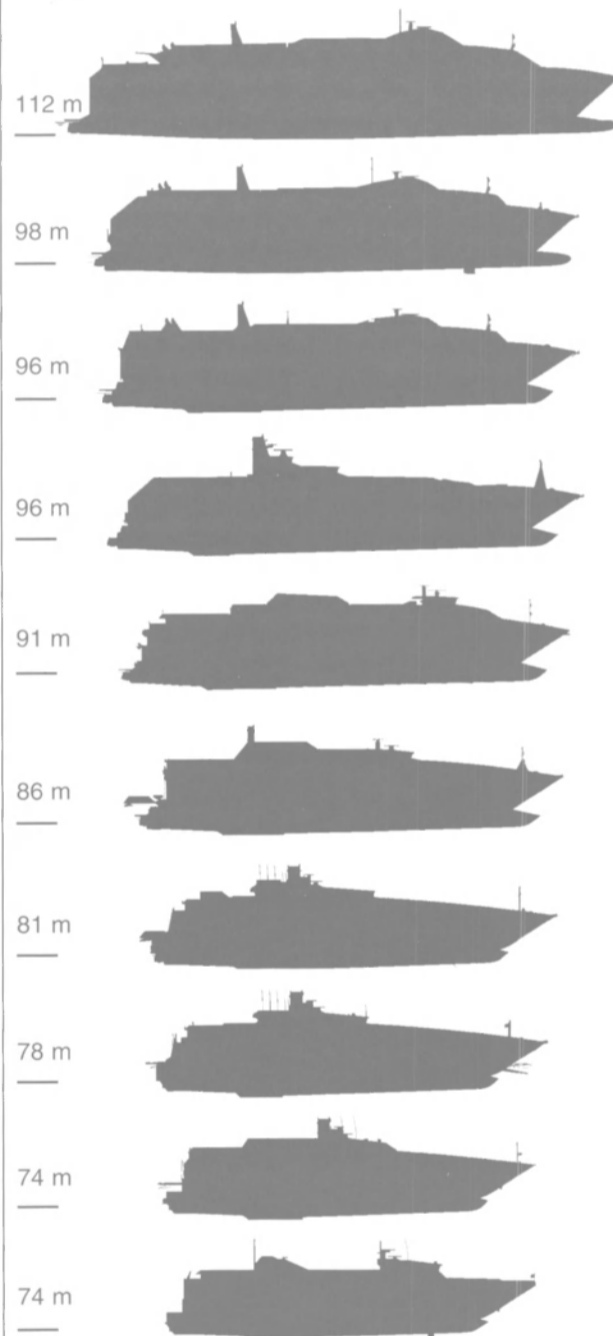
Dealer Inquiries Invited.

Shave Away, Europe 837 Cornish Drive, San Diego, CA 92107
619 223-2154 Fax 619 223-9690 www.dustmuzzle.com

Circle 348 on Reader Service Card
or visit www.maritimereporterinfo.com

EVOLUTION one12

THE BIGGER THE SHIP, THE BETTER THE BOTTOM LINE



incat

18 Bender Drive, Hobart, Tasmania 7009 Australia.
TEL: +61 3 6273 0677 FAX: +61 3 6273 0932
Email: incat@incat.com.au Website: <http://www.incat.com.au>

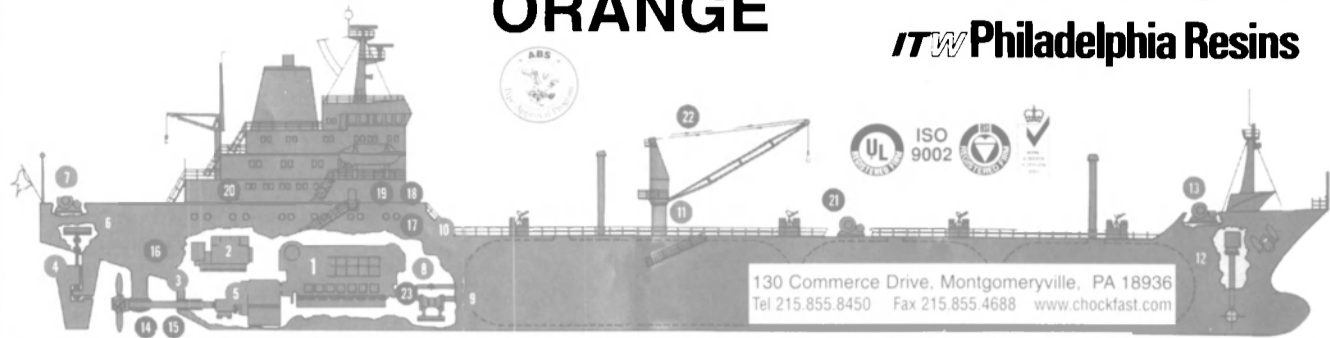
Circle 261 on Reader Service Card
or visit www.maritimereporterinfo.com

Don't risk engine security, maintenance economy and proven peace of mind: Specify **CHOCKFAST ORANGE**.

Chockfast ORANGE

is the chocking compound approved by every major classification society, including ABS

ITW Philadelphia Resins



130 Commerce Drive, Montgomeryville, PA 18936
Tel 215.855.8450 Fax 215.855.4688 www.chockfast.com

Circle 300 on Reader Service Card or visit www.maritimereporterinfo.com

SUNDIAL

MARINE CONSTRUCTION & REPAIR

A Full Service Shipyard on the Columbia River

**NEW CONSTRUCTION
REPAIRS AND CONVERSIONS
PAINTING AND BLASTING
2000 TON DRY DOCK
BUILDING & LAUNCH WAYS**

5605 NE Sundial Road Troutdale, Oregon 97060
Ph: 503-667-1974 Fax: 503-666-7872
Email: sundial@sundial-marine.com

Circle 320 on Reader Service Card
or visit www.maritimereporterinfo.com



**Shipbuilders
Architects
Marine Engineers**



**Build your next boat at the yard known for
uncompromised quality and reliability**

For more info, please contact:
Bruce Doughty, President
P.O. Box 296, Enterprise Street,
East Boothbay, Maine 04544
Phone: (207) 633-6517 Fax: (207) 633-7007
www.washburndoughty.com

Circle 335 on Reader Service Card
or visit www.maritimereporterinfo.com

International Maritime Training

International Maritime Training Inc.
Presents

U.S.C.G. COURSES

- **Basic S.T.C.W. '95 Safety Training**
- **Bridge Resource Management**
- **G.M.D.S.S.**
- **Radar**
- **A.R.P.A.**
- **500 & 1600 Ton Prep.**

Immediate Reservations Available
At the Ft. Lauderdale Facility

Call (954) 779-7764
Or Email:
info@imtfl.com

Circle 264 on Reader Service Card
or visit www.maritimereporterinfo.com



CENTRIFUGE SERVICES INC.

NOW YOU HAVE A CHOICE WITH...

**Specializing in Centrifuge Systems
Repairs to all Types and models!**

- ALFA-LAVAL (DE LAVAL)
- WESTFALIA (CENTRICO)
- BIRD
- DORR OLIVER
- SHARPLES
- MITSUBISHI
- VERONESI
- KRAUSS MAFFEI
- ALL OTHER MANUFACTURERS

MARKETS SERVED

- MARINE
- FACTORY
- POWER
- PHARMACEUTICAL
- PETROLEUM
- CHEMICAL
- FOOD
- WASTE OIL
- WASTE REDUCTION

* PARTS * SERVICE * REPAIRS

- STOCKING PARTS FOR MOST MODELS
- IN HOUSE REPAIRS
- FIELD SERVICE
- BOWL REPAIRS AND BALANCING IN HOUSE AND IN-FIELD

Stocking New Remanufactured and Used Centrifuges

120 SOUTH 16TH STREET
La Porte, Texas 77571
Phone: 281/470 - 9005
Fax: 281/470 - 6380

Circle 218 on Reader Service Card
or visit www.maritimereporterinfo.com

total cost of non-dutiable inspections and modifications, and then multiplied the resulting percentage by the total dry-docking expenses.

Contrary to American Ship Management's contention, the court held that an apportionment of dry-docking expenses is not per-se illegal, so long as the dutiable dry-docking expenses undertaken solely for the purpose of repair and the non-dutiable dry-docking expenses undertaken for a purpose either unrelated to repair or for a mixed purpose are clearly identified. However, the court condemned the particular apportionment used by Customs as arbitrary and in violation of Texaco.

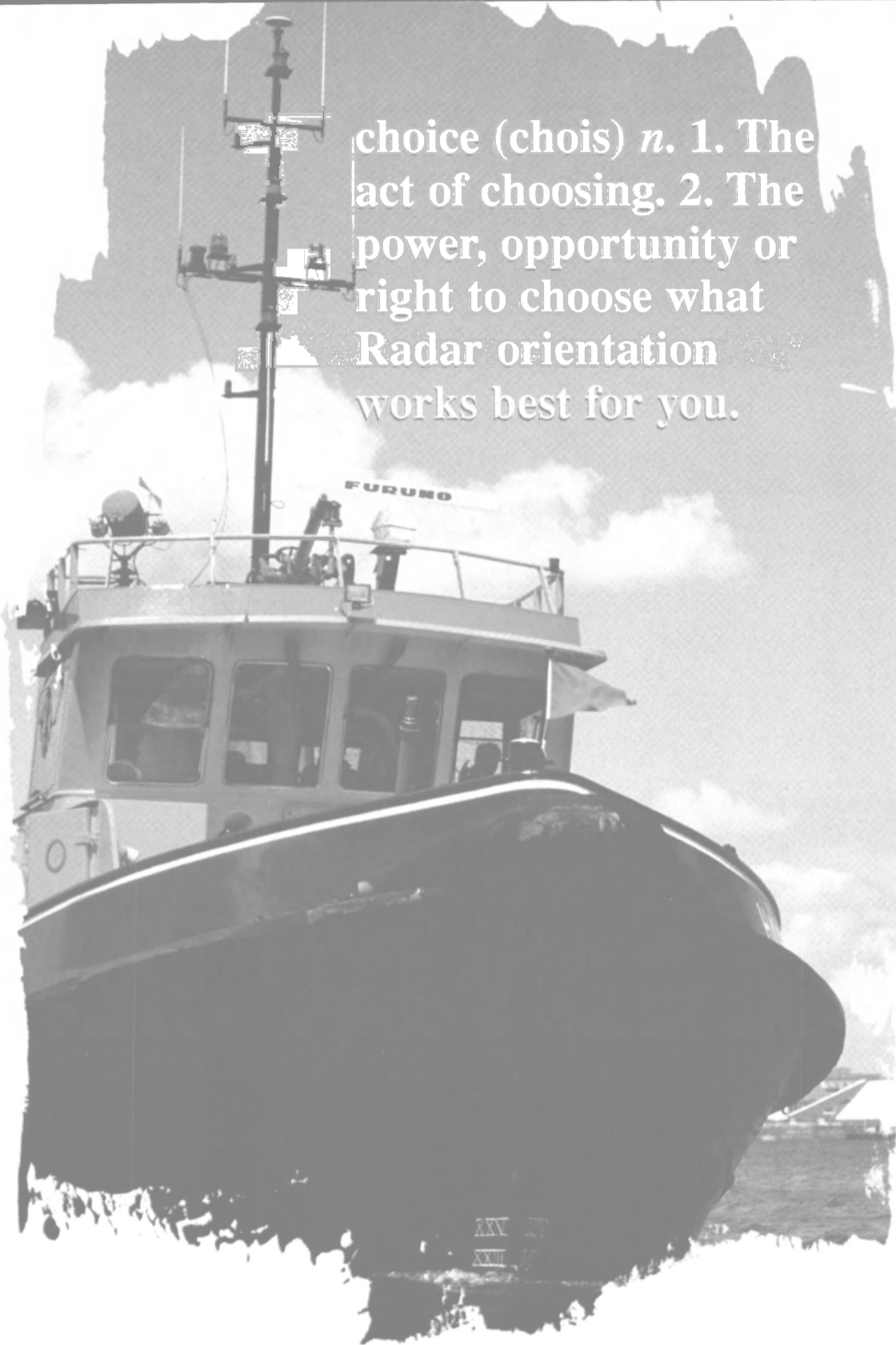
The court noted that the Texaco decision specified that "[t]he mere drawing up of a vessel on a dry dock is not a part of her repairs, but is rather a method of making an inspection of her to determine whether any repairs are necessary." Again citing Texaco, the court stated that "the cost of tugs is an inevitable expense of a mandatory inspection and, thus, is not dutiable." The court added that all maintenance charges in connection with the dry-docking during the period of mandatory inspection and/or modifications are non-dutiable under Texaco, notwithstanding whether or not any repair was performed during the same period. The court stressed the importance of the timing of dutiable repairs relative to the completion of non-dutiable inspections and/or modifications, holding that "only the maintenance expense of dry-docking for the period of time in excess of that necessary for a mandatory inspection and/or modifications are dutiable under the Texaco test."

Judging from the Customs Service's past treatment of challenges to its interpretation and application of the Texaco case, a settlement in American Ship Management is unlikely. If the CIT's holdings are upheld, Customs may be forced to move from a percentage-based apportionment to a simple examination of timing in assessing duties related to dry-docking.

As a result, dry-docking expenses would not be dutiable where dry-docking is performed to carry out duty-free inspections and/or modifications, even if dutiable repairs are performed simultaneously. If, however, dutiable repairs are conducted after the time necessary for duty-free inspections and/or modifications has expired, then the cost of continuing the dry-docking from that point forward would be dutiable.

Thomas Cheplo is an attorney at Dyer Ellis & Joseph, P.C., a Washington, D.C. based law firm with a domestic and international practice involving transportation, shipping, finance, corporate, securities, legislative, environmental, and trade matters.

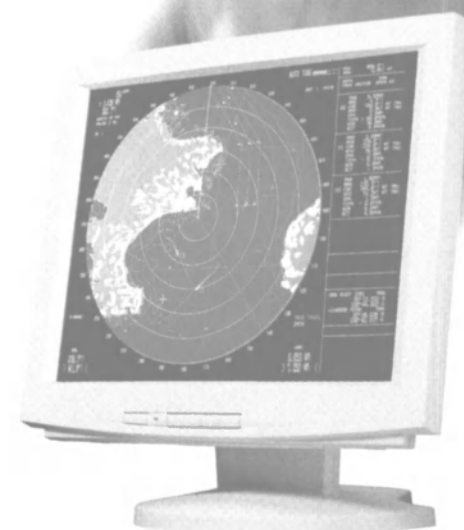
choice (chois) *n.* 1. The act of choosing. 2. The power, opportunity or right to choose what Radar orientation works best for you.



FR2105 Radar Series



FR2125V Radar



FR2105BB Radars

Explore the Freedom of Choice!

This is one time when one Radar series can fit all! Need an IMO and IEC Compliant Radar? No problem, the 21" color CRT FR2105 Radars are right on the regs. Want a portrait display for those tight rivers and channels? Check out the FR2125V Radar with a 21" color CRT portrait display. Looking for that all glass, high-tech bridge? We've got that too, in our FR2105BB series of Black Box Radars.

Furuno's IMO Compliant Radars, River Radars and Black Box Radars all feature operational functions like Head-up/Course-up/North-up orientation, parallel index lines, true motion, sensor status, GPS and other electronic position-fixing systems, wind parameters, depth sounder data and more. So if you're looking for the best choice in Radar, choose Furuno... the choice of the professionals!



www.Furuno.com

Furuno USA, Inc. • 4400 NW Pacific Rim Blvd. • Camas, WA 98607
Tel (360) 834-9300 • Fax (360) 834-9400

Circle 248 on Reader Service Card or visit www.maritimereporterinfo.com

Ship Repair & Conversion

NORSHIPCO Weathers the Economic Storm

A down economy, a disabled drydock and a nation under heightened security measures — not exactly the best position for a ship repair facility to be in — or so one would think. Norfolk Shipbuilding & Drydock Corporation (NORSHIPCO) however has managed to stay on top with its steady stream of government and commercial work coming into its yard. A member of the United States Marine Repair (USMR) group of shipyards, NORSHIPCO, as well as its West Coast yard affiliates, Southwest Marine and San Francisco Drydock, have, according to USMR COO and NORSHIPCO president, Alexander Krekich, "weathered better than most."

By Regina P. Ciardiello, senior editor

With 70 percent of NORSHIPCO's work on the government side, the yard has still had a steady stream of commercial work. According to Krekich, the work that was performed on MSC ship M/V SSG Edward A. Carter was successful in terms of schedule, costs and customer satisfaction. The 950-ft. (289.5 m) vessel, which arrived at NORSHIPCO on March 1, 2001, is under a long-term charter to MSC. Owned and operat-



Military Sealift Command (MSC) M/V SSG Edward A. Carter (at left), which is owned and operated by Maersk Line sits alongside Disney's Wonder at NORSHIPCO's Titan drydock.

ed by Maersk Line, it was converted from a commercial containership to a self-sustaining, prepositioning Army ammunition containership— capable of transporting 2,500 20-ft. containers.

Strategically placed next to the Carter in the Titan

Drydock was Disney Wonder, which arrived at NORSHIPCO on September 12. Originally scheduled to

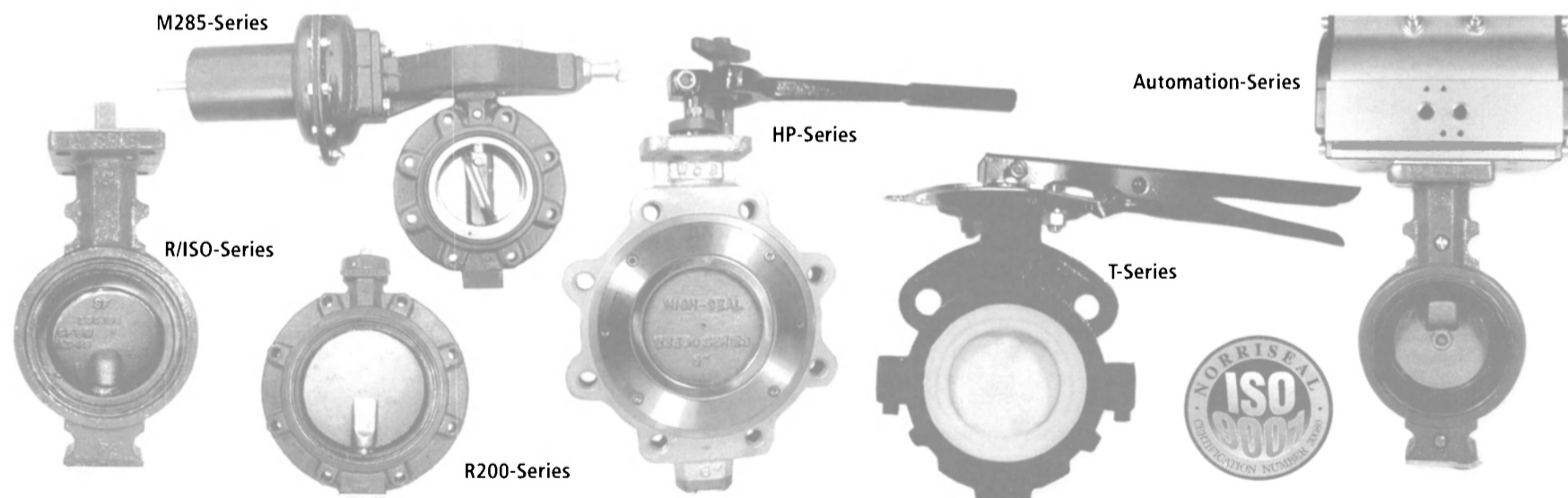
(Continued on page 27)

FULL LINE

FULL SERVICE

FULL TIME

NORRIS VALVES



- Rubber Seated
- Metal Seated
- Firesafe
- High Performance
- TEFLON® Lined
- Low Pressure
- High Pressure

For more information, visit www.norriseal.com

NORRIS BUTTERFLY VALVES • NORRISEAL CONTROLS

Solutions through engineered products.

NORRISEAL
A DOVER RESOURCES COMPANY

P.O. Box 40525 • Houston, TX 77240-0525
(713) 466-3552 • Fax: (713) 896-7386
Email: sales@norriseal.com

Coast Guard Certified
ABS Certified

© E.I. DuPont

VISIT US AT THE WORK BOAT SHOWS IN NEW ORLEANS AND SEATTLE

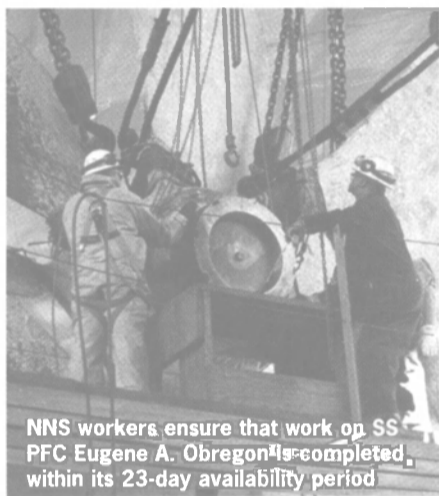
Circle 294 on Reader Service Card or visit www.maritimereporterinfo.com

Ship Repair & Conversion

Newport News Shipbuilding: A City Within A Shipyard

For more than 100 years Newport News Shipbuilding has held the distinction as one of the largest shipyards in the Western Hemisphere. The 550-acre facility, which is situated on a two-mile stretch along the James River in Newport News, Va., is best described as "a city within a shipyard." MR/EN recently visited the yard to witness first hand how the world-famous yard utilizes more than a century of know how and an unmatched wealth of technical capability to get ailing ships — from "shave and haircuts" to complicated reconstructions — in and out, on time and on budget.

By Regina P. Ciardiello, senior editor



NNS workers ensure that work on SS PFC Eugene A. Obregon is completed within its 23-day availability period

For those who have never had the opportunity to visit one of the most prolific shipyards in the world — Newport News Shipbuilding — the most prominent feature is the company's 900-ton gantry crane, whose blue steel structure emblazoned with the company name across the front in block letters, is clearly visible from Interstate 664. The immense structure is one of the largest in any shipyard worldwide. The yard has long been a top choice for repair for the cruise industry, with an edge in this sector that is two fold. Aside from the fact that NNS is in close proximity to the cruise ship mecca of Miami, Fla., the yard also has the capacity and expertise to accommodate these floating cities with its Dry Dock No. 12, which at 2,300 x 250 ft. (701 x 76.2 m), is designated as the largest in the Western Hemisphere.

Drydock No. 12 served as a home for Carnival's Paradise, which underwent emergency repairs of its starboard podded propulsion unit in July 2000. The job was unique in that it was the first ever Azipod repair to be performed in the U.S. — a fact that was confirmed by **Becky Stewart**, director of Ship Repair at NNS. "The Paradise Azipod repair was the first overhaul of an Azipod propulsion motor in the U.S. A number of cruise ships being built in Europe

have this new propulsion system. The work on Paradise will provide us with valuable knowledge for future electric drive work."

Four months later, NNS' cruise expertise again came into play when it was tapped by Celebrity Cruises to take on the repair of its new gas turbine-pow-

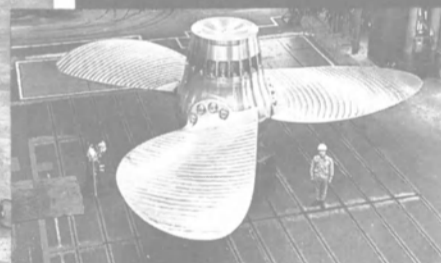
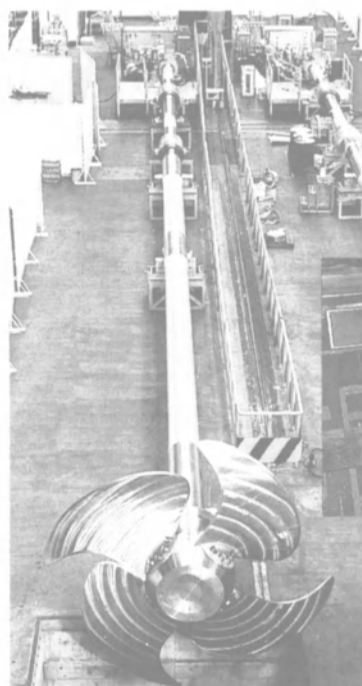
ered Millennium. The vessel, which experienced excessive vibration due to the slapping of water against its hull, arrived at NNS on November 18, 2000 for a quick, yet complete, fix in just three weeks.

(Continued on page 29)

Kawasaki

IN PURSUIT OF MANOEUVRABILITY

Aspiring to provide excellent systems, Kawasaki, with a century-long experience, is continually researching and developing new propulsion systems.

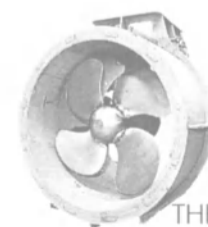
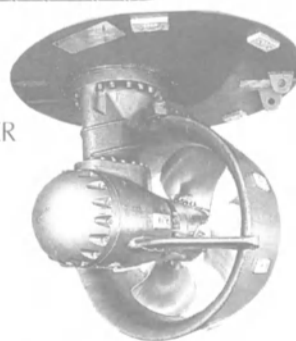


C.P. PROPELLER

REPELLER



INTEGRATED CONTROL SYSTEM



SIDE THRUSTER

KAWASAKI
HEAVY INDUSTRIES, LTD.

World Trade Center Bldg., 4-1 Hamamatsu-cho, 2-chome, Minato-ku, Tokyo 105-6116, Japan
 ●Marine Machinery Sales Dept. Machinery Division: Phone:81-3-3435-2374 Fax:81-3-3435-2022
 Kawasaki Heavy Industries (UK) Ltd. Phone:44-20-7588-5222 Fax:44-20-7588-5333
 Kawasaki Heavy Industries (Europe) B.V. Phone:31-20-644-6869~70 Fax:31-20-642-5725
 Kawasaki Heavy Industries (USA) Inc. Phone:1-212-759-4950 Fax:1-212-759-6421

Circle 412 on Reader Service Card or visit www.maritimereporterinfo.com



Simply Prepaid CALLING™

Your crew can afford the calls. You stay on top of your costs.

With your new prepaid calling cards from COMSAT Mobile Communications, both you and your crew will benefit. No monthly bills, no sorting through call records, and no payment collections. Pay for cards only upon activation, not before. So ~~your~~ inventory management is easy and risk free. To order your free supply of Simply Prepaid CALLING™ cards just call +1 301 214 3100 or 1 800 685 7898 (choose menu option # 1 on both) or e-mail cmcsales@comsat.com today.

For a limited time only, receive 250 free calling units for every pack of 10 cards you activate.

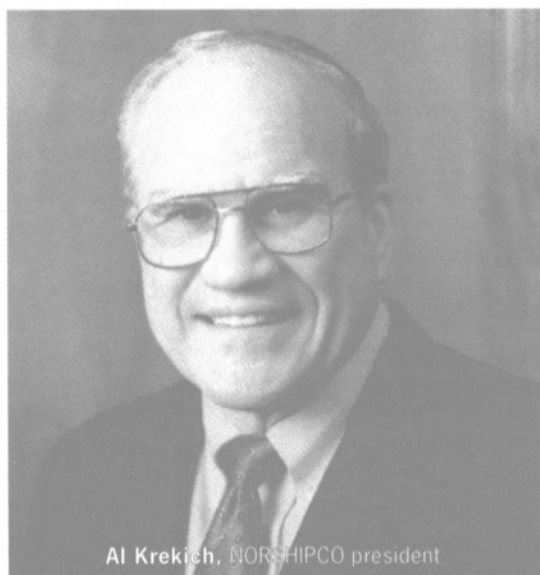
COMSAT Mobile Communications
6560 Rock Spring Drive · Bethesda, MD 20817



Circle 222 on Reader Service Card or visit www.maritimereporterinfo.com

Ship Repair & Conversion

(Continued from page 24)



Al Krekich, NORSHIPCO president

arrive at the yard on the now infamous date of September 11, the vessel could not enter the drydock that day due to security measures that were instilled immediately following the terrorist attacks.

Once the vessel was granted clearance into the yard, it underwent routine maintenance, drydocking and painting in a relatively short period of time — so that there was little itinerary interruption. Since this is a vital component of the cruise industry, NORSHIPCO met this request and provided Disney with a quick turnaround on the job. "You've got to make a commitment to maintain a quick turnaround," Krekich said. "Materials, workers — all the piece parts have to come together; everything has to be a fine, integrated watch."

On the government side, NORSHIPCO worked on the cruiser USS Normandie, and according to Krekich, after all the numbers are in, will qualify for the Aegis Flag Award, which is given out by the vessel's project manager for superior work performed on Aegis ships.

Despite a migration of commercial work from West Coast yards to the Asian yards, which has become recurring trend as a vast number of Chinese shipyards are taking business from even other traditional Asian competitors, Southwest Marine in San Diego, Calif. has done a stable amount of Navy work, as well as the company's Ingleside, Texas yard, which according to Krekich, "has had its best year ever."

Unfortunately however, NORSHIPCO had an unpleasant experience during the beginning of September while awaiting the arrival of an MSC ship that was to be housed in its Titan Drydock. As the ship was in the process of being drydocked, several of the dock's plates buckled. After being examined by the dockmaster, it was deter-

mined that there were signs of serious damage to the plates — some of which were already beginning to thin before the accident. While the repercussions from the accident seemed immense at the time — the yard had to divert three cruise ships jobs scheduled for this fall — workers bonded together and immediately began cutting out new plates and replacing them with new steel. According to Krekich, the drydock is expected to be up and running again by mid-November.

While the yard had to send Holland America's Amsterdam to GMD Shipyard in Brooklyn, N.Y. and Royal Caribbean's Grandeur of the Seas and Sovereign of the Seas to other competing yards, Krekich laments that NORSHIPCO will still come out of the situation on top — and better than ever.

"This (the drydock accident) was more disappointing if anything," he said. "NORSHIPCO is continuing its efforts to include its share of the competitive commercial ship repair market and will continue to work with ship owners up and down the East Coast once the drydock is working again."

In the meantime, the yard will continue to focus its efforts on the government side - specifically with the Navy. Since the navy's newbuild program has been lean, for the past decade, repair and maintenance of existing ships has become more vital than ever.

In fact, according to Krekich, there have been discussions that the Navy will instill a major modernization program for aging cruisers, which typically have a lifecycle of

30-35 years.

Terrorism Hits Home

Since September 11, much has changed in the maritime industry specifically from a security standpoint. Case in point being when *MR/EN* visited NORSHIPCO during the middle of October, U.S. Coast Guard patrol boats were omnipresent around the yard's environs keeping a close eye on the cruisers and the MSC ships that was stationed at the yard.

"Not much has changed in terms of the amount or degree of work and I don't believe that the events of September 11 will have a big impact on the repair industry," Krekich said.

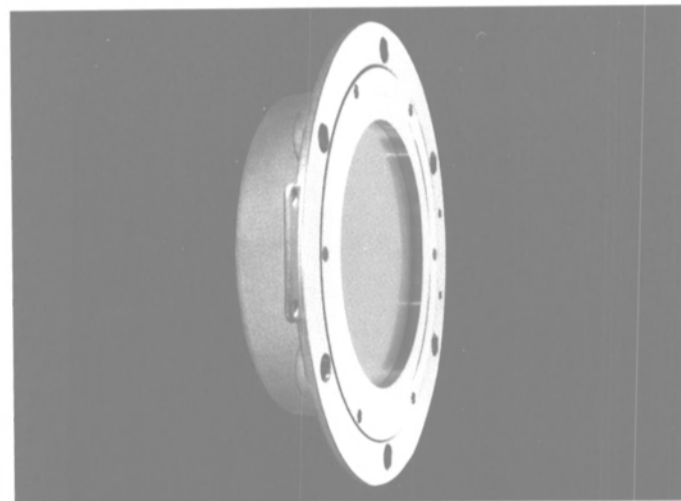
He did say that security both around the yard and at ports will deal out a huge change to the industry.

"There is a definite increase in security with the presence of the Navy and Coast Guard patrolling the areas around the shipyard," he said. "Increased security in cargo handling will continue more than likely continue indefinitely at the ports as well."

"You've got to make a commitment to maintain a quick turnaround — all the pieces have to come together and everything must be a fine, integrated watch." — NORSHIPCO president Al Krekich confirms the shipyard's ability to provide a cost-effective, efficient dry-docking process.

"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

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 e-mail
http://www.emsmarcon.com

Circle 239 on Reader Service Card
or visit www.maritimereporterinfo.com

Ship Repair & Conversion

Mobile Yard Stays Busy With Offshore Work

Even before the September 11 terrorist attacks in New York City and Washington, D.C., the offshore market in the Gulf of Mexico had shown signs of

weakening. However one shipyard — Atlantic Marine-Mobile — has reported a steady flow of work with the award of several, substantial offshore refurbish-

ment contracts in recent months.

The shipyard in Mobile has a long history with the offshore market, but it notes that 2001 has been particularly busy. Semi-submersible and jack-up rigs have occupied the Mobile, Alabama facility throughout 2001. The influx of



Ensco's ENSCO 94 at Atlantic Marine Mobile

offshore work includes the following. ENSCO International's jack-up rig ENSCO 68, arrived in Mobile in late March. The rig was in the yard for routine maintenance and class inspection, including the installation of a new top drive and upgraded drill floor to increase its drilling depth capacity. The job included about 85 tons of steel replacement, and the yard accomplished the work 10 days ahead of schedule. ENSCO 94 immediately followed, and was scheduled to leave the yard in early October. It was in the yard for drill floor modifications to allow for the installation of a new derrick in order to increase its drilling depth capacity, as well. On this job, 85 tons of steel renewal was required. Atwood Oceanics' semi-submersible Atwood Hunter entered the yard in June for a major upgrade. Hunter will have all new crew quarters — accommodating 120 people — installed, as well as a new 75-ton crane. All derrick and drilling equipment will be upgraded along with a complete renewal of the piping systems, to accommodate the rig's capacity to drill a well depth up to 25,000 ft. This was a substantial steel job, involving the replacement of about 750 tons of steel. Upon leaving the shipyard in October, hunter will begin a contract in the Egyptian territorial waters of the Mediterranean Sea for Burullus Gas-Company, drilling 11 wells.

Circle 17 on Reader Service Card
www.maritimereporterinfo.com

Your Silent Partner...

- Reducing vibration
- Protecting equipment





CENTA®
 Torsional Couplings
 Composite Shafting
 Mechanical & Electrical
 Clutches



Centax® CX Series, Centaflex® CF-R & CF-DS, Centamax® Centalink® & Centadisc Shafting, Centastart
Leading by Innovation

CENTA Corporation
 815 Blackhawk Drive Westmont, IL 60559
 PH: (630) 734 - 9600, FX: (630) 734 - 9669, Email: centacorp@aol.com

Circle 217 on Reader Service Card
 or visit www.maritimereporterinfo.com

HEADHUNTER
 INTEGRATED MARINE SYSTEMS

ROYAL FLUSH

- Powerful Jet Macerator
- 1 1/2" Discharge Piping
- 5 Year Warranty
- Weight And Space Saving Vacuum Alternative
- Labor-Saving Installation




TYPE II MSD

- USCG/IMO Certified
- No Harsh Chemicals
- Custom Designs Available
- Lightweight
- Steel, Plastic, or Aluminum Construction



tel 954-581-6996 fax 954-581-0403 www.headhunterinc.com
 4100 RAVENSWOOD RD. FT. LAUDERDALE, FL 33312

Circle 256 on Reader Service Card
 or visit www.maritimereporterinfo.com

quietly

working for you



Ask us about our customized exhaust systems for marine applications

- Silencers
- Connectors
- Insulation Blankets
- Exhaust Accessories
- Vibration Isolation
- Emission Control
- Acoustic Enclosures
- UL Fuel Sub-bases

Phone 905 612 4000
 Fax 905 612 8999
 Email info@silex.com
 Web www.silex.com



800 387 7818
 one source...one supplier
 countless solutions

Circle 315 on Reader Service Card
 or visit www.maritimereporterinfo.com


AIRCHIME
 HEARD THE WORLD OVER SINCE 1929

**IMO/ COAST GUARD CERTIFIED
 SOUND SIGNAL SYSTEMS
 CUSTOM DESIGNED SYSTEMS
 MADE FOR ANY SIZE VESSELS**

- Work Boats
- Passenger Ferries
- Deep Sea Vessels
- Cruise Ships

Over 150 Models

- Air Horns
- Enclosed & Heated Air Horns
- Self-contained Air Horns
- Electric Piston Horns
- Controls & Accessories
- Engine Room & Fire Alarm Signals
- Fog, Bell & Gong Systems



DISTINCTION • SAFETY • RELIABILITY

AIRCHIME MANUFACTURING COMPANY
 5487-267 Street, Gloucester Industrial Estates
 Langley, B.C. Canada V4W 3S8
 Phone: 604-857-2110 Fax: 604-857-2120
 Internet Site: <http://www.airchime.com>

Circle 205 on Reader Service Card
 or visit www.maritimereporterinfo.com

Ship Repair & Conversion

(Continued from page 25)

The ability to get ships fixed quickly and correctly is particularly important to the cruise industry because of its tight itinerary schedule — extra time at the drydock results in lost revenue and passenger capacity. According to Stewart, the work on Millennium shaved off considerable amounts of time as a result of NNS' ability to lie out all the materials needed on the dock prior to the ship's arrival. Materials were produced on-site via the yard's computer aided design and manufacturing system and its massive 300,000 sq. ft. machine shop. "We can muster the resources to do anything," Stewart said. "We sometimes sub-contract work, such as painting and blasting, but the majority of the work is done in-house."

On the Forefront

When *MR/EN* visited NNS in mid-October, it was not perceptible that the U.S. was in the midst of an economic downturn. The yard was abuzz with activity — both on the repair and new construction sides. On the repair front, two vessels — the 821 x 105.5 ft. (250 x 32.1 m) Carnival Victory and 893 x 116 ft. (272.1 x 35.3 m) SS PFC Eugene A. Obregon - were in the yard for regulatory, as well as cosmetic work. Sitting in Dry Dock No. 12 for a 10-day availability was Victory, which was undergoing underwater hull blasting and painting, replacement of shaft seals, propeller and rudder inspections, open and inspection of sea valves and renewal of transitional frames in way of port and starboard stabilizers.

Situated in the yard's floating Dry Dock No. 1 was MSC prepositioning ship Obregon, which carries ammunition, supplies and military vehicles. The vessel, which is being chartered through Waterman Supply, has a 23-day availability at the yard for hull and deck preservation; ballast and cargo preservation; stern ramp preservation and overhaul; crane overhaul; boiler re-tubing; main and emergency generator maintenance; cargo crane and ramp testing; and regulatory body inspections via its classification society, ABS. The vessel will return to Jacksonville, Fla. upon its departure from NNS.

The ship, which is the second of a three-part repair contract granted to NNS by Waterman Supply, followed SS SGT Matej Kocak, which visited the yard in August. The final vessel of the series, SS Major Stephen W. Pless is expected to visit NNS sometime during December.

According to shipyard superintendent, **Joe Adams**, the rotor on the vessel's steam turbines will be replaced, as well as underwater hull and freeboard repainting. The vessel's helo and bridge

decks will also be repainted. Adams added that since the vessel is more than 20 years old, regulatory work needs to be performed every two-to-three years — such as the cleaning and mucking out of its 12 ballast tanks, and blasting and painting of anchor chains.



Carnival Victory arrives at NNS during the first part of October for drydocking and repairs.

Peel Strip Remove



An improved method for removing paint, rust, adhesives & coatings from concrete. Aurand tools literally "peel" any accumulation from any hard surface. Here is the power of sandblasting in a compact, hand-held tool that can be used wherever a hard surface needs to be prepped prior to painting, refinishing or coating.

Available in several widths, and in gasoline, pneumatic and electric models.

TAKE IT OFF, TAKE IT ALL OFF

Since 1937

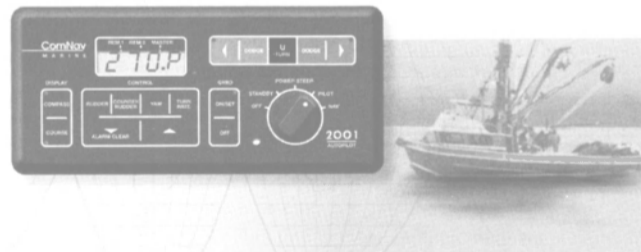
AURAND

1210 Ellis Street
Cincinnati, Ohio 45223-1843
(513) 541-7200 • FAX (513) 541-3065

Email: sales@aurand.net • web: www.aurand.net • (800) 860-2872

Circle 212 on Reader Service Card
or visit www.maritimereporterinfo.com

The crewmember you always wanted



Since their introduction in 1982, ComNav Autopilots have gained a reputation for top performance and reliability in any sea and weather conditions. ComNav Marine has a broad line of autopilots suitable for all types of vessels.

2001 Autopilot

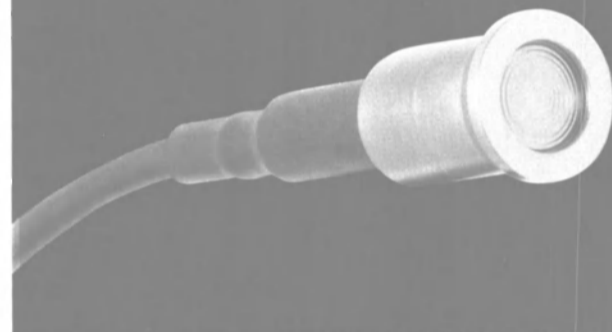
- Water resistant Control Head
- Three "Turn" functions
- Automatic trim
- Two remote ports built-in
- Two navigation ports for dual input of NMEA information
- Two heading outputs
- Selectable steering parameters
- Optional rudder angle indicator, up to 4 stations
- 3 year Extended Warrantee

ComNav ComNav Marine Ltd.

#15-13511 Crestwood Place, Richmond, BC, Canada V6V 2G1
(604) 207-1600 www.comnavmarine.com

Circle 221 on Reader Service Card
or visit www.maritimereporterinfo.com

"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

EMS

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 240 on Reader Service Card
or visit www.maritimereporterinfo.com

Ship Repair & Conversion

Shiprepair Forum Changes to Reflect Current Events

Changes in the international political and economic climate will add new urgency to the theme of the Shiprepair &

Conversion 2001 conference in London in November — gaining the edge in a competitive global industry.

Marking the 10th anniversary of the event, the conference takes place alongside the industry's leading exhibition in



Open New Markets. Reach More Buyers.

Sell spares, equipment, and services everywhere, every day.

Selling or buying? Either way you want ILSmart.com, the world's largest and most active marine e-Marketplace.

- Sellers advertise parts and services to active buyers worldwide, decrease inventories, open new markets, and increase sales.
- Buyers locate new and used items fast, find alternate sources for parts and suppliers, and find great deals.

Subscribe to www.ILSmart.com. Watch how rapidly it opens up bright and shining worldwide windows of opportunity for you.


ILSmart.com
It's About **Results!**

Inventory Locator Service, LLC • 3965 Mendenhall Road • Memphis, TN 38115 USA • For more information e-mail us at marketing@ilsmart.com or call 1-800-233-3414 (North America) or 1-901-794-5000 (Worldwide) • Fax: 1-901-794-1760.

Circle 265 on Reader Service Card or visit www.maritimereporterinfo.com



the Grand Hall, Olympia, on November 28-29.

A new pick-and-mix booking format offers cut-price entry to one or more of the four morning and afternoon sessions — giving delegates, exhibitors and visitors more scope to take part in both the conference and trade show, which will feature a record 360 exhibitors.

In a further innovation from organizers Lloyd's List Events, a pre-conference workshop on November 27 — held in conjunction with the annual meetings of the trade associations AWES and SSA — will focus on negotiating new-build, conversion and repair contracts.

In the main conference, the impact of world events will be assessed by speakers and in open debate at a time when the industry is already facing up to the demands of legislation, rationalization, modernization, diversification and competition.

Following the keynote opening address by Malta Drydocks chief executive **Peter Moore**, Acason's analysis forms part of a strategic market review in Session 1 chaired by Shell International fleet manager **Ken Graham**.

The review includes a comparison of global repair yard capacity and demand; a paper on modern shipyard trends by **David Ring**, chief executive of A&P Holdings; and an appraisal by ABS Europe assistant chief surveyor **Joseph Riva** of technical and legislative changes including the phasing out of single hull tankers and tougher survey regimes for older vessels.

There will also be a study of the causes and consequences of yard consolidation by MRC Business Information senior analysts **Mark Williams** and **Jenny Tok**, who observes.

Session 2 starts with a geographical review featuring Graig Shipping CEO **Hugh Williams** on China and a vision of European yards in 2020 by Fin-

cantieri Palermo chairman **Vito Busalacchi**, who also heads the AWES shiprepair group.

