

January 2000

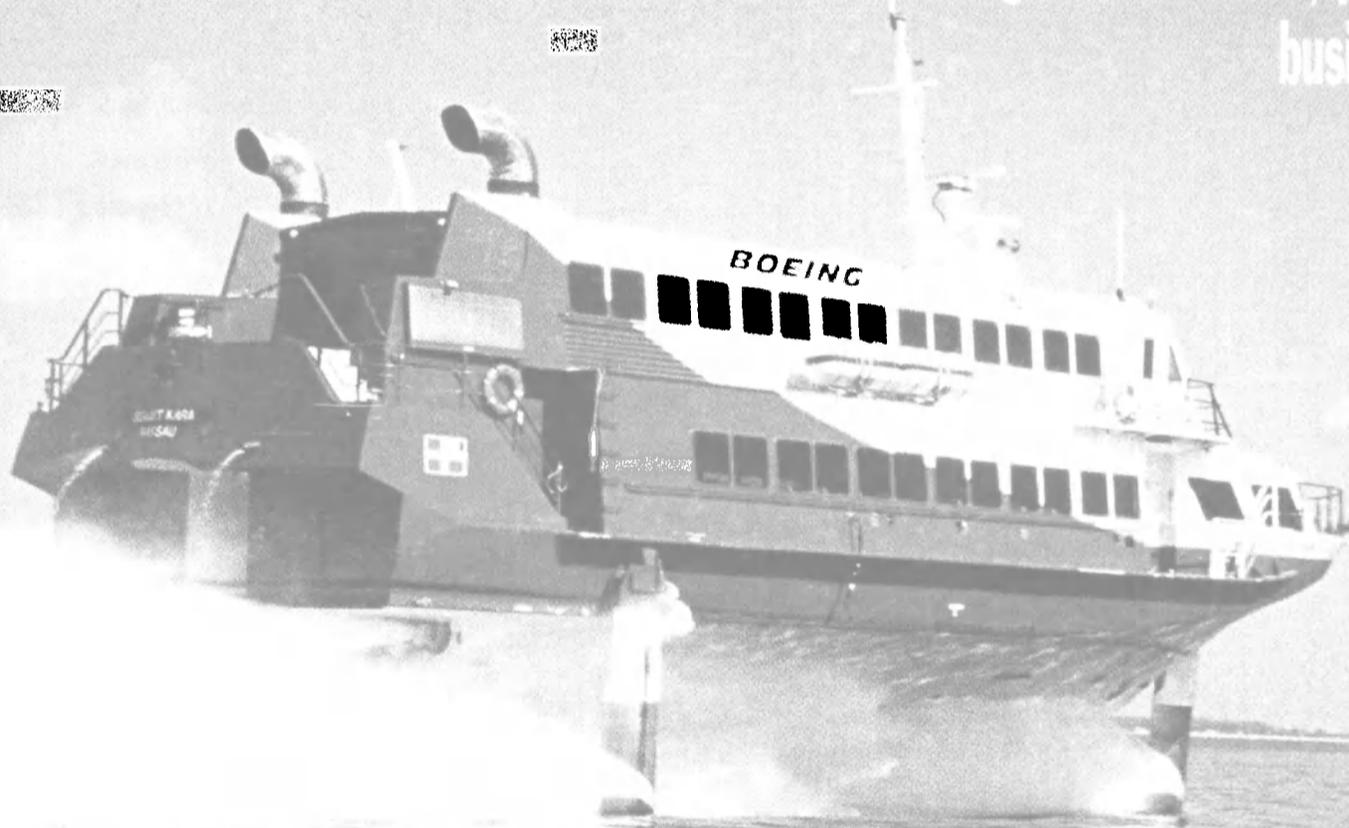
# MARITIME REPORTER AND ENGINEERING NEWS

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

The Passenger Vessel

# Pick-Me-Up

from Pascagoula to Piraeus, passenger vessel  
business is booming



TBT Debate

What is the real cost to ship owners?

Cruising With Style

New "boutique" cruise catamaran from Down Under debuts in French Caribbean

Marine Propulsion Directory • Ferlship's New Ship Contracts • ABS Bunker Fuel Quality Report

Monitoring & Control Equipment • Marine Products Catalog • PVA Preview



*Global Marine's  
GLOMAR EXPLORER  
undergoing conversion for  
ultra-deepwater drilling  
at Atlantic Marine, Inc.*



## FOR YOUR OFFSHORE REPAIRS & CONVERSIONS, YOUR SCHEDULE IS OUR SCHEDULE.

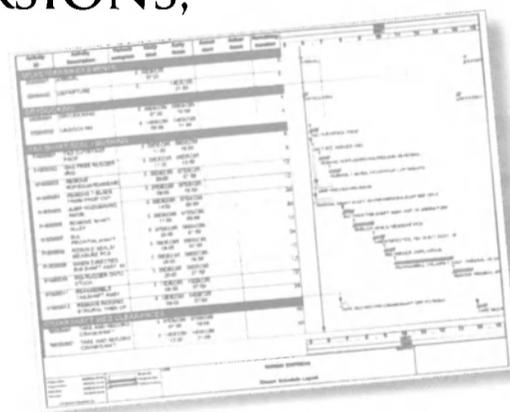
**O**ur 7-day a week straight time production schedule means a fast turnaround for your offshore projects.