The session ends with a reprise of last year's highlight, a state of the industry debate introduced by chairman and ShipCare editor **Alan Thorpe**. Speakers include **Jose Luis Moya**, IZAR managing director; **Willem Geistdorfer**, general manager of P&O Nedlloyd fleet management; **Robert Pucnik** of Petromaritime Consulting; and Det Norske Veritas technical director Tor Svensen.

Day one of Shiprepair & Conversion closes with the event's prime networking opportunity, a Lloyd's Register cocktail reception open to all delegates and exhibitors.

Session three on day two of the conference opens by examining the owner/yard interface. Factors affecting yard selection will be outlined by **Eddie Bucknell**, fleet technical manager of Columbia Ship Management; Lloyd's Register marine director Alan Gavin reviews changes in Class aims; and Chamber of Shipping senior manager **Donald Chard** will put the case for a standardized shipyard contract.

The rest of the session is devoted to new business technologies. Papers include innovation in blasting by **John Odwazny** of UltraStrip Systems; and Tecor managing director **Carlos da Maia**; maintenance systems by **Morten Steen Martinsen**, ship management director at Jo Tankers; management support software by V Ships Consulting managing director **Martin Stafford**; and diversification into the FPSO conversion market by

Petromaritime's **Robert Pucnik**.

Session four spotlights repair and conversion case studies, including analysis of Great Lakes bulk carrier upgrades by **Alan Thoms**, president and CEO of CSE Port Weller Drydocks, and a detailed review of the uses of sandwich plate construction by Intelligent Engineering director **David Sanders**.

The session and conference ends with a debate on critical industry issues including the ramifications of the global political and economic outlook.

Together with feedback from earlier sessions, other topics earmarked for discussion include the impact of Port State Control and whether tough new quality standards mean more repair work or increased scrapping.

The November 27 pre-conference workshop on contract negotiation is being held at London's Commonwealth Institute in Kensington High Street.

Examination of the key points, pitfalls and differences involved in newbuilding, repair and conversion contracts will be underlined by a mock negotiation.

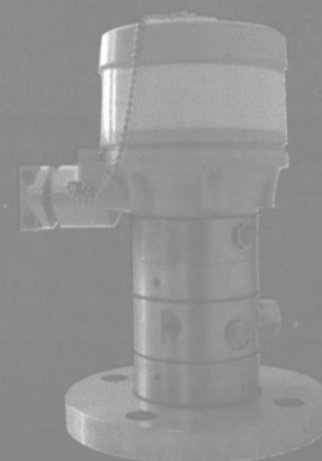
Speakers include **Ian Garrard** and **Simon Curtis**, partners in Curtis Davis Garrard; **Guy Mills**, a partner in Mills & Co; and **Katherine Birchall**, manager of North Insurance Management, representing the North of England P&I Association.

Full exhibition, conference and workshop details are on the event website — www.shiprepair.com — which includes visitor and delegate registration.

There is also a conference registration hotline on Tel +44 1932 893 861.

Circle 19 on Reader Service Card
www.maritimereporterinfo.com

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 e-mail
<http://www.emsmarcon.com>

Circle 241 on Reader Service Card
or visit www.maritimereporterinfo.com

Delta T Insulated Coating

Why Paint & Insulate?

Delta T is a one-part coating system that provides the combination of both excellent thermal and anti-condensation in one easy, cost-effective spray method. Used on vessels of all sizes worldwide. Most shipyards see a 30% to 50% reduction in total costs if installed by yard personnel.



20-60 mil layer achieves an equivalency of R9-R14.

Delta T Coating

www.deltacoat.com

Delta T carries the following classifications:

United States Coast Guard
Lloyd's Registered
ABS Approval
DNV Approval
Underwriter's Lab

All classifications are to IMO/SOLAS guidelines

For immediate information, visit our website at: www.deltacoat.com

Mascoat Products

10890 Alcott Drive, #102

Houston, Texas 77043

Phone: (713) 465-0304

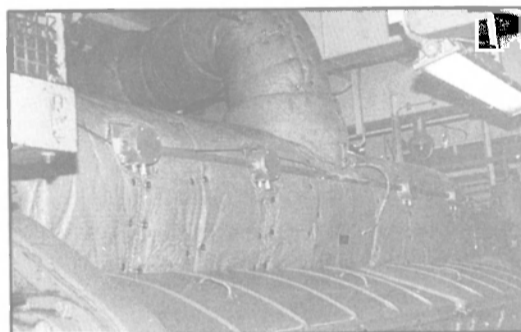
Fax: (713) 465-0302

E-mail: Sales@deltacoat.com

Circle 287 on Reader Service Card
or visit www.maritimereporterinfo.com



SUPERIOR ENERGIES INC.



TEMP-SET® INSULATION COVERS MANUFACTURING AND CONTRACTING

Removable Reusable Temp-Set Insulation Covers.
Manifolds, Turbos, Silencers, and complete Exhaust Systems.

- Reduce engine room temperature
- Lower engine room noise
- Easy to assemble
- Coast Guard Compliant

ACOUSTICAL INSULATION
ASBESTOS ABATEMENT
TURN-KEY JOBS

Let us take care of all your insulation and abatement 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 32 on Reader Service Card
or visit www.maritimereporterinfo.com

Ship Repair & Conversion

A&P Shipcare Stays Busy

A&P Shipcare has opened a new repair facility in Tilbury Freeport, London. The facility, which will support the nationwide, 24-hour, 365-day service already provided by the existing A&P

Shipcare network, comprises workshop facilities in the port capable of carrying out engine and mechanical overhauls, steelwork, pipework renewals and electrical repairs and installations. Also

available from this division are riding squads and procurement of ships spares.

A&P Shipcare Completes Repairs Aboard American Cormorant

The 52,092-dwt U.S.-registered Heavy Lift Vessel American Cormorant left Southampton on September 2 after its

annual lay over during which A&P Shipcare - Southampton carried out various works. The 1975-built American Cormorant was in the Southampton area for a visit to the Combat Equipment Battalion in Hythe. The vessel, which arrived in Southampton on June 8 and departed on August 29, underwent various tank repairs which entailed bulkhead steel repairs, steel pipe refurbishment and repairs and replacement of heavy duty plastic pipe, a task which previously had never been carried out by A&P Shipcare - Southampton.

A&P also supplied steelworkers and riggers for de-lashing work of her cargo, which comprised three tugs, three landing craft, a crane barge, a flat barge and two LCM (small landing craft), when the vessel was berthed at Gillkicker Point, Solent on June 4.

A&P Grabs Hold Of Reefer Market

The reefer market has proved the most successful for A&P Falmouth throughout recent months with a total of six bookings for reefer ships from two separate owners. Falmouth is ideally located for the reefer trades on the ballast route from Northern Europe to loading ports in South Africa, Canary Islands and the Caribbean.

Amer Shipping's 13,312 grt vessel the Amer Choapa was the first to enter the shipyard during July. Work completed during the nine-day docking included blasting and painting, steelwork repairs, hatch cover repairs, main engine survey and overhauls to the rudder and tailshaft. Following the successful completion of the Amer Choapa, the 9,070 grt Amer Whitney arrived during early August for similar works covering a 10 day period. Having successfully completed both vessels, A&P Falmouth are now awaiting the arrival on 9th October of the third Amer Shipping vessel the 9,072 grt Amer Everest, for drydocking and survey.

Another major reefer vessel owner, Norway's Leif Hoegh & Co. ASA, also utilized the repair facilities of A&P Falmouth. The 7,743 grt Crystal Pride arrived during early September for drydocking and survey, which included hull preparation and painting and boiler and generator maintenance. Deck repairs included work on the cargo cranes and hatch covers. Following the Crystal Pride, her sister ship, Crystal Prince arrived in Falmouth for drydocking and survey during a 12 day period mid-September, and a third sister ship, Crystal Primadonna arrived at the end of the month with similar works completed, and left the yard on schedule on October 8.

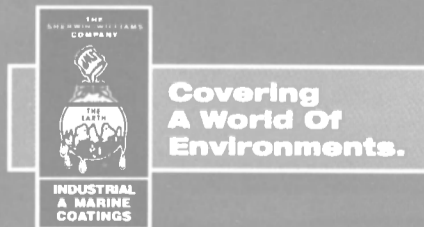
Circle 18 on Reader Service Card
www.maritimereporterinfo.com

IF YOU'RE LOOKING
FOR ONE SUPPLIER
THAT OFFERS EVERY
MARINE COATING,
AND EVERY SERVICE,
WHEN AND WHERE
YOU NEED IT,

WE'RE IN THE SAME BOAT.

With our comprehensive line of Industrial and Marine coatings and Seaguard Marine products, we offer protection for every part of your vessel. And with our coast to coast product availability, along with our national network of service representatives, you can be assured your job gets done right and on time. So if you'd like the benefits of working with a supplier like this, well, we'd love to have you aboard.

To have a local Sherwin-Williams representative contact you, please call 1-800-524-5979. Or visit us on the web at www.sherwin-williams.com.



Circle 313 on Reader Service Card or visit www.maritimereporterinfo.com

Cochin Shipyard Is Poised For Growth

One of India's largest and most sophisticated shipyards, Cochin Shipyard (CSL), has successfully completed major upgrade work for Oil and Natural Gas Corporation of India on its Jack-up-rig Sagar Shakthi and Mobile Offshore Drilling Rig Sagar Bhushan. Both jobs, which totaled approximately \$2.2 million, were granted on the basis of a global tender against strict international competition.

Situated on the main sea lane, which links the Mediterranean with the Far East, Cochin boasts two of the largest docks in India measuring 837 x 141 x 29 ft. (255 x 43 x 9 m) and 886 x 148 x 39 ft. (270 x 45 x 12 m), serviced by cranes ranging between 10 and 150 tons. The yard also features a covered shop area of 35,000 sq. m, large steel stockyard and three quays measuring 951, 682 and 1,509 ft. (290, 208 and 460 m).

Sagar Bhushan's drilling capacity was upgraded for drilling up to 400 m water depth from the previous 300 m. Sagar Shakthi required erection of a Raw-water tower of 459 ft. (140 m) height and 66 tons in weight for the purpose of meeting the raw-water requirement for drilling operation at seas. For both vessels CSL procured, installed, tested and commissioned major equipment such as cementing units, top drive system, drilling instrumentation systems and solid control equipment. Extensive hull repairs were also performed involving approximately 1,050 tons of steel renewal, and overhauling and servicing of all rig cranes.

CSL has also diversified into Off-shore engineering as part of its expansion drive. The shipyard had secured against international competitive bids, two projects, both of which were completed ahead of schedule. The first project entailed enhanced drilling capacity for 12 drilling platforms in Bombay High South.

From the financial side, the yard has a stronger net worth position and improved capital base to expand its ship repair capacity through the installation of a ship lift system that would provide five additional berths. The yard is also planning to set up marine workshops in various ports of India such as Chennai, Tuticorin, Mumbai and Cochin. The yard has already expressed its interest in melding with the setting up of Ship Repair Complex at the Kochi Port Trust in an area of 700 acres, which would provide various services such as floating docks, drydocking and lay of berth to vessels

passing through international waters.

Circle 20 on Reader Service Card
www.maritimereporterinfo.com



Want to be a marine operations specialist?

Didn't think so.



Bahamas Fast Ferries

Moving people through paradise—a **very** tough job that **someone** has to do, daily.



Caesars The Glory of Rome

Marine services for the world's largest riverboat casino—definitely **not** all fun and games.



The Belle of Louisville

How's **this** for a special marine challenge—a National Historic Landmark with an aggressive excursion schedule.

Our clients do their thing...

- inter-island transportation/charters
- gaming
- historic vessel excursions

and we do ours...

- critical analysis and solutions
- strategic planning
- assumption of operational responsibility for owners/operators



HORNBLOWER
MARINE SERVICES
www.hornblowermarine.com

For more information on Hornblower marine management and consulting services, please contact our corporate office at: 115 E. Market Street, New Albany, Indiana, 47150. Phone (812) 218-9570 FAX (812) 218-9571.

Circle 258 on Reader Service Card
or visit www.maritimereporterinfo.com

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



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>

Call today for more information!

Circle 242 on Reader Service Card
or visit www.maritimereporterinfo.com

Ship Repair & Conversion

Camacho Tapped To Lead Ship Repair Coalition

RADM Richard Camacho, USN (Ret.) was elected as Chairman of the National Ship Repair Coalition's Executive Committee. "I'm honored to serve in

this capacity," said Camacho. "The ship repair industry plays a vital role in protecting U.S. national security. I look forward to working with the Administration, Congress, and Navy to insure that our military has the resources needed to meet its security obligations."

Camacho is senior vice president of Business Development at United States Marine Repair where he is responsible for directing preparations of technical and cost proposals for all USMR shipyards.

The National Ship Repair Coalition is



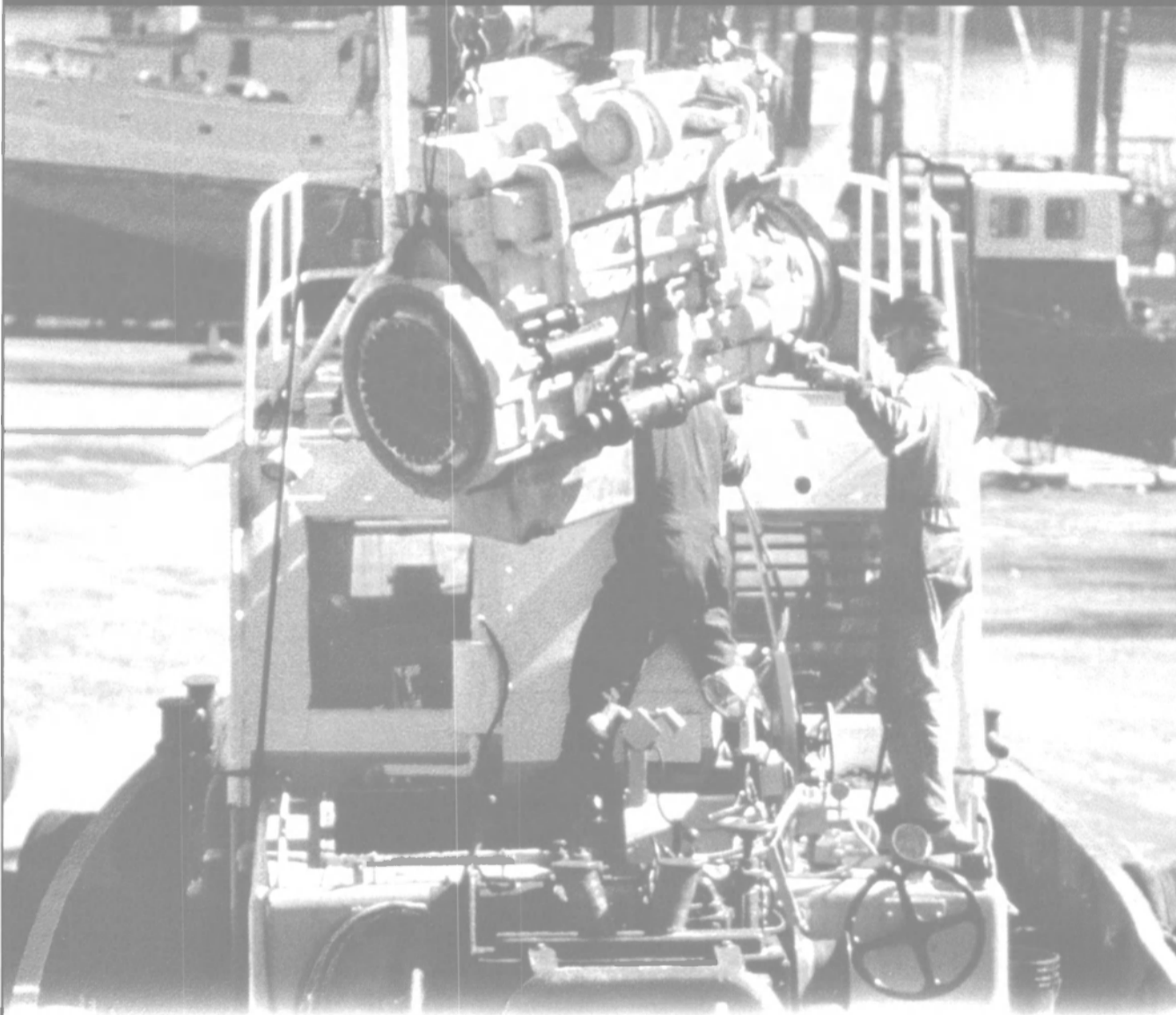
RADM Dick Camacho was elected chairman of the National Ship Repair Coalition's Executive Committee.

the leading national trade organization for the U.S. ship repair industry. It is the only trade group that exclusively represents ship repair interests. Its members include Newport News Shipbuilding, NORSHIPCO, Southwest Marine, NASSCO, Continental Maritime, Earl Industries, Moon Engineering, PacShip, Marine Hydraulics Int'l, Tecnico, and Pacific Shipyards Intl.

HSR Completes GLM Rig Upgrades

The Offshore Division of Houston Ship Repair, Inc. (HSR) completed two rig upgrades for Global Marine. HSR was the primary contractor for the re-powering and mud system enhancement stages of the Glomar Baltic I upgrade project. The Marathon LeTourneau Super 300 jackup drilling rig was re-powered with five Caterpillar type 3516 TA V, 1,305 kW diesel generator sets, replacing the three existing EMD diesel engine driven 1,400 kW generators. HSR was also contracted to replace the two existing National 12-P-160 mud pumps with three National 14-P-220 mud pumps. HSR removed the existing generator and mud pump units, installed the new units and modified as necessary, the associated system piping and auxiliaries associated with the generators and mud pumps. HSR performed all the structural modifications necessary for the new installations. Additionally, the engineering for the structural modifications and the detail engineering for the piping systems were done by HSR. This project was carried out in Sabine Pass, Tx. (Rowan Facility) HSR was also awarded the contract for the re-powering of the CFEM, type T-2000-C, jack-up rig Glomar Labrador I. The five existing Caterpillar D-399TA diesel generator sets were being replaced by five Caterpillar type 3516 TA V, 1,305 kW diesel generator sets. HSR also performed the modifications on the existing systems piping. This project was carried out in Port of Spain, Trinidad and was completed ahead of schedule.

Don't Be Fuel-ish...



...Repower & Save!



With fuel costs continuously on the rise, you can't afford to operate with uneconomical engines! So let the Cummins team show you the benefits of repowering. Many new Cummins' customers who have changed out older 2-stroke engines have reported up to 25% fuel savings...that's money you can take to the bank! The choice is clear...it's Cummins for auxiliary and propulsion engines!

76-2000 hp (57-1492kW)

Call 1-800-DIESELS

4500 Leeds Ave. #301, Charleston, SC 29405 • www.cummins.com • e-mail: wavemaster@cummins.com
©2001 Cummins Marine, a Division of Cummins, Inc.

Circle 227 on Reader Service Card or visit www.maritimereporterinfo.com



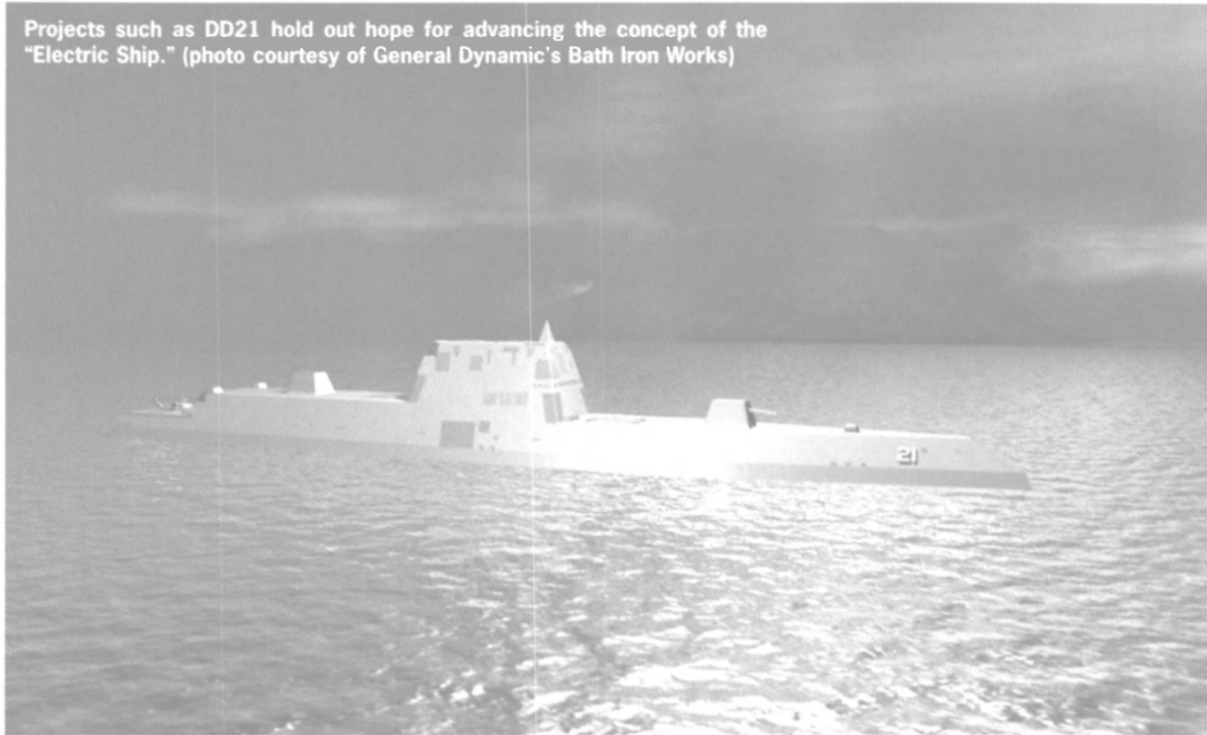
BRASWELL SHIPYARD PANAMA

Three drydocks up to Panamax size

**ASTILLEROS BRASWELL INTERNATIONAL S.A., Roosevelt Avenue,
P.O. Box 366, Balboa, Republic of Panama, Phone:507-232-5562/5566 ·
Fax 507-232-5851 · e-mail: sales@braswellshipyard.com · www.braswellshipyard.com**

Where Is the All-Electric Navy?

Projects such as DD21 hold out hope for advancing the concept of the "Electric Ship." (photo courtesy of General Dynamic's Bath Iron Works)



By Scott C. Truver

"There is a powerful agent, responsive, quick, and easy to use, pliable enough to meet all our needs on board. It does everything. It supplies light and heat for the ship and is the very soul of our mechanical equipment. That agent is electricity."

— *Captain Nemo in 20,000 Leagues Under the Sea*

Jules Verne's classic novel first appeared in 1869. Today, the Navy is standing at the threshold of remarkable capabilities that *Jules Verne* could barely imagine—a "revolution at sea" akin to the change from sail to steam and from oil-fired plants to nuclear power. But the process for the Navy has not been easy. As a Navy integrated electric drive (IED) insider told me privately: "Innovation is one thing; if you're asking us to change the way we do business, that's something else entirely." And as theoretical physicist *Max Planck* understood: "An important scientific innovation rarely makes its way by gradually winning over and converting its opponents; it rarely happens that Saul becomes Paul. What does happen is that its opponents gradually die out and that the growing generation is familiarized with the idea from the beginning."

If the focus is on the post-2030 era, when most of today's fleet will be scrapped or sold to allies, only dim outlines of the future Navy are visible. If the focal point is moved closer, to, say, 2015, then about 65 percent of tomorrow's fleet is either under construction or in service today. Given this reality—and the engineering difficulties and costs of back-fitting IED and integrated power systems (IPS) to ships in service or under construction—near-term prospects for widespread introduction of electric technologies and systems are not promising.

Nonetheless, there are many targets of opportunity: Zumwalt (DD-21)-class land-attack destroyers (pictured above); later USS Virginia (SSN-774)-class submarines; LHA(R) amphibious ships; next-generation CVNX aircraft carriers; JCC(X) joint command and control ships; and the Coast Guard's Deepwater national security cutters. These opportunities are, however, clouded by the numerous top-down strategy and program reviews and transformation panels set up by Secretary of Defense *Donald Rumsfeld* and the quadrennial defense review process. The announcement earlier this year that the Navy was to hold completion of the source selection for DD-21 "in abeyance, pending the results of these reviews" could have a ripple effect on plans for IED and IPS in other ships.

Changing Focus Is Essential

In assessing the future effect of IED and IPS, the Navy must look well beyond propulsion and naval architecture benefits. Captain "*Corky*" *Graham* — the "archangel" of IED — talked about breaking the tyranny of the propulsion shaft. He outlined key benefits of electric drive: flexibility of internal arrangements, improved sea keeping through optimized



SEAARK
MARINE

Strong, Dependable, Durable...

All-American qualities.

SeaArk Marine has provided our Armed forces with these same qualities in aluminum work and patrol boats for over 40 years. Quality boats built for what you do.



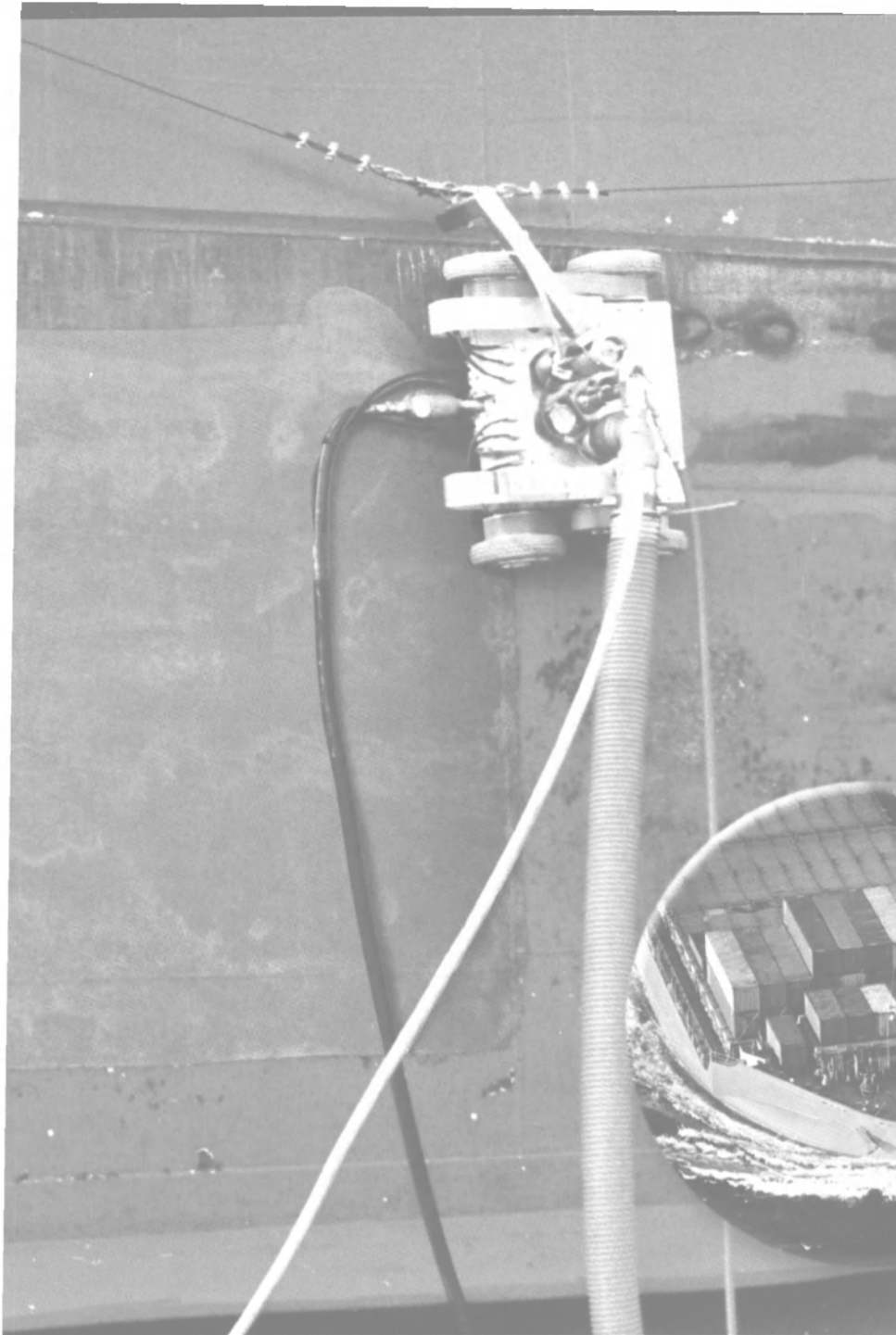
SeaArk Marine's 27' Commander "RAM" and 28' Dauntless have been selected to defend our Nation's harbors and coastlines by the United States Navy.



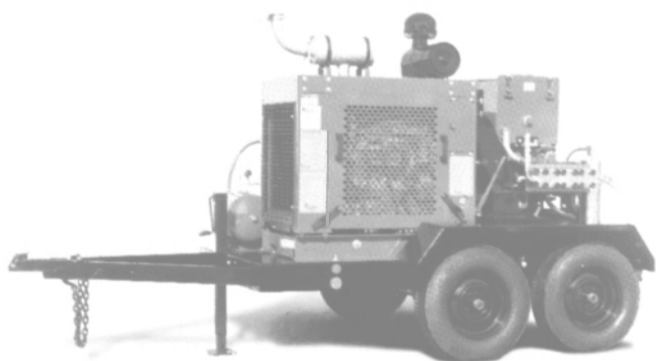
SEAARK
MARINE

P.O. Box 210
Monticello, AR, USA 71657
Phone: (870) 367-9755 • Fax: (870) 367-2120
www.seaark.com
All models available on GSA contract

Circle 307 on Reader Service Card or visit www.maritimereporterinfo.com



NLB's compact SRT-10 Crawler is ideal for ships, tanks and other vertical surfaces.



NLB's ultra-high pressure pump units produce up to 40,000 psi (2,800 bar).

For productive surface prep, choose NLB's HydroPrep™ Crawler

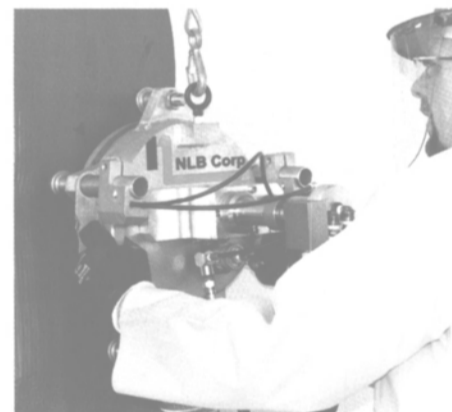
If you need to prepare large, tall surfaces, you should move up to the SRT-10 Crawler from NLB.

The Crawler delivers the power of ultra-high pressure water jets through patented SPIN JET® rotating nozzles, producing a cleaner surface than grit blasting. You'll also eliminate the cost and hazards of grit, and simplify your clean-up and disposal.

Compared to other automated water jet systems, NLB's SRT-10 Crawler is the:

- Most maneuverable
- Most reliable
- Most economical
- Simplest to maintain and operate

The Crawler is part of NLB's versatile HydroPrep™ system, which also includes an ULTRA-CLEAN 36® pump, rigging, operator console, and vacuum recovery — all for less than you'd expect. It pays for itself by shortening your project.



The hand-held VertaJet™ SRT-6 simplifies smaller jobs.

Even if you've used grit blasting for years, you'll soon see why water jetting with a HydroPrep™ system is more productive. So don't just go with the flow... go with the leader. Call NLB today for a free demo. **In North America, call toll-free, 1-877-NLB-7990.**

Distributorships still available in some countries.



NLB North America

29830 Beck Road, Wixom, MI 48393, USA
 Phone: 01-248-624-5555, Fax: 01-248-624-0908
 Texas: (281) 471-7761, New Jersey: (856) 423-2211

e-mail: nlbmarketing@nlbusa.com, www.nlbcorp.com

NLB Europe

Gentianenlaan 17
 3233 VC Oostvoorne, Netherlands
 Phone: 31-(0) 181-482811
 Fax: 31-(0) 181-485238

e-mail: watercle@publishnet.nl

Circle 292 on Reader Service Card or visit www.maritimereporterinfo.com

U.S. Navy: The Electric Ship

weight distribution, increased redundancies and survivability, and better fuel efficiencies. As the USS Arleigh Burke (DDG-51) design manager, he pushed the advanced integrated electric propulsion plant; as commanding officer of Carderock Naval Ship Research and

Development Center, he believed electric drive was one of several "technology clusters" that needed to be pursued. That was 20 years ago-yet electric drive has not been installed in any major in-service or in-production Navy warship. Meanwhile, perhaps mirroring the

Navy's mid- to late-19th-century experience, other naval powers are investigating the possibilities. For example, the Royal Navy is installing electric drive in its Albion-class amphibious warships and has selected the advanced WR-21 intercooled and recuperative gas turbine,

IED, and IPS for its next-generation Type 45 destroyer.

As long as the focus remains on the hull, mechanical, and electrical (HM&E) aspects of specific ships, success will elude the Navy. But if it articulates what an all-electric Navy could be and puts programs and resources in place for various future technologies and systems as well as IED and IPS, success will be much more likely. In short, it must embrace IED and IPS as catalysts for the wide-ranging, "leap-ahead" warfighting capabilities that President **George W. Bush** and his advisors seek for the Navy.

In January 2000, then-Navy Secretary **Richard Danzig** announced that the Zumwalt destroyers would be built with IED and IPS. A year earlier, he endorsed a Naval Sea Systems Command "Common Integrated Electric Drive" report calling for a corporate approach to ensure that technologies developed for one platform type can be applied to other platforms. "Changes in propulsion systems are fundamental and of fundamental importance," Secretary Danzig noted in his DD-21 announcement. "We are moving forward to embrace a technology-electric drive technology-and the integrated power system that comes with it, to drive Navy ships." Thus, a lot hangs on the future of the DD-21.

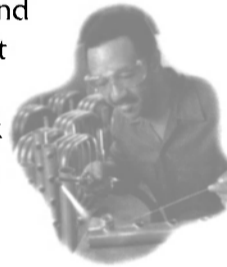
To be sure, there remain hotbeds-maybe "rice bowls" is more apt-of interest in IED and IPS in and out of the



We Offer Marine HVAC Solutions Based On 40 Years Of Engineering Excellence.

And That's Not All. For nearly half a century, Cruisair and Marine Air Systems have been the foremost names in marine HVAC technology. In 1999, we brought these two well-respected brands together with the formation of Taylor Made Environmental.

Today you can look to us for a complete range of turnkey air conditioning and heating solutions, for circulated-water, seawater-cooled and air-cooled applications. Cruisair and Marine Air Systems products are designed by professional engineers who understand the unique requirements of the marine environment. They're built at state-of-the-art plants by skilled craftsmen who take pride in their work. They're backed by our extensive applications engineering group, and sustained by our worldwide network of factory-trained service dealers. So give us a call or send us your specs, and let us show you how we can solve your next marine HVAC job.



Cruisair



Taylor Made ENVIRONMENTAL

MARINE AIR SYSTEMS AIR

TAYLOR MADE

A-0151, A-0152, A-0153

hvac@tmenviro-va.com • www.tmenviro.com • Tel: +1-804-746-1313 (US) • +44(0)870 3306101 (UK)

Circle 323 on Reader Service Card or visit www.maritimereporterinfo.com



John Crane-Lips
Marine Propulsion Systems

Managing your moves

Thrusters

- Easy mounting
- Robust and flexible design
- High thrust to power ratio
- Retractable versions
- Underwater mountable versions

John Crane-Lips Americas

3617 Koppens Way
Chesapeake
Virginia 23323 USA
Tel.: +1-757-485-5275
Fax: +1-757-487-3658

www.johncrane-lips.com
e-mail: info@johncrane-lips.com

Podded propulsion units and integrated stern propulsors will contribute significantly to wake reduction (which will help nullify advances in space-based multi-spectral sensors), overall propulsion efficiency, acoustic stealth, and maneuverability.

(Photo courtesy Rolls-Royce)



Circle 271 on Reader Service Card or visit www.maritimereporterinfo.com

Navy. Some are studying other technologies and systems, including high-temperature superconducting motors, new prime movers-such as advanced nuclear plants and next-generation gas turbines such as the WR-21 engine in testing-and direct-electric conversion from nuclear power. Others are concentrating on "downstream" technologies and systems for weapons, sensors, and passive and active defenses. The Office of Naval Research (ONR) has established a "swamp works" that is examining electric warships. Also, an ONR-sponsored 13th future naval capabilities area for electric warships and combat vehicles has been put in place. The Chief of Naval Research, Rear Admiral **Jay Cohen**, has made the all-electric ship his top priority.

However, looking in from outside, the Navy's approach seems fragmented and ill coordinated, and it remains underfunded despite more than \$100 million spent on IED and IPS technologies and systems over the past decade or so (mostly by industry and academia). That is small change compared to the billions that have been allocated to weapons, sensors, command-and-control, and other systems. During the past ten years of declining Navy research-and-development funding generally, the fraction going to HM&E systems has declined. Still, sensor, combat systems, and weapon designers somehow seem to assume that modern HM&E elements-advanced hull designs, modern propul-

sion systems, and sophisticated zonal electric distribution systems-will be in hand when needed. Several government officials conclude that Secretary Danzig's corporate approach cannot work unless the service overcomes its penchant for rice bowls, and a single

agency has the responsibility and authority to make decisions and allocate resources.

In August 2000, Senator **Trent Lott** suggested that the Navy establish a new high-level office to oversee electric drive in the fleet, as had been done with

nuclear power. His idea was rejected by the Navy, but it remains valid. In this vein, a July 2000 Congressional Research Service report concluded that "policy-makers might consider electric drive as not simply a proposal but a broader technology area that might



TWO-STROKE SERVICE SPECIALISTS

Motor-Service Hugo Stamp, Inc.

service facility specializes in overhauling and repairing two-stroke components like the MC80 series. MSHS offers reconditioned valve spindles and valve seat inserts "on exchange base." We look forward to servicing your engine and filtration needs with our extensive inventory. Our factory-trained technicians are available 24-hours a day worldwide.

For more information, call 1-800-622-6747 or e-mail info@mshs.com or fax your request to (954) 763-2872.



MOTOR-SERVICES HUGO STAMP, INC.

AUTHORIZED DISTRIBUTORS & SERVICE CENTER

3190 S.W. 4th Avenue, Ft. Lauderdale, FL 33315 • (954) 763-3660 • Fax (954) 763-2872 • <http://www.mshs.com>

Circle 252 on Reader Service Card or visit www.maritimereporterinfo.com



Orkot® Marine Bearings are offered as custom engineered components (to Ø 2.2m) and as semi-finished tubes and plates with stocks worldwide.

Available in three material grades to perfectly match application requirements.

Classification society approvals. 24 hour service (United States)

Orkot® Marine Bearings

A unique synthetic composition and the incorporation of solid lubricants, ensures Orkot® Marine Bearings operate with an exceptionally low co-efficient of friction in seawater, grease, oil and even in dry-running conditions.

- High load tolerance - for applications including crane mast bearings and cylinder rod-end bearings.
- Water lubricated - for rudder and propeller shaft bearings.
- Low friction - suited to hatch cover pads and stabilizer bearings.



TLM MARINE
TXM MARINE
SLM MARINE

Polymer sealing solutions

A part of Smiths Group plc

Busak Shampan

For immediate contact, call the Orkot information center:
North/South America Tel: +1(541) 688-5529 Fax: +1(541) 688-2079
Europe/Middle & Far East Tel: +44(0)1709 376044 Fax: +44(0)1709 374819

24 hr service (United States): 1-800-546-7568

Circle 295 on Reader Service Card or visit www.maritimereporterinfo.com

U.S. Navy: The Electric Ship

require longer-term management and oversight and a series of research, development and procurement decisions stretching over the course of several years." The Navy's nuclear and Aegis programs provide good lessons (and interesting leadership and management contrasts) for meeting the challenges of

technological innovation and change that electric drive presents. Clearly, a passionate champion and excellent leadership are needed-and total control over all aspects of the project is critical.

Electrifying Benefits

Assuming appropriate programs and policies are in place, numerous benefits

have been forecasted by Navy, industry, and academic sources:

- IED and IPS will greatly enhance design flexibility and reduce internal volume requirements for ship machinery. Although the effect will vary among ship types, there will be a reallocation to combat systems (or other payload

requirements) on the order of 25 percent of an individual ship's internal volume that would have been devoted to propulsion.

- IED systems will have minimal vibration and acoustic and magnetic signatures, good shock resistance, and excellent economies of operation throughout all speed regimes — a particular concern for gas-turbine prime movers.

- IPS and IED will facilitate the implementation of modular architecture and standardized interfaces throughout the fleet, and will enhance the efficiency and effectiveness of ship design and construction.

- Development of small-, medium-, and large-application modular components for high-speed electric motors and integrated propulsors for all ship applications in a range of standard power generation modules will increase commonality throughout the fleet, regardless of prime movers.

- Podded propulsion units and integrated stern propulsors will contribute significantly to wake reduction (which will help nullify advances in space-based multispectral sensors), overall propulsion efficiency, acoustic stealth, and maneuverability.

- All ship's power will be available in the form of electricity for shipboard requirements. IPS will enable the instantaneous power switching and distribution among propulsion, ship service, and combat, weapon, and sensor systems without loss of loads or degradation in quality of power.

- All elements of a warship's signatures-acoustic, infrared, radar cross section, magnetic, visual-will be reduced, with much of that decrease attributed to IED systems.

- Electromagnetic aircraft launch and recovery systems incorporated in design of the CVNX-class aircraft carrier will be much more reliable and effective than legacy steam catapults and arresting gear. Steam team will all but disappear in surface ships and-with future direct-electric conversion nuclear plants-in submarines as well.

- Introduction of electrothermal chemical weapons and rail and coil guns will be facilitated.

- Development of directed-energy and electromagnetic pulse weapons will enable fleetwide assets to disrupt electronic component and electro-optical sensors and detonate enemy warheads.

- Electromagnetic and laser shields will be installed in surface platforms. A possible modification of this system will offer advantages as a "cloaking device" to shield naval forces from surveillance and targeting systems-the ultimate stealthy warship.

- Acquisition and fleetwide operational costs will be reduced significantly

ELIMINATE DUST and WASTE PROBLEMS WHILE CUTTING COSTS !!!



NOTE: THERE IS NO DUST !!

STOP Blast Cleaning with DUSTY Mineral Abrasives

Metallic steel abrasive provides superior dust-free cleaning for less cost than mineral abrasives. It is no longer necessary to create clouds of blasting dust and thousands of tons of blast waste debris.

You do the Math

Cost per Ton	Slag	METarit
Purchase Price	\$ 100	\$ 350
Disposal Cost	\$ 90	\$ 90
Total	\$ 190	\$ 440
Recycles	0	20*
Actual Cost	\$ 190	\$ 22

* Typical

DISCOVER THE ADVANTAGES OF RECYCLABLE METALLIC ABRASIVES

- Absolute profile control – lower paint consumption.
- Lower abrasive cost and no scrap surcharge.
- Virtually no dust – cleaner work environment.
- Recycles – minimizes generated waste.
- Compatible with all conventional blasting equipment.
- Contains no free silica or heavy metals.



Circle 219 on Reader Service Card or visit www.maritimereporterinfo.com

because of common components and systems. A total cost reduction of at least 20 percent will be realized throughout the fleet.

- Fossil fuel savings will be even more impressive-as much as 25-30 percent, depending on ship type. Industry data show that a DD-21 outfitted with the advanced WR-21 gas turbine and IPS and IED systems will on average cost approximately \$80 million less per ship for fuel throughout its service life than today's Arleigh Burke-class destroyer. (Multiplied by the 32 DD-21s in the Navy's plan, the life-cycle savings of some \$2.56 billion would be enough to add three ships to the program.)

- Electrical components will be much more reliable than the mechanical and hydraulic components they replace and they will be more easily instrumented, thus advancing automation and contributing to crew reduction.

- Training and maintenance will be facilitated and strengthened on a fleetwide basis. It will be easier to assign people with critical technical and engineering skills to all ship types, with little need for refresher training. Maintenance will be enhanced because of broad commonality among electronic technologies and components.

Charting a Course

Hard on the heels of *20,000 Leagues*, Jules Verne wrote *Journey to the Moon*, also published in 1869. A century later, Neil Armstrong walked on the moon, taking that giant leap for mankind. It is well past time for Verne's vision of an "all-electric" warship to be realized. If the electric-drive community in the Navy, industry, and academia is to be successful in achieving this vision, its focus must be not only on fielding electric-drive warships, but more broadly on what an all-electric Navy means for the nation and its naval forces. Electric drive and integrated power systems are vital warfighting elements of this future fleet-not simply HM&E programs competing against "sexier" weapon and sensor systems for scarce dollars, people, and time. The United States has the skilled people to do the job. Naval laboratories and engineering centers of excellence are without equal. Here and abroad, civilian-commercial industrial bases for advanced electric generators and motors, power-control electronics, solid-state rectifiers and inverters, and high-power switches stand ready to make the necessary leap to military applications-if an adequate return on investment can be garnered. Opponents finally seem to be dying out. A growing generation, familiar with ideas of IED and IPS from the beginning, is assuming positions of authority and responsibility. Integrated power and electric drive cer-

tainly can be catalysts for other "leap-ahead" technologies that the Bush administration desires. But still the Navy needs a champion. Where are the **David Taylors, Hyman Rickovers, Bill Raborn's, and Wayne Meyers** of the all-electric Navy?

Dr. Truver is vice president, national security studies, and director of the Center for Security Strategies and Operations for Anteon Corporation in Arlington, Va. This professional note was adapted from his keynote speech at the Electric Ships Conference, 17 May 2001. Dr. Edward C. Whitman, the center's naval science advisor, assisted him in the effort.

Reprinted from Proceedings with Permission - Copyright © 2001 U.S. Naval Institute.

Contractors • Manufacturers • Engineers • Quality Interiors • Turnkey Deck Houses & Crew Modules • Steel Fabrication and Erection • HVAC • Electrical

Bulkheads & Linings • Ceilings • Doors & Frames • Prefab. Modular Toilet Spaces • Plumbing Fixtures

Sheathing • Batters • Gratings • Galley • Mechanical Equipment • Fabricated Dressers & Lockers • Carpeting

Sheathing • Doors • Dining Room Furnishings • Lounge & Bar Furnishings • Work Spaces • Laundry Equipment • Storeroom Shelving & Equipment

Quality • Integrity • Reliability

Providing Marine Interiors Since 1962

J A M E S T O W N

Contractors • Manufacturers • Engineers

Jamestown Metal Marine Sales, Inc.
4710 N.W. 2nd Avenue, Suite 400, Boca Raton, Florida 33431
Ph: (561) 994-3900 • Fax: (561) 994-3969
www.jamestownmetal.com

Circle 268 on Reader Service Card or visit www.maritimereporterinfo.com

IT'S A JUNGLE OUT THERE.

Please consider my request for free cable charts.

Name _____

Company _____

Street Address (no P.O. Box #s) _____

City _____

State _____ Zip _____

Phone _____

Vessel Name _____ Doc # _____

Type of Business _____ MRO1

12200 Cape May to Cape Hatteras
 12300 Approaches to New York
 12318 Little Egg Inlet to Hereford Inlet
 12323 Sea Girt to Little Egg Inlet
 12553 Shinnecock Light to Fire Island Light
 13205 Block Island Sound and Approaches
 13218 Martha's Vineyard to Block Island
 18007 San Francisco to Cape Flattery
 18480 Approaches to Straits of Juan de Fuca
 18580 Cape Blanco to Yaquina Head
 18620 Point Arena to Trinidad Head
 18640 San Francisco to Point Arena
 18700 Point Conception to Point Sur
 26320 Florida and the Bahama Islands
 11460 Cape Canaveral to Key West

Mail coupon to: Concert Submarine Cable Protection
340 Mt. Kemble Ave., P.O. Box 1923, Room S-200
Morristown, NJ 07962-1923, USA. Or call us toll-free:

concert

AT&T BT

1-800-235-CHARTS

The ocean bottom can be a maze of unseen obstacles, including our submarine cables. To avoid tangling with these cables, send for free Concert cable charts which show the exact locations of even our most recent installations. That way, you won't get caught in uncharted territory.

Chart requests subject to availability and are considered on a case-by-case basis.

U.S. Navy

USS Mobile Bay Gets "Smart" at NASSCO

USS Mobile Bay (CG 53) recently completed an eight-month Extended

Dry-docking Selected Restricted Availability (EDSRA) at National Steel and Shipbuilding Company (NASSCO), the highlight being the installation of the SMART SHIP and All-Electric alter-

ations, the first time that both of these actions have been performed simultaneously. Mobile Bay will utilize data obtained during the two alterations in order to develop their modified manning

levels.

Numerous other jobs and alterations were also performed during the EDSRA. This simultaneous installation of SMART SHIP and All-Electric required extensive Ship's Force training to ensure the correct operation of new equipment. In addition, Mobile Bay was a returning forward deployed unit that had experienced a crew exchange just a few months prior to the start of the availability.

The Northrop Grumman SMART SHIP installation team also conducted 12 days of intensive crew training under the direction of NAVSSES installation managers **Summer Clark** and **Bill Anderson**.

Raytheon Marine to Supply T45 Destroyer's IBS

This month in Amsterdam Raytheon Marine will present its newest version of its integrated "BridgeControl." Raytheon Marine's new bridge console design will be installed first time on the new class T45 destroyer for the Royal Navy of the United Kingdom. The new design includes TFT screens for the main work stations like Radars, ECDIS and Conning display in modular consoles.

Circle 14 on Reader Service Card
www.maritimereporterinfo.com

DCS Wins Navy SBIR Contract For \$670K

Dimensional Control Systems (DCS) was awarded a \$670,000 Phase II Small Business Innovative Research (SBIR) contract from Office of Naval Research (ONR) to develop a dimensional variation control software tool specific to the shipbuilding industry. The technology basically adapts processes used in the auto and aerospace industry for more than 20 years, industries that have used computer simulation during product design to assess the impact of part and assembly dimensional variation on producibility.

The application of this technology in shipbuilding has the potential to allow shipbuilders to predict and resolve dimensional problems at the product definition stage.

Bender Shipbuilding has agreed to be a Beta Site for this development work. In addition, General Dynamics Electric Boat and Northrop Grumman Ingalls Shipyard will provide informational support for this effort.

Other shipyards and ship design firms which would like to participate should contact **Ramesh Kumar** of DCS at tel: (248) 786-0145 or email: kumarr@3dcs.com



DOLPHIN RUBBER FENDERS

ALL TYPES / ALL APPLICATIONS

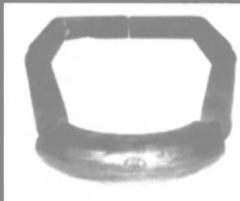
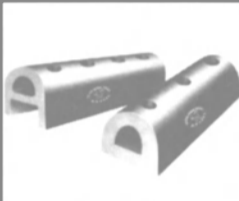
Pneumatic Fenders



Dock Fenders



Ship Fenders



Engineered & Manufactured by:

KUMNAM CHEMICAL, INC.
348-3, Chung Chun-Ri, Chillye- Myun
Kimhae, Kyungnam, Korea
E-mail: kumnam@kumnamkorea.com
Tel: 82 (55) 346-3131
Fax: 82 (55) 346-3137

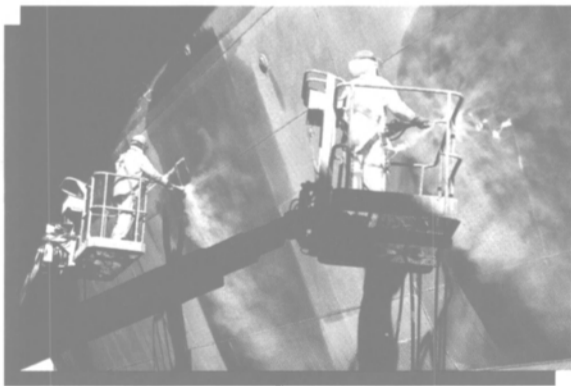
www.kumnamkorea.com

Distributed in the Americas by:

DOLPHIN RUBBER USA
2241 Barraud Avenue
Norfolk, Virginia 23504
Tel: (757) 625-3200 Fax: (757) 625-3300
E-mail: network@sybercom.net

Circle 233 on Reader Service Card or visit www.maritimereporterinfo.com

You're always out in front with FLOW waterjets
—now even faster at 55,000 psi



You need the best available equipment to stay competitive in this business. FLOW knows. We lead the waterjet industry in:

Productivity

Remove coatings faster with FLOW's HUSKY® pump running at 55,000 psi, the highest operating pressure available.

Reliability

FLOW has more pumps in the field than all other UHP waterjet manufacturers combined, with over 1 million total working hours.

Low Operating Costs

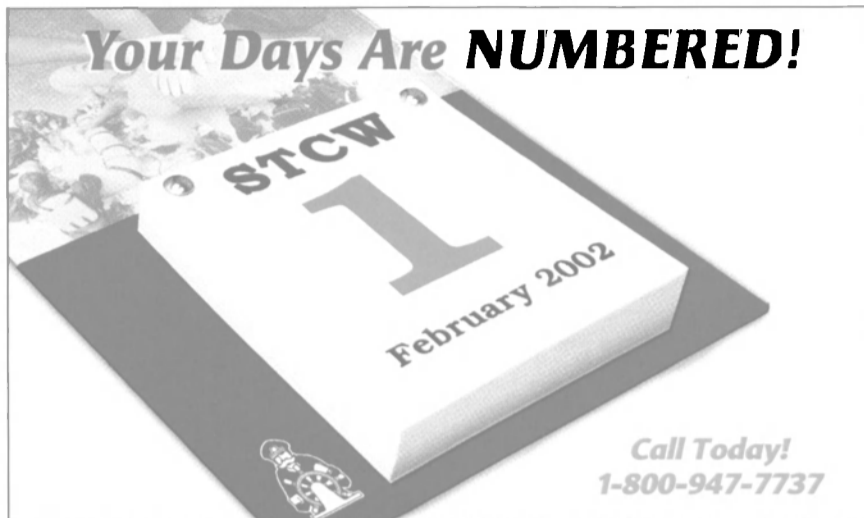
FLOW's HydroCat® is proven in the field to remove tough coatings faster than grit blasting, without the added cost of grit containment and disposal.



Flow International Corporation has developed every major advance in the field of waterjet technology and is the world's leading manufacturer of ultrahigh-pressure (UHP) waterjet equipment.

F | o | w 1-800-446-3569 • www.flowcorp.com

Circle 247 on Reader Service Card or visit www.maritimereporterinfo.com



Your Days Are NUMBERED!

Call Today!
1-800-947-7737

You only have until **February 1, 2002** to make sure all your mariners comply with STCW.

personnel can avoid the classroom and train more efficiently while retaining more information than ever before.

With Basic Safety Training through Houston Marine Training Services' **Computer Based Training (CBT)**, your

The CBT program is approved by the U.S.C.G. and offers crew flexibility, cost savings, and student data management.

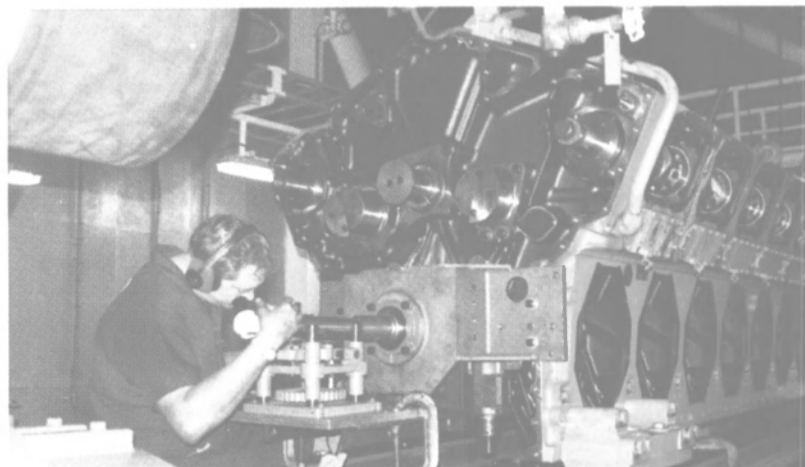
HOUSTON MARINE
TRAINING SERVICES

5728 Jefferson Highway • New Orleans, Louisiana 70123 • Fax: 504-729-4450 • www.houstonmarine.com

Circle 259 on Reader Service Card
or visit www.maritimereporterinfo.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®**
Repair of cracked or broken cast iron engine blocks

IN-PLACE MACHINING COMPANY

USA: 800-833-3575 International: 414-562-2000 FAX: 414-265-1000
24 HOUR EMERGENCY SERVICE...day or night, 365 days a year
email: help@inplace.com Website: www.inplace.com

Circle 261 on Reader Service Card
or visit www.maritimereporterinfo.com

Cable Transit Problems...



Rapid Transit® Sealing System

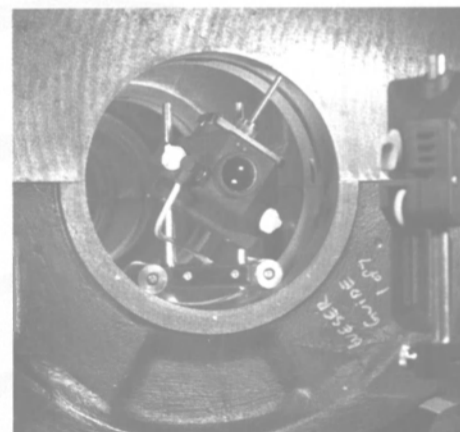
- ✓ Approved: Firestop/Watertight/Gas-tight
- ✓ Approved: ABS, DNV, Lloyds, USCG
- ✓ Saves labor, weight & space vs. block systems
- ✓ RISE Software makes material calculation easy
- ✓ Also approved for single and multi pipes
- ✓ **New RISE Extend-A-Frame - Doubles** usable space in any block system frame!

For a full catalog, software and informational video contact:

CSD Sealing Systems-North America
Tel. 603-641-3914 E-mail: sales@csdsealingsystems.com
www.csdsealingsystems.com

Circle 226 on Reader Service Card
or visit www.maritimereporterinfo.com

Alignment measurement of bearing shells and bores



BORALIGN®, the latest development for the measuring of bores and bearings in internal combustion engines, compressors, turbines, and pumps. True bore center measurement, not just bore straightness. It measures whether multiple bores are in line with one another and with the rotating centerline of the shaft. Universal brackets fit bore diameters from 5" to 30".



(305) 591-8935 • Fax (305) 591-1537
info@ludeca.com • www.ludeca.com
1425 NW 88th Avenue, Miami, FL 33172

Circle 281 on Reader Service Card
or visit www.maritimereporterinfo.com

Deepwater One Delivers \$2.3B Proposal to USCG

Deepwater One Team last month delivered a \$2.3-billion proposal to the U.S. Coast Guard (USCG) for the design and development of an Integrated Deepwater System (IDS) that will help the Coast Guard meet vital offshore

operational requirements into the 21st century. The team is led by Boeing and includes: European Aeronautic, Defense and Space (EADS); Construcciones Aeronauticas S.A. (CASA) of Madrid, Spain; Eurocopter, an EADS Company, of Marignane, France; John J. McMullen Associates Inc. (JJMA) of Alexandria, Va.; and Northrop Grum-

man Ship Systems Avondale Operations, a subsidiary of Northrop Grumman Corporation, located in New Orleans, La.

The Deepwater program is a \$12-billion, 20-year Coast Guard initiative to recapitalize the fleet of specialized ships, aircraft and sensors that operate in the deepwater mission environment, typically greater than 50 miles offshore.

Approximately 90 ships, 70 fixed wing, 130 rotor wing and 120 shore sites will be upgraded or replaced with an integrated system of surface, air, command and control, and logistics capabilities. New ships, fixed wing aircraft and helicopters will be introduced into the fleet as the Coast Guard's operational tempo increases and deepwater mission requirements continue to evolve, particularly in the areas of maritime safety, law enforcement, environmental protection and national defense.

A five-year contract with renewable terms is expected to be awarded in June 2002, when one winner will be selected as prime and will have responsibility for implementation of the new IDS.

Boeing has responsibility for the system integration, information and communications systems and logistics. CASA will concentrate on fixed aircraft and Eurocopter will supply rotary wing helicopters. JJMA will have responsibility for naval architecture and marine engineering. Northrop Grumman Ship Systems Avondale Operations will be the shipbuilder.

Ruston's RK270 Engines Power Offshore Patrol Vessels



Four Ruston 20RK270 engines generating a total of 30,200 kWb power one of the new Offshore Patrol Vessels for the Royal Brunei Navy.

The second of a three-part series of new Offshore Patrol Vessels for the Royal Brunei Navy, which was launched in June 2001 at BAE Systems shipyard on the Clyde at Glasgow is powered by four MAN B&W Diesel Ruston 20 cylinder RK270 engines. Producing a total of 30,200 kWb at 1,032 rpm, the engines provide each 2,000-ton displacement vessel with speeds of more than 30 knots. Mounted in pairs, port and starboard, the engines drive their respective propellers and shafting via a flexible coupling, shaft and gearbox. The main function of these OPVs will be littoral operations, protecting Brunei's offshore oil industry and safeguarding the nation's territorial integrity.

Circle 2 on Reader Service Card
www.maritimereporterinfo.com

Thermax

®

SALES & DISTRIBUTION

Panel Specialists, Inc. / Thermax NA
3115 Range Road (P.O. Box 968)
Temple, TX 76504-1240, USA

Tel: (800) 947-9422 *USA only
(254) 774-9800

Fax: (254) 774-7222

Website: www.panelspec.com

INTERIOR JOINER WALL PANELS

AROUND THE WORLD NAVAL ARCHITECTS, INTERIOR DECORATORS, MATERIAL SPECIFIERS, SHIP-BUILDERS, JOINERS, AND CABINET MAKERS LOOK TO THERMAX FOR:

- NON-COMBUSTIBLE marine construction boards meeting requirements of SOLAS and IMO resolutions
- Marine fire rated construction boards for bulkheads, joiner panels, walls, double shell, and ceiling
- Marine Regulatory Body Certification (USCG/UL, Canadian Coast Guard, UK DOT, Lloyds, DNV, etc.)
- Excellent core material for marine furniture fabrication
- Environmentally friendly construction material (no fibers, no formaldehydes, nontoxic)
- Technical Support
- Inventory in the USA ready for immediate shipment
- Laminating services available
- Metal profiles for bulkhead systems upon request
- Design, production, and sales of marine products according to requirements of EN DIN ISO 9001:1994

Sales

Panel Specialists, Inc. (PSI)
15006 Shaw Road
Tampa, FL 33625, USA

Tel: (800) 540-5503 *USA only
(813) 264-2656
Fax: (813) 264-2507
E-mail: thermax@erols.com

ISO 9001 Registered and Certified

THERMAX • Subsidiary of ISOVOLTA AG • Austria
A Constantia Industrieholding A.G. Company

Circle 325 on Reader Service Card or visit www.maritimereporterinfo.com

With ECP's environmental products...

The solution is clear!



POLLUTION PREVENTION WASTE REDUCTION RISK MANAGEMENT

Find out what clients like the U.S. Coast Guard, Washington State Ferries, and Superior Tank already know... ECP's products & Services get the job done!

Let us show you how our cleaning, degreasing and emergency response products can work for you.

Learn how our bioenhanced retrofit for oily water separators will reduce waste oil & sludge, while enhancing OWS efficiency.

Call ECP Service Corp at 253-946-6300, visit our web site at www.ecpservice.com, or come see us in person at...

**Fish EXPO in Seattle
Nov. 15-17, booth 720.**

Circle 238 on Reader Service Card or visit www.maritimereporterinfo.com



Marine Coatings, Protective Coatings, Powder Coatings A Global Resource in the USA

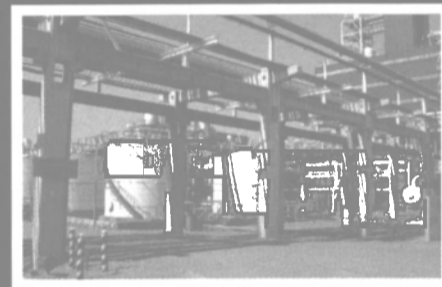
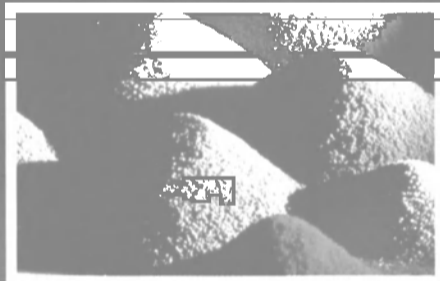
Jotun combines world proven marine, protective and powder coatings that meet the specific requirements of the US market with fast, quality technical service and support for its customers.

Manufacturing

Jotun's US plant is located just outside of New Orleans. Continuing investment in state-of-the-art production systems ensures the availability of top-quality factory fresh coatings with quick, reliable delivery and supply nationwide.

Product quality

Jotun products have been developed through intensive research and development and are proven in service throughout the world. The Jotun USA product mix provides optimum quality and performance in its coatings.



Supervision

Jotun's technical supervisors provide advice gained from years of on-site experience, shared knowledge and Jotun's intensive training programs.

Technical support

With full technical analysis and problem solving resources provided in the laboratory at the Louisiana plant, the US technical service team is equipped to react quickly to solve problems on-the-spot.

Jotun Paints – a major resource in the USA and in more than 50 countries worldwide.



For further information contact:
Jotun Paints, Inc. and Jotun Powder Coatings, Inc.

9203 Highway 23, P.O.Box 159,
Belle Chasse, LA 70037
Phone: 1-800-638-7756 / 504-394-3538
Fax: 504-394-3726

11245 State Highway 225,
La Porte, TX 77571
Phone: 281-842-3300
Fax: 281-471-0267

Please see us at Work Boi
Booth 657

Circle 272 on Reader Service Card or visit www.maritimereporterinfo.com

Cost Estimating: A Crucial Tool for Planning

by Jim Cole

Remember when you had your first job and you saw something that you

really needed to have, let's say it was a car. You asked your parents' opinion about you purchasing it and I'm sure the

first thing they wanted to know was what is the purchase price? Then they probably asked if you had thought about

the additional costs such as insurance, maintenance and major repairs. But at this point, you were probably thinking of the improvements that you wanted to make to the car. Other concerns such as are you paying too much for the car may have come up. If it did, your response may have been that the price wasn't too high, but was your response based on emotion or did you really know? What your parents were asking for and what they were bringing to the table was that you should make an estimate of your total cash commitment.

Construction cost estimating in business serves the same purpose toward finding out what the total cash commitment is going to be. The estimating and evaluating process should go in steps so that business decisions can be made in steps. The construction cost estimate can influence strategic decisions, should you acquire one vessel or two, and tactical decisions such as, should you include an off-ship fire fighting system on your new tug?

The preliminary costs of a proposed project can be estimated based on a preliminary description of it. This gives the owner the first indication of their cash commitment for the project and is necessary to help prepare a preliminary cost benefit analysis of the proposed project. Components of a cost benefit analysis, in addition to the construction cost estimate of the vessel, include the cost of insurance, maintenance, repairs, operating costs, and projected revenue. From this initial step, a Go/No-Go decision can be made or the project can be modified in scope. The owner will be able to arrive at a decision, and at this point, will have managed his or her money well by spending only a small amount of it. As the project moves forward, the description of it will expand. A preliminary design of the vessel should be prepared by the owner's consultant and will be the basis from which a more detailed cost estimate can be done. This level of cost estimate is based on actual costs of similar vessels and can be broken down by group such as hull, machinery, etc. This will allow individual features within the design to be reviewed for their effect on the total cost of the project and can individually be the subjects of a cost benefit analysis. Now the vessel owner is prepared to make the next important step. Should the financial commitment be made to start a contract design, and should a financial commitment be made to proceed with the construction or conversion of the vessel?

To this point, the owners have not gone so far with their project that they've spent too much money. Would the owner have been able to make a good decision without having had the first project review, a preliminary

ABSolutely Committed to Customer Service

Superior customer service starts with our experienced surveyors and engineers. The entire ABS worldwide team is committed to providing innovative solutions for designing and operating the latest generation of safe and environmentally sound offshore vessels.

Recognized by industry as one of the leading international classification societies, ABS is committed to keeping your projects on-time, on-schedule and on-budget.

Setting Standards of Excellence in Marine and Offshore Classification



www.eagle.org

P-35 Photo: Petrobras Gera de Farias

Circle 203 on Reader Service Card or visit www.maritimereporterinfo.com



design, and two levels of a construction cost estimate? No, without a construction cost estimate, the decisions would have been subjective and the design features of the vessel would probably not have been reviewed. Making a decision without careful analysis of the vessel and its cost would be much worse than your having made an impulse purchase of that car you discussed with your parents. As the project moves on to the contract design phase, the owner should have his or her consultants prepare a construction cost estimate. Design features can be selected or rejected based on their affect on vessel cost, as a well-developed construction cost estimate will enable the owner to change plans accordingly. As you journey from contract design to the bidding process, the owner will be armed with data that has the vessel cost broken down by cost group. This will help in the selection of a shipyard, because the owner can compare the shipyard's estimates to his own. Large differences in the overall cost or among the cost items can be resolved before a contract is signed, and any differences in interpretation or intent can be resolved. Construction cost estimating is a serious responsibility for shipyards. They too need to understand what their commitment will be in labor, materials and services, and what their revenues will be for the project. The contents of the shipyard's construction cost estimate can be used to create a construction schedule that can be met and the owner, who has an estimate of his own, will be able to verify the ship-

About the Author: *Jim Cole's career in the marine industry began in 1957. His 44 years of experience include preliminary and final design and cost estimating and control for new vessel construction, conversions and retrofits. He has worked with every type of commercial vessel from skiffs to offshore supply vessels; fishing boats to research vessels, covering sizes between 19 and 260 feet in length.*

yard's schedule. Owners cannot afford to lose revenues by finding out too late that their vessel will not be delivered on time. Cost overruns and change orders are things to avoid as well.

The cost estimate, like a good sketch or draft of a document, starts the planning process out on the right track. If

the client has paid for a well-based estimate, they will be able to forecast the amount of their capital commitment and can plan, schedule, and modify the design, if necessary, all in the interest of managing their money. The benefits of construction cost estimates are that they provide the client with dollar figures

that are vital to the proper budgeting, planning, and tracking of projects. This applies to repair projects, as well as new construction or conversion projects. A thorough estimate provides guidance for a project in the same manner as good navigational data is needed for a safe voyage.

■ Full speed ahead with Capsat® Fleet 77

Fleet

Europort 2001 sees the launch of Capsat® Fleet 77, the next generation of maritime satellite communication terminals giving you 24x7 online access to any vessel anywhere in the world.

Capsat® Fleet 77 is based on the new Inmarsat Fleet service. The new terminal offers high-speed and cost-effective voice and data communication based on either the Mobile Packet Data Service protocol with constant 24x7 online access or 64 kbps ISDN.

Capsat® Fleet 77 is a product of many years of experience and tried-and-tested technology from Thrane & Thrane. The smallest, most convenient, cost-effective and reliable maritime high-speed data option, Capsat® Fleet 77 offers decisive advantages to fleet owners wishing to increase the efficiency in the management of their maritime business.

Always Online

Visit Thrane & Thrane on stand 02.2018 at Europort 2001 from November 13 to 17, to see Capsat® Fleet 77 and find out more about how you can extend your business network full speed ahead to any vessel, any time, and anywhere in the world!

Thrane & Thrane A/S
Denmark
info@tt.dk
www.tt.dk

Thrane & Thrane

Circle 368 on Reader Service Card or visit www.maritimereporterinfo.com

Workboat

Taylor To Head Tidewater

Dean E. Taylor, has been promoted to President of Tidewater, replacing **William C. O'Malley**, who will retain the positions of CEO and Chairman. Taylor was also appointed to the Tidewater

Board of Directors. Taylor was previously executive vice president with operating responsibilities for Latin America, West Africa and the North Sea. It is expected that Taylor will become CEO in March 2002, when O'Malley is scheduled to retire. Taylor is a graduate

of Tulane University with an MBA from Boston University, and he joined Tidewater in 1979 following seven years of military service as a Naval officer.

"I am humbled and honored to be considered for succession to **Bill O'Malley**. I have been blessed with the opportunity

to work closely with him, as well as with other great industry leaders, including his predecessor, **John Laborde**, during my 23 years here. I consider the opportunity to follow them a privilege of a lifetime. Shoes such as theirs are difficult to fill," Taylor said. "All who follow our company know Bill O'Malley's achievements at Tidewater. Besides the financial, which initiated a sea change in industry profitability, and the deepwater construction/acquisition program, which is putting Tidewater squarely on the deepwater map, I also consider his achievement in the area of improving Tidewater's safety performance to have been monumental. All of the Tidewater family is grateful to him for all that he has done, but especially for the safest working environment in the industry."

Brinson New NWC Chairman

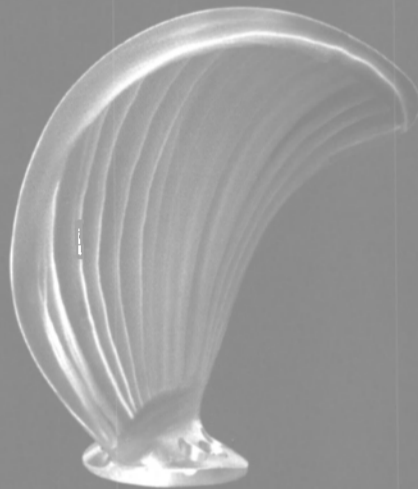
J. Ron Brinson, former port director and now special projects coordinator of the Port of New Orleans, was elected chairman of the National Waterways Conference, Inc., at the organization's annual meeting. Brinson succeeds **Craig E. Philip** of Nashville, president and CEO of Ingram Barge Co., who had served as chairman for the last two years.

Brinson, who served as president and CEO of the Port of New Orleans from 1986, now heads the millennium port and other special projects. He previously served seven years as president of the American Association of Port Authorities. He also worked for the South Carolina State Ports Authority and as a reporter and later associate editor of *The Charleston News and Courier*. **H. Merritt Lane, III** was named as the conference's vice chairman of New Orleans, president and CEO of Canal Barge Company. **Harry N. Cook** of Washington, D.C., was re-elected as the organization's president.

Fred C. Raskin of Andover, Mass., was named as first vice president. He was formerly president of Eastern Enterprises, Inc. Elected as vice presidents of the conference were **W. Scott McGeorge**, president of Pine Bluff Sand & Gravel Co.; **Joseph L. Meibergen** of Enid, Okla., chairman and CEO of Johnston Enterprises, Inc.; **J. Scott Robinson** Muskogee, Okla., port director of the Port of Muskogee; and **Michael J. Toohey** of Washington, D.C., government relations director of Ashland Inc. **William H. Satterfeld** was named as secretary and counsel, and **Glenn W. Vanselow** was selected as treasurer.

Christopher J. Bresica, **C. Barry Gipson**, **John W. Holt, Jr.**, **Heather Hampton-Knodle** and **Emmett R. Neal** were all elected to the Executive Committee.

When Only the Original Counts





BERG
P R O P U L S I O N
A F T E R S A L E S

Box 1005 Phone: Fax: E-mail: Website:
S-430 90 OCKERO +46-31-97 65 00 +46-31-97 65 38 info@bergpropulsion.se www.bergpropulsion.se
SWEDEN

For Emergency call our 24-hour International Service Pool +46-31-96 94 62

Circle 296 on Reader Service Card or visit www.maritimereporterinfo.com





OPTIMUM USE OF POWER

LEMAG-PREMET® Online



Permanent Cylinder Pressure Analyzing


Now available for
Diesel Engines
Gas Engines
Steam Engines
Compressor Engines

The permanently mounted LEMAG PREMETS® Online measures the cylinder pressure continuously, from each cylinder at the same time. The engine's actual performance is no longer unknown. Now, you can immediately determine the major engine malfunctions; reduce your total maintenance costs and receive exceptional fuel costs savings.

Install the system once – and receive all this data continually on your PC:


- Indicated Power
- Max. Cylinder Pressure
- Optional Torsional Vibration
- Optional Injection Pressure



Please, contact us for your local distributor:
Lemag, Inc.
PMB 182 · 250 "H" Street · Blaine, WA 98230-4033
Tel: 604 980 1281 · Fax: 604 980 1341
email: lemagine@home.com

LEHMANN & MICHELS GmbH & Co. KG
Marlowring 4
22525 Hamburg / Germany
Tel: +49 40 850 00 61 · Fax: +49 40 851 1888
email: lemagine@lemagine.de
www.lemagine.de



OPTIMUM USE OF ENERGY

Circle 278 on Reader Service Card or visit www.maritimereporterinfo.com

Safety of Life at Sea

SOLAS
International Convention for
the Safety of Life at Sea

An issue not to be ignored

MARPOL
INTERNATIONAL CONVENTION FOR
THE PREVENTION OF POLLUTION FROM SHIPS

GMDSS
GLOBAL MARITIME DISTRESS
AND SAFETY SYSTEM

GMDSS
GLOBAL MARITIME DISTRESS
AND SAFETY SYSTEM

Before you carry dangerous goods!

IMDG Code
International Maritime Dangerous Goods
Code and Supplement

**Guiding hands for
maritime safety issues**

ALL AVAILABLE AS BOOK AND CD-ROM

For further details, please contact
the IMO Publishing Service

Tel **+44 (0)20 7463 4137**
Fax **+44 (0)20 7587 3210**
Email **publications-sales@imo.org**
Website **www.imo.org**

INTERNATIONAL
MARITIME
ORGANIZATION

We're ABSolutely Looking for the Best!

Join a growing international organization, work on exciting projects, put your maritime talent to work for the protection of life, property and the natural environment.

ABS is a leading classification society. We are growing. Grow with us.

ABS is looking for talented individuals to **join our team of surveyors** in the Gulf Coast region. In this position, every day is different. ABS surveyors are exposed to a wide variety of vessel, rig and equipment types and face new challenges every day.

Applicants must have a marine engineering degree or equivalent. Seagoing experience and a USCG license are a plus. Applicants must have the right to work in the United States and the ability to travel internationally.

Important job. Important people.

Mail / Fax / Email resumes to:
 ABS Americas
 Attn: J. Marks
 16855 Northchase Drive, Houston, TX 77060
 Reference job code: **Surveyor GC**
 Fax: 281-877-5926 • Email: absempopp@eagle.org
 ABS Americas is an Equal Opportunity Employer. M/F/D/V



Circle 411 on Reader Service Card or visit www.maritimereporterinfo.com

First JAK-400 ATB System Enters Service

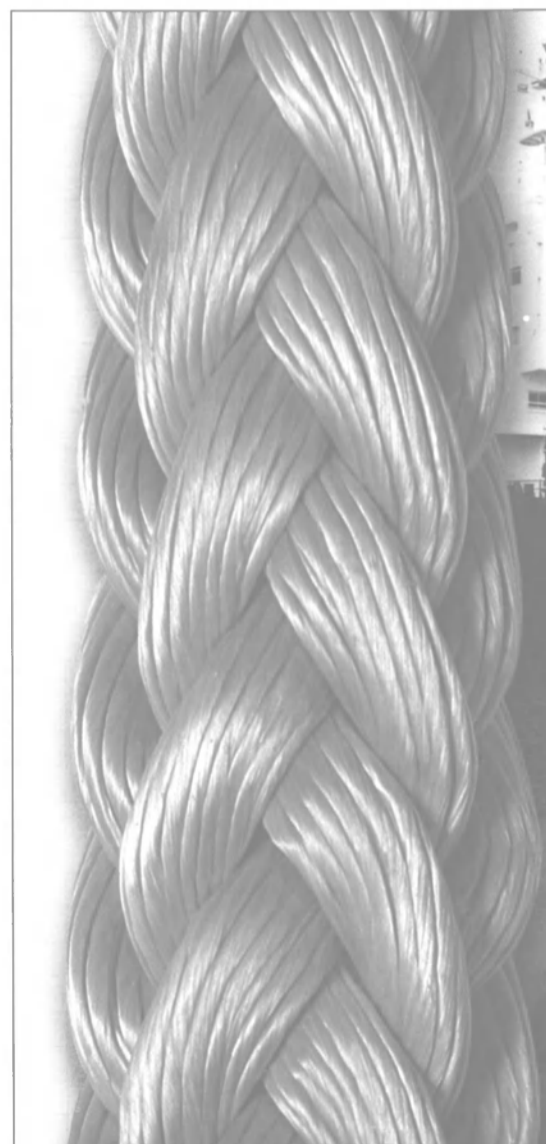
The first of a new breed of ATB entered service mid-summer, when pusher tug Kara Sea and oil barge Spring Creek of K-SEA Transportation Corp., Staten Island, N.Y., headed off to Pakistan loaded with 12,500 tons of Soybean Oil.




According to the owner's report on July 25, 2001: "Mornin' everyone. The Kara Sea and Spring Creek are approaching the vicinity Bermuda, are in three to five- ft. seas and are making 8.3 to 8.9 knots. The crew is happy with the way the tug rides except for the lateral slamming caused by the seas on the quarter. They have stuffed rope between the tug and barge to dampen the effect which lessens the jolts. There are no other reported problems and the system and components appear to be operating as expected."

The installation job was completed by Bollinger, Gulf Repair LLC. The entire net installed equipment and steel weight was 39 metric tons total, approx. eight tons net (five tons steel and 5.2 tons equipment such as push pin cylinders, 2 off) to the tug (2.25 tons were removed) and the rest approx. 31 tons net to the barge. 14 tons were removed, 34.86 tons steel and 10.4 tons socket plates were mounted.

Circle 51 on Reader Service Card
www.maritimereporterinfo.com





The dark ages are over and so are the days of wire mooring lines.

Why continue the drudgery and injury associated with the use of wire mooring lines? The lightweight and strength of AmSteel®-Blue saves time, money, and the environment while eliminating back injuries. Harness technology and let it work for you.


Many major shipping companies have retrofitted their fleets from wire to AmSteel®-Blue mooring lines. They saw the light – and the savings, and so can you.

- Outlasts wire mooring lines by 3 – 4 times
- Decreases mooring time by 50% – 75%
- Greatly reduces injuries associated with the use of wire rope
- Eliminates maintenance required for wire mooring lines

AmSteel®-Blue is now recognized as the synthetic replacement for wire mooring lines.

For more information contact Samson Rope Technologies and ask for our Marine Applications Engineer.

Made with **Dynema** DSM's registered trademark for High Performance Polyethylene Fiber.



2090 Thornton Street, Ferndale, WA 98248
 (T) 800.227.7673 / 360.384.4669
 (F) 800.299.9246 / 360.384.0572

www.samsonrope.com

Photo: Erik Von Suthoff

Circle 305 on Reader Service Card or visit www.maritimereporterinfo.com

Marco Shipyard: Rolling With The Changes

Over their lifetime, fishing vessels are arguably the most robustly constructed maritime structures around, due to their continuous operation in the most arduous of conditions. Marco Shipyard in Seattle — founded in 1953 — built its business and reputation in the fishing industry, producing boats for operation around the globe. In fact, **Peter G. Schmidt**, company founder and president, was an innovator in the use of steel construction for the fishing vessel market, which previously consisted mostly of wooden boats. "He wanted to bring small boatbuilding into the modern world," said **Bob McMahon**, vice president. While the market for building new fishing vessels is a far cry from 10 years ago, Marco Shipyard has parlayed its marine expertise and built a company with the facilities, the personnel, the hardware and the software technology that have enabled it to command a reputation of one of the finest builders of tugboats and pilot boats in the United

States. According to McMahon, the company will expand its opportunities further in the coming months, when it will announce a licensing agreement to build aluminum fast ferries, primarily for the vessel-hungry California market.

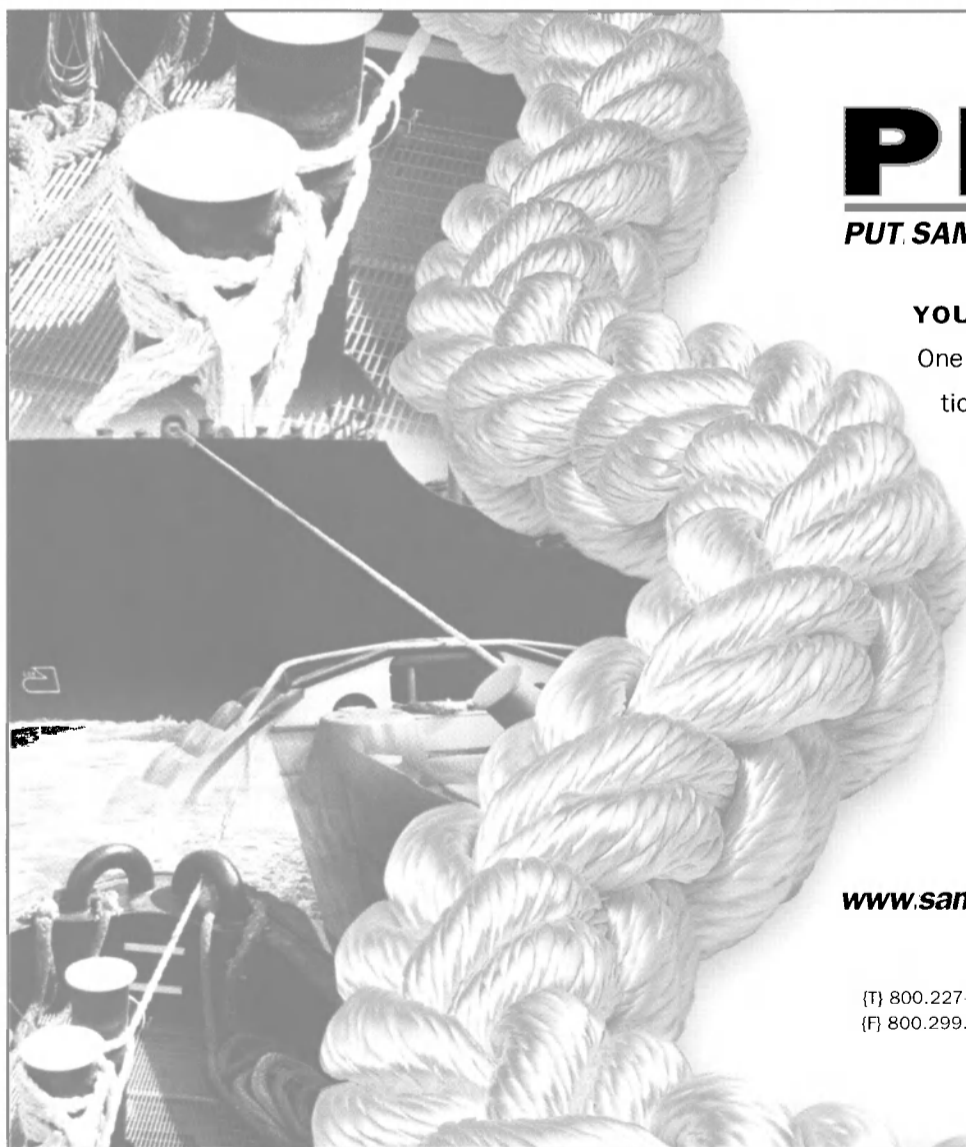
Located on Seattle's Lake Washington Ship Channel, Marco Shipyard has, for nearly half a century served as the leading builder of steel and aluminum vessels for the Pacific Northwest. The shipyard — which touts itself as a true full-service facility — has constructed vessels of nearly every type, ranging from oil spill recovery vessels to fishing vessels to the most advanced Z-drive tugs in the world. Since the mid-1960s, the yard has built more than 100 steel and aluminum tugboats, pilot boats, workboats and fishing vessels ranging from 58 to 160 ft. (17.7 to 49 m).

Star Gazing

Marco Shipyard's approach to vessel construction and repair has engendered a



Marco Shipyard Seattle (inset below) has considerable experience in building some of the world's most advanced Z drive tugs.



PROTON 8

PUT SAMSON STRENGTH TO WORK FOR YOU

YOUR SOURCE FOR SOLUTIONS

One of our strengths is the ability to provide solutions to your operational requirements. You wanted a product to maximize the performance of your "combi" tugs working off H-bitts. We responded and after a year of field testing we are proud to introduce Proton 8 offering the following performance characteristics:

- ◀ Lightweight, low stretch, and high strength associated with products made from Dyneema® fiber.
- ◀ Low stretch for maximum control.
- ◀ High resistance to heat.
- ◀ Excellent grip on H-bitts.
- ◀ Easy to re-splice.

www.samsonrope.com

2090 Thornton Street
 Ferndale, WA 98248
 (T) 800.227-7673 / 360.384.4669
 (F) 800.299.9246 / 360.384.0572

Call us to find out how to put our strengths to work for you.



Made with **Dyneema** DSM's registered Trademark for High Performance Polyethylene fiber.

Circle 306 on Reader Service Card or visit www.maritimereporterinfo.com

Workboat

number of loyal, repeat customers, such as Harley Marine Services of Seattle. "A repeat customer is the sincerest form of flattery," said McMahon. The shipyard delivered its eleventh tractor tug, Millennium Star, which is a 105-ft. (32 m) vessel with a beam of 36.8 ft. (11.2 m) and a molded depth of 16.5 ft. (5 m),

and is a prime example of Marco's expertise at building the most advanced workboats on the market. According to McMahon, the demand for advanced Voith Schneider and Z-drive tugboats continues to grow, as vessel owners and operators recognize the superior handling and flexibility of these vessels.