- On-time delivery
- Competitive pricing
- Gulf of Mexico location
- ISO-9002 certified

We have many satisfied customers in the drilling, seismic and dive-support sectors. Call us today to discuss your repair & conversion projects.

Visit our website [www.atlanticmarine.com](http://www.atlanticmarine.com)



## **Atlantic Marine, Inc.**

*a subsidiary of Atlantic Marine Holding Company  
of Jacksonville, Florida*

P.O. Box 3202, Mobile AL 36652  
tel (334) 690-7108, fax (334) 690-7107  
email [amisales@atlanticmarine.com](mailto:amisales@atlanticmarine.com)

For centuries  
this was  
the maritime  
industry's  
most  
important  
navigation  
device.

Soon,  
this  
will be.



MAREX.com is building the largest online maritime industry parts and supplies exchange in the world. When it's launched, your company will be able to set a course directly into markets that have been too costly to service through traditional sales offices or distributors.

Whatever you've got to sell — fire fighting gear, engine parts, compressors, free-fall life boats, generators, cranes, or any of thousands of other industry specific parts or equipment — MAREX.com will put it in front of prospective buyers around the world. Using the worldwide reach of MAREX.com to expand your customer base, you'll lower your costs while increasing your sales.

MAREX.com is changing the way the maritime industry does business. And that's good news for your business. To see how your company can expand its markets at lower cost, just sign on at [www.marex.com](http://www.marex.com).

Or, call toll-free 1-888-451-4111.



**MAREX** .com

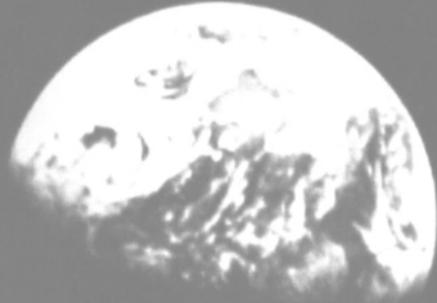


MAREX.com is a member of ABBRA and NMMA.

Circle 237 on Reader Service Card

Sample Maritime Week @ [www.marinelink.com](http://www.marinelink.com)

# For a world of maritime information



## ... get The Source

*Maritime Week* — the only industry weekly dedicated solely to the maritime market — is designed to deliver to you the world of maritime industry information 52 weeks a year.

*Maritime Week's* international network of reporters and information sources offers an unmatched array of timely features, news, data and analysis.

Please mail check and form below to: **Maritime Week Subscriptions, 118 East 25th St., New York, NY 10010; or fax to: +212-254-6271**

Sign me up for 1 year (52 issues) at the special rate of \$99.00\* (SAVE 66% off Regular Subscription Price)

Sign me up for a 6-month trial (26 issues) for just \$59.00  
(\*Subscriptions outside the U.S. & Canada: \$199.00/year; \$129.00/6 months)

Name/Title \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

Country \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_

E-Mail \_\_\_\_\_

Please bill my company  Check Enclosed

VISA  MASTERCARD  American Express

Account No. \_\_\_\_\_

Exp. Date \_\_\_\_\_ / \_\_\_\_\_

Signature \_\_\_\_\_

mr/en 00

# MARITIME REPORTER

AND  
ENGINEERING NEWS

ISSN-0025-3448  
USPS-016-750

No. 1

Vol. 62

Founder: John J. O'Malley 1905 - 1980

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.

**On the Cover:** SeaJets, the Palm Beach-based Jetfoil departed the Port of Palm Beach on November 6, 1999, inaugurating regular service of the jets into Grand Bahama Island. Combining their innovative and high speed operation, the jets are able to cover the 65 nautical miles between the Port and the Island in 99 minutes. Flying over the sea's surface, the JetFoil leaves no wake and can absorb shock waves up to 19 ft. (5.7 m) — with little or no movement in passenger cabins. The only two JetFoil operations operating from U.S. ports, the recently refurbished Boeing 929 jets can accommodate up to 250 passengers.

### 8 Ship Shape

Technical editor David Tinsley investigates marine electronic innovations, headlined by Kelvin Hughes' new flat screen bridge system.

### 17 Marine Propulsion Guide

Marine propulsion technology highlights include the installation of the first Mermaid "pod." A to Z listing of marine propulsion companies.

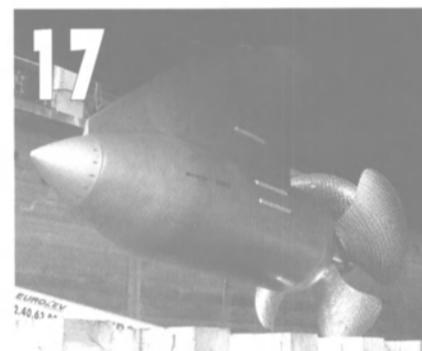
### 26 Passenger Vessel Report

- Rivages Crossieres receives new luxury liner
- United States Lines is flying high
- Hornblower meets, beats operational challenges

plus... **GREAT BOATS of 1999**

### 46 Bye, Bye Billions

Failing to find a suitable alternative to TBT coatings could cost shipowners nearly \$1 billion per year.