Marco is eager to serve this burgeoning market, as its 105-ft. tug, which was designed in house, can be built — "if we're pushed" — in about six or seven months with about ten to twelve weeks between deliveries in series production.

Powered by a pair of Caterpillar 3516B diesel engines providing a total

Millennium Star Main Particulars

Length	105 ft. (32 m)
Beam	36.8 ft. (11.2 m)
Depth	16.5 ft. (5 m)
Marine engines	2 x Caterpillar 3516B
Power	4,400 hp
Winches	Burrard Iron Works
Hydraulic tow pins	Smith Berger Marine
Z-drives	Ulstein 1650H
Electric	Harris Electric
Electronics	Radio-Holland
Radios	Stephens
Radars	JRC
GPS	Furuno
Gyrocompass	Anschutz
Autopilot	Robertson

California Main Particulars

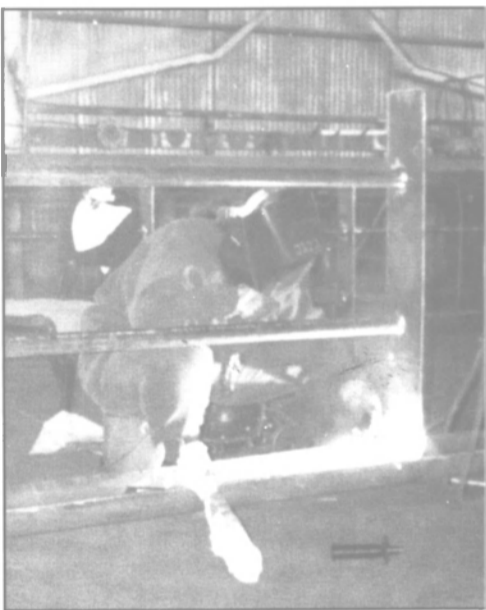
Length	104 ft. (31.7 m)
Beam	29.5 ft. (9 m)
Depth	12.5 ft. (3.8 m)
Marine engines	2 x Caterpillar 3508B
Power	2,200 hp
Propellers	Sound Propeller
Gears	Twin Disc
Electric	Harris Electric
Speed	14 knots
Radars, GPS	Furuno
Chart plotting	Transas
Radios	SEA
Gyrocompass	Sperry
Autopilot	Liton
Loudhailer	Ray 430

You Handle Production... ... Let Us Supply the People

At Ameri-Force, Inc. we have been supplying top notch craftspeople to major U.S. Shipyards since 1991. What do we have to offer?

Quality Craftspeople:

- Welders
- Shipfitters
- Pipefitters
- Pipewelders
- Machinists
- Electricians
- Riggers
- Painter/Blasters



Why Choose Ameri-Force?

We Deliver:

- Quality Personnel
- Insurance to meet your needs
- Quick Response Time
- Professional coordination
- Safety Trained Workforce
- Extensive Marine Experience

AMERI-FORCE, INC.

1 800 633-4096

www.ameriforce.com



The Work Force Specialists

See us at the IWBS Booth #479



ABS AMERICAN BUREAU OF SHIPPING

SEE US AT WORKBOAT BOOTH #1260

16855 Northchase Drive, Houston, TX 77060,
T: 281-877-6000 F: 281-877-6001, abs-america@eagle.org,
www.eagle.org

American Bureau of Shipping (ABS) is one of the world's leading ship classification societies. Its superior technical competence is backed by the industry's highest quality standard. The mission of ABS is to promote the security of life, property and the natural environment primarily through the development and verification of standards for the design, construction and operational maintenance of marine vessels.

Circle 403 on Reader Service Card
www.maritimereporterinfo.com

WARTSILA

SEE US AT WORKBOAT BOOTH #2341

2900 SW 42nd Street, Ft. Lauderdale/Hollywood, FL 33312
T: 954-327-4857 F: 954-327-4877
tuija.kjellberg@wartsila.com, www.wartsila.com

Wartsila is a global engineering company focusing on power generation, marine propulsion and industrial applications. Wartsila offers two strong brand names, Wartsila and Sulzer. The activities include designing, manufacturing, marketing, and servicing of Wartsila and Sulzer engines. Wartsila offers engineering and provision of main engines and auxiliary engines from 0.5 to 66 MW for all vessel types total engine room solutions, integrated propulsion systems and global service.

Circle 401 on Reader Service Card
www.maritimereporterinfo.com

VIKING LIFE SAVING EQUIPMENT

SEE US AT WORKBOAT BOOTH #1857

1625 N. Miami Avenue, Miami, FL 33136
T: 305-374-5115 F: 305-374-1535
us@viking-life.com, www.viking-life.com

Inflatable life rafts, life jackets, and other marine safety equipment.

Circle 400 on Reader Service Card
www.maritimereporterinfo.com

Circle 205 on Reader Service Card or visit www.maritimereporterinfo.com

HOPEMAN™

Providing Marine Interior Accommodations For Over 85 Years



*Cruise Ships,
Coastal Vessels,*

Casinos,

Riverboats...

*whatever your
program needs,
Hopeman has*

*Program
Management*

Engineering

Materials

Installation

*Service After
The Sale*

and the

*Financial Stability to
Ensure Performance*

*from start
to finish...*

*we can do
it all*

Hopeman Brothers Marine Interiors LLC

435 Essex Avenue Waynesboro, VA 22980 USA

Phone: 540-949-9200 Fax: 540-949-9259

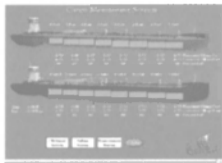
e-mail: hopeman@hopemanbrothers.com www.hopemanbrothers.com

IAN-CONRAD BERGAN

SEE US AT WORKBOAT BOOTH #377

3409 Gulf Breeze Parkway, Gulf Breeze, Fla. 35263
Tel. 850-932-9388 Fax. 850-932-0504
sales@icbergan.com; www.icbergan.com

Setting the standard for tank monitoring is a tradition at the Bergan Company. Offering quality solutions is another. That is why we have teamed up with Loadmaster International producers of Cargomax. The Bergan/Cargomax Software provides yet another quality solution and again raises the bar to a higher standard.



Circle 309 on Reader Service Card
www.maritimereporterinfo.com

of 4,400 bhp. Millennium Star is a powerful, multi-purpose vessel capable of providing ship assist, inland and ocean towing and escort services. Winches for the vessel are from Burrard Iron Works of British Columbia. The model HE split-drum headline winch is fitted with 500 ft. of three in. diameter Vetstran line. The model HJD double-drum tow winch handles 2,600-ft. (792 m) of 2.25-in. (5.7 cm) wire, and 1,000 ft. (305 m) of two in. (5 cm) diameter wire. The hydraulic tow pins/stern roller unit is from Smith Berger Marine of Seattle. Additional suppliers of equipment onboard Millennium Star include: Ulstein model 1650H Z-drives; Harris Electric switchboards, distribution panels and wiring; Marine Controls master alarm panel; Radio-Holland USA electronics; Stephens VHF and SSB radios; JRC radars; Furuno GPS units and plotter; Anschutz gyrocompass; and Robertson autopilot.

While Marco Shipyard has an enviable reputation in the construction of advanced azimuthing drive tug-

The Marco Shipyard

With more than 600 ft. of waterfront, the Marco Shipyard is renowned for its clean, organized approach to designing, building and repairing vessels. Marco Shipyard is supported by an in-house computerized Naval Architecture Department and Mechanical Engineering Department, and adheres to a modularized building concept which maximizes efficiencies. Following is an inventory of its physical assets.

- 500-ton and 1,800-ton floating drydocks
- 70-ton lift with large sidetracking system
- Steel and aluminum fabrication shops
- Machine shops, including a 40-ft. (12.2-m) shaft lathe
- Hydraulic shop
- Piping and outfitting shops
- Carpentry and cabinetry
- Paint shop
- Computerized plate-cutting facility

SIEMENS

Marine Solutions

SEE US AT WORKBOAT BOOTH #1365

29000 Highway 98, Daphne, AL 36526
Tel. 251-626-7824 Fax. 251-626-0984

Michael.Meier@sea.siemens.com; http://www.marine-engineering.de

For more than a 100 years Siemens is a successful vendor in the marine business. As turn-key provider, Siemens has the power to take responsibility for the complete electrical systems and services on board a ship resulting in ships safety, reliability, environmental compatibility and added value for operators.



Circle 314 on Reader Service Card
www.maritimereporterinfo.com

INTERNATIONAL PAINT INC.

SEE US AT WORKBOAT BOOTH #1330

6001 Antoine Drive, Houston, TX 77091
T: 713-682-1711 F: 713-684-1511

joann.plasek@uk.akzonobel.com, www.international-marine.com

International Paint Inc. supply an unrivalled range of high performance Marine Coatings, offering proven asset protection to coastal and deep-sea vessel operators worldwide. Key product technologies include tin-free Intersmooth Ecoloflex SPC antifoulings, Intersleek Foul Release Coatings and Interlac Low Solar Absorption cosmetic finishes.



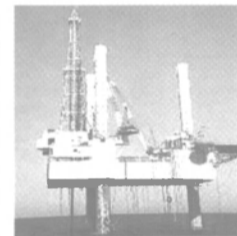
Circle 346 on Reader Service Card
www.maritimereporterinfo.com

United Marine Enterprise Inc.

SEE US AT WORKBOAT BOOTH #2821

P.O. Box 22077, Beaumont, Texas 77720
T: (409) 833-7070; F: (409) 8330744

United Marine is a full service ship and offshore drilling rig repair and new construction operation servicing the marine industry worldwide with its shipyard located in Port Arthur, Texas. United Marine offers the latest technology in its new jack-up rig design for shallow and deep water drilling.



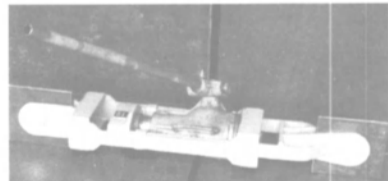
Circle 372 on Reader Service Card
www.maritimereporterinfo.com

Innovative Shipyard Tools Reduce Staging And Fit-Up Time!

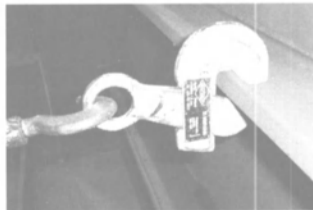
Ship Fit Tools is a remarkable new line of Specialty Tools designed specifically to aid the Ship Fitter with material handling and fit-up.



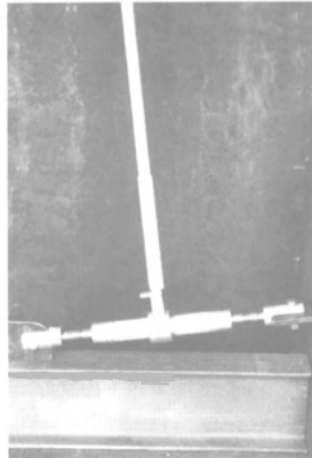
The Bulb-Align a tool for aligning Holland Bulb Profile Stiffeners when joining panel sections.



The Pul-Ton is a tool that converts the pushing force of a jack into a pulling force for joining large hull sections. Up to 25 ton capacity per jack.



The Bulb-Mov-R is a gripper for handling Holland Bulb Profile Stiffeners. 1.5, 3 and 5 ton models.



The Pul-Jak is a ratcheting jack for pushing or pulling bulkheads, frames and hull sections. 7, 12 and 20 ton models are available.

Ship Fit Tools are designed to facilitate the work of a plate fitter in ship building and steel fabrication. If staging and fit up work are a bottleneck in your yard, then there maybe a Ship Fit Tool to help you.

Ship Fit Tools

Distributed by:
Weld Tooling Corporation

3001 West Carson Street
Pittsburgh, PA USA15204-1899
Phone: 1-412-331-1776
1-800-245-3186
Fax: 1-412-331-0383
http://www.bugo.com



CUMMINS MARINE

SEE US AT WORKBOAT BOOTH #1021

4500 Leeds Avenue, Suite 30, Charleston, SC 29405
T: 843-745-1620 F: 843-745-1549

wavemaster@cummins.com, www.cummins.com

Cummins Marine, a division of Cummins, Inc., is a manufacturer of marine diesel engines 76-2000 HP including auxiliary and propulsion power.

Circle 370 on Reader Service Card
www.maritimereporterinfo.com

ELECTRONIC MARINE SYSTEMS INC.

SEE US AT WORKBOAT BOOTH #1655

800 Ferndale Place, Rahway, NJ 07065
T: 732-382-4344 F: 732-388-5111

Emsmarcon@aol.com, www.emsmarcon.com

It will introduce the smallest radar tank sensor for tank ship and tank barge cargo gauging with an accuracy of 1mm to 125 Ft. This is a network sensor that allows all on deck communications over a single cable. It will also display its automation and control consoles to ACCU.

Circle 371 on Reader Service Card
www.maritimereporterinfo.com

Circle 215 on Reader Service Card or visit www.maritimereporterinfo.com

boats, it has been equally successful serving other market niches, including the construction of advanced pilot boats.

The shipyard earlier this year completed its contract for two new pilot vessels for the San Francisco Bar Pilots with the delivery of the 104-ft. (31.7 m) California, sistership to San Francisco. The boats are outfitted with the latest in electronic navigation aids and are designed to transfer pilots safely to and from ships entering or leaving San Francisco Bay.

The San Francisco Bar Pilots must

service about 8,500 vessels per year, meaning that it maintains two pilot station vessels, with one on duty 12 miles outside the Golden Gate Bridge at all times and under all conditions. "Our pilots have been delighted with the comfort and safety of the first boat," said Captain Peter McIsaac, president of

San Francisco Bar Pilots, speaking prior to the delivery of California. "The Marco design has met our expectations, and brings a new level of performance to the Bay." California — on her main deck — features a comfortable day room/lounge area with large windows, an entertainment and information center

and a full galley. The raised pilothouse forward is designed to provide excellent visibility over pilot transfer operations on both the port and starboard sides, as well as good visibility up the sides of the vessel being serviced. Comfort and safety is enhanced by a large roll stabilization tank located below the pilot-

Progress creates success.

Leading technology from Liebherr.

LIEBHERR-WERK NENZING GMBH
P.O. Box 10, A-6710 Nenzing
Tel. +43 5525 - 606 - 280
Fax. +43 5525 - 606 - 448
deck.crane@lwn.liebherr.com
www.liebherr.com

ZF MARINE INDUSTRIES

SEE US AT WORKBOAT BOOTH #1135

3131 SW 42nd Street, Ft. Lauderdale, FL 33310
 T: 954-581-4040
 joe.hudspath@zf.com, www.zf-marine.com

ZF Marine, the world's largest manufacturer of marine transmissions, offers complete propulsion systems, including the new ZF Mathers CruiseComand, a plug 'n play control system for vessels with electronic engines and solenoid gears, and the ZF Mathers MicroCommander, MasterCommand, ClearCommand, and pneumatic control systems.

Circle 381 on Reader Service Card
www.maritimereporterinfo.com

MAN B&W DIESEL INC.

SEE US AT WORKBOAT BOOTH #1713

17 State St., 18th Fl., New York, NY 10004
 T: 212-269-0980 F: 212-363-2469
 Diesel_Sales@manbwus.com, www.manbw.dk, www.manbw.de

Man B&W Diesel, Inc. markets and services diesel engines and related products manufactured by the MAN B&W Diesel Group. The group's parent company, MAN B&W Diesel AG is the leading supplier of large diesel engines for marine propulsion and power plants.

Circle 334 on Reader Service Card
www.maritimereporterinfo.com

SHERWIN WILLIAMS

SEE US AT WORKBOAT BOOTH #563

2004 Durham St., Tampa, FL 33605,
 T: 813-382-7400, F: 352-686-7818
 bob.f.wolfe@sherwin.com, www.sherwinwilliams.com

Seaguard Marine Paints and Coatings is a business segment within the Industrial and Marine Organization of the Sherwin Williams Company. Our business focuses on Government, which includes the Navy, Coast Guard, Army, Marines and Air Force plus Commercial Marine, Off Shore, Cruises Vessels and export. We have dedicated marine stores, which carry a complete line of paints, coatings, and related products for the marine industry.

Circle 380 on Reader Service Card
www.maritimereporterinfo.com

MMC INTERNATIONAL CORP.

SEE US AT WORKBOAT BOOTH #1624

60 Inip Drive, Inwood, NY 11096
 T: 516-239-7339 F: 516-371-3134
 mmcintl@aol.com, www.mmcintl.com

MMC Int'l will be exhibiting its line of portable gauging and sampling equipment for restricted and closed gauging applications, vapor control valves, liquid level alarm systems, CL Couplings for flange to flange connections and other associated marine products.

Circle 332 on Reader Service Card
www.maritimereporterinfo.com



LIEBHERR

The name for cranes.

Circle 354 on Reader Service Card or visit www.maritimereporterinfo.com

EUROAMERICAN

MARINE PRODUCTS, INC.
1209 W. 17th St. Houston, TX 77008

MANUFACTURERS OF
Basket & Ladder Type Cable Tray
For the Marine/Offshore Industry

STOCKING DISTRIBUTORS OF

- European Offshore and Shipboard Cable
- Cable Glands
- Cable Lugs
- Electrical Junction Boxes

For more info please contact us at:
Phone 713-868-0983, Fax 713-864-3470
www.euroamericanmarine.com

Circle 244 on Reader Service Card
or visit www.maritimereporterinfo.com

house deck and large bilge keels on the hull. The vessel, on its stern, carries a 16-ft. Ocean Tech RIB for use in emergencies. In addition to its newbuild capabilities, Marco Shipyard, in some years, garners half of its business through the vessel repair side of the business. With 600-ft. of waterfront and a full complement of trades in-house — backed by its own naval architecture and

marine engineering capability — Marco is well-equipped to handle just about any type of repair job that arises. Its largest drydock can handle a vessel to 1,900 tons and 200+ ft., and has seen work lately ranging from routine maintenance and repair to technically challenging repowers and refits.

Circle 160 on Reader Service Card
www.maritimereporterinfo.com



CUT FILTER USAGE BY MORE THAN 50%

FILTERS	OTC 2
LOWEST LIFECYCLE COST	✓
REMOVES WATER CONTINUOUSLY	✓
REMOVES ALL SOLIDS	✓
PREVENTS MICROBIAL GROWTH	✓
HIGH DISPOSAL COSTS	✓
FREQUENT REPLACEMENT	✓

Think You Can't Afford A High Performance Centrifuge?

Call today for information about this ground breaking new design for purifying diesel fuel, lube oil and oil-water-sludge mixtures.

1-800-722-6622.



GEA Westfalia Separator, Inc.
A company of mg technologies group.

Westfalia Separator, Inc.
100 Fairway Court • Northvale, NJ 07647
Tel: (800) 722-6622 • Fax: (201) 784-4399
www.wsus.com

Circle 341 on Reader Service Card
or visit www.maritimereporterinfo.com

Maritime Reporter & Engineering News

Stearns® Quality PFD's

It's about Technology.

It's about Quality.

It's about Life.

You can trust Stearns® to provide the finest flotation gear available. Where technology is constantly improving and quality is always surpassing the competition. We design with safety in mind. The new I600 Offshore Lifejacket has an attached ring to provide further safety to it's users along with a foam filled collar for additional head support. All Stearns® Vests are USCG approved.



Stearns® Inc.
P.O. Box 1498 • St. Cloud, MN 56302
(800) 697-5801 • Fax: (320) 252-4425
e-mail: safety@stearnsnet.com
www.stearnsinc.com

Circle 409 on Reader Service Card
or visit www.maritimereporterinfo.com

All roads lead to ABB Turbocharger Service.



ABB Turbochargers Co.'s network of service centers around the U.S. equals less down time for your vessel, saving you time and money!

We at ABB recognize that every additional hour your ship stays in port for repairs is money lost. This is why 24-hour service for your ABB turbocharger, often within hours, is now available locally from our facilities in Houston, Los Angeles, Miami, New York and Seattle.

Staffed by ABB factory-trained technicians, our repair facilities offer swift handling of your maintenance concerns by people you know you can trust. With the help of our computer network, ABB technicians can access your

turbocharger's complete history to aid in speedy diagnosis. They can then utilize our locally maintained stocks of genuine ABB parts or go on-line to rapidly locate necessary parts in our worldwide inventory.

You asked for the best in service, and we delivered. But you would expect nothing less. After all, we design and build the industry's most efficient turbochargers. It's only natural that we also offer the finest in repair and maintenance service, worldwide.

We Design It... We Build It... We Service It Best!

ABB Turbocharger Co.

U.S. Headquarters

1460 Livingston Ave., North Brunswick, NJ 08902

24 Hour Service: (732) 932-6103

Telefax: (732) 932-6378

www.abbturbocharger.com

All Facilities ISO 9002 Certified

ABB Turbocharger U.S. Service Centers:

Houston (281) 930-8383 Fax: (281) 930-9595

Los Angeles (310) 324-4814 Fax: (310) 324-5102

Miami (954) 450-9544 Fax: (954) 450-8957

New York (732) 932-6103 Fax: (732) 932-6378

Seattle (253) 383-1806 Fax: (253) 383-1270

ABB

Circle 201 on Reader Service Card or visit www.maritimereporterinfo.com

Workboat

Bollinger Delivers Patrol Boat

In time of heightened security, the new 87-ft. (26.5 m) coastal patrol boat, USCG Sturgeon, built by Bollinger Shipyards for the U.S. Coast Guard at Grand Isle, La. Was a welcome sight. The new boat replaces the 82-ft. (24.9

m) patrol boat Point Sal, that was commissioned in 1966.

Sturgeon is the 36th of 50 nearly identical vessels being built by Bollinger for the Coast Guard in a contract worth more than \$200 million.

The Sturgeon has a 17 ft. (5.1 m) beam and a 6 ft. (1.8 m) draft. It is powered

by two MTU diesel engines with a top speed of 25 knots and a range of 882 n.m. It has a crew of ten and accommodations for 11.

The new shallow draft cutter is designed to operate up to 200 mi. offshore, as well as near shore. It is equipped with a larger pilothouse than



the boat it replaces, providing 360-degree visibility with an integrated and sophisticated command and control system. It also has a stern launch and recovery system for a small aluminum boat with rubber side guards (RIB) that improves efficiency and safety over the present crane launch and recovery system employed on the boat it replaces.

Sturgeon is capable of meeting its maritime missions of search and rescue, law enforcement, marine environmental response and protection, commercial vessel safety, recreational boating safety and national defense. It is designed to work closely with the Coast Guard's future deep-water assets and all of its aircraft. The cutter is uniquely capable of providing home defense and is expected to provide added security for Louisiana Offshore Oil Port (LOOP) and offshore energy platforms.

According to **Boysie Bollinger**, the terrorist attacks on the United States on September 11 have once again focused attention on the Coast Guard and its inestimable value to our country and its homeland security. Within minutes after the attacks on the World Trade Towers, Coast Guard Cutters and their crews were assisting in the area emergency response agencies. They transported medical aid and logistical personnel and provided security for New York harbor.

Vicki M. McAllister Delivered From Eastern

Eastern Shipbuilding Group, Inc., delivered Vicki M. McAllister, the second of two 96 ft. (29.2 m) reverse trac-

Eastern Shipbuilding delivered Vicki M. McAllister to New York's McAllister Towing and Transportaton.



Diesel engines tailored to meet any requirement from 450 kW to more than 100.000 kW

MAN B&W Diesel A/S
Teglholmegade 41
DK-2450 Copenhagen
Telephone: +45 33 85 10 00
Fax: +45 33 85 10 30
www.manbw.dk

Circle 283 on Reader Service Card or visit www.maritimereporterinfo.com

tor tugs that they have recently constructed for McAllister Towing and Transportation Company, Inc. Vicki M. McAllister, slated for operations in the Philadelphia area, is a 5,000 hp vessel measuring 96 x 34 x 15 ft. (29.2 x 10.3 x 4.5 m) tug. It was designed by Jensen Maritime Consultants of Seattle, Wash., and built and classed by ABS A1 Towing-AMS. It is powered by two EMD 12-645-E7B engines and two Schottel Model SRP-1212FP Z drives producing up to 60 tons of bollard pull. NETEC hawser winches Model X2671 are mounted fore and aft holding 475 ft. of 10 in circumference line. Firefighting equipment consists of Detroit Diesel 8V-71TI diesel engine driving a Goulds 3410-8 in. by 10 in. pump, which produces 3000 gpm that is distributed to two 1500 gal. Elkhart fire monitors.

Circle 190 on Reader Service Card
www.maritimereporterinfo.com

Rodriguez Building Twin-Screw Shrimpers

Rodriguez Shipyard in Bayou LaBatre, Ala. is enjoying a busy season with a twin-screw shrimper currently under construction for a late November delivery. The new boat, for owner Steve Nguyen, will be similar to the Lucky B delivered to Louisiana customer Ba Nguyen last August. At 98 x 26 x 12-ft., the boats, are each powered by a pair of Cummins 6-cylinder KTA19 M3 engines rated for 600 hp at 1,800 rpm, turning into Twin Disc 5202 gears with 6.1:1 reductions.

California Builder Launches New Catamaran Design

Many of the catamarans being launched in North America are built to imported designs, but a California builder is taking a home-grown approach. Working with a team of




November, 2001

skilled aluminum builders in his custom built shop north of San Francisco. Moose Boats owner **Roger Fleck** has built his prototype. The firm will be hauling the boat to the New Orleans Work Boat show and they are looking for orders for this or either of the two other models available. The prototype is

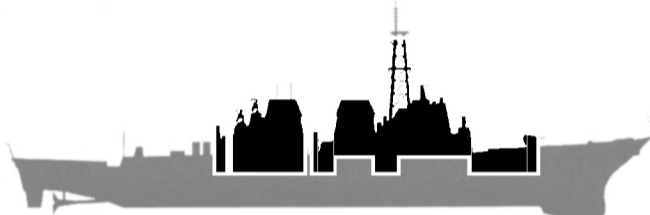
32 ft. (9.7 m) over all, excluding swim grids, and 28.2-ft. (8.5 m) on the waterline. The full beam is 11.2 ft. (3.3 m) with a 22-in. maximum draft. Dead rise aft is 15 degrees and dry displacement is 13,800 lbs. This model is powered by a pair of Cummins six-cylinder 6BTA5.9 M3 engines with a recreational rating of

330 hp at 2,800 rpm. Driving Hamilton 274 waterjets through ZF 88C reversing gears with a 1:1 ratio, the boat achieved its 34-knot design speed on sea trials. The boat will also be available with the same engines in their commercial ratings of 280 and 315 hp.



A.Z.E. SUPPLY CO., INC.
18 ROCKHILL ROAD
BALA CYNWYD, PA
19004

PIPE * VALVES * FITTINGS




MARINE * MILITARY * COMMERCIAL

CAGE CODE: OBGU9

TEL 610-667-3406
FAX 610-667-3415
E-MAIL: PIPERJC@EROLS.COM

CREDIT CARDS ACCEPTED

Circle 349 on Reader Service Card
or visit www.maritimereporterinfo.com



VISGAGE

**Test Oil
Viscosity
Immediately**

**Diesel • Gear
Spindle • Hydraulic
Lubricating Oils**

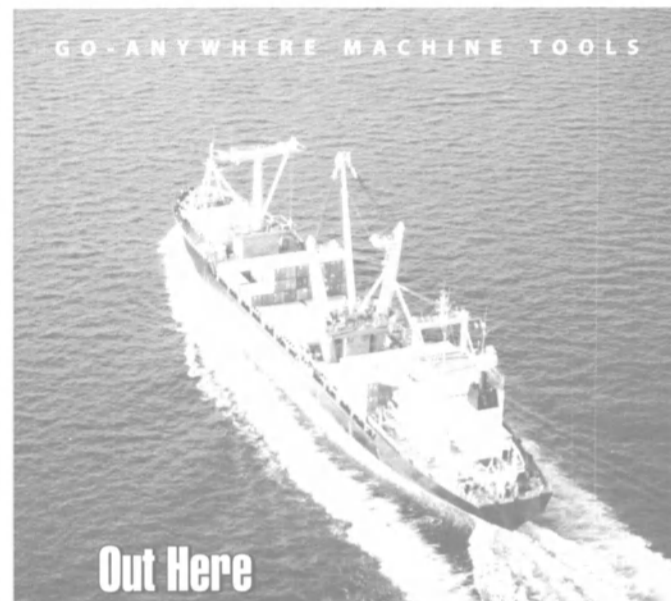
Special Models Available
for Fire-Resistant Fluids
Direct readings in
Centistokes or Saybolt
Universal Seconds

**No stop watches,
thermometers, or
calculations!**

**A necessity for any
company using
large quantities of
lubricating oils.**

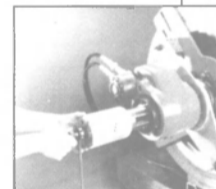
Louis C. Eitzen Co., Inc.
P.O. Box 1210
Glenwood Springs, CO 81602
Tel: (970) 945-7572
Fax: (970) 945-2738
E-mail: visgage@rof.net
Web: www.visgage.com

Circle 280 on Reader Service Card
or visit www.maritimereporterinfo.com



There's
No Good
Time
For
Downtime

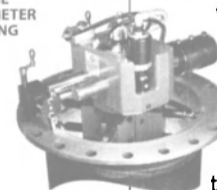
When equipment must be repaired now, Climax Portable Machine Tools give your crews the power to get the job done fast, any time, anywhere. Our compact, easy-to-use tools attach directly to the work piece — wherever it may be — so there's little time lost for dismantling. Boring, borewelding, milling, turning, weld prep, beveling,



LARGE DIAMETER BORING

facing and many other operations can be performed easily with precision.

Climax's line of over 25 machine tools provide effective solutions for repairs at sea and valuable alternatives to costly off-site machining in ship repair or refurbishing operations. Call us today for complete information on these tools and an unlimited



FACING, BEVELING & MORE

range of custom tool designs for unique repair applications.



Learn More.
Send for **FREE**
Literature Today.

CLIMAX
Portable Machine Tools, Inc.

2712 E. Second St., Newberg, OR 97132-8210 USA
Phone: 800-333-8311 • Fax: 503-538-7600

2840

See us on the Internet at www.cpmi.com

Circle 351 on Reader Service Card
or visit www.maritimereporterinfo.com

NAVIGATIONAL PILE

Plastic Pilings Inc. 

Cut Life-Cycle Costs

Plastic Pilings, Inc. (PPI) is a world pioneer in the design, development, and manufacture of navigational marker pilings, fender pilings and load bearing pilings, pannels and marine lumber derived from "waste stream" recycled plastics. PPI's patented process includes encapsulating a structural steel core or a Vinylester composite fiberglass structural tubing in plastic. Pilings are not affected by sea water, will not corrode, not subject to dry rot, and are immune to marine borers.

Plastic Pilings, Inc.
Corporate Office
Rialto, CA USA
Phone: (909) 874-4080
Fax: (909) 874-4860
www.plasticpilings.com

Tug Automation Control System Helps Eliminate False Alarms

When operators of properly equipped tugboats receive a system alarm, they know there is a real problem. They also know that they're not going to get any help from an on-board engineer because the operator is the only one on board. But Quebec-based Techsol, Inc.'s helps reduce the alarm, thanks to new Marine Automation Control System (MAX) installed in several harbor tugboats designed by Robert Allan Ltd. This state-of-the-art alarm, control, and monitoring system eliminates both false alarms and the need for an on-board engineer, making it possible for only the pilot and shore engineer to handle any problems that might arise.

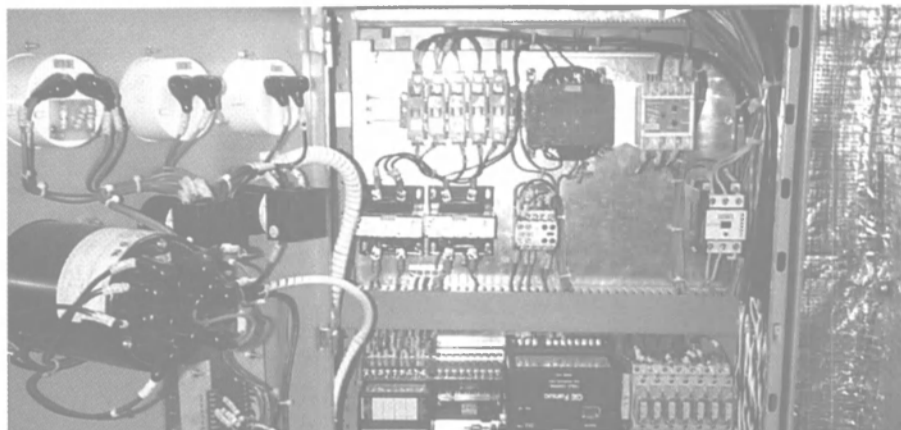
Techsol, a marine electrotechnology company, created this Unmanned Machinery Space (UMS) system to enable pilots and shore engineers to have a complete picture of a vessel's system via graphical displays and touch screens. Designed to replace existing dedicated systems that were not user friendly, this modular system was built using off-the-shelf equipment from Charlottesville, Va.-based GE Fanuc Automation and adapting it to meet requirements for shipboard systems. GE Fanuc received certification for the components for use in marine applications with the American Bureau of Shipping and Lloyd's Register.

"The main advantages of using standard equipment from GE Fanuc and adapting it to the marine world are twofold: worldwide component availability and lower cost," says **Claude Messiaen**, Techsol's president and owner. "We're avoiding specialty parts and leveraging proven off-the-shelf hardware."

Techsol chose GE Fanuc's CIMPLICITY human machine interface software and Series 90-30 programmable logic

controllers (PLCs) with field I/O modules to create the compact MAX system able to carry out all of the vessel's control, alarm and monitoring functions. The Series 90-30 field I/O modules are dedicated to specific equipment, and the MAX system requires five or six of these units to achieve complete ship automation.

Because each field I/O module is equipped with a central processing unit (CPU), it can accept input from switches and sensors and generate output to



Concerned About Safety?
FILL THE GAPS IN YOUR RADAR.
Now Available for Marine Applications



Permanent Mount
Vision Up To 3200 feet
See In Complete Darkness
No Illuminators Required

Visit Our Web Site for More Information
www.arion-international.com



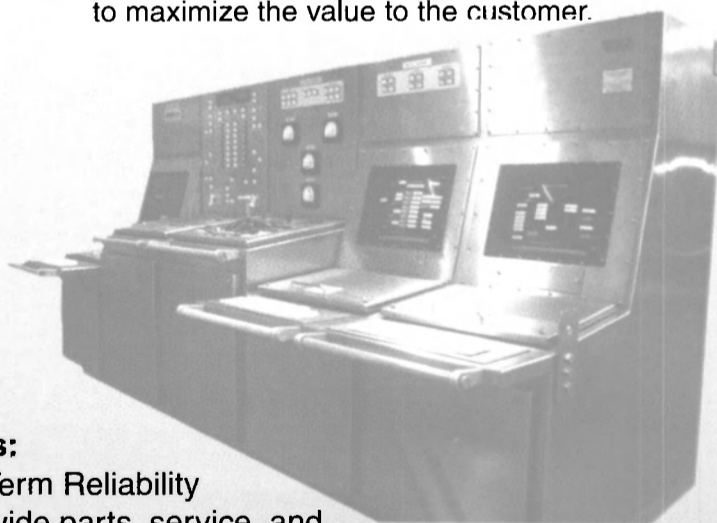
**Pan/Tilt Thermal Cameras
Joy-Stick Operation**

(800) 365-7443 (407)366-7443
Fax: 407-366-7444

Circle 211 on Reader Service Card or visit www.maritimereporterinfo.com



TANO has a 35 year tradition in providing marine automation systems using the latest technologies to assure lower operating costs. We specialize in tailoring a system to meet the specific needs of the vessel and to maximize the value to the customer.



Installed Systems Include:

- Propulsion Control
- Steering Control
- Cargo/Ballast Control
- Electrical Monitoring and Control
- Simulators and Trainers

Benefits:

- Long Term Reliability
- Worldwide parts, service, and training support
- MIL-Spec and Commercial
- New Construction and Retrofits

1-800-229-TANO **www.tano.com**

TANO Corp.
5700 Citrus Blvd., Ste E
New Orleans, LA 70123
Phone: 504/733-4777
Fax: 504/734-2127
Singapore Office
Phone: 65-296-5421
Fax: 65-296-0451

Circle 322 on Reader Service Card or visit www.maritimereporterinfo.com



Monitoring & Control

control machines and processes without relying on the processing power of the central PLC. Thus, they can act as stand-alone devices able to carry out normal functions and keep the machinery operational if the central system fails. Additionally, their autonomous nature provides faster processing and greater reliability.

The modules have the capacity for self-diagnostics down to the sensor level and can generate fault reports on open wire, short circuit, under and over range, and wiring error. These digital and analog modules communicate with up to 700 sensors that monitor operating conditions on the boat's propulsion and aux-

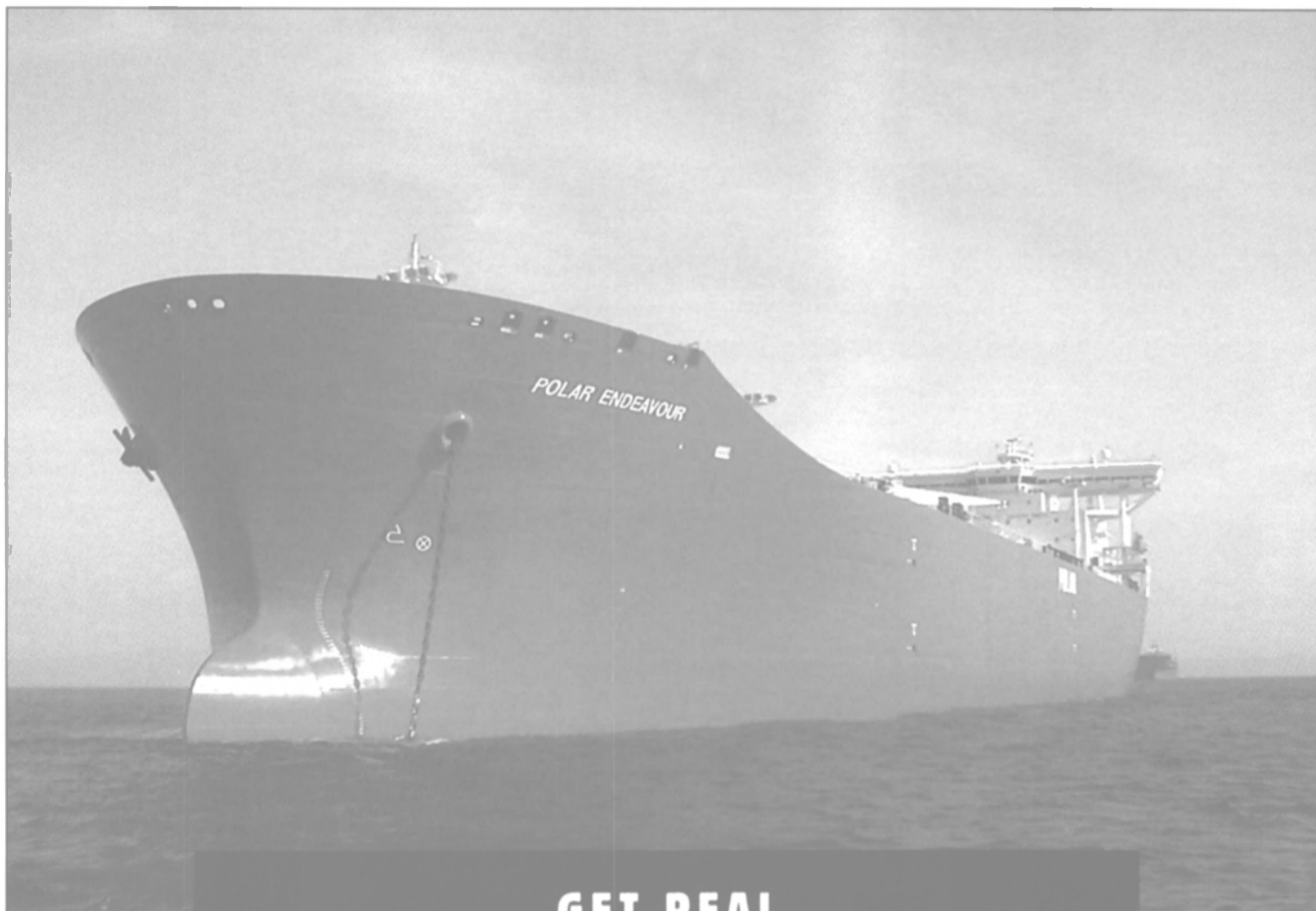
iliary systems, including main engines, generator and pump control, switchboard logic, fuel transfer, and steering.

When a sensor receives information, such as a fire in the starboard engine, it transfers this information to the fire detection field I/O module. The module then takes immediate fire-suppression

steps, sounds an alarm, and also notifies the central PLC of the problem via a high-speed data bus. The Series 90-30 PLC relays this information to the other modules, which take the appropriate self-preservation steps on equipment that they monitor. At the same time, the central PLC converts the information and sends it to the user interface, which shows the operator the type and exact location of the problem. If a field module fails, the central PLC will take over the control for that unit until the fault is cleared, providing a basic level of redundancy at no extra cost.

Opening Windows

The CIMPLICITY software receives data from the PLCs and I/O points, acting as a central operator interface for various local and remote controls. This easy-to-use graphical interface was developed on a Windows NT platform, and, in Techsol's applications, is composed of marine-approved computers and touch-screen displays. The software employs an object-oriented approach that makes it simple to create screens to handle any number of operating parameters. Pre-built and pre-configured screens are readily adapted using graphic tools. A built-in graphics editor incorporates Windows-type toolbars on the development screen. The user simply selects a tool for drawing, or for adding text and button objects. An Object Linking and Embedding (OLE) button eases importation of OLE 2.0 objects such as spread sheets, charts, and bitmapped



GET REAL

Out here in the real world you are put to the test every day. Mastery of the skills required to do your job right is a constantly moving target.

Case Study:

THE TARGET MOVES: The new Millennium class tankers will be equipped with the most technologically sophisticated and advanced bridge systems in the world.

MITAGS/PMI's SOLUTION: MITAGS/PMI and Polar Tankers team up to develop an integrated bridge resource management (BRM) training program for deck officers serving on the Millennium class tankers. This unique and comprehensive program will provide instruction using the Raytheon Integrated Bridge System and Custom Kamewa-Anschutz steering system found on MITAGS/PMI's new STN Atlas 5000 full mission 360° bridge simulator.

Only by working with MITAGS/PMI to arrive at an integrated training solution can Polar Tankers give their deck officers the most realistic and effective training available.

MITAGS/PMI: maritime training for the real world.



Maritime Institute of Technology & Graduate Studies (MITAGS)
Pacific Northwest Maritime Institute (PMI)

MITAGS Call 443-989-3235
e-mail: admissions@mitags.org
5700 Hammonds Ferry Road
Linthicum Heights, Maryland 21090
www.mitags.org

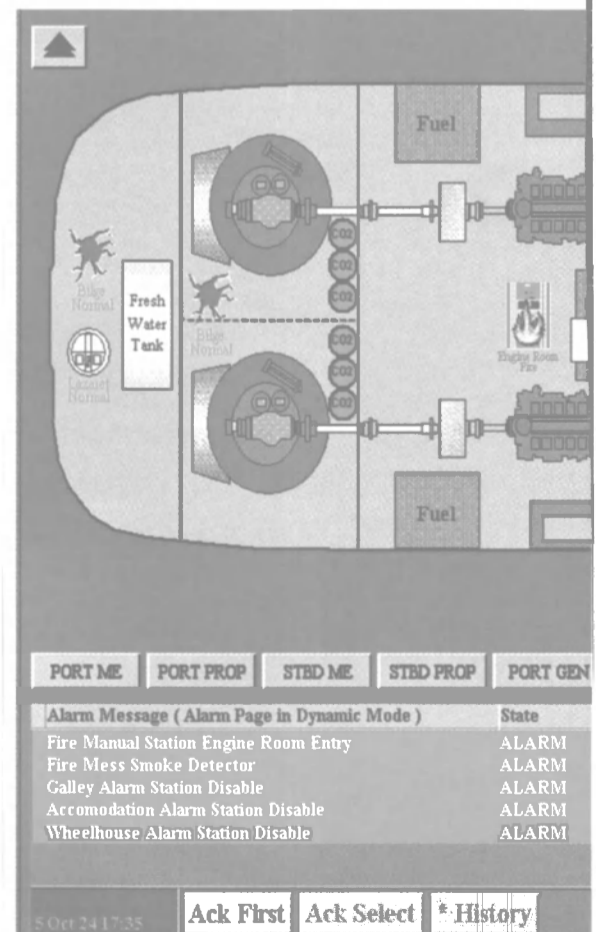
PMI Call 206-441-2880
email: info@stcw95.com
2333 Third Avenue
Seattle, WA 98121-1711
www.stcw95.com



MITAGS is certified as a Maritime Education & Training Center by Det Norske Veritas

MITAGS the leader in STCW-95 training offers 29 USCG approved courses including:

Electronic Navigation ■ Bridge Resource Management & Shiphandling ■ Medical Person in Charge ■ Basic Safety Training ■ Basic & Advanced Firefighting ■ Tankerman Person in Charge (PIC) ■ Crowd and Crisis Management ■ Heavy Weather Avoidance ■ Computer Operations ■ Global Maritime Distress & Safety Systems



Circle 286 on Reader Service Card or visit www.maritimereporterinfo.com

Monitoring & Control

images. Once objects are created, they can be resized, rotated or moved using the "handles" that appear when the object is selected. Additionally, operators are able to switch CIMPLICITY screens in less than half a second, ensuring accurate data and quick response. Since CIMPLICITY was developed under Windows NT, it interfaces easily with any third-party equipment, and screens can be easily adapted to reflect replaced or upgraded equipment.

Techsol took advantage of the software's open architecture by creating AutoCAD drawings of the engine and importing them into CIMPLICITY. Since the screens were developed using actual ship equipment, what the operator sees on screen accurately depicts the equipment and its exact location on board. MAX has 13 to 20 different screens, and most equipment graphics displayed on the screens relate detailed information in response to a touch by the operator's finger. This configuration gives the operator easy comprehension of the system layout without any specific or advanced technical knowledge, which is a key benefit of the Techsol system.

One company that has seen this benefit firsthand is Robert Allan Ltd., Canada's oldest privately owned consulting naval architectural firm, providing marine consulting and design services to a worldwide client base. Headquartered in Vancouver, the company specializes in tug and barge transportation, ship-assist and escort tugs, and fast patrol

craft

"Our principal products as naval architects are high-performance tugs with very low levels of manning," says Robert Allan, president and owner of Robert Allan Ltd. "A very high standard of automation is required, and that really implies a system like the one Techsol

is producing."

CIMPLICITY's high standard of automation allows MAX to be controlled by only one on-board operator, and its flexibility permitted Techsol to design a system that generates no false alarms. That's no easy feat by marine-world standards.

Techsol created custom scripts, or algorithms, for MAX. By following these algorithms, the system reacts to varying conditions and eliminates possible false alarms. For example, when a tugboat maneuvers, fuel has a tendency to slosh around in the tank, generating low-fuel alarms. With MAX, when the



COMMERCIAL NEWBUILDINGS



As the result of the merger between the renowned Spanish builders Astilleros Españoles and Bazán, IZAR is one of the largest shipbuilding groups in the world.

Our mission is to help shipowners match the increasing demands of a competitive shipping market. And we have a wealth of experience in doing so.

IZAR is currently building a series of LNG carriers with the latest technology, but also new dredgers for the best known operator in the world.

WHO ELSE BUT IZAR?

IZAR has built some of the fastest ferries in the world, but also three dual drilling units for the Gulf of Mexico incorporating the latest offshore technology, and was the pioneer in FPSOs.

IZAR is designing a new generation of fast Ro-Pax ships, but also has the most advanced and environmentally-friendly technology in double-hull tankers and in chemical carriers.

And, most importantly, we are ready to meet any demand.

Let IZAR help build your utopia.



Pº de la Castellana, 55 • 28046 MADRID, Spain • Tel. +34 91 335 84 00 • Fax +34 91 441 50 90 • www.izar.es



Circle 267 on Reader Service Card or visit www.maritimereporterinfo.com

We provide our customers with...

- Timely & cost effective topside & offshore repairs
- Turnkey project solutions
- Precise machine shop services

...repairs & new installations made from the finest materials and components, produced with an unsurpassed dedication to craftsmanship.

Offshore INLAND
MARINE & OILFIELD SERVICES

www.offshoreinland.com
3521 Brookdale Drive South • Mobile, AL 36618
Tel 334 479 6081 • Fax 334 479 1989 • Toll free 800 489 8120

Circle 297 on Reader Service Card or visit www.maritimereporterinfo.com

The best equipment for the worst conditions

When lives are at stake, an immersion suit with the quality and performance of Ocean Commander is quintessential. 45% lighter than conventional neoprene suits, it's easy to get into and so flexible that it's ideal for abandonment procedures. Replaces the Gumby Suit!



Ocean Commander™ Immersion Suit OC8000 features include:

- water-tight hood
- face seal for water & wind exposure
- inflatable head pillow supports the head & provides additional buoyancy
- water-tight zipper & seams
- 5 mm detachable neoprene mitts
- SOLAS grade reflective tape
- detachable inner buoyancy liner of AirSoft™ foam for flotation & thermal insulation
- neoprene wrist seals
- urethane coated nylon exterior makes repairs & cleaning easier
- compact storage case
- non-slip durable rubber soles
- safety harness available on Model OC8000 HR

Mustang Survival Inc.
3870 Mustang Way
Bellingham WA
USA 98226

TEL 360.676.1782
FAX 360.676.5014
WEB www.mustangsurvival.com



Circle 290 on Reader Service Card or visit www.maritimereporterinfo.com

FOR SALE AND RENT

TENSION LOAD LINKS AND SHACKLES Cabled and Radio-Telemetry



0-300 TONS CAPACITY
custom specials to 5000 tons



Water Weights Inc

for further details call:
USA toll free: 1-888-998-3787
tel: 1-909-626-8316
fax: 1-909-626-8326

www.waterweights.com

AN IMES GROUP COMPANY
www.imes.group.com



Circle 337 on Reader Service Card or visit www.maritimereporterinfo.com

We're The Difference Between Inside

& Out



Marine



Emergency



Mass Transit



Recreational

Clean Seal® has partnered with engineers since 1978, designing a full line of products that seal out noise, dust, and moisture. Our climate controlled facility maximizes bonding potential of adhesives on gaskets, molding and decorative trim. Clean Seal supports many applications in the RV, automotive, marine, and transportation industries with quality, service and product availability.

- 3M® brand tapes and adhesives
- On-time delivery
- Wide variety of profiles available – 6 million feet in stock
- Packaged by linear foot, on easy to use reels
- Our specialty division can cut, splice and glue to your specifications
- 100 ft. minimum order

For assistance in selecting the right seal for your application, call a Clean Seal specialist today.

1-800-366-3682
ext. 1363



The Original
Industrial Seal

800-366-3682 ext. 1363
219-299-1888
Fax: 219-299-8044
P.O. Box 2919
20900 W. Ireland Rd
South Bend, IN 46680-2919
<http://www.cleanseal.com>
e-mail: cleanseal36@cleanseal.com



CLEAN SEAL

Circle 220 on Reader Service Card or visit www.maritimereporterinfo.com

FOR THE FASTEST, EASIEST, LOWEST COST CRANE OPERATIONS... JUST ADD WATER.



The E-Crane™ (Equilibrium Crane) is changing the basic concept of how ships are unloaded in ports around the world. It is an advance that has proven it moves more bulk material faster, farther and at lower cost than any conventional crane type.

The E-Crane incorporates a unique parallelogram system to keep the crane in near balance throughout its full working range. It makes gravity work to your

advantage, reducing horsepower requirements *and* power consumption by up to 50%. It also lets you handle high-repetitive cycling of large loads (up to 30 U.S. tons) at long outreaches (up to 150 ft. / 45 m). And it's easily controlled by operator joysticks for pinpoint bucket placement.

For details, case histories or to arrange a visit to see the E-Crane in action, call us today.

North and South America

E-Crane International, USA, Inc.

Phone: 1-740-387-0015

Fax: 1-740-387-0181

E-mail: info@ecrane-usa.com

E-CRANE
EQUILIBRIUM

All Other Countries

E-Crane International, Europe, B.V.

Phone: 31-165-320100

Fax: 31-165-320759

E-mail: info@ecrane-europe.com

**See us at the
International Workboat Show,
booth #2500.**

Circle 235 on Reader Service Card or visit www.maritimereporterinfo.com



pilot maneuvers the boat, input from the joystick automatically disables the fuel tank low-level alarm, so sloshes will not cause alarms.

According to Messiaen, U.S. Navy representatives recently experienced a trial run and demonstration of a tugboat equipped with MAX, and were impressed when the system did not give

any false alarms. Civilian watercraft makers are also impressed with MAX, as well as makers of luxury yachts and large offshore tugs. Techsol is also working with a U.S. engine maker to specify MAX as the standard control system for their engines.

Techsol installs MAX in new construction as well as retrofits, and the



team has found that the system merges easily with existing equipment. So easily, in fact, that Techsol retrofitted a control system on a 400-car ferry over a five-week period without ever having to take the vessel out of service.

"When we do retrofits, we try to save what we can," Messiaen says. "We use MAX with the existing equipment, especially sensors, and the modules from GE Fanuc are wonderful at integrating with the on-board architecture."

In the future, Techsol looks to integrate the CIMPLICITY software with a

predictive maintenance package. By incorporating predictive maintenance into their system, Techsol will be able to expand MAX's capabilities, enabling it to automatically inform the operator when preventive and regularly scheduled maintenance should be performed.

Not only will the new system eliminate false alarms, it will help prevent true alarms from happening with preventive maintenance. Now that's keeping a ship afloat.

Circle 11 on Reader Service Card
www.maritimereporterinfo.com

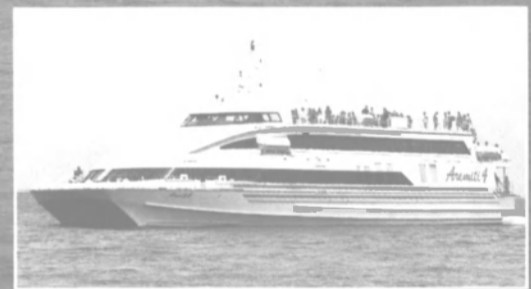
Serving demanding customers worldwide



Aqualiner
 Low Wash Ferry
 130 passengers



New Ferry V
 Damen Fast Ferry 4010
 400 passengers



Aremiti 4
 Damen Fast Ferry 5012
 445 passengers / 20 cars

DAMEN SHIPYARDS

SHIPBUILDING AND SHIPBUILDING KITS FOR CONSTRUCTION IN THE USA
 Industrieterrein Avelingen West 20 · P.O. Box 1 · 4200 AA Gorinchem/HOLLAND
 Telephone: 011 31 183 639528 · Telefax: 011 31 183 637762
 E-mail: americas@damen.nl · Internet: www.damen-shipyards.com

Circle 229 on Reader Service Card or visit www.maritimereporterinfo.com

Keeping an Eye on Fuel Costs

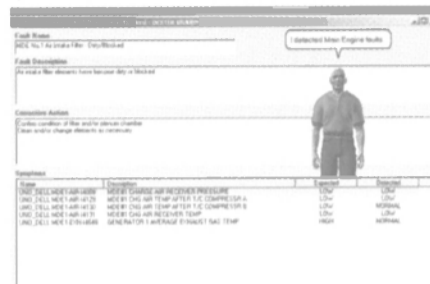
As fuel prices will seemingly continue to rise, owner/operators will increasingly turn to systems such as the Digital Torque Meter to help with energy conservation. The system measures horsepower, rpm and torque on rotating shafts by using fiber optic sensors, making the system accurate and reliable. The system is designed to be flexible, and allows for installation on shafts as small as two in. and as large as 24 in. in diameter. In upgrading the system over the years, Instruments, Computers & Controls has kept evolving customer needs as its guiding force. The standard Digital Torque Meter System typically has a NEMA 4 enclosure up to 30 ft. from the shaft, displaying rpm, shaft horsepower and torque. Inputs and outputs can be configured to interface to other onboard instrumentation. A portable system is also available, and can be used from ship to ship. The fiber optic technology allows nearly all electronics, except for the sensor LEDs, to be housed within the NEMA 4 enclosure.

A temporary power cord is connected to the box for quick installation until permanent power can be had. The sensors typically mount across a bearing housing or mounting brackets. Once the system has been installed and initially calibrated, there is no need for recalibration as the system does not drift. The customer is able to recheck calibration at any time.

Installation of the Digital Torque Meter System is performed by the customer, which helps make the unit competitively priced. While a precise, step-by-step manual allows customers to install the system without any training, the company maintains its New Hampshire facility with a simulated shaft that allows customers hands-on training if required.

Circle 199 on Reader Service Card
www.maritimereporter.com

Intelligent Software Agents for Machinery Diagnostics



Companies using process control software can integrate intelligent software agents for machinery diagnostics and prognostics using MACSEA Ltd.'s DEXTER™ system. The artificially intelligent agents use probabilistic neural networks to detect patterns of alarm conditions associated with specific machinery faults. The agents acquire real-time machinery sensor data, monitor alarms, detect trends, diagnose equipment faults, and predict impending problems. DEXTER is designed to "plug-and-play" with existing process control software, thereby adding value to a company's automation investment. Animated characters with speech synthesis and recognition capabilities appear on the user's screen whenever an

agent detects a problem, no matter what other software the user happens to be running at the time. Software tools are provided to easily create and deploy teams of real-time agents in a distributed configuration across computer networks.


Circle 194 on Reader Service Card
www.maritimereporter.com

Wärtsilä NSD: Extending the Life Cycle of Marine Diesel Engine


Wartsila NSD, long a provider of advanced diesel engine technology, has steadily evolved through natural growth and acquisition into a whole propulsion system provider. The company, maintaining its high standard of research and development, has worked to steadily refine the process of monitoring and analyzing propulsion system performance.

On a tanker, for example, an engine breakdown can be catastrophic. Rapid response at the first sign of trouble is the first line of defense in avoiding a potential catastrophe, not to mention major costs. The problem today, with the considerable drawdown in the number of crew required to operate today's ships, is that qualified technicians are not always readily avail-


Damen Workboats




Stan Tug 1605




Azimuth Stern Drive Tug 3110



Multi Cat 2510




Stan Tug 2909



Azimuth Stern Drive Tug 3111

DAMEN SHIPYARDS

Industrieterrein Avelingen West 20 · P.O. Box 1 · 4200 AA Gorinchem/HOLLAND
 Telephone: +31 (0) 183 63 21 89 · Telefax: +31 183 63 21 89
 E-mail: info@damen.nl · Internet: <http://www.damen.nl>



Circle 230 on Reader Service Card or visit www.maritimereporterinfo.com



The New, Affordable Advanced Treatment Type II Marine Sewage Unit

This new economical and lightweight modular LX-Series design is ideal for small commercial vessels. It even fits under the stairway of a tug engine room. The LX-Series is fully certified by the US Coast Guard under 33 CFR Part 159 and IMO rules.

For more information on the LX-Series, check out our website at www.marinefast.com today.

FAST SYSTEMS
Smith & Loveless, Inc.
Commercial Division
8229 Brentwood Industrial Drive
Brentwood, MO 63144-2814, USA
Phone: (314) 645-6540
Fax: (314) 645-6131

Circle 246 on Reader Service Card or visit www.maritimereporterinfo.com



INTERCON

COUPLER SYSTEMS
for ARTICULATED TUG-BARGES

- INNOVATION
- EXPERIENCE
- QUALITY

NICOLE LEIGH REINAUER
RTC 135

For more information
on Intercon's ATB
connection technology,
contact:

INTERCONTINENTAL
ENGINEERING - MANUFACTURING CORPORATION

P.O. Box 9055
Kansas City, Missouri 64168
phone (816) 741-0700
fax (816) 741-5232

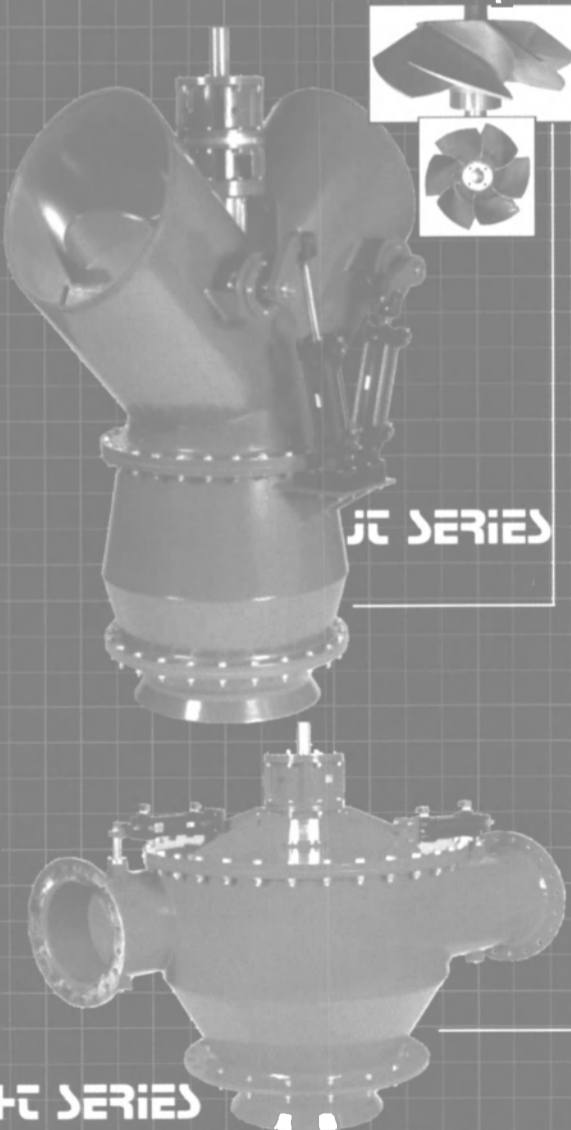
www.intercon.com

Circle 263 on Reader Service Card or visit www.maritimereporterinfo.com

TECHNICAL READOUT **OmniTHRUSTER™** Mixed-Flow Impeller

PATENTED SYSTEM

- Kinetic Converter takes input shaft energy and produces usable hydraulic energy by the use of a mixed flow impeller
- Steering Vanes continuously meter or proportion a percentage of the fluid flow to one or both sides of the vessel
- Nozzles accelerate the mass of water creating a thrust force at the hull interface
- Thrust Directors (optional) deflect the water flow forward or aft producing slow speed auxiliary propulsion
- Electronic Control System controls the 360° thrust vector resultant from a fixed or variable speed prime mover rotating continuously in one direction.
- There are no rotating parts that have to be stopped or started as thrust direction and/or magnitude changes.



HT SERIES

30555 Solon Industrial Parkway • Cleveland, OH
440 542-0200
www.omnithruster.com

Circle 298 on Reader Service Card or visit www.maritimereporterinfo.com

Your Source for Marine Valves

SINCE 1918

Commercial • Military • Bronze • Stainless • Cast Steel

For 83 years The William E. Williams Valve Corporation has been a specified and trusted manufacturer to the Marine Industry.

Williams is an approved manufacturer for U.S. Navy vessels including the USS Cole and most Cruisers, Destroyers and Landing Ships built over the past 20 years. Specifications include Mil-V-18110, Mil-V-18434 & Mil-V-22052. Shock & Vibration qualification available on most products.

For commercial applications Williams can offer A.B.S. Type approved valves for multiple services. Ship types include Tankers, Containerships, Cruiseships, Barges, Offshore Rigs and Workboats.

Time tested since 1918, Williams has both the technology and experience to service all your shipboard needs.



Guaranteed **Delivery** Guaranteed **Service** Guaranteed **Quality**

Remember, 83 years of constant growth isn't by accident... it's by performance



William E. Williams
VALVE CORPORATION

www.williamsvalve.com

A.B.S. TYPE
APPROVED

38-52 Review Ave., Long Island City, NY 11101 (USA) Tel: 718.392.1660
Toll free: 800.221.1115, Fax: 718.729.5106, E-Mail: sales@williamsvalve.com

Circle 356 on Reader Service Card or visit www.maritimereporterinfo.com

Monitoring & Control

able on the high seas. Consider that the main engine for a tanker costs between \$6-\$7 million, or about 10 percent of the tanker cost with a lifetime of 15 to 20 years. To guarantee an optimal life-span, Wartsila NSD has set out to provide onboard engine operators with as much assistance as possible.

Sensor-based operating systems continuously monitor the engine, mainly the piston running behavior and its wear. They warn the operator before problems might occur. But those surveillance systems themselves can break down without warning.

Advanced Help Desk System

Wartsila NSD asked Kaidara to develop a diagnostic system that could be used at sea. The project focused on two of the most sold monitoring tools of the Mapex product family. Kaidara created a case database from 120 carefully documented cases. Now, when an engine operator at sea encounters a problem, he calls a technician in Switzerland. To get information on how to fix the current breakdown, the technician just checks off a series of boxes on the screen. The diagnostic system then searches the case database for the previously solved problems that most closely match the current case, and the system gives the technician precise repair instructions.

"Some of our low speed diesel engines are equipped with additional monitoring systems," said **Karl Svimmersky**, Head of the Engine Diagnosis Division, Wartsila NSD. "These tools indicate the fitness of the engine and permanent information of the engine operator is essential. Thanks to Kaidara

Advisor, a failure in such a tool can be located and repaired within a very short time, avoiding heavy and costly engine breakdown."

Today, the diagnostic is available on the laptops of the maintenance staff. Onboard a ship, they can access the engine's entire history and the data on previous repairs. Data captured onboard the ship is used to update the central case database. Highly satisfied with the results of this project, Wartsila NSD is studying the possibility to apply the technology to the entire maintenance process.

Circle 198 on Reader Service Card
www.maritimereporterinfo.com

Selco Offers Analogue Alarm Annunciator

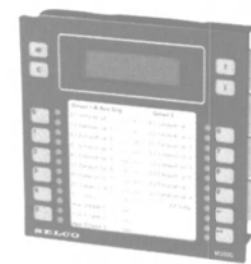
Selco has released an improved and updated version of its M3000 product, which is a compact 24 channel Analogue Alarm Annunciator. The M3000 is now delivered with a simple, flexible and user friendly programming tool.

The M3000 is touted as ideal for those

with needs for monitoring with sensors for instance; temperature sensors, pressure sensors or any other kind of sensors providing a signal within the range of 0-20 mA or 0-24 VDC. Selco's M3000 includes 48 programmable alarms. Each alarm can be allocated to survey any one of the 24 inputs.

The alarms can be programmed to control one of the 24 LEDs on the front panel and one of the 14 open collector outputs. Several alarms can control the same LED and/or output. Furthermore there is one common open collector output for general alarm and output for siren control.

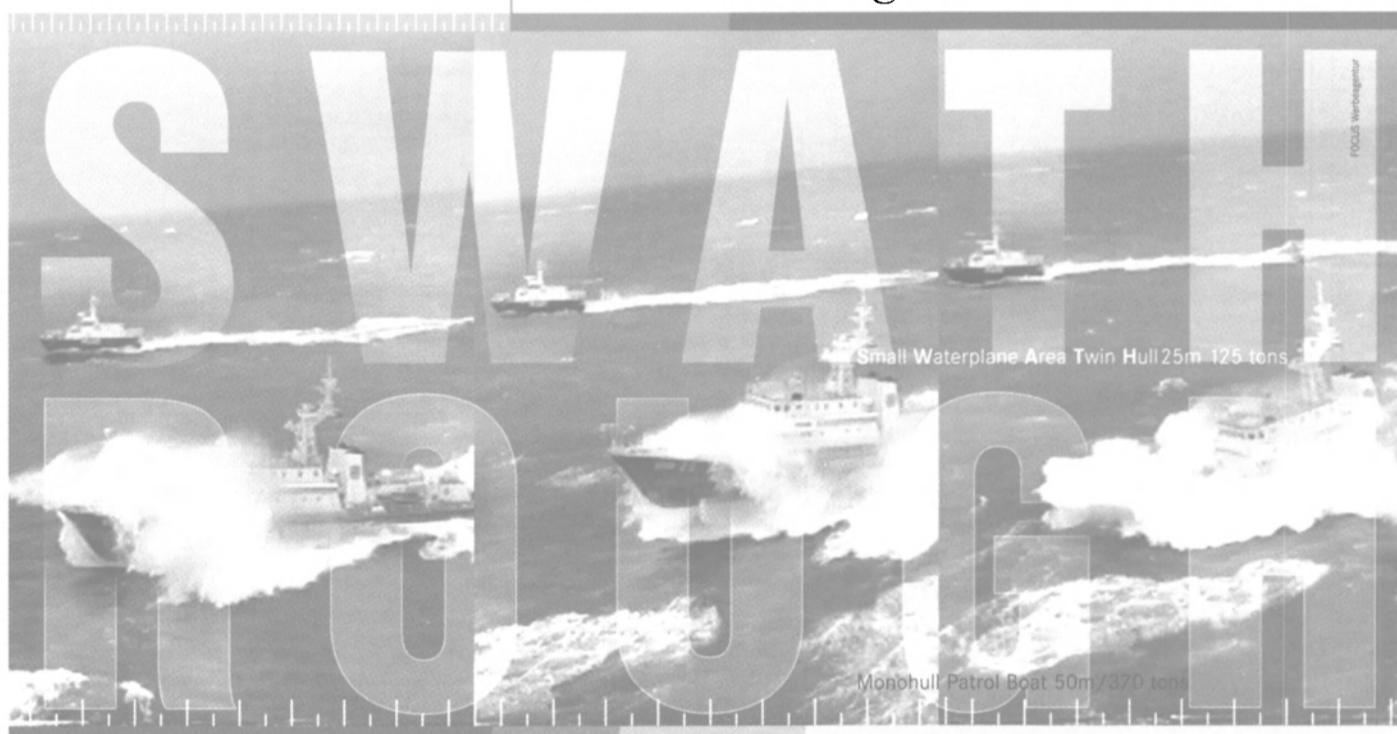
Selco's M3000, a compact 24 channel Analogue Alarm Annunciator



ABEKING & RASMUSSEN



We can't change the weather



But we can make you much more independent of it!

Above sequences were taken from a video of a comparison seatrial against 9 ft waves at 16 kts.

P.O. Box 11 60
D-27805 Lemwerder · Germany

Phone: 49-(0)421-67 33-0
Fax: 49-(0)421-67 33-112

www.abeking.com
e-mail: mv@abeking.com

SWATH
TECHNOLOGY

Monitoring & Control

M3000 has a special feature that provides exhaust gas monitoring for combustion engines. The exhaust temperature on each cylinder is compared with the average temperature of the remaining cylinders.

Circle 197 on Reader Service Card
www.maritimereporterinfo.com

Navi-Sailor Consoles Modernized

Transas Marine has switched to a new-generation, modern design of hardware for its Navi-Sailor range of navigation systems, new hardware which is available as full-size pedestal mount and

desktop consoles. Designed to support the new software technology used in the Transas Navi-Sailor line, the hardware set comprises a console and built-in RS-3 marine computer, which will be applicable as the standard Marine Processing Unit (MPU) for the entire range of the company's navigation products.



The desktop version is designed as a solution for small craft or a retrofit. When bridge space is limited, the console can be located on the chart table, while the RS-3, as a separate module, can be positioned anywhere else. Another advantage of the new consoles is that they are pre-cabled and delivered as "plug and play" solutions allowing easy installation onboard the ship. The consoles are in Transas standard black and dark-gray colors, although other colors are also available upon request.

Circle 196 on Reader Service Card
www.maritimereporterinfo.com

NorControl Gives River Forth Advanced VTS

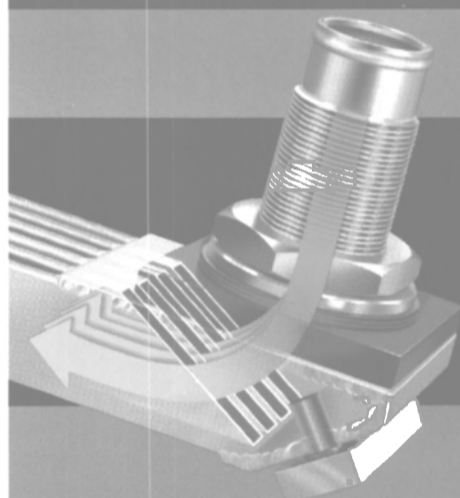
Forth Ports, PLC, the U.K.'s second largest port handler, commissioned a Vessel Tracking System (VTS) from Norcontrol IT in 1998 to replace equipment installed in 1984. The system uses four radars to track all commercial vessels within the Firth of Forth but it needed the back up of a sophisticated Voyage Management Database to record all associated information such as voyage times, anchorage usage, pilot & tug usage, cargo status etc. Following a requirements specification process with Norcontrol IT a completely new Voyage Management Database was designed and installed.

"Norcontrol IT have developed this latest product after extensive consultation with Forth Ports, an interactive approach which will now be a key part of the Voyage Management Database development with other customers," said **Øyvind Taugl**, Manager of Research and Development in Norcontrol IT. "It will also ensure future customers benefit from a solid base product while being assured that their specific needs are incorporated into the delivered application."

The Voyage Management Database is a web-based application designed to be intuitive to use and enable rapid processing of information. The application manages static and dynamic data and a Data Administrator can track and manage a wide range of information about system users, local pilots, tugs, ports, ships and cargoes etc.

Circle 195 on Reader Service Card
www.maritimereporterinfo.com

More heat exchange solutions. One heat exchange leader. Duramax® Marine.



DuraCooler®

- ▶ Streamlined head for improved internal/external flow
- ▶ Lower pressure drop across keel cooler
- ▶ Compact footprint with increased cooling surface area

Every heat exchange application is unique. Different vessels, operating conditions, engines and equipment all require specialized cooling solutions. We recognize that one heat exchange product can't fit all applications. That's why Duramax® Marine continues to expand its line of heat exchange products.

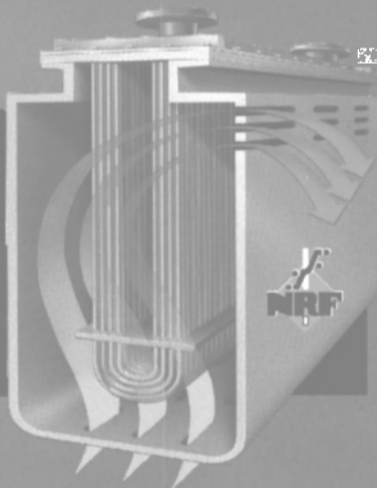
Each heat exchange solution Duramax® Marine provides is unique in design and performance. With more than 30 years experience in heat transfer and a full-scale testing program, we understand the differences that will help you select the DuraCooler® sized for your application. We back that selection with our exclusive Guarantee of Thermal Efficiency.

In addition to our heat exchange products, Duramax® Marine provides a host of other quality, value-added, engineered marine solutions, including water-lubricated bearings, shaft sealing systems and marine fendering systems.

Contact Duramax® Marine—your leader in total marine solutions—for all your heat exchange needs. For a free consultation, please call us today at **440.834.5400** or visit www.duramax-marine.com.

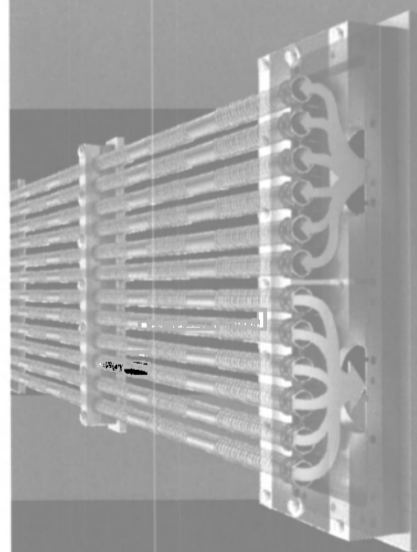
NRF Box Cooler

- ▶ Alternative to plate, and shell and tube heat exchangers
- ▶ Protected within the ship's hull against damage
- ▶ Leakage can be stopped without dry docking



Johnson Demountable Keel Cooler

- ▶ No through hull fittings
- ▶ Replaceable parts
- ▶ Cool multiple circuits with one cooler



DURAMAX® MARINE LLC

17990 GREAT LAKES PARKWAY ■ HIRAM, OHIO 44234 USA ■ PHONE 440.834.5400 ■ FAX 440.834.4950

Circle 234 on Reader Service Card or visit www.maritimereporterinfo.com

A new Era in New York Ship Repair
Offering 2 Facilities
GMD Shipyard
Brooklyn, New York
Bayonne Dry Dock & Repair
Bayonne, New Jersey

“Anytime, Just in time Ship Repair and Conversion”

Combined Capacity

- **Three Graving Docks**
338 X 48 metres
- **Two Wet Berths**
338 X 37 metres
500 X 11 metres
- **Full Service Shops**
Machine
Piping
Electrical
Plate
Blasting & Paint
Rigging
Carpentry
Tailshaft



No job too small or large
“On time, on budget every time”

Contact: Michael P. Cranston, President + 1-718-260-9200
Kyriakos (Kerry) Demou, Marketing Director +1-718-852-4800
GMD Shipyard, Brooklyn Navy Yard, Building 595, Brooklyn, New York 11205, USA
NYShipyards@aol.com

"YOUR SERVICE PARTNER..."



...FOR DIESEL TECHNOLOGY"

**1090 7th Street
Richmond, CA 94801 U.S.A.**

**Phone: 510-236-3525
Fax: 510-236-3576**

Circle 285 on Reader Service Card
or visit www.maritimereporterinfo.com

**YOU'VE KNOWN US FOR QUALITY
RIGGING PRODUCTS SINCE 1890**



Now more than ever, Skookum signifies value in today's cost-conscious world. Our comprehensive block, fairlead, sheave and alloy forging lines have met the challenges of the most demanding applications around the world. And in the process, we've proudly taken part in the shaping of American history; from salvage operations at Pearl Harbor and construction of the Grand Coulee Dam to San Francisco's BART and the space shuttle.

Whatever your applications, we're committed to serving you with the finest in standard and custom engineered products. For further information contact your nearest dealer or call us direct:
Skookum
PO Box 280, Hubbard, Oregon 97032
Telephone 503/651-3175
1-800/547-8211 FAX 503/651-3409

SKOOKUM **Blocks & Rigging**
AN ULLMAN COMPANY

Circle 316 on Reader Service Card
or visit www.maritimereporterinfo.com

VIKING
LIFE-SAVING EQUIPMENT

VIKING Davit-Launched Liferaft



Available in 12, 16, 20, 25 & 35 person capacities
Automatically self-righting liferafts in 25 & 37/39 person capacities

VIKING Marine Evacuation Chute



The high-capacity single-chute system evacuates 353 persons in 30 minutes and the high-capacity side-by-side chute system evacuates 706 persons in 30 minutes.

- Viking liferafts are U.S.C.G. approved
- SOLAS '96 amendments to SOLAS '74 regulations
- LSA Code



VIKING LIFE-SAVING EQUIPMENT (AMERICA) INC.
1625 N Miami Avenue · Miami FL 33136 · Tel (305) 374-5115 · Fax (305) 374-1535
<http://www.viking-life.com> · e-mail: us@viking-life.com

Circle 33 on Reader Service Card
or visit www.maritimereporterinfo.com

We're not just blowing bubbles!
**ElectroWaveUSA is taking semi submersible
Ballast Control to a new level...**



Meet the LevelCom 100

Imagine! A one size fits all tank level indicator that monitors **depth, volume, weight and specific gravity** of virtually any liquid! And it does it all without special sensors.

No sensor in the tank!

No expensive or fragile pressure transmitter or sensor in the tank. No more need to empty and gas free a tank to repair or calibrate a tank level indicator!

Packed with features!

- Equipped to communicate to a remote display or computer
- Automatic sense line leak and plug detection
- No custom scales required
- Automatic self calibration
- Programmable **alarm** and **control** setpoints
- 10 point depth/volume/weight "Tank Table" accurately tracks the shape of the tank
- 4-20mA input and output options add to the versatility of the LevelCom 100

**Simply the most complete
Tank Level Indicating system
available today.**

**Manufactured in the
USA by:**

TMS, Inc.
Phone: 1-503-285-8947
Fax: 1-503-285-1379
info@tms-usa.com

**For information contact our
offshore industry representative:**

ElectroWaveUSA
Phone: 1-713-896-7799
Fax: 1-713-896-7722
systems@electrowaveusa.com

Circle 324 on Reader Service Card
or visit www.maritimereporterinfo.com

\$120M NYC Ferry Deal Goes To Manitowoc Marine Group

A hotly contested contract to build three Kennedy Class ferries for the City of New York was last month awarded to Manitowoc Marine Group for \$120 million. Given the recent terrorist attacks that brought down the World Trade Centers and the revived New York waterway as a result, the contracts are particularly high-profile. The new Kennedy-class ferries will be 310 x 70 ft (94.4 x 21.3 m), and are capable of transporting 4,400 passengers and 30 vehicles, and will replace three existing ferries built in 1965. They will provide year-round transportation service between Staten Island and Manhattan. The ferries will feature twin pilot houses plus state-of-the-art navigation and propulsion systems. "This contract is an excellent example of the solid growth opportunities afforded us by our strategic acquisition program in general, and more specifically, last year's acquisition of Marinette Marine," said **Terry D. Growcock**, Manitowoc's president and CEO. "It also continues our success in extending the reach of our shipyards beyond their traditional Great Lakes markets."

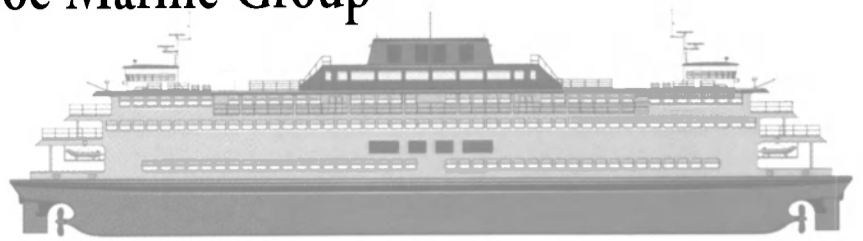
Tom Byrne, president of Manitowoc Marine Group, added: "We expect to build the ferries at Marinette Marine, with the first ferry scheduled for delivery in fall of 2003. The ferries will feature "old world" nautical aesthetics that are reminiscent of the ferries that plied New York's harbors decades ago. Material procurement and basic hull fabrication work for the first ferry will soon begin at Marinette Marine.

In addition, Manitowoc received a contract from Great Lakes Dredge & Dock to build a 7,100-cu.-yd. dump scow. Work on the 7,100-cu.-yd., split-hull dump scow, which will be built by Bay Shipbuilding, is expected to begin later this fall. The 63 x 277-ft. (19.2 x 84.4 m) dump scow will be constructed and ABS-certified for ocean-class service and is similar to two dump scows built by Bay Shipbuilding in 1987. Delivery of the \$4.8-million vessel is scheduled for August, 2002.

Manitowoc Tapped To Build USCG Icebreaker

The Manitowoc Company, Inc. also won an \$82.4-million contract to build a new Great Lakes ice breaker. The new vessel will measure approximately 240 x 60 ft. (73.1 x 18.2 m), and will displace 3,500 long tons. In addition to breaking ice to keep shipping lanes open on the Great Lakes, the multi-mission vessel will service aids to navigation, as well as performing search and rescue, pollution control, security, and law enforcement duties from its homeport of Cheboygan, Mich. The vessel will be

built at the company's Marinette Marine shipyard, and is expected to take more than three years to build. The new ice breaker, which will be delivered in 2005, replaces the Mackinaw, a 290-ft. (88.3 m) Coast Guard cutter that was built in 1944.



NEW KENNEDY FERRIES- OUTBOARD PROFILE



Willard Marine, Inc.

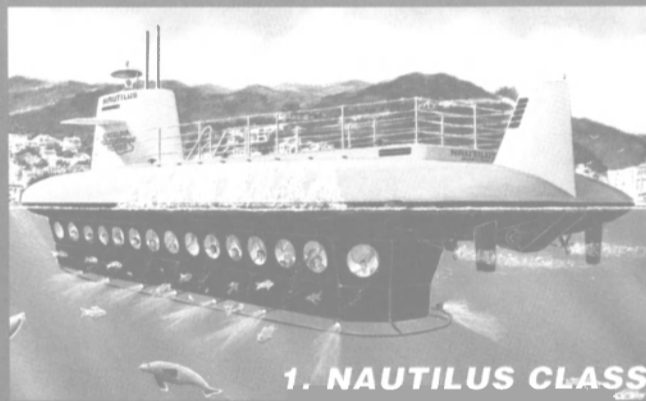
THE BUILDER YOU CAN DEPEND UPON

1250 N. Grove Street, Anaheim, CA 92806 • 714-666-2150 • Fax 714-632-8136
Web site: willardmarine.com • E-mail: webmaster@willardmarine.com

Founded 1957

PROPRIETARY DESIGNS & SPECIAL PROJECTS

COMMERCIAL • Revenue producing vessels for the Tourist Trade



1. NAUTILUS CLASS



2. SEAVIEW



3. AQUABUS

GOVERNMENT • More than 800 boats delivered to the U.S. Government



4. SEPTAR 56*



5. KINGSTON 32*



6. PERSONNEL BOATS*

RIGID INFLATABLES • U.S.A. Leading Builder of Commercial & Military RIBs



7. SEA FORCE*



8. PATROL RIB*

*Willard Marine GSA Contract GS-07F-0123H



9. SEA FORCE SOLAS*

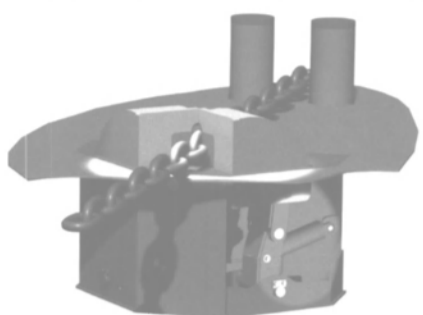
1. Nautilus Class 65' x 49 Passenger Semi-Submersible Viewing Vessel
2. SeaView 49' x 49 Passenger Viewing Vessel
3. Aquabus 40' x 49 Passenger Water Taxi
4. Septar 56'/17m Remote Controlled Target Simulator (GSA*)
5. Kingston 32' Patrol RIB (GSA*)
6. Personnel Boat 40'/13m (GSA*)
7. Sea Force 24'/7m U.S. Navy (GSA*)
8. Sea Force 36'/11m Patrol/Utility RIB (GSA*)
9. Sea Force U.S.C.G. SOLAS Approved RIBs (GSA*)

Circle 347 on Reader Service Card or visit www.maritimereporterinfo.com

NEW!

Smith Berger Marine, Inc.
Now Offers A Complete Line Of

SHARK JAWS



SAFE – RELIABLE – ECONOMICAL

Smith Berger Marine, Inc. is pleased to introduce the newest addition to our product line. Designed to demanding Smith Berger standards, our Shark Jaws are a natural extension of our capabilities and add to our long history of providing the maritime community with rugged, dependable mooring and towing equipment.

By coupling our new Shark Jaws with Smith Berger Towing Pins and Stern Rollers you can now take advantage of Smith Berger quality to outfit your next Anchor Handling/Tug Supply Vessel.

Smith Berger Marine, Inc. 7915 10th Ave. S. Seattle, WA 98108 USA
Tel. 206 764 4650 - Toll Free 866 726 1688 - Fax 206 764 4653
E-mail: sales@smithberger.com

Circle 317 on Reader Service Card
or visit www.maritimereporterinfo.com

IBS Fitted To Navion Tanker/Drillship

Sperry Marine Systems, a unit of Northrop Grumman Corporation, recently fitted an integrated bridge system (IBS) on the 96,900-dwt Navion Odin, a new shuttle tanker built at the IZAR Construcciones Navales SA shipyard in Puerto Real for Norway's Navion. "This job required a very rapid turnaround time to meet the shipyard's schedule,

which we achieved in record time of six weeks from order to commissioning/seatrials," said **J. Nolasco DaCunha**, vice president and general manager of commercial marine markets. The bridge equipment includes six separate operator consoles, four of them with flat-screen LCD displays. The system uses Sperry Marine's proprietary Voyage Management System software and Electronic Chart Display and Information System with radar overlay.

ANCHORS

ANCHOR MARINE



CHAINS

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

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

P.O. BOX 58645
HOUSTON, TX 77258

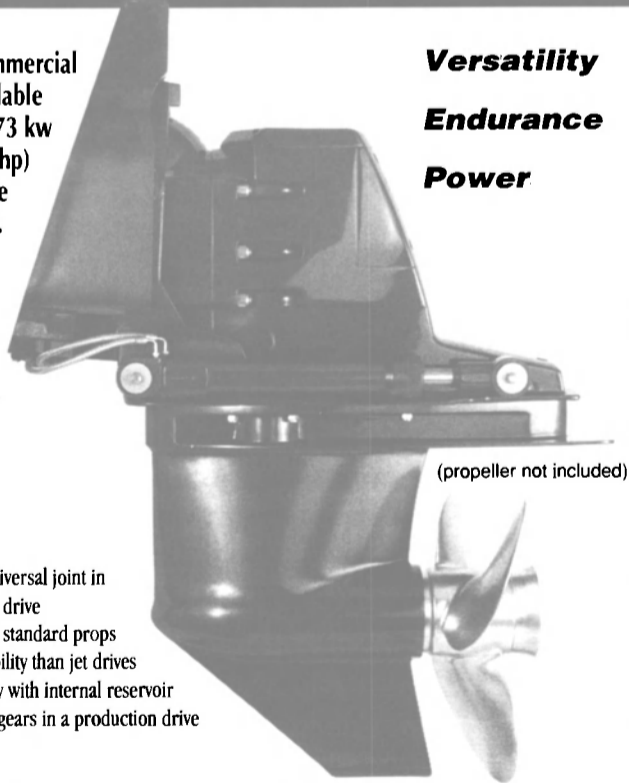
ALL TYPE
ANCHORS & CHAIN
ABS, LLOYDS
GRADE 2, 3, K-4
CHAIN & FITTINGS

sales@anchormarinehouston.com
www.anchormarinehouston.com

Circle 210 on Reader Service Card or visit www.maritimereporterinfo.com

520 Diesel Power Stern Drive

This is the only commercial stern drive available for a 134 kw - 273 kw (180 hp - 370 hp) diesel engine application.



Versatility
Endurance
Power

- Largest internal universal joint in a production stern drive
- Uses up to 20 inch standard props
- Better maneuverability than jet drives
- 7 quart oil capacity with internal reservoir
- Largest shafts and gears in a production drive

Konrad

Stern Drive Specialists

Web Page and E-mail: <http://www.konradmarine.com>

1-715-386-4203

1-715-386-4219 FAX

1-800-927-3545 Sales

Visa & MasterCard accepted

Circle 365 on Reader Service Card or visit www.maritimereporterinfo.com

50 "NEW" REASONS FOR CHOOSING MMC TANK GAUGING TAPES.



"Made in America" might be the best reason for choosing an MMC Closed Trimode™ gauging tape shown here, but there are others:

Ease of operation – With a single penetration you'll measure ullage, interface and temperature. A steady tone sounds when the probe reaches oil, an intermittent tone when it senses water; the temperature appears on an LCD display in the hub.

Accuracy – The electronic sensor is accurate to +/- 1/8 inch (3mm); for dryness, 3/8 inch (10mm) of bottom. The tape is available with either metric or feet/inches markings.

Compliance – The Closed Trimode™ keeps you in conformance with all U.S. Coast Guard regulations. It is gas-tight, and when installed in an MMC vapor-control valve, prevents hydrocarbon fumes from escaping into the atmosphere.

Safety – It is approved as intrinsically safe by FM, BASEEFA, CSA, and SAA.

MMC gauging tapes are simply the best you can buy. That they're made in America is just one of the many reasons why.



MMC International Corp., Inwood, New York USA • 1-800-645-7339

Circle 285 on Reader Service Card
or visit www.maritimereporterinfo.com

IMO Adopts Anti-Fouling Convention

A new IMO convention prohibits the use of harmful organotins in anti-fouling paints used on ships and will establish a mechanism to prevent the potential future use of other harmful substances in anti-fouling systems. The International Convention on the control of harmful anti-fouling systems on ships was adopted on October 5.

Under the terms of the new Convention, Parties to the Convention are required to prohibit and/or restrict the use of harmful anti-fouling systems on ships flying their flag, as well as ships not entitled to fly their flag but which operate under their authority and all ships that enter a port, shipyard or off-shore terminal of a Party.

Ships of above 400 gt and above engaged in international voyages (excluding fixed or floating platforms, FSUs and FPSOs) will be required to undergo an initial survey before the ship is put into service or before the International Anti-fouling System Certificate is issued for the first time; and a survey when the anti-fouling systems are changed or replaced.

Ships of 79 ft. (24 m) or more in length but less than 400 gt engaged in international voyages (excluding fixed or floating platforms, FSUs and FPSOs) will have to carry a Declaration on Anti-fouling Systems signed by the owner or authorized agent. The Declaration will have to be accompanied by appropriate documentation such as a paint receipt or contractor invoice. Anti-fouling systems to be prohibited or controlled will be listed in an annex (Annex 1) to the Convention, which will be updated as and when necessary.

BP Orders Fourth Tanker

BP has placed with National Steel and Shipbuilding Co. (NASSCO) of San Diego an order for a fourth double-hull oil tanker for use in delivering Alaska North Slope crude oil to refineries on the west coast. BP placed orders for three tankers in September 2000.

Construction of the 1.3-million-barrel-capacity tankers will begin in early 2002, and NASSCO is scheduled to deliver the first ship in late 2003 with subsequent ships being delivered in 2004, 2005 and 2006. BP will complete conversion of its Alaska fleet to double hulls in 2006. In addition to double hulls, BP's new Alaska Class tankers will be built with redundant propulsion and steering systems which include twin diesel-electric power systems in segregated engine rooms, twin propellers and twin rudders. Use of diesel-electric propulsion systems will also reduce air emissions at sea and in port while reducing maintenance down time.

Circle 249 on Reader Service Card or www.maritimereporterinfo.com

ANCHORS CHAINS

ChartCo Supplies Jo Tankers

ChartCo has supplied and fitted ChartManager on the 24-vessel parcel tanker fleet, owned and managed by Norwegian company, Jo Tankers.

Captain **Egil Hansen** of Jo Tankers says, "We chose ChartManager because we wanted to get our information updated as soon as it becomes available. It provides us with an easy way to follow up chart corrections and has standardized the method of chart updates on all our vessels, which is essential for overall vessel and fleet safety."

Jo Tankers is storing all chart updates and data on a laptop, to be printed as required, providing a useful means of audit trail. In terms of money spent per vessel, the company is finding that ChartManager is at least as cost-effective as sending chart updates by courier.

Circle 180 on Reader Service Card
www.maritimereporterinfo.com

OMI Corporation Acquires Vessels and Charters

OMI Corporation announced an agreement to acquire four product tankers from two other ship owners for approximately \$120 million cash in aggregate.

Two of the vessels are 35,000 dwt built in South Korea in 2000. One vessel was delivered on September 10, and the other was delivered on September 30. Both vessels will be chartered back to the owner for five years. The other two vessels are 37,000 dwt product carriers under construction in South Korea. Upon delivery in November 2001 and March 2002 the vessels will commence three-year time charters.

Shipping Lines Form Alliance

Yang Ming Line announced that five major Asian steamship lines have agreed to form one of the largest cooperative international sea container transport efforts among steamship lines. The new alliance for a cooperative worldwide network will consist of: COSCO Container Lines Ltd., Kawasaki Kisen

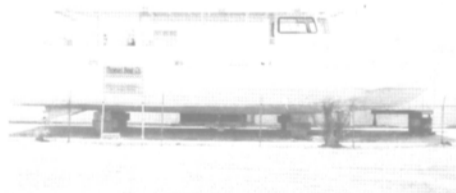
Tel.: +31 (0)10 429 2222
Fax: +31 (0)10 429 6459
gju@wortelboer.nl
www.wortelboer.nl

Kaisha, Ltd. (K-Line), Yang Ming Marine Transport, Hanjin Shipping Co., Ltd., and Senator Lines GmbH. Management for the group agree that the only way to provide the best possible service to customers in the container shipping industry today is by means of optimization of each carrier's assets and rationalization of their services on a global basis. There will be a transition time while the newly formed alliance will exchange slots and study changes in port rotations.

ALUMINUM CATAMARANS AND UTILITY CRAFT

Boats Under Const.
(3) 65' Catamarans
(2) 65' Landing Craft

Combining Cajun know and modern CAD/CAM experience for quality aluminum boat construction.



ISLAND BOATS, INC.

ALUMINUM BOATBUILDERS
6806 HWY 90 EAST - NEW IBERIA, LA 70560
PH. 337.560.4483 - FAX 337.560.4473
email: islandboats@eatel.net

Circle 266 on Reader Service Card
or visit www.maritimereporterinfo.com



International Salvage & Wreck Removal
Dredging
Emergency Lightering
USCG Certified OSRO
Point-To-Point Towage
Demolition & Construction
Certified Offshore Heavy Lift



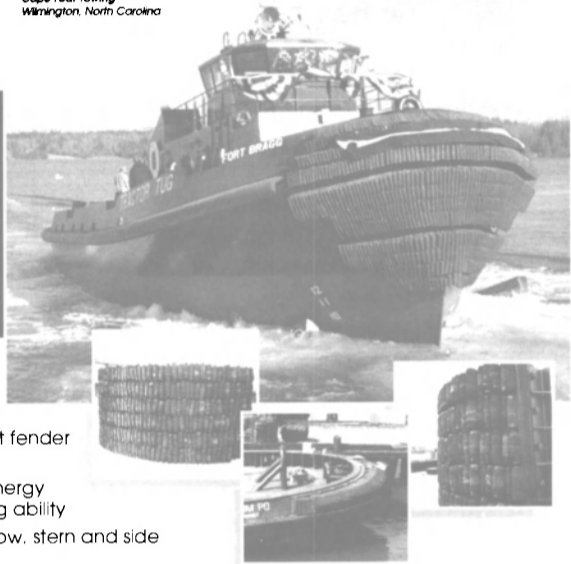
Donjon Marine Co., Inc.
Phone: (908) 964-8812 Fax: (908) 964-7426
Web Site: www.donjon.com
E-Mail: inquiries@donjon.com
1250 Liberty Avenue, Hillside, New Jersey 07205 USA

Circle 367 on Reader Service Card
or visit www.maritimereporterinfo.com



Viking Enhanced Softloop Fender

FORT BRAGG
Cape Fear Towing
Wilmington, North Carolina



When Push Comes To Shove, Have A Viking On Your Side!

- The softest, most forgiving ship assist fender on the market
- Designed for greater energy absorption and gripping ability
- Ideal for tractor tugs, bow, stern and side fenders
- Side hip fenders for tug and barge units
- Pier cell fenders

a division of Viking Marine Products, Inc.

1160 State Street • Perth Amboy, NJ 08861 USA
Tel: (732) 826-4552 fax: (732) 826-5533 www.vikingfender.com

Circle 330 on Reader Service Card
or visit www.maritimereporterinfo.com

ALL AMERICAN MARINE

BOAT



JOBS

Paid Upgrades & Training

CAPTAINS & MATES (any tonnage)

ENGINEERS (licensed & unlicensed)

A/B's, OS's, DECKHANDS

Casios, Inland & I.C.W. Pushboats, Ships

Ocean-going tugs, Offshore oil industry, Overseas & coastal

www.all-american-marine.com

americancerwing@cs.com

Phone: 1-800-576-8562

Fax: (251) 443-8494

Circle 206 on Reader Service Card
or visit www.maritimereporterinfo.com

Terrorism: The Aftermath

Security is Synonymous With Safety

By Capt. James S. Clarkson
Modern Maritime Group

Since the worst-case scenario became a reality with September's terrorist attacks in the U.S., organizations of all kinds have been forced to re-evaluate how security applies to their operations. While the nation's focus has been primarily on the aviation industry, those of us in the maritime community have immediately seen many ramifications for water borne transportation. Because of the monstrous scale of death and damage, the industry can expect governments and regulatory authorities to apply varying degrees of increased security measures throughout the free world's infrastructure.

Substantial security measures have already been taken in the maritime sector. The U.S. Coast Guard is instituting several new port security measures. Security zones have been established in U.S. ports, reporting requirements for vessel arrivals have been greatly expanded and the Coast Guard is escorting vessels perceived to be high-risk targets for potential terrorist activity. Government organizations are also scrutinizing a vessel's previous ports of call and are requiring crew lists supply the country of origin of each crew member.

While this reaction is understandable, activity of this nature is difficult to maintain and often does not address the root causes of the problem. For the long-term, the industry must ensure that remedies and corrective actions taken are well thought out, help sustain vigilance and supply the resources required to achieve a systematic approach to security. If done properly, the solutions will continuously improve performance, prevent security breaches at all levels and mitigate the inevitable, increased cost demands on business. The solutions should be designed to incorporate existing infrastructures and technologies and be scalable and flexible in order to meet new opportunities and needs. This challenge will be difficult, but now is the time to act.

In the past 15 years, the maritime community has witnessed a rising tide of regulations that have focused primarily on safety and environmental protection. In the aftermath of September 11th, new rounds of regulations concentrating on security are likely to be created. This will bring added economic pressure to an industry that already suffers narrow profit margins and steadily increasing administration costs.

The industry has recently seen the implementation of two major

Are Stray Electrical Currents Destroying Your Machinery?

-Used on propeller shafts, turbines, generators, electric motors, gears, pumps, and other rotating equipment. Failure to properly ground rotating shafts can result in expensive damage, such as bearing failures.

-Operates dry or with oil spray. Self-cleaning.

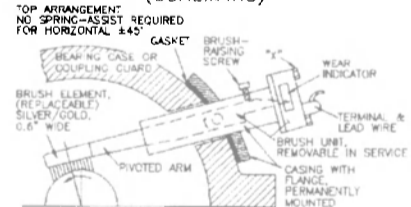
-Working parts are removable during operation.

Remove screws at "X" to pull entire brush assembly out of brush casing.

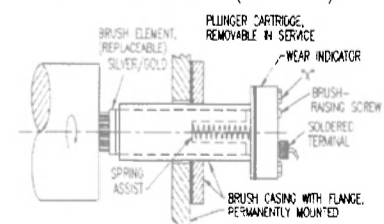
-Brush voltage is insulated from casing, allowing voltage and current monitoring.

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

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



"PLUNGER" TYPE "A" (SCHEMATIC)



Visit us @ Workboat Show
Booth 1162

© 2001

SOHRE TURBOMACHINERY INC

SOHRE TURBOMACHINERY® INC.

132 Giberville Road, P.O. Box 889 TEL (413) 967-6908

Ware, Massachusetts 01082-0889 FAX (413) 967-5846

(800) 207-2195 tsohre@sohreturbo.com www.sohreturbo.com

Circle 318 on Reader Service Card
or visit www.maritimereporterinfo.com

Maritime Reporter & Engineering News

Offering vessels uniquely designed for versatility, dependability and maximum service.



From its very beginning in 1948, L & M BoTruc Rental has been a unique leader among marine transportation specialists serving the oil and gas industry. From the original BoTruc that evolved from a highly successful passenger and automobile ferry, the company has grown dramatically and now operates one of the largest fleets of offshore marine transportation vessels in the Gulf of Mexico.

Confidence in the quality of their equipment, the ability and skill of personnel and the flexibility and freedom of sole ownership has made L & M BoTruc Rental a company of proven professionals with an ever growing list of customers.

Anyone seeking employment in the oil and gas industry who demands a professional and safe working environment would be considered a great asset to our team.



P.O. Box 775 • 18692 West Main St.
Golden Meadow, Louisiana 70357
Ph. (985) 475-5733 • Fax (985) 475-5669
email botruc@botruc.com
www.botruc.com

Circle 223 on Reader Service Card
or visit www.maritimereporterinfo.com

LET US HELP YOU NAVIGATE THE WORLD'S WEATHER!

Worldwide Marine Weather Forecasts
Extreme Conditions/Design Studies

Weatherresearchcenter.com
Weathernavigator.com
Stormnavigator.com

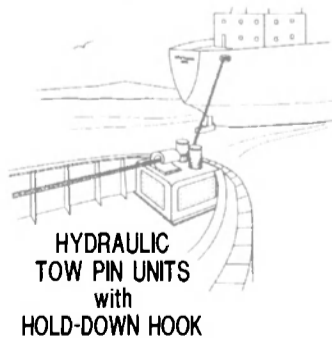
Houston – Texas 713-529-3076
Email: wrc@wxresearch.org



Weather Research Center

Circle 339 on Reader Service Card
or visit www.maritimereporterinfo.com

TRACTOR PINS FOR TODAY'S TUGS



WESTERN MACHINE WORKS

1870 Harbour Road - North Vancouver, B. C. - Canada - V7H 1A1
Phone: (604) 929-7901 Fax: (604) 929-7951 or (604) 929-5329

Circle 340 on Reader Service Card
or visit www.maritimereporterinfo.com

WHAT DO THESE NEW TUGS HAVE IN COMMON?



SCHUYLER RUBBER CO., INC.

16901 Wood-Red Rd.
Woodinville, WA 98072
1-800-426-3917

Phone (425) 488-2255
Fax (425) 488-2424
Web Site: www.schuylerrubber.com
E-mail: sales@schuylerrubber.com



Circle 355 on Reader Service Card or visit www.maritimereporterinfo.com

MARINE PROPULSION PARTS & PRODUCTS

KAPLAN & ASSOCIATES, INC

Seal Kits
Gear Sets
Overhaul Kits
"Hard to find Parts"

New & Used
Thrusters
Prop Shafts
Marine Equipment

TOLL FREE
1.877.SEND SPARES (1.877.736.3772)

Parts Available 7 Days a Week- 24 Hours a Day- Visa/Mastercard
Harbormaster-Murray & Tregurtha-Sykes-Schottel-Jastram-Others

24 Hour Hotline: 248.788.8989
Tel: 248.788.8161 Fax: 248.788.8162
Email: alankaplan@aol.com
Web Site: <http://www.alkaplan.com>

Circle 274 on Reader Service Card
or visit www.maritimereporterinfo.com

RODNEY E. LAY & ASSOCIATES NAVAL ARCHITECTS

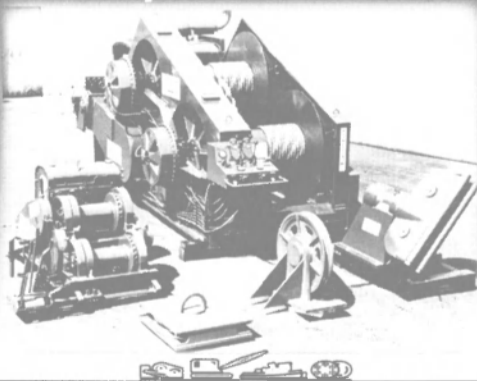
Serving the marine and casino industry for 59 years

See us at
**THE WORKBOAT SHOW
BOOTH #2108**

13891 Atlantic Boulevard, Jacksonville, Florida
(904) 221-7447 (904) 221-1363 fax
www.rodneyley.com

Circle 347 on Reader Service Card
or visit www.maritimereporterinfo.com

Let our Experience Work for You



RASMUSSEN EQUIPMENT COMPANY

Seattle, Washington Belle Chasse, Louisiana
Phone: (206) 762-3700 (800) 227-7920 Fax: (206) 762-5003
email: equipmentsales@rasmussenco.com www.rasmussenco.com

Circle 302 on Reader Service Card
or visit www.maritimereporterinfo.com

TMS Total Marine Solutions

Offering the Right Solutions and Quality
Customer Service to ship Owners & Operators

Proudly Representing:

Marinfloc AB
United Ship Service
Rivertrace Engineering
Tramp Oil & Marine Ltd

Biotrace
Bio-Matrix
Citro Bio
Masto

4350 Oakes Road, Ste 501 Ft Laud, FL 33314
Ph: 954-327-2032 Fx: 954-327-2530
totalmarinesolutions@msn.com

Circle 327 on Reader Service Card
or visit www.maritimereporterinfo.com

Terrorism: The Aftermath

international mandates, the International Safety Management (ISM) Code and the International Code for Seafarers Certification Training and Watchkeeping (STCW). These two initiatives have driven massive increases in administrative, compliance and other operating costs and, in turn, assisted in changing the

overall face of the industry itself. As anxieties subside, and people and businesses return to normal, corrective actions will be reviewed and well intentioned professionals will attempt to implement solutions to increase security and provide protection to people, property and the public at large. It is a good

and worthy goal. However, an initial concern for mariners is the possibility for the birth of another management system — Security Management.

The incorporation of a Security Management System is not needed, will confuse instead of improve the situation and will add to an already significant bur-

den. The maritime industry presently operates under several management systems, including some that address Safety Management (ISM Code), Quality Management (ISO 9000) and Environmental Management (ISO 14000). These standards are perfectly suited to address security requirements and negate any necessity for establishing a new standard. As an example, consider the stated objectives of the ISM Code: "to ensure safety at sea, prevention of human injury or loss of life, and avoidance of damage to the environment, in particular, to the marine environment, and to the property." Further, the Code requires Companies to implement a system that "establishes safeguards against all identified risks," including preparing for the emergencies related to both safety and environmental protection.

All successful management systems are supported by the same basic principles. They require acceptance and leadership from senior management, a written policy, applicable written procedures, a cultural commitment and evidence of compliance. Advanced systems also require performance measurement to gauge an organization's execution of documented policies and procedures. For years management system experts have been preaching integration of management and technology systems as a key component of effectively managing processes. Today it is more imperative than ever to apply the principles of management systems across multiple functions (safety, environmental protection, quality and now security) and leverage the productivity benefits of information technology.

"Man will occasionally stumble over the truth, but most of the time he will pick himself up and continue on."

— Winston Churchill

What are the Threats?

The Marine industry, like aviation, is a part of the transportation industry and therefore an obvious target for terrorist attacks. Many ship managers have already envisioned the horror of having a bomb placed on one of their vessels in a populated port. Vessels such as tankers and cruise ships are particularly likely to be appealing targets for terrorists because of the high potential for loss of human life and destruction.

Another type of criminal posing a security threat to the maritime industry is pirates. International law defines piracy as the attack of a ship for private ends (money). Though motivated by money and not political or religious aims, piracy is an increasing menace to the international shipping trade and should be addressed in a company's Safety Management System.

Also, there are individuals who may

The fish can't believe their eyes

Now it's your turn...
Insist upon
Barkemeyer
manoeuvring
equipment



Barkemeyer Schiffstechnik GmbH & Co. KG., Birkenweg 11, D-21465 Reinbek
Tel.: +49 (0)40 7118020, Fax: +49 (0)40 7110086
E-mail: info@barkemeyer.com, Internet: www.barkemeyer.com

Circle 213 on Reader Service Card
or visit www.maritimereporterinfo.com



Onboard First Aid: Immediate Actions



A Video Training Course
Based on STCW Requirements

Phone: 1-732-818-9883
Fax: 1-732-818-9884
www.walportusa.com

Circle 333 on Reader Service Card
or visit www.maritimereporterinfo.com

POLARSTAR



Introducing Polarstar, the
newest deck suit from
Imperial, manufacturer of
the Original Immersion
Suit for 30 years.

For info on the new
Polarstar Deck Suit or
an Imperial Immersion
Suit, call 1-800-592-6255

810 NW 45th St.
Seattle, WA 98107
Phone: 206-783-5512
Fax: 206-783-5361



www.imperialsuit.com
e-mail: kari@imperialsuit.com

See us at Fish Expo Booth #711

Circle 353 on Reader Service Card
or visit www.maritimereporterinfo.com

Quality Products For The Worldwide Marine Industry



Marine Heads



Oily Water Separators

Microflush Marine Heads in stainless steel or vitreous china use only 1 or 2 quarts of water per flush. Options include rear or downward discharge, internal or remote flush activators.

Marine Sanitation Devices have no moving parts, no power requirements and low maintenance. Discharge by gravity or sump/pump. Accommodates crews from 1 to 100 men. IMO approved. USCG certified.

Oily/Water Separators in 7 models: .15-5.0 cu. Meters p/hour. No replacement filters required.



A Wabtec company

452 E. Hill Rd., Willits, CA 95490-9721 USA
Tel: 800-358-8280; 707-459-5563; Fax: 707-459-6617
E-mail: info@microphor.com
www.microphor.com; www.wabtec.com

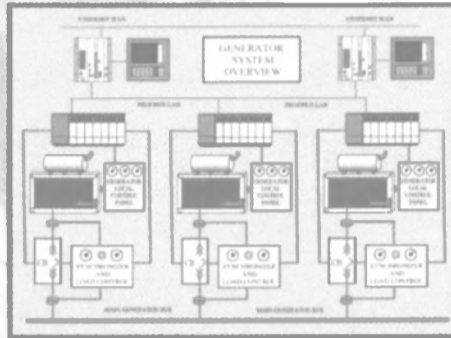
Circle 288 on Reader Service Card
or visit www.maritimereporterinfo.com



Outsource Manufacturing



Marine Propulsion



Power Management Systems



Visit Us at
The International WorkBoat Show
 in New Orleans, November 28-30
 Booth Number 2031



*Leading Edge Technology
 Rugged Quality*

**ADVANCED POWER CONTROL SOLUTIONS
 FOR THE MARINE INDUSTRY**

- **Low and Medium Voltage Switchboards**
Ship Service
Propulsion
Emergency
- **Low & Medium Voltage Motor Controls**
- **Power Management Systems**
- **Engine Control, Governing & Monitoring**
- **Man Machine Interface Packages**
- **PLC Based Control Systems**
- **Shore Power Stations**
- **World Wide Regulatory Compliance**
- **World Wide Service**

Email:
 sales@con-select.net

1701 South Lane, Mandeville, LA
 Phone (985) 892-6446

Website:
 www.con-select.net

Circle 405 on Reader Service Card or visit www.maritimereporterinfo.com

**ONE DIGITAL INSTRUMENT
 ALL READOUTS**

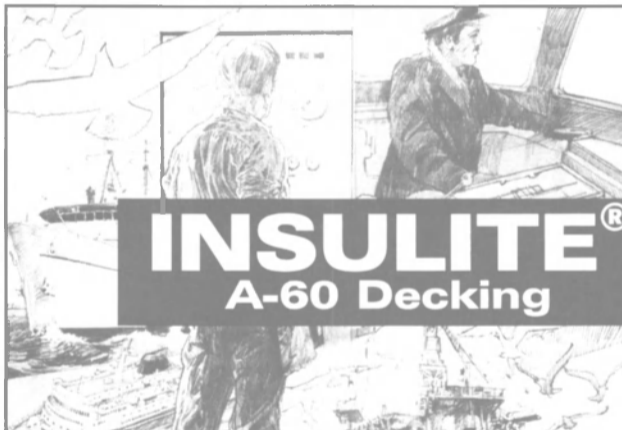


- 3 Voltages
 L-L, L-N
- 3 Amps
- 3 kW
- 3 kVA
- 3 kVAr
- 3 PF
- Freq.
- kWh
- kVArh
- Peak V, A
- Neutral A

Ph. 1-877-SELCOUS

SELCO USA, INC. SELCOUSA.com

Circle 311 on Reader Service Card
 or visit www.maritimereporterinfo.com



**INSULITE®
 A-60 Decking**

E. H. O'Neill Company, Inc.
 P.O. Box 974, Brooklandville, MD USA 21022-0974
 410.560.2244 / Fax 410-252-9767 / e-mail: info@ehoneill.com
 For more information go to our website, www.ehoneill.com

Since 1964, Insulite has been installed on ships as an underlayment for finished decking systems because it is;

- **Lightweight**
- **Insulating**
- **Non-Combustible**

Approved by: Lloyd's Register, De Norske Veritas, U.S. Coast Guard, Canadian Coast Guard and Germanischer Lloyd.

Manufactured to meet the requirements of MIL-D-23134A. Meets the criteria for non-combustibility as outlined in FTP Code, Part 1, IMO Resolution A.799(19).



Circle 236 on Reader Service Card or visit www.maritimereporterinfo.com

Worldwide Experience

INTERIOR OUTFITTER

Cruise Ship Specialists



Custom Ship Interiors, Inc.

P.O. Box 882 Solomons, MD 20688-0882
 Fax: 410-326-9125
 410-326-9122

www.customship.com

Circle 228 on Reader Service Card
 or visit www.maritimereporterinfo.com

**Proven
 Performance**

Over 50 years of innovative seating design and customer satisfaction



Seating, All Shipboard Locations

- Helm Pedestal
- Deck Console
- Shock Isolating Suspensions
- Passenger
- Utility/Work Station

See Them All, Booth #1962
 International Work Boat Show

H.O. Bostrom Co., Inc.

Waukesha, WI U.S.A Inc.
www.hobostrom.com
 sales@hobostrom.com
 fax 262-542-3784

Your Brand Choice



Circle 254 on Reader Service Card or visit www.maritimereporterinfo.com

Terrorism: The Aftermath

pose as security threats to maritime businesses and our economy in general. These include hackers, who attack our information infrastructure, and disgruntled employees.

Shipboard Security Procedures

The international and dynamic nature of the business and services provided makes the shipping industry more vulnerable to security lapses than most other industries. The amount of variables involved in protecting a ship are, by far, more numerous than protecting a manufacturing plant. It's not effective to put a fence around a ship. However, with a comprehensive security program a company can limit access to both the ship and the terminal or port facility the vessel is calling on. Shipping companies should review the content of the policies, plans and procedures in their management systems to verify they adequately address elements such as training, communications, key procedures and emergency preparedness that apply to secu-

rity issues. Some examples of management system improvements for shipboard security include:

Gangway Security

A vessel's gangway is the easiest point of access to a vessel when it is moored at berth. Too often, the crew member assigned to monitor gangway access is not given clear instructions for boarding procedures and when to call for the assistance of an officer. Furthermore, decreased manning levels on ships often result in the gangway watch taking on additional responsibilities that require leaving the gangway unattended for periods of time. Vessel operators need to emphasize the security aspects of the gangway watch in procedures and training. Items to be addressed should include Embarking/Disembarking procedures (for crew, guests and contractors), communication procedures (internal and ship-to-shore), Stores and Package Receiving procedures, and Security Equipment (lighting, CCTV's, hand-held radios, etc.) In many ports, the terminal or a

third party provides a security officer. In such cases, the vessel should have procedures to familiarize the security officer with his responsibilities to the vessel. In all cases, the Master of the vessel must ensure that this security is adequate and that security personnel know and understand shipboard requirements and procedures.

Certificate Validation

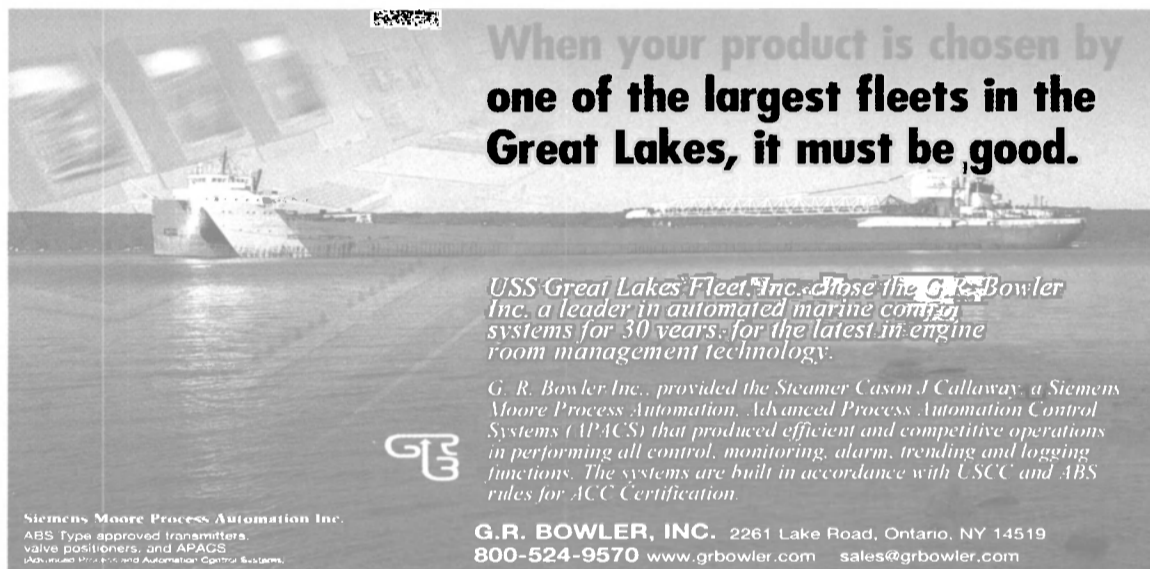
One of the most difficult processes to carry out aboard a vessel is validation of a crew member's certification. Forged and illegally obtained documents are widespread and must be dealt with through a cooperative effort from several sources. Validation procedures should include input from the vessel, vessel management, manning agencies or unions and, in some circumstances, flag-state administrations.

Captain's Interview of Crew Members

Ship's Masters should conduct one on one interviews with each new member of the crew as they sign on. A thorough interview will give the master insight to the capabilities and attitude of the crew member and provide the opportunity to immediately establish policy and expectations aboard the vessel.

Security Tours, Contingency Plans

Crew member's rounds, both at sea and in port, should always include elements of security. Tours and inspections throughout the vessel can include checks for intrusion and piracy, lock and key control and adherence to limited access spaces. Also, vessel management systems should be examined for content of their Emergency Response Plans. Most vessels have plans for emergency items such as pollution events (hazmat, oil spills), medical emergencies, fire, abandon ship, man overboard and many other. However, few vessels have contingency plans for bomb threats, dealing with intruders or hostage situations.



When your product is chosen by
**one of the largest fleets in the
Great Lakes, it must be good.**

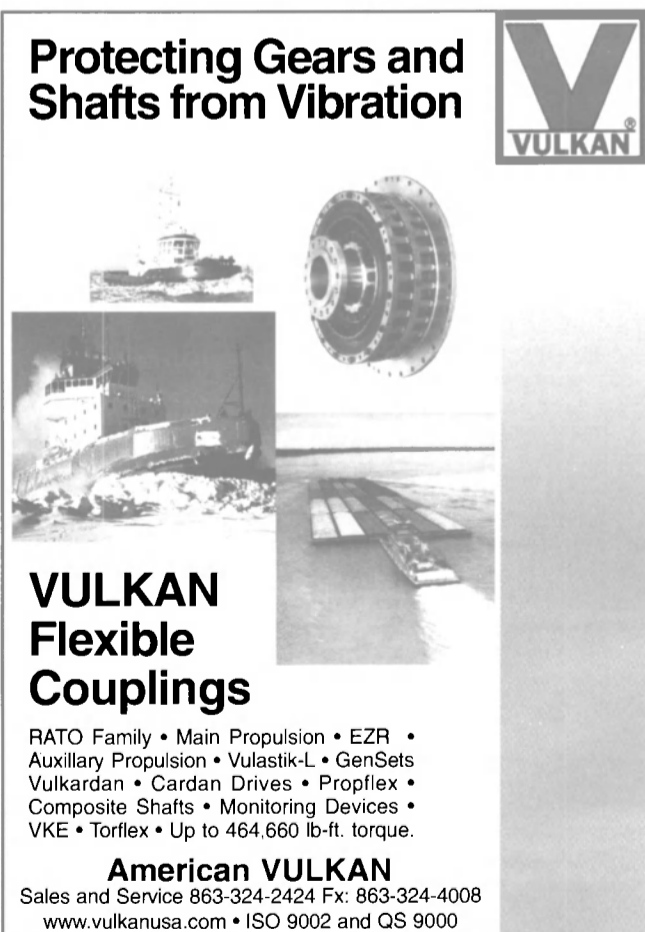
USS Great Lakes Fleet, Inc. chose the G.R. Bowler Inc. a leader in automated marine control systems for 30 years for the latest in engine room management technology.

G. R. Bowler Inc., provided the Steamer Cason J Callaway, a Siemens Moore Process Automation, Advanced Process Automation Control Systems (APACS) that produced efficient and competitive operations in performing all control, monitoring, alarm, trending and logging functions. The systems are built in accordance with USCC and ABS rules for ACC Certification.

G.R. BOWLER, INC. 2261 Lake Road, Ontario, NY 14519
800-524-9570 www.grbowler.com sales@grbowler.com

Siemens Moore Process Automation Inc.
ABS Type approved transmitters,
valve positioners, and APACS
(Advanced Process Automation Control Systems)

Circle 253 on Reader Service Card or visit www.maritimereporterinfo.com



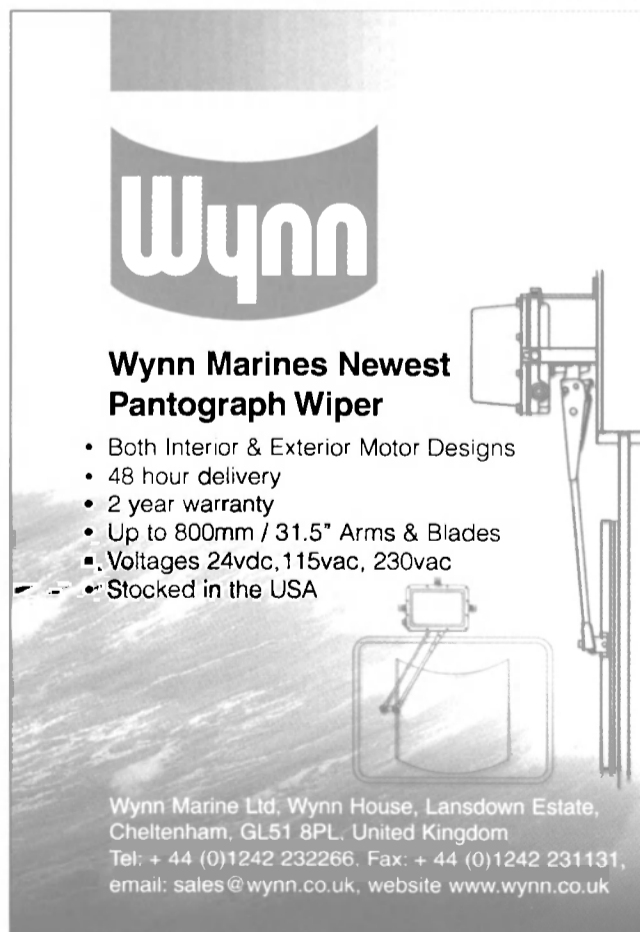
**Protecting Gears and
Shafts from Vibration**

VULKAN
Flexible
Couplings

RATO Family • Main Propulsion • EZR •
Auxiliary Propulsion • Vulastik-L • GenSets
Vulkardan • Cardan Drives • Propflex •
Composite Shafts • Monitoring Devices •
VKE • Torflex • Up to 464,660 lb-ft. torque.

American VULKAN
Sales and Service 863-324-2424 Fx: 863-324-4008
www.vulkanusa.com • ISO 9002 and QS 9000

Circle 208 on Reader Service Card
or visit www.maritimereporterinfo.com



Wynn

**Wynn Marines Newest
Pantograph Wiper**

- Both Interior & Exterior Motor Designs
- 48 hour delivery
- 2 year warranty
- Up to 800mm / 31.5" Arms & Blades
- Voltages 24vdc, 115vac, 230vac
- Stocked in the USA

Wynn Marine Ltd, Wynn House, Lansdown Estate,
Cheltenham, GL51 8PL, United Kingdom
Tel: + 44 (0)1242 232266. Fax: + 44 (0)1242 231131,
email: sales@wynn.co.uk, website www.wynn.co.uk

Circle 344 on Reader Service Card
or visit www.maritimereporterinfo.com

Port Security

For all of the security measures that can be taken aboard a vessel, effective security in port is only possible if the port authority and terminal operator also engage in effective security measures. Items to consider for port security are guarding the perimeter of the terminal, including surveillance and protection of the water borne boundaries, conducting drills for bomb threats, hostage situations and intruders and practicing security measures in all terminal employees' routines. Port procedures and plans must be communicated to calling vessels and coordinated with vessel procedures and requirements. For example, security plans should be raised and coordinated during the initial operations briefing held between the vessel's cargo officer and the load/discharge supervisor ashore. Ideally, operations checklists provided by each party in this meeting should reflect security requirements.

Additionally port authorities must effectively coordinate all elements of the system (i.e., working with shipping agents to gain access to cargo manifests, ETA, ETD, previous port of call, destination, and tracking movements of dan-

Terrorism: The Aftermath

gerous materials in the port).

Data Security

Fortunately, most of the financial services companies affected directly by the collapse of the World Trade Center had data recovery and data management systems already in place. Other companies

around the world, however, have not prepared themselves for a disaster of this scale and are now considering solutions to solve issues raised by the crisis. According to **Carrie Lewis**, an analyst at Yankee Group Inc. in Boston. "Almost every company out there is rethinking what they are doing." The

question for all companies to consider is "what would happen if a bomb destroyed the building that houses company computers?"

As the maritime community assesses its weaknesses with regard to vessel and port security it must bear in mind that the means to implement the improve-

ments already exist through implemented Safety, Environmental and Quality Management Systems.

Companies with practicing management systems can simplify the otherwise daunting task of incorporating additional security measures by using the tools built into these management systems. Identification and implementation of the changes needed to a company's security procedures can be administered through existing audit, document control, and training procedures.

By Capt. James S. Clarkson,
Modern Maritime Group

Liebherr Enjoys Success In Far East



Shipbuilding in the Far East, especially in China and Korea, is continuing its upward trend in 2001, and deck crane supplier Liebherr has enjoyed success as well. Current deliveries in the Far East include: 40 deck cranes (four, 40-ton cranes per ship) for a series of 10, 2,530 TEU containerships under construction at Hyundai for the German shipowner B. Schulte; 20 deck cranes (four, 40-ton cranes per ship) for five 2,530 TEU containerships under construction at Daedong Shipyard for the Greek shipowners Efshipping S.A. and Liquimar Tankers Management Ltd. The most recent orders in China include 2 x 670 TEU container vessels at Jiangzhou Shipyard for the German shipowner Klingenberg Bereederungs und Befrachtungs OHG and 2 x 1,100 TEU container vessels at Jiangdong Shipyard for another German owner Werner Bockstiegel Bereederungs GmbH. Each of these vessels will be fitted with two cranes capable of lifting 45 tons at a radius of 26.5 m.

Liebherr's reach is global, as it is represented around the world by both Liebherr-owned companies as well as by selected business partners. To enhance its global sell, the company recently extended its reach, with Liebherr Maritime Benelux B.V. in Utrecht, The Netherlands. In addition to its office in Houston, Liebherr Nenzing Cranes in Miami, USA has been opened to deal with the ever-increasing enquiries from American shipowners and shipbuilders for supply of deck cranes.

Circle 50 on Reader Service Card
www.maritimereporterinfo.com

STOP MARINE RUST & CORROSION PERMANENTLY!!!

EVEN SALT WATER WON'T EAT THROUGH POR-15®!

Stop rust PERMANENTLY with **POR-15® MARINE**, a rock-hard yet flexible coating that won't crack, chip, or peel. **NOTHING ON EARTH** compares to **POR-15® MARINE** for durability. We guarantee it unconditionally!

...and it's "Hammer Tough"!

CALL TODAY FOR **FREE CATALOG**
1-800-457-6715

Shop our on-line catalog:

www.por15-marine.com

RESTO MOTIVE LABORATORIES, INC.
A DIVISION OF POR-15, INC.

P.O. Box 1235 • Morristown, NJ 07962-1235
In NJ: (973) 887-1999 • FAX: (973) 887-8007

Circle 303 on Reader Service Card
or visit www.maritimereporterinfo.com

Global Versatility

40K Vulcan Stripper™ Rotary Gun

Everything for professional UHP surface preparation: electric and diesel high pressure pumps, surface prep control guns, fittings, hoses and nozzles.

Plunger Pumps and Water Jetting Units with pressures ranging from **40,000Kpsi, 60-750 hp, and flow rates to 274 gpm.**

GD GARDNER DENVER WATER JETTING SYSTEMS INC.

1-800-231-3628
281-448-5800
FAX: 281-448-7500
www.waterjetting.com
E-mail: mktg.wjs@gardnerdenver.com
12300 North Houston-Rosslyn Road Houston, Texas 77086

Circle 250 on Reader Service Card
or visit www.maritimereporterinfo.com

Marine Deck Hardware and Equipment

- ♦ **ANCHORS:** ♦
50 to 60,000 Lbs. - New and Used
Stockless - Dantorth - L.W.T. - Halls - Snug Stowing
- ♦ **CHAIN** ♦
3/4" to 5" - 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 KEELS ♦
All Sizes Available. New & Used
- ♦ **FENDERS FOAM FILLED and PNEUMATIC** ♦
For Rent or Sale
All Sizes.
New & Used

GIGANTIC INVENTORY NEW & USED

IN STOCK NOW
in the West Coast East Coast and The Gulf

Call Toll-Free (800) 322-3131

SERVING THE MARINE & OIL INDUSTRIES FOR OVER 50 YEARS
WE ARE DIRECT FACTORY DISTRIBUTORS & IMPORTERS

WATERMAN SUPPLY CO., INC.

P.O. BOX 596
WILMINGTON, CA 90748
PH: (310) 522-9698
FAX: (310) 522-1043

Circle 338 on Reader Service Card
or visit www.maritimereporterinfo.com

Barnacle, Paint, and Rust Remover

Rapidly remove paint, rust, scale, barnacles, and other hard coatings from metal and concrete surfaces without heavy pressure. New Swirl-Off scarifier attaches to your grinder, sander, drill, or polisher. Rotary tool scours tough deposits. Using pneumatic tools, it removes marine growths underwater. Easier, faster, and safer than scraping, sandblasting, or chemicals. There's nothing else like it! Ask for Bulletin MAR-1 showing many models and styles.

DESMOND

The Desmond-Stephan Mfg. Co., P.O. Box 30, Urbana, Ohio 43078
Phone 937-653-7181, Fax 937-653-5511

Circle 231 on Reader Service Card
or visit www.maritimereporterinfo.com

1000

Act Now!

March 11-15, 2002
Miami Beach Convention Center
Miami Beach, Florida, USA

**SINCE EXHIBIT SPACE IS BOOKED EARLY,
IT IS IMPORTANT TO SECURE YOUR PLACE
AS SOON AS POSSIBLE**

For latest space availability, phone, fax or write to:

Seatrade Cruise Shipping Convention

CMP Princeton Inc.

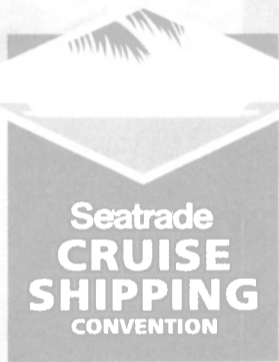
125 Village Boulevard, #220

Princeton, NJ 08540-5703, USA

tel: +1 609 452 2800 • fax: +1 609 452 9374

visit our website at www.cruiseshipping.net

email: info@cruiseshipping.net



Sponsored by:

International Council of Cruise Lines (ICCL)
Florida-Caribbean Cruise Association (FCCA)



CMP

United Business Media

REQUEST ADDITIONAL INFORMATION

Please mail or fax to:

Seatrade Cruise Shipping Convention
CMP Princeton Inc.
125 Village Boulevard #220
Princeton, NJ 08540 USA
Tel: +1 609 452 2800
Fax: +1 609 452 9374

Please select your area (s) of interest:

- Exhibiting
- Attending the Conference
- Visiting the Exhibition

Name _____

Title _____

Company _____

Nature of business _____

Address _____

City _____ State _____

Country _____ Postal Code _____

Phone _____ Fax _____

Email _____

MRM02



Enviro-Strip

Enviro-Strip Cleaning Systems in Fort Lauderdale uses a blast of baking soda to remove layers of old anti-fouling bottom paint. The process used with compressed air allows us to strip down to the gelcoat or metal with no harm to the hull.

Circle No. 101

www.maritimereporterinfo.com



H.O. Bostrom

As a provider of seating for over 50 years, H.O. Bostrom is one of the most respected names in the industry. Our SeaPost series seats are "marinized" to withstand their environment. Call us today for more information about our complete line of helm and passenger seating.

Circle No. 102

www.maritimereporterinfo.com



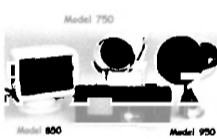
TurtleSkin

Both safety and comfort are key elements in the design of the TurtleSkin WaterArmor suits. In addition to the patented fabric, the suit has received a patent for its design that allows the panels covering the thigh to be shortened or lengthened, so that one suit can fit anyone.

A TurtleSkin fabric was also used in the crash bags that allowed the NASA's spacecraft Pathfinder to land successfully on Mars in 1997, and will be used in the three upcoming missions to Mars from both the U.K. and U.S. in 2003.

Circle No. 103

www.maritimereporterinfo.com



Arion International

Arion International, Inc., has introduced three Marine Thermal Imaging Cameras for nighttime use, collision avoidance, and search/rescue. Unlike image intensifiers that require low levels of light to operate, thermal cameras require no visible light to operate.

Circle No. 104

www.maritimereporterinfo.com



Kobelt Manufacturing

"Kobelt Manufacturing is committed to manufacturing the finest marine controls and steering systems in the world. From our innovation in electronic controls to our craftsmanship with bronze and stainless steel, our products span the oceans of the world to further our reputation as an international leader in marine technology."

Circle No. 105

www.maritimereporterinfo.com



Incat

Incat - The Magazine is produced six times a year by Incat Australia Pty Ltd, builders of some of the world's fastest large vehicle and passenger ferries.

Recent Incat deliveries to Europe include four fast 315 ft. (96 m) catamaran ferries operating in Spain and the Royal Australian Navy's HMAS Jervis Bay which carries and troops between Darwin and East Timor.

Circle No. 106

www.maritimereporterinfo.com

See Things Clearer With Wynn's Wipers

Wynn manufactures the most comprehensive range of Straight line wipers, Pendulum and Pantograph wipers, clear view screens and associated control systems, with a choice available for heavy duty through to

light duty applications.

Circle No. 107

www.maritimereporterinfo.com



Curtis Universal Joint

Curtis block and pin style universal joints have been used in all kinds of commercial and naval ships since 1935. Principally used in reach rods for remote valve operators, Curtis u-joints can be easily disassembled for boring of the hubs and conveniently reassembled with

no damage to component parts. **Circle No. 108**

www.maritimereporterinfo.com



Superior-Lidgerwood-Mundy

More Pull For Less H.P.-"SLM CAPSTANS" Superior-Lidgerwood-Mundy Corp's "NEW" Generation of Millennium-2000 Capstans are available in a variety of sizes, which are well suited for barges, workboats and dockside applications.

Circle No. 109

www.maritimereporterinfo.com



Webster Instruments

New eight-page, four-color overview of the Webster Instruments product line including portable hydraulic testers, turbine & positive displacement flow meters, pressure transducers, panel readouts, in-line flow indicators, hydraulic test stand instrumentation, pressure test kits, pump test kits and portable/industrial data acquisition equipment.

Circle No. 110

www.maritimereporterinfo.com



Governor Control Systems

Governor Control Systems, Inc. (GCS), is an authorized distributor for Woodward Industrial Controls. With offices in Fort Lauderdale and Houston, GCS is committed to providing complete prime mover control services including sales, service, engineering and training for steam turbines, gas and diesel engines.

Circle No. 111

www.maritimereporterinfo.com



Imperial International

The founders of Imperial International, Inc. have been in the marine industry for decades, and as manufacturers of the Imperial Immersion Suit, are steadfast to ensure the protection of individuals within the marine industry. A well maintained suit increases chances of survival, lasts longer, and saves time and money.

Circle No. 112

www.maritimereporterinfo.com



Liebherr

LIEBHERR-Werk Nenzing GmbH, located in Austria, was founded in 1976 for the purpose of designing, selling, manufacturing and providing after-sales service for ship and offshore cranes.

Since then the product range has extended to include crawler cranes, as well as harbor mobile cranes. The network of Liebherr service stations throughout the world provides a continuous and reliable after-sales service for all our customers.

Circle No. 113

www.maritimereporterinfo.com

LEMAG PREMETS

The Lehmann & Michels permanently mounted LEMAG



PREMET Online measures the cylinder pressure continuously, from each cylinder at the same time. Once installed, you receive continually indicated power, max, cylinder pressure, main trend etc. on your PC.

Circle No. 114

www.maritimereporterinfo.com



TechnoFibre

TechnoFIBRE provides professional lifeboat and davit maintenance worldwide. ISO 9002 Certified, it is also an authorized service company to over 20 lifeboat and davit manufacturers.

Circle No. 115

www.maritimereporterinfo.com



Climax

Climax's line of more than 25 machine tools provides effective solutions for repairs at sea and valuable alternatives to costly off-site machining in ship repair or refurbishing operations. Contact Climax for complete information on these tools and an unlimited range of custom tool designs for unique repair applications.

Circle No. 116

www.maritimereporterinfo.com



NLB

NLB 40201 pump produces up to 40,000 psi of water jet power to quickly remove coatings, rust and more from ship surfaces. Features rugged, reliable performance and low operating cost.

Circle No. 117

www.maritimereporterinfo.com



Maritime Associates

Maritime Associates, Inc. manufactures and supplies a complete range of IMO/SOLAS safety signs and posters as well as LLL pathway systems. The company uses a number of materials in manufacturing, including the internationally certified American Permalight substance used to make the photoluminescent signs.

Circle No. 118

www.maritimereporterinfo.com



Shave Away's Dust Muzzle Works With Any Vacuum

Dust Muzzle is a polypropylene shroud for collecting dust made by angle sanders and die grinders. It is flexible, transparent and retrofits over 1,200 tools in minutes. No special paper is needed, it works with any vacuum and it is over 95 percent efficient.

Circle No. 119

www.maritimereporterinfo.com



Intercontinental Engineering

Intercon manufactures a complete line of winches, hoists, ATB couplers, and customer material handling equipment for commercial and military applications.

Circle No. 120

www.maritimereporterinfo.com

E.H. O'Neill

A-60 Decking lightweight non-combustible, insulating approved by Lloyd's Register, DNV, Germanischer Lloyd, USCG and Canadian Coast Guards.

Circle No. 121

www.maritimereporterinfo.com





Flow A-3000 Ultralight

The Flow A-3000 Ultralight hand tool combines the power of ultrahigh pressure water with extremely high nozzle rotation speeds.

The result is a versatile tool that offers excellent removal rates for a wide variety of surface prep projects. A-3000 delivers as much as 6.5 gallons per minute of ultrahigh-pressure water, and is the only hand tool rated for operating pressures of 45,000 psi.

Circle No. 122
www.maritimereporterinfo.com



American Vulkan

VULKAN Couplings are world renowned for high quality, guaranteed torsional stiffness and damping capacity. Brand names include the highly flexible RATO Couplings, VULKASTIK-L, VULKARDAN-E,

FLEXOMAX, and TORFLEX. VULKAN Couplings are found on Diesel engines and electric motor-driven equipment including marine propulsion, on rigid-mounted or free standing transmissions, compressors, two-bearing generators and pumps.

Circle No. 123
www.maritimereporterinfo.com

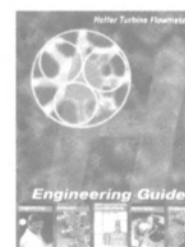


Back To Nature

Back To Nature Products Co. introduces Aqua-Strip Safer Marine Paint & Varnish Remover. It removes multiple layers of bottom and topside coatings in one application.

Aqua-Strip is environmentally safe, biodegradable, non-flammable and contains no methylene chloride. It is safe for all surfaces including fiberglass and gel coat.

Circle No. 124
www.maritimereporterinfo.com



Hoffer Flow Controls

Hoffer Flow Controls supplies flow measurement products for shipboard flow processes with experience in applications including fuel flow measurement for the propulsion

plant, R/O system flow measurement, flow switches for use in the fire control system, trim and drain/ballast systems and more.

Circle No. 125
www.maritimereporterinfo.com



Analytic Systems

Analytic Systems is a leading supplier of power conversion equipment to the commercial and recreational marine sectors. Founded in 1976, it provides a

full range of DC/DC Voltage Converters, DC/AC Inverters, AC/DC Power Supplies and both AC and DC Source Battery Chargers. Analytic is one of the best engineering organizations in the industry.

Circle No. 126
www.maritimereporterinfo.com



Advance Fabricating

Advance Fabricating, Inc. has supplied two 92x30x11 towboat construction kits to John

Bludworth Shipyard, LLC in Corpus Christi, TX. These boats were designed by John Bludworth and are being built for Republic Barge Transportation of Houston, Texas.

Circle No. 127
www.maritimereporterinfo.com



Senesco

Senesco provides a full range of dry dock services. Located on Narragansett Bay in North Kingstown, RI,

Senesco is conveniently located on the East Coast between New York and Boston and is ready to meet your repair needs.

Circle No. 128
www.maritimereporterinfo.com



Ludeca, Inc.

The VIBSCANNER data collector features built-in sensors for important machine parameters: vibration acceleration, displacement and velocity according to ISO standards as well as bearing

condition, temperature and RPM. Simple to operate with joystick navigation and backlit graphic display. Its OMNITREND software evaluates and archives measurement data on a PC.

Circle No. 129
www.maritimereporterinfo.com



Cover Guard

Cover Guard flame retardant, temporary protection by Bainbridge International is the worlds leading temporary protection

systems. Designed to protect decks, walkways, carpeting and furnishings from scuffs, scrapes, dirt, and debris during repair and new build projects. Cover Guard will save you time and money on your next project.

Circle No. 130
www.maritimereporterinfo.com



L.C. Doane

The L.C. Doane Company is a world leader in the manufacture of fluorescent lighting fixtures for the U.S. Navy and commercial marine applications. Current military specifications

for shipboard lighting are based on the stan-

dards originally developed by The L.C. Doane Company.

Circle No. 131
www.maritimereporterinfo.com



National Crane

National Crane Corporation, America's truck-mounted hydraulic crane leader and a Grove Worldwide Company, has released literature that introduces its new Series 500D telescoping crane.

The 500D is a completely redesigned version of the company's popular 500C series. The new design affords greater lifting capacity, longer reach and improved overall performance.

Circle No. 132
www.maritimereporterinfo.com



H&S Tool, Inc.

H&S has grown to be a leader in the design and manufacturing of portable tube and pipe end machining and cutting tools.

This growth is being realized by providing a level of service, quality and reliability that is unsurpassed in the industry.

Circle No. 133
www.maritimereporterinfo.com

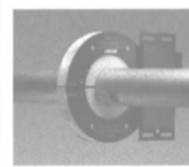


Rox System

Since the start of 1990 cable transit manufacturer Roxtec International AB has worked hard to find simple and safe solutions within the marine and offshore industries.

Now we widen our range of products with the area efficient SRC frame that minimizes the risk of cracks in thin bulkheads. The Roxtec system is modular based and highly flexible. The sealing modules can easily be adjusted to precise cable diameter just by peeling of layers from the center.

Circle No. 134
www.maritimereporterinfo.com



Binsfeld Engineering, Inc.

Binsfeld Engineering, Inc. introduces the TorqueTrak 9000-IP, a permanently powered digital radio telemetry system.

The system includes a fiberglass rotating collar with miniature transmitter, which broadcasts digital data from a torque sensitive strain gage to the digital receiver. Simple and easy to install, this telemetry system provides a real time torque information during actual machine operation.

Circle No. 135
www.maritimereporterinfo.com

Konrad

The Konrad 520 is the only commercial stern drive available for 134-273 kW (180-370 hp) diesel engine installations.

Its ability to handle high input torque, up to 854Nm (630 lb. Ft.), makes it ideal for many



diverse applications: crew boats, pleasure craft, charters, fishing vessels and parasail boats. Our rigid manufacturing standards and diligent testing procedures allow us to confidently offer a war-

ranty.
Circle No. 136

www.maritimereporterinfo.com

LSA MES

Lifecraft Systems Australia Marine Evacuation Systems (LSA MES) are the safest, lightest, most compact and efficient systems in the world.

Renowned for ease of operation and reliability, the LSA MES has the capability to rapidly and safely evacuate or retrieve persons in any military or conventional application.

Circle No. 137
www.maritimereporterinfo.com



GHS/Load Monitor for Crane Barges

A new onboard software package developed for crane barge opera-

tors checks crane trim and list in various operating modes. Wind, deck loads, tank loads as well as hook load and detailed crane model are included.

Circle No. 138
www.maritimereporterinfo.com



Mountz, Inc.

Mountz, Inc., announces the Wizard module, which transforms any Handspring Visor handheld

computer into the world's first PDA torque and force analyzer.

With the Wizard, entering torque and force parameters is as easy as maneuvering through Visor screens with a touch of the stylus, so there's no learning curve if the user has had a PDA.

Circle No. 139
www.maritimereporterinfo.com



A.Z.E. Supply Co.

For the past 10 years, A.Z.E. Supply has been the U.S. Government's and the U.S. Navy's largest pipe and tubing supplier.

The company can supply material in carbon, stainless, alloy and cuni. A.Z.E. also specializes in bronze and cuni fittings and flanges. These all can be supplied either to commercial or military specifications.

Circle No. 140
www.maritimereporterinfo.com

THE MARINE MART

The Classified
and Employment Section



PRODUCTS & SERVICES

Single source vendor:
Spare Parts + Equipment
for foreign built ships

SCARDANA

FAX: (1) - 450 - 671 - 3898

TEL: (1) - 450 - 465 - 6556

TOLL FREE FAX:

1 - 877 - 228 - 9879

E-mail: service@scardana.ca

Web Site: www.scardana.ca

Procurement Contractors
+ Spare Parts Agents
Since 1974

Tired of nautical reproductions



Martifacts 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.martifacts.com / maritifacts@aol.com

MARTIFACTS, INC.

P.O. Box 350190 Jacksonville, FL 32235-0190
Phone/Fax: (904) 645-0150

Marine Video Systems

Security - Surveillance- Convenience

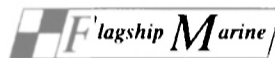
Waterproof cameras - \$189.00

Monitors - \$189.00

Time lapse recorders

800-316-6426 www.flagshipvideo.com

Let us design a system for you!



Commercial
Military - Pleasurecraft



REPLACEMENT PARTS FOR:

SKL/DMR • Paxman • Sulzer
Fairbanks • MTU

Fuel Injection Parts • Superior • GMT
Alco • Cooper • Delaval Enterprise

PHONE: 719-227-1821

FAX: 719-227-7498

APPLIED ENERGY CORP



EMAIL: Applied@JTP.com
WEBSITE: www.JTP.com/Applied

2442 GUNNISON ST. • COLORADO SPRINGS, CO 80909

CUNNINGHAM
MARINE HYDRAULICS CO., INC.

Service Parts Repair Consulting

Litton Marine Systems
Authorized Sperry - Decca - C. Plath Dealer

CMH HELE-SHAW, INC.



201 Harrison Street
Hoboken, N.J. 07030
(201) 792-0500 # (212) 267-0328
1-800-322-2641
FAX# (201) 792-7716

E-Mail Address:
cmh-hydraulics@erols.com

TANKS

Custom Fuel Cell Bladder

Diesel or Gas Tanks

- Impact Resistant
- Non-Expanding
- Vibration Proof
- Lightweight
- Fully Baffled

MADE TO FIT
WORK BOATS, FISHING
BOATS, RACE BOATS

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

Peck & Hale 180 Division Avenue, West Sayville NY 11798
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:

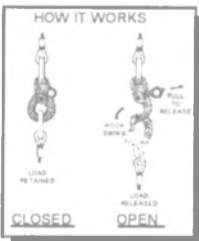
- Quick disconnect
- Remote release or disengagement
- Place loads where access is restricted
- Saves Manpower
- Wide range of angles of release

101 Applications!!

- Towing
- Fishing
- Maritime
- Boating
- Construction
- Lifeboats
- Material Handling
- Laboratory

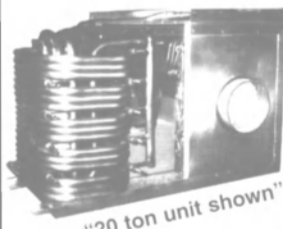
Specifications:

Material: 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

Slash your HVAC budget!
Slash long term maintenance!
Eliminate engineering expense?



1 Ton - 20 Tons
Self-Contained
High-Pressure
Split & Chiller

Chosen over all others by the US and Canadian Coast Guard since 1996



Let us design a **fresh water cooled** self-contained HVAC system for you!
Fernstrum™ keel coolers & Sen-Dure® heat exchangers

800-316-6426 www.flagshipmarine.com



Commercial-Military
Pleasurecraft

JON M. LISS ASSOCIATES, INC.

63 BOVET ROAD NO. 503 • San Mateo California 94402



NAVY STANDARD
VANEAXIAL
FANS
Delivery
From
Stock

(650) 573-9191

Fax (650) 572-8458

jon411@pacbell.net

INFORMATION

S H O W C A S E

GET FREE INFORMATION ONLINE at: www.maritimereporterinfo.com

Get Free Information Fast

Circle the appropriate Reader Service Number

on the opposite page or visit

www.maritimereporterinfo.com



Page	Advertiser	Product	R/S#	Page	Advertiser	Product	R/S#
59	A Z E Supply	pipe & tubing	349	C4	Karl Senner Inc.	propulsion systems	275
6	ABB Turbo Systems AG	turbochargers	200	25	Kawasaki	marine equipment	412
57	ABB Turbocharger	turbochargers	201	12	Kobel Manufacturing	control systems	276
69	Abeking & Rasmussen	boatbuilder	202	74	Konrad	propulsion	369
46	ABS	classification society	203	77	L & M Boutruc Rental	utility supply vessels	223
9	ABS	classification society	204	10	Lantec/Mac Industries	deck machinery	277
52	ABS	classification society	403	48	Lehman & Michaels	pressure indicators	278
50	ABS	classification society	411	3	Leica Navigation	marine navigation	279
28	Airchime Mfg	horns & whistles	205	55	Liebherr Werk Nenzing	marine cranes	354
76	All American Marine	marine equipment	206	20	Liferaft Systems of Australia	evacuation systems	373
80	American Vulkan	couplings	208	59	Louis C. Eitzen Co. Inc.	oil analysis	280
52	Ameriforce	skilled laborers	209	43	Ludeca Inc	laser alignment	281
74	Anchor Marine	marine equipment	210	4	MACSEA Ltd	machinery diagnostics	282
61	Arion International	marine thermal imager	211	58	MAN B & W Diesel A/S	engines	283
35	Astilleros Braswell Intl	ship repair/shipyard	350	55	MAN B & W Diesel A/S	engines	334
29	Aurand Manufacturing	surface prep tools	212	16	Manly Marine	marine closures	284
78	Barkemeyer-Schifftechnik	maneuvering equipment	213	72	Marine Turbo & Diesel	diesel engines & parts	285
18	Bollinger Shipyards	shipyard	214	62	Maritime Institute of Tech.	simulator training	286
54	Bug-O-Systems	cutting & welding	215	31	Mascoat Products	marine insulation	287
13	Carhartt Inc	marine workwear	216	78	Microphor	sanitation devices	288
27	Centa Corporation	propulsion equipment	217	73	MMC International	tank gauging tapes	289
22	Centrifuge Services Inc	separators	218	55	MMC International	tank gauging tapes	332
40	Chesapeake Specialty Products	deck coatings	219	39	Motor Services Hugo Stamp	diesel engine parts	39
64	Clean Seal	extruded rubber products	220	64	Mustang Survival	survival apparel	290
59	Climax	portable mach tools	351	10	Neptune Research	water active. repair tape	291
29	Comnav Marine Ltd.	navigation	221	37	NLB	surface prep tools	292
26	Comsat Mobile Comm.	communications	222	9	Norma Products Inc.	pipe fittings & cuttings	293
41	Concert Cable Protection	underwater cables	nrsn	24	Norriseal	valves	294
79	Con-Select	generator controls	408	16	NREC	diesel engines & parts	295
15	Cortland Cable	rope	224	48	Nya Berg Propulsion AB	propulsion	296
1	Craft Bearing	bearings	225	64	Offshore Inland	hydraulic systems	297
43	CSD North America	sealing systems	226	68	Omnithruster Inc	thrusters	298
34	Cummins Marine	diesel engines	227	39	Orkot Inc.	bearings	299
54	Cummins Marine	diesel engines	370	22	Philadelphia Resins	coatings	300
79	Custom Ship Interiors	interiors	228	60	Plastic Piling	navigational marker pilings	301
66	Damen Shipbuilding	shipbuilder	229	77	Rasmussen Equipment	marine equipment	302
67	Damen Shipbuilding	shipbuilder	230	82	Restomotive Laboratories	protective coatings	303
82	Desmond Stephan	swirl off scarifier	231	77	Rodney E. Lay & Assoc.	naval architects	347
17	Deutz	engines	232	50	Samson Rope Technologies	mooring	305
42	Dolphin USA	ship fenders	233	51	Samson Rope Technologies	towing	306
75	Don Jon Marine	boatbuilder	367	77	Schuyler Rubber	fenders	355
70	Duramax	heat exchangers	234	36	Sea Ark Marine	marine equipment	307
65	E Crane	cranes	235	5	Sea Tel	communications	308
79	E H O'Neill	decking & flooring	236	83	Seatrade	trade show	329
C3	Eastern Shipbuilding	ship repair/shipyard	237	24/25	Seaward International	fenders	310
44	ECP Service Corporation	environmental mgmt	238	79	Selco USA	alarm systems	311
27	Electronic Marine Systems	sensors	239	10	Shannon Enterprises	insulation/thermal blankets	312
29	Electronic Marine Systems	sensors	240	21	Shave Away	environmental safety	348
31	Electronic Marine Systems	sensors	241	32	Sherwin Williams	coatings & corrosion control	313
33	Electronic Marine Systems	sensors	242	55	Sherwin Williams	coatings & corrosion control	380
54	Electronic Marine Systems	sensors	371	54	Siemens	automation systems	314
19	Envirovac	vacuum systems	243	27	Silex Inc	silencers/expansion joints	315
56	Euro-American Marine	welding	244	72	Skookum	rigging products	316
C2	Exxon Mobil	lubricants	245	74	Smith-Berger Marine	deck hardware	317
68	Fast Systems	sewage syst./separators	246	76	Sohre Turbomachinery	grounding brushes	318
42	Flow Technologies Inc.	water jet cleaning	247	56	Stearns Manufacturing	pdf's & safety products	409
23	Furuno	radar equipment	248	15	Stratos	remote communications	319
75	G J Wortelboer Jr. B.V.	chains	249	22	Sundial Marine	shipbuilding	320
80	G R Bowler	control/monitoring systems	253	31	Superior Energies, Inc.	insulation manufacture	321
82	Gardener Denver Water Jet	water jetting	250	61	Tano Corporation	propulsion control syst.	322
71	GMD Shipyard	shipyard	251	38	Taylor Made Environmental	air conditioning	323
79	H O Bostrom	seating	254	72	Technical Marine Services	tank level indicators	324
16	Harris Corporation	satellite comm.	255	44	Thermax	bulkhead panels	325
28	Headhunter	sanitation systems	256	47	Thrane & Thrane	communications	368
2	Heikama Bica Oy	marine cables	257	4	Thrustmaster of Texas	bowthrusters	326
53	Hopeman Brothers	interior design	352	77	Total Marine Solutions	safety & environment	327
33	Hornblower Marine	consultants	258	8	United Marine Enterprise	ship repair/shipyard	328
43	Houston Marine	marine training	259	54	United Marine Enterprise	ship repair/shipyard	372
49	I M O	maritime publications	260	76	Viking Fender	fenders	330
54	Ian Conrad Bergen	software	309	72	Viking Life Saving	life saving equip	331
78	Imperial Intl Inc	immersion suits	353	52	Viking Life Saving	life saving equip	400
43	In Place Machining	crankshaft repair	261	52	Wartsila	propulsion	401
21	Incat Australia	fast vessels	262	16	W W Patterson Co.	deck machinery	361
68	Intercontinental Engineering	deck machinery	263	78	Walport	safety videos	333
22	International Maritime Train.	education & training	264	22	Washburn Doughty	boatbuilder	335
54	International Paint Inc	coatings	346	7	Wasser	coatings	336
30	Inventory Locator Service	parts & locator service	265	64	Water Weights	load measuring equip	337
75	Island Boats	aluminum boatbuilder	266	82	Waterman Supply	marine equipment	338
63	IZAR	shipyard	267	77	Weather Research	weather studies/services	339
41	Jamestown Metal Marine	interiors	268	77	Western Machine Works	tractor pins	340
20	Jeamar Winches	winches & sheaves	269	56	Westfalia	oil/water separators	341
14	Jeffboat Incorporated	drydocking	270	73	Willard Marine	inflatable boats	342
10	Jered Industries	stabilization systems	304	68	William E. Williams	valves	356
38	John Crane Lips	propulsion equipment	271	9	Wolong International	lifeboat mfg	343
45	Jotun Paints	coatings	272	80	Wynn Marine Ltd	wind screen & wipers	344
19	Kahlenberg	airhorns	273	11	Z F Marine Group	propulsion systems	381
77	Kaplan & Associates	propulsion parts	274	55	Z F Marine Group	propulsion systems	345

The listings above are an editorial service provided for the convenience of our readers.

PRODUCTS & SERVICES

CAMAR International Corp.
186 Prescott St. Worcester MA 01605

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



**ANTI GLARE
SOLAR SHADES FOR
SHIPS NAVIGATION
BRIDGE WINDOWS**



See Us at International Workboat Show New Orleans

SOLAR SOLVE MARINE
South Shields, UK, NE33 1RA
Tel: +44 191 454 8595 Fax: +44 191 454 8692
E-mail: sales@solasolv.com

www.solasolv.com

EDEN MARINE
SATELLITE COMMUNICATIONS

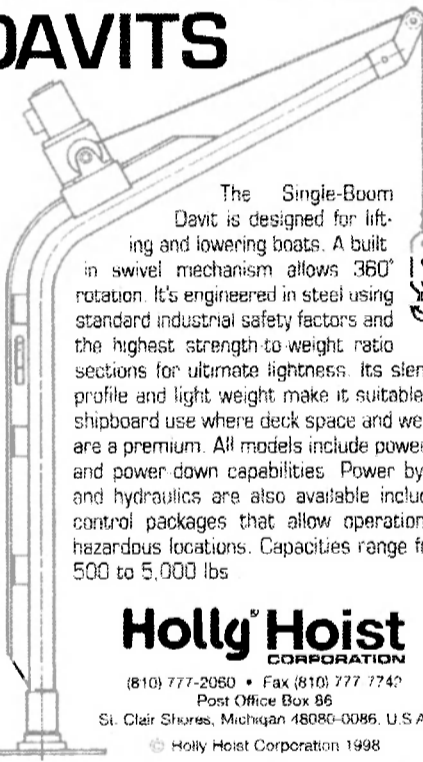
+ 1 561 278 6299 / info@edenmarine.com



SUNCOR Stainless

www.suncorstainless.com
(781) 829-8899 FAX: (781) 829-9220

DAVITS



The Single-Boom Davit is designed for lifting and lowering boats. A built in swivel mechanism allows 360° rotation. It's engineered in steel using standard industrial safety factors and the highest strength-to-weight ratio sections for ultimate lightness. Its slender profile and light weight make it suitable for shipboard use where deck space and weight are a premium. All models include power-up and power down capabilities. Power by air and hydraulics are also available including control packages that allow operation at hazardous locations. Capacities range from 500 to 5,000 lbs.

Holly Hoist CORPORATION

(810) 777-2060 • Fax (810) 777 7742
Post Office Box 86
St. Clair Shores, Michigan 48080-0086, U.S.A.
© Holly Hoist Corporation 1998

MARITECH Marine Service, Inc.

Specialized in technical services of
BERG CP PROPELLERS
worldwide since 1981.

200 Leslie Dr. Suite # 1114, Hallandale, FL 33009 U.S.A.
Phone: (954) 454-7990 Fax: (954) 454-7702
E-Mail: maritech@attglobal.net

Dehumidifiers, air movers, and carpet drying fans 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



Ebac Industrial Products, Inc.
704 Middle Ground Blvd.
Newport News, VA 23606
Telephone: 800-433-9011
Fax: 757-873-3632

SHIP MODELS

"MODELMAKERS TO THE MARITIME INDUSTRY"
UNCOMPROMISED DETAIL. COMPETITIVE COST
For ship owners, shipyards, architects, collectors.
Individually handcrafted from brass-custom & service most

MARITIME REPLICAS
MARITIME REPLICAS AMERICA INC:
10355 S.W. 132ND ST. MIAMI, FL. USA 33176
Ph: 305-238-7700 Fax: 305-238-1006
website:www.maritimereplicas.com

BACKBONE PUBLISHING Co.
PO Box 562, Fair Lawn, NJ 07410, USA
FAX: 201 670-7892; bbpub@optonline.net

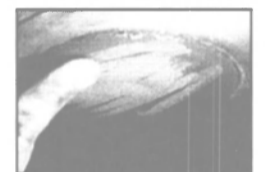
NEW BOOKS: MULTI-HULL SHIPS
Hardcover, 7.5"x10", 495p, 431 fig, 510 ref, \$259.00.
Hydrostatics, stability, resistance and propulsion in calm water and waves, seakeeping, controllability, strength, and design for all breeds of multi-hull "species" from catamarans and trimarans to SWATH, wave-piercing, hydrofoil-assisted, and super-critical speed catamarans. This unique and only reference book in English is akin to the 3-volume SNAME's PNA.

ARC WELDING OF ALUMINUM & MAGNESIUM ALLOYS \$139.95
WELDING STRESS RELIEF BY EXPLOSION TREATMENT \$149.95

CUT COSTS IMPROVE OPERATIONS

PRI-R

HFO Treatment
This Vasa 32 exhaust valve is carbon free after 12,000 hours on PRI-R!



- Improve Your Fuel
- Reduce Charter Hire Loss
- Extend Engine Component Life & Reliability
- Enhance Vessel Safety & Emissions Control

Actual Results From PRI-R Users:

- 82 exhaust valve replacements eliminated annually. Saved more than \$73,000 in parts and labor alone!
- 8 days of downtime at sea eliminated. Charter hire losses avoided, which saved \$120,000 in annual cost.
- Fuel sludge reduced 50%. Savings in fuel valve and disposal cost totaled more than \$74,000.

Call PRI Today!
888-776-9373
www.priproducts.com



SCALE MODELS
SCALE REPRODUCTIONS, INC.
9121 PRECISION PLACE FAIRHOPE, AL 36532
DISPLAY, ENGINEERING, TANK TEST
SINCE 1976

WWW.2SCALE.COM (334) 928-3829
2SCALE@2SCALE.COM (334) 928-1859 Fax

MARINE INCINERATORS
Burn shipboard waste and sludge in rugged and efficient THERM-TEC Mariner incinerators. The first and only US built, IMO, USCG, ABS approved equipment. We also supply leased containerized incineration plants for open deck use.

THERM-TEC Inc. www.thermtecmarine.com
e-mail: carolina@teleport.com Phone: 503-978-0863

ShipMan Preventive Maintenance Software
Written by experienced ship engineers and operators
Use for one vessel or for your entire fleet

Maintenance scheduling and reporting
Integrated onboard/shoreside spares
Stocking levels and reorder points
Vessel configuration tracking

Technical manual and data tracking
Manufacturer and vendor tracking
Preventive maintenance history
Spare parts usage history

Build your own PM program using our software, or let our experienced technicians develop it for you.

Quantic
Engineering and Logistics Corporation

Windows 95, 98, NT and Macintosh

Box 9567 Panama City Beach, FL 32417
850-234-7933 FAX - 850-234-1032
E-Mail: Quanticeng@AOL.COM

HYDREX
UNDERWATER TECHNOLOGY
Moldock repairs
Underwater welding repairs
Propeller bending and cropping

Haven 29 - Noorderlaan 9 1220 Turner Street
B-2030 Antwerp - Belgium Clearwater, FL 33756 - USA

www.hydrex.be

PRODUCTS & SERVICES

GMDSS

Global Marine Distress
& Safety Systems
IN MOBILE

STCW Compliant and USCG
Approved 70 Hour Course

To Register Call:

1-800-247-3080

Limited to 12 students

\$950.00



SEASCHOOL
Since 1977

Maritime Associates

Your Marine & Offshore Signage Experts

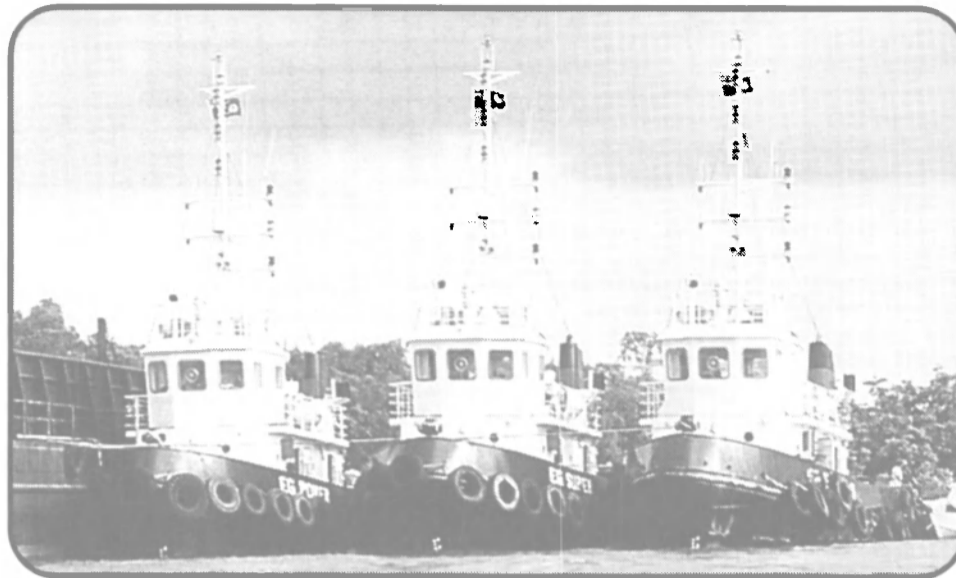
We can supply you with ALL YOUR SIGNAGE NEEDS, utilizing our wide range of unique base materials, mounting and installation methods, all cost effectively manufactured in the USA. NOW...Order Online, or contact us for a Free Product Guide on CD Rom, and see our New product lines, including the next generation of photoluminescent material, BRIGHT WHITE, and our SLIMLINE Low Location Lighting System. We can offer next day service from our immense inventory of stocked signs. If we don't have what you want in stock, we'll make it for you!



Maritime Associates
P.O. Box 1788, Crystal Bay, NV 89402 USA
Tel: 775.832.2422 Fax: 775.832.2424
Email: maritimeas@aol.com
www.marinesigns.com

VESSELS FOR SALE OR CHARTER

FOR SALE



NEW 66' TUG -- \$550,000

We Have 3 Tugs Ready For Immediate Sale!

These Are Brand New Singapore Flag Vessels That Were Freighter Delivered And Are Now Berthed In Grand Cayman Island. Twin 350 HP Cummins Engines With Kort Nozzles. ABS Certified.

FOR ADDITIONAL INFORMATION CALL:

203-374-5779

Ask For Paul Carpenter



**A.R. LARSEN
COMPANY INC.**



www.marinegalley.com

Excellence in Food Service Equipment & Services
to the MARINE INDUSTRY...around the globe.

MARINE GALLEY DESIGN
EQUIPMENT & APPLIANCES
CUSTOM FABRICATION • INSTALLATION
JOINER SYSTEMS
FIXTURES & FURNISHINGS

1-800-735-7286

(425) 861-8868 • Fax: (425) 861-8668

arlarsenco@yahoo.com • Redmond, WA 98073-0088

All our products and services meet marine industry regulations standards and requirements.

VESSELS FOR SALE OR CHARTER



100' x 25' All Weather Aluminum

2 air conditioned & heated cabins. 3-1271 natural - 2-371, 1200 rpm, 30kw generator. Full electronics, new paint, COI & stability for 150. May 2000. Completely renovated in & out, must see. Priced to sell. No tire kickers please. Capt. George 718-252-4398. Very economical on fuel, sailing daily.



22 Knot Passenger Catamaran, USCG certified for 117 passengers. 54 Ft. Bellcraft suitable for fast ferry, whale watching, charters, diving. All aluminum construction built in 1990. New Avlgrip paint inside and out, all new upholstery. Twin Lugger 450HP diesels in excellent shape. A strong, well-built, reliable craft with large passenger capacity in a compact footprint. Located in Ft. Lauderdale.

Contact Rob Martin (808) 864-9071

BOUY TENDER "BASSWOOD"

- 180'L x 37'W x 12' Draft
- 2 engines @ 1050 HP each, EMD model #R8-645E6 and L8-645E6
- 11 knot cruise, 13.7 knot max
- 28,000 gallon fuel capacity
- (1) 100 KW generator, (2) 180 KW generators
- 25 ton crane
- Housing quarters for crew of 58
- Deluxe galley
- A/C and heat
- Fresh water maker with a 30,000 gallon fresh water capacity

Asking: \$364,000 All offers considered

A&C Shipping, Inc.

1052 South Florida Avenue

Lakeland, Florida 33803

Phone: 863-682-0931 • Fax: 863-682-3351



Specializing In Barges



ZIDELL
MARINE
CORPORATION

- ◆ Single or Double Hull, Inland or Ocean-Going
- ◆ Design, Construction & Modification
- ◆ Chartering, Sales & Brokerage

Ask for Bill Gobel or Jack Breshears

503-228-8691 1-800-547-9259

3121 SW Moody Avenue, Portland, Oregon 97201

CENTRAL BOAT RENTALS, INC.



Morgan City, LA

**TUGS & BARGES
INLAND & OFFSHORE**

OIL BARGES
WATER BARGES
SPUD BARGES
LIQUID MUD BARGES
DECK BARGES
VESSEL DOCKAGE
KEYWAY BARGE
QUARTER BOATS

Phone: (504) 384-8200 Fax: (504) 384-8455
website: www.centralboat.com

EMPLOYMENT/RECRUITMENT



FAIRFIELD INDUSTRIES

Fairfield is known the world over for its development and use of advanced technology for both acquisition and processing of seismic data utilized in the exploration of oil and gas. Specializing in acquisition and data handling, Fairfield designs and manufactures seismic data acquisition systems, operates crews to acquire seismic data, processes a wide variety of data, and licenses non-exclusive seismic data to oil and gas companies. Our Marine field operations are based out of Lafayette, LA.

With the additional boats being put in service Fairfield has multiple openings for experienced Mariners. The first addition will be a newly refitted layout/cable boat. (190', 200 tons, & 5000 HP) Positions to be filled are as follows: Captains; Mates; Chief Engineers; A/B Seamen; & Oiler/QMEDs. There are multiple openings. USCG license required.

The departure point is Lafayette, LA. Currently we are working off of the coast of Louisiana.

We offer a competitive day rate with 28/28-day work schedule & EQUAL PAID TIME OFF. (Day rate is paid during 28 days scheduled to work AND during the 28 days off)

Job Title	Starting Day Rate / Annualized	Top Day Rate / Annualized
Captain (500 T+)	\$151/day \$55,115	\$186/day \$67,890
Mate (500 T+)	\$141/day \$51,465	\$148/day \$54,020
Engineer Unlim.	\$158/day \$57,670	\$164/day \$59,860
A/B Seaman	\$88/day \$32,120	\$92/day \$33,580
Oiler/QMED	\$66/day \$24,090	\$95/day \$34,675

Fairfield offers an excellent benefits package including life, health, dental, vision and long-term disability insurance, and 401(k)

Qualified applicants are encouraged to forward a resume & salary history (include schedule) to jhodge@fairfield.com or fax it to Jeff Hodge - Field Recruiter @ 337.232.2313.

Questions? Call 281.615.8499 for Jeff Hodge

Fairfield Capabilities: www.fairfield.com/acquisition/capabilities.html

Fairfield Industries is an equal opportunity employer.

BOAT JOBS AVAILABLE

- Captains
- Mates
- Chief or DDE Engineers
- QMED's
- A/B's
- O/S's

Spots available on towing, oil industry and other vessels.

CALL PASSPORT MARINE
1-800-238-9667
WWW.PASSPORTMARINE.COM

BOAT JOB LISTINGS UPDATING DAILY

CALL 24 HOUR
MARINE JOB HOTLINE
504-889-JOBS (5627)



BENDER

NOW HIRING!

A/B's & O/S's
OVER 50 POSITIONS AVAILABLE

100 TON MASTERS
IMMEDIATE JOB OPENINGS

1600 TON MASTERS
CALL TODAY FOR JOB OFFERS

LICENSED ENGINEERS
\$3000 SIGNING BONUS

QMED'S & OILERS
EAST COAST, GULF, CARRIBEAN

CALL TOLL FREE 1-888-824-1626

APPLY ONLINE

www.bendermarine.com

www.maritimejobsonline.com

No Fee Boat Jobs Experienced Maritime Personnel Needed Immediately!

Work For Gulf Stream, Inc. A Progressive, Innovative Company.
No Employee Fees Charged.

Maritime & USL&H Contracting

- Deck Hands
- OS's and Ab's
- Cooks and Galley Hands
- Levermen
- Tankermen
- QMED's
- D.D.E.'s
- Chief Engineers
- Captains-100, 200, 500 & 1600 Ton D.P.

(STCW 95 & Z Card Required for Most Positions)

Top Wages & Great Benefits!

GULF STREAM, INC

Phone: (334) 665-9000 • Fax: (334) 661-4151
Toll Free: 1-877-381-2618

Boat Jobs

No Fee

Parsons Brinckerhoff, a world leader in the planning, design, engineering, program and construction management of major transportation and infrastructure projects has immediate openings in our New York City Headquarters for the following individuals in our Ports & Marine Engineering Center:

MARINE FACILITIES PROJECT MANAGERS MARINE FACILITIES DESIGN ENGINEERS (STRUCTURAL)

Candidates will manage, plan and execute the engineering and design of ports, marine terminals and waterfront facilities.

Requires:

- Minimum of 5-10 years of experience
- Experience in management, planning, feasibility studies engineering and design of ports, marine terminals and waterfront facilities
- MS in Structural Engineering, PE preferred.
- Marketing ability a plus.

Salary will be commensurate with experience, supplemented by an excellent benefits package. For consideration, please send resume, indicating position of interest and salary history, to: Parsons Brinckerhoff, Dept. MTR1101, G.P.O. 2166, New York, NY 10116. Attn: Joe Alberti. Fax: (212) 631-3739. E-mail: alberti@pbworld.com. Equal Opportunity Employer, M/F/D/V.

For more information, visit our website at: <http://www.pbworld.com>



Accepting applications for: Experiences Diesel Mechanic

Must have extensive knowledge of Detroit 71 & 92 series and Caterpillar 3400 & 3500 Series. Must be able to repair & rebuild diesel engines and effect repairs on all mechanical problems on sea going & harbor tugs. Fleet based in the Jersey city area.

Send resume & salary history to:

Sea Wolf Marine Towing, Inc.
497 Broadway, Suite 4
Bayonne, NJ 07002
201-339-0177 fax

Get on Board.

ENSCO Marine has one of the most diversified fleets of offshore supply vessels in the Gulf of Mexico.

We offer competitive salaries and an employee benefits package which includes medical, dental, life insurance, AD&D, LTD, 401(k) savings, profit sharing, free uniforms and company paid training for license upgrades including all CG required documentation and STCW certification.

ENSCO Marine is currently seeking:

- Licensed Chief Engineers
- Designated Duty Engineers
- 500/1600T Masters
- 500/1600T Mates
- Able Seaman
- QMEDS
- Ordinary Seaman

Contact the HR Department at:
800-227-9583; Fax 337-837-4087
e-mail hrbrostaff@enscou.com
or send resume to 620 Moulin Road
Broussard, Louisiana 70518

We are an Equal Opportunity Employer M/F/D/V



WWW.ENSCOUS.COM



John Crane-Lips Marine Propulsion Systems

JC-L a global supplier of Marine Propulsion Systems is currently accepting resumes for USA field service engineers to accomplish on-site technical services for propulsion equipment overhaul, repair, and installation. Candidates should have strong marine/mechanical/electrical engineering background and experience with shipboard control systems.

Send qualifications to:
jclservice@johncrane.com
Fax: 757-558-3627
EOE

EMPLOYMENT/RECRUITMENT



LICENSED ENGINEERS Fishermen and Seamen

NOAA is seeking marine personnel for ships operating from East, Gulf, and West Coast home ports. If you desire a dynamic work environment that offers opportunity, then NOAA may be the place for you. NOAA has openings for licensed engineers, fishermen, and seamen on board our fleet of research and survey vessels.

For information, visit our website at <http://www.mcc.noaa.gov> and apply online at <http://www.jobs.doc.gov>

Major Northeast US Marine Repair facility seeks the following to join our ambitious team.

ESTIMATOR

Experienced in major full service repairs

DOCK MASTER

Also experienced as Project Manager

Phone # 201-914-0408

NAVAL ARCHITECT

(GS5 - GS13): U.S. Coast Guard Engineering Logistics Center, Baltimore, MD seeking a Naval Architect for full-time civilian employment to conduct conceptual design and advance engineering analysis in the area of ship stability, structures, seakeeping, maneuvering, powering, welding and fabrication, weapons systems, damage control, advanced hull form, life cycle cost, and arrangements in support of Coast Guard fleet and new construction.

Salary range, commensurate with experience: 28K - 82K. Relocation package. Request application materials by calling Mr. Martin Mardiros at (410) 762-6768 or see www.uscg.mil/civilianjobs.htm Ann. No. AR119630. Applications must be received by 10/15/01. EOE.

ATTENTION MARINERS!!!

The deadline for STCW certification is February 1, 2002. Louisiana Human Resource Development Institute has a contract with Gulf Coast Mariners Association Education Fund to enroll mariners for **FREE STCW Courses**:

- Basic Safety Training
- Bridge Resource Management
- Advanced Firefighting
- Automatic Radar Plotting Aids
- Proficiency in Survival Craft
- Global Maritime Distress and Safety Systems

Contact us at toll free 1-877-935-7829
or visit our web site at www.gcmaef.com
for more information.

SALES PERSON

Marine mechanical repair company seeks sales person to assist our expansion into industrial markets. Requires self motivated individual able to seek, contact and negotiate with potential and current customers and attain sales for the company. Sales person will report directly to the company President. Fax resume to: Jim White - White Marine Inc. / 732-826-4478

Carnival Cruise Lines, one of South Florida's top organizations and a member of the S&P 500, currently has the following opportunity available in our Miami office:

MANAGER, QUALITY ASSURANCE

Responsibilities include developing, implementing and administering a comprehensive quality assurance program for fleet of 16 passenger cruise vessels.

The qualified candidate should possess at least 10 years experience as a licensed marine engineer attaining chief engineer status on an ocean going vessel. BS degree or equivalent work experience, PC proficiency and strong English written/verbal communication skills. The ability to speak Spanish or Italian is a plus. Knowledge of maritime auditing, federal regulations and shoreside technical management experience preferred.

We offer a competitive compensation and benefits package, including full health coverage, 401(k), stock purchase plan and on-site child care and fitness centers. Relocation assistance is available. For consideration, fax resume to (305) 406-8619 or e-mail: hshleier@carnival.com. Post-offer background check and drug screening required. EOE

Carnival

J. RAY McDERMOTT The Marine Construction Experts!

Has immediate openings for the following positions:

Captains 1st, 2nd, 3rd Class Mates 1st, 2nd, 3rd Assistant Engineers

USCG License - Unlimited Tonnage Required
1-2 Years at Current License Level Preferred
Maritime or Vocational Graduates Preferred

COMPREHENSIVE BENEFITS PACKAGE

- Health/Dental Insurance - company supplements
- Short Term Disability - company paid
- Thrift Plan w/company matching
- Company Paid Retirement
- Long Term Disability
- Credit Union On-Site
- Prescription Card
- Life Insurance
- Transportation Provided

Qualified applicants should submit resume to:
J. Ray McDermott, Inc. - Attn: Donnie Clause
P.O. Box 188 - Morgan City, LA 70381
E-Mail: djclause@mcdermott.com
Fax: (985) 631-8408

www.jraymcdermott.com

An Equal Opportunity Employer, M/F/H/V



WANTED! Marine Engineer with refrigeration experience

The Marine Alliance is a progressive, modern company with competitive pay and excellent benefits that is jointly owned by BP Marine and Uiter ASA. The successful applicant will be working in our Pasadena based customer service center.

We need a Marine Engineer with a minimum of 5 years seagoing experience and at least a second's license. The candidate should have experience working on shipboard refrigeration and air conditioning systems as the position we are recruiting for is that of Technical Coordinator for refrigeration services. The job is mostly desk bound although some field work is required on occasion.

This position offers a wide variety of work and the opportunity to cross-train in both our lubricants technical field and/or shipboard maintenance and repair.

The Marine Alliance USA Inc.
9400 New Century Drive
Pasadena, TX 77507
Phone: 281-808-1825
Fax: 281-291-0888

email: dave.kinnaird@marinealliance.com

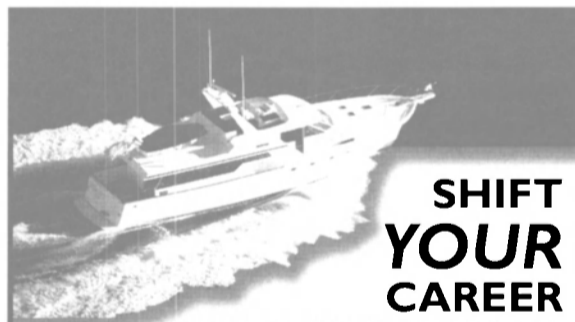
Product Analysts

needed in Houston, Texas to support management systems for the maritime industry, provide software system installation, implementation, maintenance. Must have Bachelor's in Marine Eng, Marine Transportation, Nautical Systems, or Information Systems and two years in job offered or two years exp. using maritime software management systems. Fax resume to LPhillips, American Bureau of Shipping at 281-877-6303. Put code SB/NS on resume.



Administration - Construction
Crewing - Engineering
Finance - M & R
Operations - Sales

(Established 1969) P O Box 260 • Mercer Island, WA 98040 • 206-232-6041



SHIFT YOUR CAREER INTO HIGH GEAR

ZF Marine, a fast growing division of ZF Friedrichshafen, an International Fortune 500 Company, has openings for Electronic Technicians who enjoy a hands-on approach to problem solving and who appreciate the opportunity to work with people in a variety of situations.

ZF Marine is seeking experienced professional electronic technicians to repair, install, inspect and troubleshoot to the board level. Preference will be given to candidates' w/marine electronics experience. Successful candidates will also be required to secure ABYC marine electrical certification.

ZF Marine provides a highly competitive pay structure along with a superior benefit package that includes a company provided service vehicle, tools and paid training.

We have current openings in:

Providence, RI • Annapolis, MD • Merritt Island, FL
Green Bay, WI • Chicago, IL • New Orleans, LA
New Bern, NC

Join the ZF Marine team, which allows for an environment conducive to personal and professional growth. For consideration, fax or send your resume to: ZF Marine Corporate Headquarters, Attn: Human Resources, 3131 SW 42nd Street, Ft. Lauderdale, FL 33312. Fax: (954)581-4099 www.ZF-Marine.com • EOE M/F/D/V • Drug Free Workplace



EMPLOYMENT/RECRUITMENT

PORT ENGINEER

American Management Systems, Inc., has immediate opening for experienced Port Engineers to support US Navy fleet maintenance. Applicants must have US citizenship, BS degree in Marine Engineering or Naval Architecture, USCG Engineers license, and prior commercial Port Engineer, shipyard, and/or shipboard experience. Competitive salary & benefits. E.O.E. Send resume to:

AMS, Inc.
Personnel Director (J-4)
1455 Frazee Road, Suite 315
San Diego, CA 92108
or FAX: (619) 683-5699

CREWS NEEDED

- Tugs
- Supply Boats
- Crew Boats
- Gambling Vessels
- Seismic
- Dynamic Positioning
- Tankers
- Research
- Ice Breakers

Local, Foreign & Casino Jobs

It's easy, just call
504-362-8809

or visit our web site at
www.boatcrewsusa.com
 or email us at
boatcrews@aol.com
FAX 504-362-9194
 One Seine Ct., Suite 309
 New Orleans, LA 70114



255 E. Dania Beach Blvd., Suite 220
 Dania Beach, FL 33004

Seaward Services, Inc.

Seaward Services, the federal government's first choice for operation and maintenance of its research vessels, range craft, and service craft under 1600 GRT, has immediate openings for licensed & unlicensed mariners aboard several of its 50 contract operated vessels. Bring your professional experience to a company who understands how success is achieved.

At Seaward, it is the employees who make the difference!

In return, Seaward will provide you with family based schedule, competitive pay and one the most comprehensive benefits package in the industry, including:

- Five day work week
- Home 300 nights/year
- 401K Plan
- Free Uniforms
- Health Care Insurance
- Paid Vacation Days
- Paid Holidays
- Jury Duty Pay
- Bereavement Pay
- STCW, License Upgrade & Tuition Assistance
- Military Leave of Absence Pay Differential
- Service Awards
- Direct Deposit
- Open Door Policy...

To learn more, contact the Human Resources Department at:

Phone: 954-922-1688; Fax: 954-922-2688;
 Email: quarterdeck@seawardservices.com
www.seawardservices.com

E.O.E.

BRASWELL SHIPYARD, PANAMA

Commercial Ship Repair Manager

Due to our continued success we wish to recruit an additional SHIPS REPAIR MANAGER for our Panama facilities.

We are looking for a hardworking pro-active project manager who thrives on challenge. This is not a deskbound position

The candidate will have a minimum of three years ship repair management experience and/or Chief Engineers certification, be both physically and mentally fit. Bi-lingual English / Spanish would be an advantage.

In return we are offering a package commensurate with your experience in a tropical yet cosmopolitan location.

If you believe you have the qualities we need we would like to hear from you. Please forward your CV with a covering letter to:

Chris Rowland.
Director of Operations
E-mail crowland@braswellshipyard.com
Fax to (507) 232 5851
For more information about ourselves
please visit our web site at
www.braswellshipyard.com



Cruise Industry/ East Coast Salesperson

Seeking a highly self-motivated, sales driven individual to prospect, qualify and sell customized repair and conversion solutions to the cruise and commercial marine industry located on the East Coast and Florida. Dealing directly with owners' representatives, naval architects and designers, individual will provide in-depth reviews/interpretations of customer inquiries and detailed project specifications. Responsible for performing sales presentations; effectively negotiating contracts to close business deals; generating/maintaining competitive database; coordinating technical/commercial details of projects; and assisting with setting sales strategies.

BS Degree in Naval Architecture/Marine Engineering or related field highly desired but other experience and education will be considered. Requires minimum 10 years sales or engineering experience (cruise), ability to analyze market conditions along with strong organizational, communication and computer skills. Knowledge of commercial contracts, blueprints, proposal writing, shipyard planning, project management and development of work specification required. Experience in fabrication, repair or maintenance facility preferred. Extensive domestic travel is necessary.

Location of this position is flexible, Mobile, AL or Miami, FL. Interested candidates, please send resume to: **Atlantic Companies, Attn: Human Resources Department, P.O. Box 3202 Main Gate Dunlap Drive, Mobile, AL 36652, Phone: 251-405-1416 or 1-800-650-9283, Fax: (251) 690-7890, Email: mhughes@atlanticmarine.com**



www.atlanticmarine.com
 Equal Opportunity Employer

ASSISTANT PORT ENGINEER

Immediate opening for assistant port engineer for tugboat company in Norfolk. One to two years experience on tugs preferred. Experience with EMD and Detroit Diesel engines a plus. Computer literacy a must. Responsibilities will include day-to-day maintenance and repair of small fleet of harbor tugs, off-shore tugs and push boats including documentation of all repairs.

Send resume to:

Assistant Port Engineer
P.O. Box 38400
Baltimore, MD 21231-8400
Or Fax: (410) 732-9623

BID NOTICE

Texas Department of Transportation (TXDOT) NOTICE OF BID

Sealed Bids will be received by TXDOT for the following:

1959 70 Vehicle/500 Passenger Motor Ferry Vessel (EH Thorton), Equip #10611, S/N 279295, Steel Hull, 245' Long, 66' Breadth, 9.5' Depth, 542 Tons with Dual Pilothouses, 2 Cooper Bessmer JS6T 6 Cyl. 865 HP Diesel/Electric Engines. One 25KW Generator, Magnetic compass, 2 Radars. 240 Life Vests and over 5,000 Misc. Cooper Engine Parts.

You may view the equipment located at Ferry Road, Hwy 87, Galveston TX 77550 by contacting Mr. Allen Decker at (409) 763-2386. Bid forms may be obtained by contacting the above. Bids will be accepted until 2:00 P.M. November 30, 2001, at which time they will be publicly read. Usual rights reserved.



The New Generation
 Energy Services Company

Join the CDI Team
 Always on the move
 Always looking for qualified professionals
 Excellent Pay/Excellent Benefits
 Visit our website at:
www.caldive.com
 Fax: 985-330-0396

PROFESSIONAL

AlcoTec
A Subsidiary of The ESAB Group, Inc.
AlcoTec Wire Corporation
Traverse City, Michigan 49686 / USA

- Premium Aluminum Weld Wire
- World Market leader
- Fully Integrated Manufacturing
- Welding Technology Leaders
- Design Consultation
- Trouble Shooting
- Customized Weld Schools

Phone (231) 941-4111 Fax (231) 941 9154
E-mail- sales@alcotec.com www.alcotec.com

BISSO MARINE

- HEAVY LIFT SPECIALIST
- MARINE SALVAGE
- WRECK REMOVAL
- SONAR SURVEY - DIVING

P.O. BOX 4113
NEW ORLEANS, LOUISIANA 70178
Phone: (504) 866-6341
Fax: (504) 865-8132
www.bismarco@aol.com

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



TELEPHONE (604) 736-9466
FACSIMILE (604) 736-9483
E-MAIL ral@ral.bc.ca
WEB www.ral.bc.ca

ROBERT ALLAN LTD.
NAVAL ARCHITECTS AND MARINE ENGINEERS

SUITE 230 - 1639 WEST 2nd AVENUE
VANCOUVER, B.C. CANADA V6J 1H3

Bludworth Cook Marine
ATB Flexible Connection Systems

Richard Bludworth
John Cook

Houston, Texas
(713) 644-1595
(281) 996-1414

rbludworth@hotmail.com
jcookmarine@aol.com
www.vesselrepair.com
(link)

GHS
General HydroStatics

Visit WWW.GHSport.com

Computer software for Naval Architects

hydrostatics, stability, strength, modeling
salvage simulations
onboard trim/stability/strength

CREATIVE SYSTEMS Inc.
CREATORS OF GHS
P.O. Box 1910 Port Townsend, WA 98368 USA

sales@ghsport.com
Phone: 360 385-6212
Fax: 360 385-6213



CT MARINE

• NAVAL ARCHITECTS • MARINE ENGINEERS •

- VAPOR RECOVERY
- TUGS
- TOWBOATS
- BARGES

Tel. 203-831-0405 Fax. 203-831-0407
56 CROOKED TRAIL, ROWAYTON CT. 06853
ctmarine@optonline.net

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 Fx: 203-226-5246
ANKERPAINT@aol.com

CDI CDI Marine Group

CDI Marine Company The M&T Company
904-805-0700 732-657-5600

Band, Lavis & Associates, Inc.
410-544-2800

Naval Architects • Marine Engineers
Naval Aviation Support

JACKSONVILLE, FL • BREMERTON, WA
ISLANDIA, NY • POTTSTOWN, PA
LAKEHURST, NJ • PATUXENT RIVER, MD
PASCAGOULA, MS • PORTSMOUTH, VA
SEVERNA PARK, MD

Email: manno@cdicorp.com Visit us at our web site at:
<http://www.cdimanegroup.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



ARTHUR D. DARDEN
INCORPORATED


NAVAL ARCHITECTS & MARINE ENGINEERS

3200 RIDGELAKE DRIVE, SUITE 403
METAIRIE, LOUISIANA 70002
(504) 832-3952 FAX (504) 832-3953

CDI Band, Lavis & Associates, Inc.
A CDI Marine Group Company

Naval Architects & Marine Engineers

900 Ritchie Highway
Severna Park, Maryland 21146
Tel: (410) 544-2800; Fax: (410) 647-3411;
E-Mail: bla@cdicorp.com
Web Site: www.edicorp.com/bla



CHILDS ENGINEERING CORPORATION

WATERFRONT ENGINEERING • DIVING INSPECTION

BOX 333 MEDFIELD, MA 02052 (508) 358 8845

DYER ELLIS & JOSEPH COUNSELORS AT LAW

Watergate, Eleventh Floor
600 New Hampshire Ave., NW
Washington, DC 20037
202-944-3000
FAX 202-944-3068

A PROFESSIONAL CORPORATION

www.dyerellis-maritime.com
E-mail: nav@dejlaw.com

BAYFRONT MARINE, INC.

EXPERT WORLDWIDE VESSEL DELIVERY SERVICE
EXPERIENCED PROFESSIONALS
Licensed
Masters, Engineers and Crews
Call Mel or Diane Longo (904) 824-8970

C.R. CUSHING & CO., INC.
NAVAL ARCHITECTS, MARINE ENGINEERS
& TRANSPORTATION CONSULTANTS

18 Vesey Street
NEW YORK, NY 10007

TEL. (212) 964-1180
FAX: (212) 285-1334 CRCUSHING@AOL.COM


311 Legget Drive
Kanata, Ontario, Canada
Phone: (613) 592 2830
Fax: (613) 592 4950

Trials and Instrumentation
Structural Assessment
Fatigue/ Fracture Experts
Shafting/Vibration Analysis
Performance Prediction
Model Testing

FTL FLEET TECHNOLOGY

PROFESSIONAL

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
PHILADELPHIA (215) 465-9573
SAN DIEGO (619) 425-4211


MARINE SYSTEMS • ANALYSIS & DESIGN

GIBBS & COX INC.
Naval Architects & Marine Engineers

50 West 23rd Street
New York, NY 10010
212-366-3900

Brunswick, ME Hampton, VA
207-721-8200 757-896-0200

Arlington, VA Philadelphia, PA
703-416-1240 215-952-0172

JOHN W. GILBERT ASSOCIATES, INC.
Naval Architects  *Marine Engineers*

(781) 740-8193 75 Terry Drive, Suite 200
FAX (781) 740-8197 Hingham, MA 02043

GLOBAL DIVING & SALVAGE, INC.



ENVIRONMENTAL PRODUCTS SALES & SERVICE

- Oil Containment Boom
- Sorbent Products - Marine/Commercial
- Complete Spill Response Packages
- Silt/Sediment - Curtain/ Boom
- Debris Boom
- Secondary Containment

24 Hour Emergency Service
(800) 441-3483

jhallmark@globaldivingandsalvage.com

GLOSTEN
The Glosten Associates, Incorporated

Naval Architecture Marine Engineering Transportation Analysis
Contract Administration

605 First Avenue, No. 600 Phone: (206) 624-7850
Seattle, WA 98104-2224 Fax: (206) 682-9117

CONSULTING ENGINEERS SERVING THE MARINE COMMUNITY

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

HERBERT ENGINEERING CORP.
2417 Mariner Square Loop, Suite 125
Alameda, CA 94501

Naval Architects • Marine Engineers • Marine Software Specialists

Tel: (510) 814-9700 E-mail: info@herbert.com
Fax: (510) 814-9763 <http://www.herbert.com>

CERTIFIED ISO 9002



JMS NAVAL ARCHITECTS SALVAGE ENGINEERS
The sea-going naval architects.

860-448-4850 • jmsnet.com

John J. McMullen Associates, Inc.
An Employee Owned Company



**Naval Architects
Marine Engineers
Program Support Specialists**

Alexandria, VA • Annington, VA • New York, NY
Newport News, VA • Pascagoula, MS • Pittsburgh, PA
Bath, ME • Port Hueneme, CA • Bremerton, WA
Philadelphia, PA • San Diego, CA • Tacoma, WA
Charleston, SC • Quantico, VA • New Orleans, LA

Corporate Headquarters:
4300 King Street, Suite 400, Alexandria, VA 22302
Business Development: (703) 933-6690 Fax: (703) 933-4777
Web Site: www.JJMA.com Email: Marketing@JJMA.com

Michael R. Keough, CPC
KEOUGH ASSOCIATES



124 Garretson Avenue
Staten Island, NY 10304-2830
PH: (718) 979-8698 Fax: (718) 667-8347

Our 25th Year, Providing Executive Search & Technical Recruitment Services to the Maritime Community and Supporting Industries.

MSC MARINE SYSTEMS CORPORATION
MARINE ENGINEERS / NAVAL ARCHITECTS

HM&E Design **Drawings** **Logistic Support**
Inspection **Vibration** **Testing Programs**

68 FARGO STREET, BOSTON, MA 02210 INEO @ MSCORP.NET
TEL: (617) 542-3345 FAX (617) 542-2461 WWW.MSCORP.NET

US/GLOBAL... WE DELIVER



- Delivery of vessels from 50 feet, to 5000 gross tons.
- An Experienced Team of Expert Licensed Masters, Engineers, Certified Marine Surveyors/Consultants.
- 25+ years of No Accidents/No Incidents Operations.

MARNAV INTERNATIONAL Ltd.
800-217-5059 • mni@mar-nav.com • Fax 360-697-9450

MCA ENGINEERS, INC. 

- * Marine Structural Engineering (FEA, Fatigue,...)
- * Hull Monitoring System (Motions, Stress,...)
- * Ship Repair Analyses & New Designs
- * Mooring Master (Analyses / Monitoring)
- * Vessel Information Archive System (Multimedia)
- * FracTrac Relational DataBase
- * Ultrasonic Leak Detection


e-mail: info@mcaengineers.com
web-site: www.mcaengineers.com
Phone: (714) 662-0500 Fax: (714) 668-0300
2960 Airway Ave., A-103, Costa Mesa, CA 92626

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., 71 Hudson Street, New York, N.Y. 10013, Tel. (212) 962-1590 Fax (212) 385-0920, E-mail rmellusi@tdt.net.com

Alan C. McClure Associates, Inc.
NAVAL ARCHITECTS • ENGINEERS



2600 South Gessner • Suite 504 • Houston, Texas 77063
(713) 789-1840 • (713) 789-1347 Fax

MIL Systems
Naval Architects & Marine System Engineers

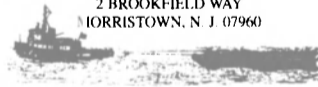


1150 Morrison Drive, Tel.: (613) 726-0500
Ottawa, Ontario K2H 8S9 Fax: (613) 726-0252
www.milsystems.com quality@milsystems.com

MOSS MARINE USA, Inc.
Naval Architects, Marine Engineers, Surveying & Repair

410-542-8775 fax 410-542-8115
Baltimore, MD 21209
www.mossmarineusa.com

MOWBRAY MARINE SALES INC.



2 BROOKFIELD WAY
MORRISTOWN, N.J. 07960

PHONES: (973) 984-2295 1-800-762-9383
NIGHT: (973) 538-1789
FAX: (973) 984-5181

SPECIALISTS IN BUYING, SELLING AND RENTING TUGBOATS • BARGES CONTRACTORS FLOATING EQUIPMENT

YOUR MARINE CONSULTANTS

Modern Maritime, Inc.
Modern Solutions for the Traditions of the Sea

Safety, Quality and Environmental Management Systems



- Consulting
- Implementation
- Administration
- Document Control

1-800-876-8969
or
www.modernmaritime.com

PROFESSIONAL



NATIONAL ASSOCIATION OF MARINE SURVEYORS, INC.
established 1962

WE ARE THE OLDEST U.S. ORGANIZATION for CARGO, HULL & MACHINERY and YACHT SURVEY.

For a NAMS surveyor in your area, call
1-800-822-6267
fax: (757) 488-0584 e-mail: office@Nams.cms.org
www.nams-cms.org

BRS
Barry Rogliano Salles USA LLC
Shipbrokers and Consultants

Provides brokerage and consulting services for the sale, purchase, finance and chartering of ships or new build projects in the maritime and offshore industry.


5177 Richmond Avenue, Suite 1142 Houston, TX 77056
Tel: 713-871-8900 Fax: 713-871-9688 www.brs-houston.com

VIBTECH, INC. NAVAL ARCHITECTURE
MARINE ENGINEERING
STRUCTURES
VIBRATION
SHOCK
NOISE



FAST SHIP DESIGN
MAIN OFFICE: 125 STEAMBOAT AVENUE,
NORTH KINGSTOWN, R.I. 02852
E-mail: Vibtech@ids.net

CRUISE SHIP SPECIALISTS



Nautical Designs Inc.
NAVAL ARCHITECTS / MARINE ENGINEERS
2101 S. ANDREWS AVE. FT. LAUDERDALE, FL. 33316 PH. (954) 463-2033

SARGENT & HERKES, INC.
NAVAL ARCHITECTS • MARINE ENGINEERS
225 BARONNE ST., SUITE 1405
NEW ORLEANS, LA 70112
504-524-1612 • 504-523-2576 (Fax)
E-mail: sahinc@bellsouth.net

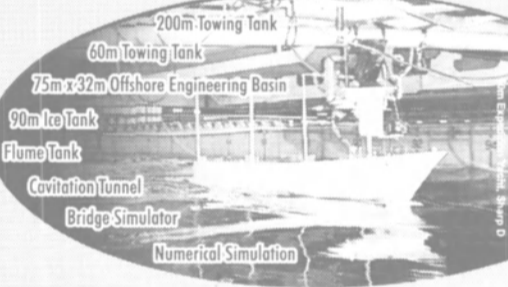
OCEAN ENERGY SYSTEMS
Naval Architects & Marine Engineers
505 N. Sam Houston Pkwy, Suite 320
Houston, TX 77060
Phone: 281-820-4200 Fax: 281-820-2440
Web Site: <http://www.oceaneng.com>

Schrider & Associates, Inc.
Naval Architects Marine Engineers

P.O. Box 2546 Office: (251) 621-1813
Daphne, AL 36526 Fax: (251) 626-1814
E-mail: info@schriders.com

Technical and Managerial Solutions for Shipyards & Vessel Owners

OCEANIC CONSULTING CORPORATION



200m Towing Tank
60m Towing Tank
75m x 32m Offshore Engineering Basin
90m Ice Tank
Flume Tank
Cavitation Tunnel
Bridge Simulator
Numerical Simulation

P.O. Box 28009 St. John's Canada A1B 4J8 <http://www.oceaniccorp.com>
Email: oceanic@oceaniccorp.com Tel: (709) 722-9060 Fax: (709) 722-9064

sms
Scientific Marine Services, Inc.

Naval Architects, Instrumentation Engineers, Ocean Engineers
Mechanical Engineers, Software Engineers, Coastal Engineers

Member of The BMT Group of Companies

Houston, Texas Tel: (281) 458-8000 Fax: (281) 458-0988
Escondido, California Tel: (760) 727-0600 Fax: (760) 727-0250

MARINE INSTRUMENTATION TRIALS and TESTING HULL MONITORING SYSTEMS

Seaworthy Systems, Inc.

ISO 9001
MARINE ENGINEERS AND NAVAL ARCHITECTS
Essex, CT 06426
(860) 767-9061; Fax: (860) 767-1263; www.seaworthysys.com
SAN FRANCISCO • PHILADELPHIA • WASHINGTON, DC

Ocean Tug & Barge Engineering Corporation
Milford Common Professional Office Bldg.
258 Main Street, Suite 401
Milford, MA 01757

Phone: 508-473-0545
Fax: 508-244-6004
Email: rhill@oceantugbarge.com
Internet: www.oceantugbarge.com

OCEAN TUG & BARGE ENGINEERING



Robert P. Hill
President
20 Years Experience in AT/B Design

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

PRO-DIVE INC.
Complete and Professional Diving Services

501 Illinois Avenue, P.O. Box 663, Ottawa, IL 61350
Phone: (815) 433-5228 Fax: (815) 434-2433

Randy Jacobs President 24-HR. SERVICE
e-mail: prodive@theramp.net

SURVIVAL SYSTEMS INTERNATIONAL



931 Industry Road
Kenner LA, 70062

LIFEBOAT INSPECTION, REPAIRS, PARTS.
PHONE: (504) 469-4545, FAX: (504) 466-1884.
E-mail: lifeboatserv@earthlink.net

RADIAN WWW.RADIANINC.COM

- Marine Engineering
- Marine Safety
- Vessel Operations
- International Marine Services
- Marine Electrical Systems
- Life-Cycle Management

Radian Inc.
5845 Richmond Hwy. - Alexandria, VA 22303
Phone: (703) 329-9300 - or - (800) 593-5593

VIBRANALYSIS ENGINEERING CORP

- PREDICTIVE MAINTENANCE PROGRAMS
- VIBRATION ANALYSIS
- FIELD & SHOP BALANCE
- ACOUSTICAL CONSULTANTS
- COMPUTERIZED DATA COLLECTION
- MARINE APPLICATIONS - IR/THERMAL IMAGING

VIBRANALYSIS ENGINEERING CORP 800-553-1614
9300 Gamebird 713-944-3633
Houston, TX 77034 Fax: 713-944-8797

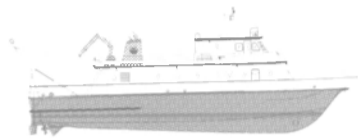
United States Postal Service
Statement of Ownership, Management, and Circulation

1. Publication Title: MARITIME REPORTER & ENGINEERING NEWS
2. Publication Number: 118 EAST 25TH ST. NEW YORK, NY 10010
3. Filing Date: OCTOBER 2001
4. Issue Frequency: MONTHLY
5. Number of Issues Published Annually: 12
6. Annual Subscription Price: NONE
7. Complete Mailing Address of Known Office of Publication (Not printer, sales, and distribution):
MARITIME REPORTER & ENGINEERING NEWS
118 EAST 25TH ST. NEW YORK, NY 10010
8. Complete Mailing Address of Headquarters or General Business Office of Publisher (Not printer):
MARITIME REPORTER & ENGINEERING NEWS
118 EAST 25TH ST. NEW YORK, NY 10010
9. Full Name and Complete Mailing Address of Publisher, Editor, and Managing Editor (Do not leave blank):
JOHN F. O'MALLEY
MARITIME ACTIVITY REPORTS
118 EAST 25TH ST. NEW YORK, NY 10010
GREG TRAUTHMANN
MARITIME ACTIVITY REPORTS
118 EAST 25TH ST. NEW YORK, NY 10010
REGINA CIARDIELLO
MARITIME ACTIVITY REPORTS
118 EAST 25TH ST. NEW YORK, NY 10010
10. Owner (Do not leave blank. If the publication is owned by a corporation, give the name and address of the corporation immediately followed by the names and addresses of all stockholders owning or holding 1 percent or more of the total amount of stock. If not owned by a corporation, give the name and address of the individual owner. If the publication is published by a partnership or other unincorporated firm, give its name and address as well as those of each individual owner. If the publication is published by a proprietor, give its name and address.)
Full Name Complete Mailing Address
JOHN F. O'MALLEY MARITIME ACTIVITY REPORTS
JOHN C. O'MALLEY 118 EAST 25TH ST.
NEW YORK, NY 10010
11. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages, or Other Securities. If none, check box.
Full Name Complete Mailing Address
12. Tax Status (For completion by nonprofit organizations authorized to mail and non-profit rates) (Check one)
 The publication is not a nonprofit organization.
 The publication is a nonprofit organization.
 Has Changed During Preceding 12 Months
 Has Changed During Preceding 12 Months (Publisher must submit explanation of change with this statement)

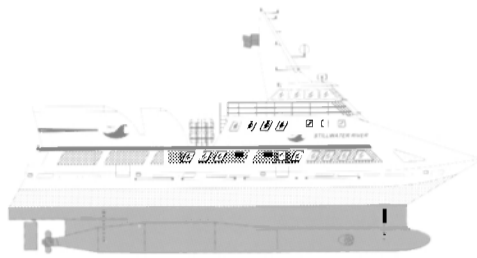
13. Publication Title: MARITIME REPORTER & ENGINEERING NEWS
14. Issue Date for Circulation Data Below: SEPTEMBER 2001

15. Extent and Nature of Circulation	Average No. Copies Each Issue During Preceding 12 Months	No. Copies of Single Issue Published Nearest to Filing Date
a. Total Number of Copies (Net press run)	32,550	29,667
b. Paid and/or Requested Circulation (Sum of 16i and 16j)	30,140	27,144
i. Paid in-Country Subscriptions (State on Form 3541)	0	0
ii. Paid Outside-Country Subscriptions (State on Form 3541)	0	0
iii. Sales Through Dealers and Carriers, Street Vendors, Counter Sales, and Other Non-USPS Paid Distribution	0	0
iv. Other Classes Mailed Through the USPS	0	0
v. Total Paid and/or Requested Circulation (Sum of 16b i, ii, iii, iv, and v)	30,140	27,144
c. Free Distribution Outside the Mail (Carriers or other means)	712	489
d. Total Free Distribution (Sum of 16c and 16d)	712	489
e. Total Distribution (Sum of 16b and 16d)	30,852	27,633
f. Copies not Distributed	392	835
g. Total (Sum of 16e and 16f)	32,550	29,667
h. Return Paid and/or Requested Circulation (Do not check if 15c is not 100)	92,64	92,24
16. Publication Title: MARITIME REPORTER & ENGINEERING NEWS 17. Issue Date for Circulation Data Below: NOVEMBER 2001 18. Publication Title: MARITIME REPORTER & ENGINEERING NEWS 19. Issue Date for Circulation Data Below: 10/14/2001 <p>Instructions to Publishers 1. Complete and file one copy of this form with your postmaster annually on or before October 1. Keep a copy of the completed form for your records. 2. In cases where the stockholder or security holder is a trustee, include in items 10 and 11 the name of the person or corporation to whom the trustee is acting. If a trustee, include the name and address of the individual who is stockholder who own or hold 1 percent or more of the total amount of stock, mortgages, or other securities of the publishing corporation. In item 11, if none, check the box. Use blank sheets if more space is required. 3. Be sure to furnish all circulation information called for in item 15. Free circulation must be shown in items 15c, d, and e. 4. Item 15b - Copies not Distributed, must include (1) relevant copies originally stated on Form 3541, and returned to the publisher (2) expanded returns from news agents, and (3) copies for office use, reference, libraries, and all other copies not distributed. 5. If the publication has Periodicals authorization as a general or requester publication, this Statement of Ownership, Management, and Circulation must be published; it must be printed in any issue in October or, if the publication is not published during October, the last issue printed after October. 6. In item 15, indicate the date of the issue in which this Statement of Ownership will be published. 7. Item 17 must be signed. Failure to file or publish a statement of ownership may lead to suspension of Periodicals authorization. PS Form 3526, October 1999 (Revised)</p>		

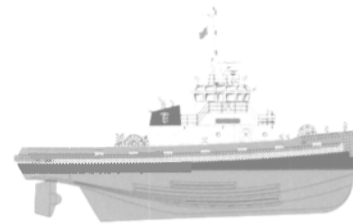
Diversification



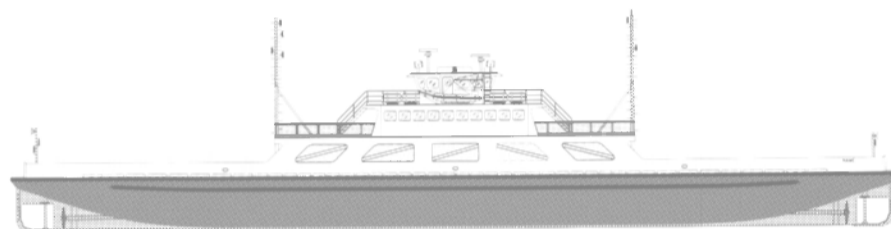
96' Research Vessel



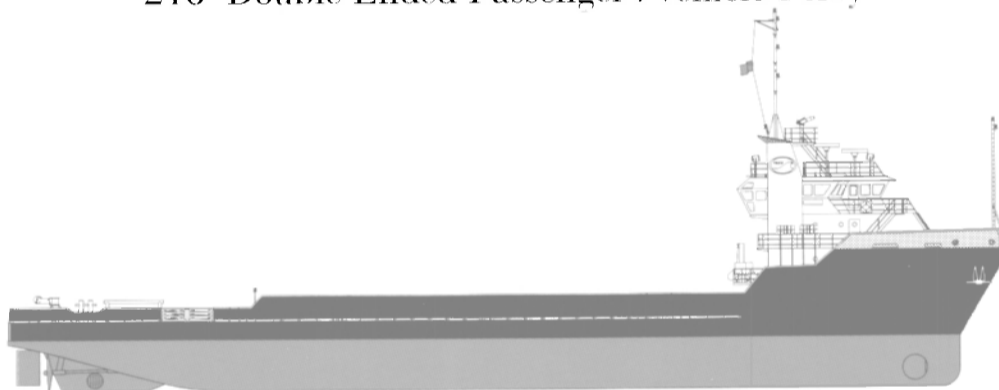
120' Aluminum SWATH



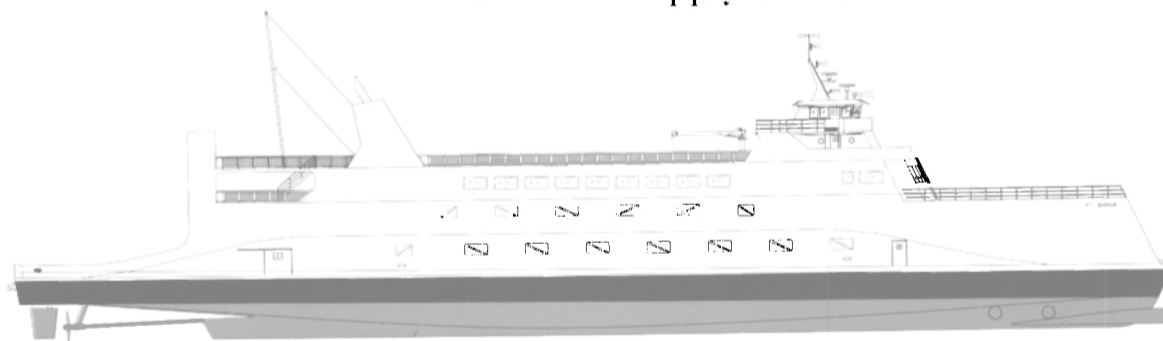
110' Z-Drive Tug



216' Double Ended Passenger /Vehicle Ferry



232' DP Platform Supply Vessel



306' Passenger /Vehicle Ferry

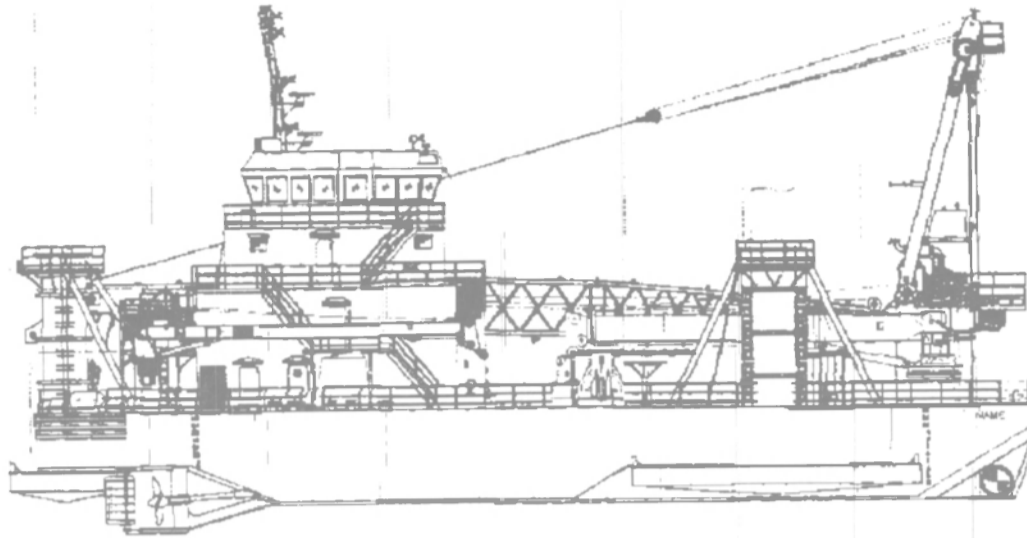
New Construction, Conversions, Repairs

Eastern Shipbuilding Group

P.O. Box 960, 2200 Nelson Street, Panama City, Florida 32402. Phone 850-763-1900. Fax: 850-763-7904
Website: www.easternshipbuilding.com email: info@easternshipbuilding.com

Circle 237 on Reader Service Card or visit www.maritimereporterinfo.com

KARL SENNER, INC...WHEN ONLY THE BEST WILL DO



MONTCO LIFT BOAT

Karl Senner, Inc. has been awarded the contract to supply the propulsion system for Montco, Inc.'s Lift Boat which is currently under construction at Bollinger Shipyards, Inc. This lift boat is the first of its kind using Berg controllible pitch propellers, bow thrusters and Reintjes marine gears which make it a breakthrough in its field of operation.

Karl Senner, Inc.'s Propulsion Package Includes:

Two (2) Reintjes LAF 762, Vertical Offset Reduction Gears,
with a Reduction Ratio of 5.136:1

Two (2) Berg C.P. 580 D/4 Propeller Systems

One (1) Berg SPF 3.5 Bow Thruster

Owner: Montco, Inc., Golden Meadow, Louisiana

Designed and built by: Bollinger Shipyards, Inc., Lockport, Louisiana

REINTJES
MARINE GEARBOXES

BERG PROPULSION
CONTROLLABLE PITCH PROPELLERS
AND BOWTHRUSTERS

ABB
TURBOCHARGER SERVICE

REINTJES
MARINE CONTROLS

SALES, PARTS, SERVICE • 500 H.P. TO 20,000 H.P.

website: <http://www.karlsenner.com> sales@karlsenner.com service@karlsenner.com parts@karlsenner.com



Karl Senner, Inc.

WEST COAST
Karl Senner, Inc.
12302 42nd Drive S.E.
Everett, WA 98208
Mr. Whitney Ducker
(425) 338-3344

NEW ORLEANS
Karl Senner, Inc.
25 W. Third St.
Kenner, LA 70062
(504) 469-4000
Telefax: (504) 464-7528

EAST COAST
Olof Wadehn Enterprises
30 Sheppard Lane
Huntington, Long Island
New York 11743
Mr. Olof Wadehn
(631)692-4548

Visit our website at <http://www.karlsenner.com>

Circle 275 on Reader Service Card or visit www.maritimereporterinfo.com