### 13 Contracts

### 20 Monitoring & Control

### 24 Ship Repair & Conversion

### 50 ABS Bunker Fuel Analysis

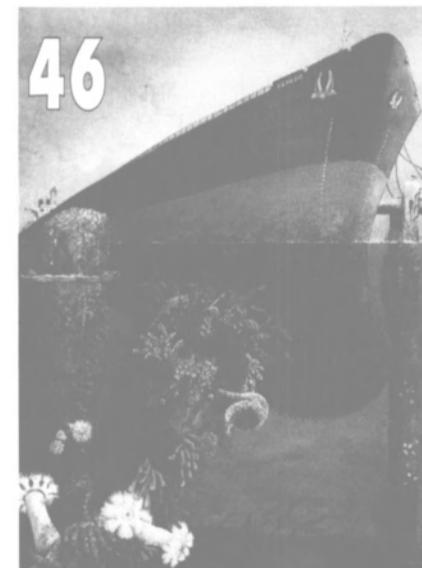
### 53 Marine Products

### 68 Ferlship's New Shipyard Orders

### 69 Buyers Guide

### 72 Advertiser's Index

### 73 Classifieds



**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](mailto: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.  
© 2000 Maritime Activity Reports, Inc.

Member

**BPA**  
INTERNATIONAL®  
Business Publications  
Audit of Circulation, Inc.



*The World's Most Accurate GPS Navigator!*

***Leica's revolutionary MX480 professional chart navigation system combines the ultimate in accuracy and graphics.***

The MX412B, professional DGPS navigator, complete with a 12 parallel channel GPS receiver, combined antenna, and a full suite of navigation features, satisfies even the most discriminating mariner. Add the industry's best data display, on which you can easily view critical navigation information from a distance under any lighting condition. It's easy to see why the MX412B has become the professional's choice in GPS

Call Leica Geosystems at: 310 791 5300 (USA), + 45 44 54 03 00 (Europe), or [www.leica.com/gps](http://www.leica.com/gps)

navigation. The unique interactive MX480 system integrates precise data from the MX412B with brilliant color graphics. Despite the weather, you immediately and clearly see your vessels position with amazing accuracy. Chart your course to our web page, or call Leica GPS to discover more about Leica's unique solution to navigation. Call 310 791 5300 (U.S. & Canada) or call your local representative.

*Leica*

MADE TO MEASURE

Circle 234 on Reader Service Card

Coming in MR/EN

February

**CRUISE SHIPPING ANNUAL** • Cruise Ship Marine Products Catalog • **NavCom Electronics Selection Guide** • Marine Engineering: Advanced Welding Techniques • **Country Focus: Finland**

March

**SHIP REPAIR & CONVERSION** • AWO Annual • **Marine**

**Engineering: Innovative Marine Materials** • Software Solutions • **Marine Electronics Yearbook** • Country Focus: Japan

April

**OFFSHORE ANNUAL** • Satellite Communications Guidebook • **Safety at Sea** • Engine Performance Products • **Country Focus: Norway**

Get connected @ [www.marinelink.com](http://www.marinelink.com)

# MARITIME REPORTER

& ENGINEERING NEWS

**Editorial & Executive Offices**  
118 E. 25th St., NY, NY 10010  
Tel: (212) 477-6700; Fax: (212) 254-6271  
e-mail: [mren@marinelink.com](mailto:mren@marinelink.com)

**PUBLISHERS**

Charles P. O'Malley  
John E. O'Malley  
John C. O'Malley

**Vice President/Editorial Director**

Gregory R. Trauthwein

**EDITORIAL**

**Assistant Editor**

Regina P. Ciardiello

**Technical Editor**

David Tinsley

**Editorial Consultant**

James R. McCaul, president,  
International Maritime Associates

**Manager of Information Systems**

Susan Cosme

**MARKETING**

**Marketing Manager**

Mark Manziano

**PRODUCTION**

**Production Manager**

Adam Hellman

**Asst. Production Manager**

Oksana Mortemy

**CIRCULATION**

**Circulation Manager**

Dale L. Barnett

**ADVERTISING SALES**

**Director of Sales**

Lucia Annunziata

**Regional Sales Manager**

Angela Crisolo

**Regional Sales Manager**

Robert C. Howard

Tel: (561) 368-4233

**Regional Sales Manager**

Brett Keil

Tel: (561) 368-6538

**Classified Sales Representative**

Carrie Rivera

**Assistant to Director of Sales**

Jennifer Truman

**WEST COAST**

Amy Stewart

1126 Ninth Street

Manhattan Beach, Co., 90266

Tel: (310) 374-1085; Fax: (310) 374-1436

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

**U.S. GULF COAST**

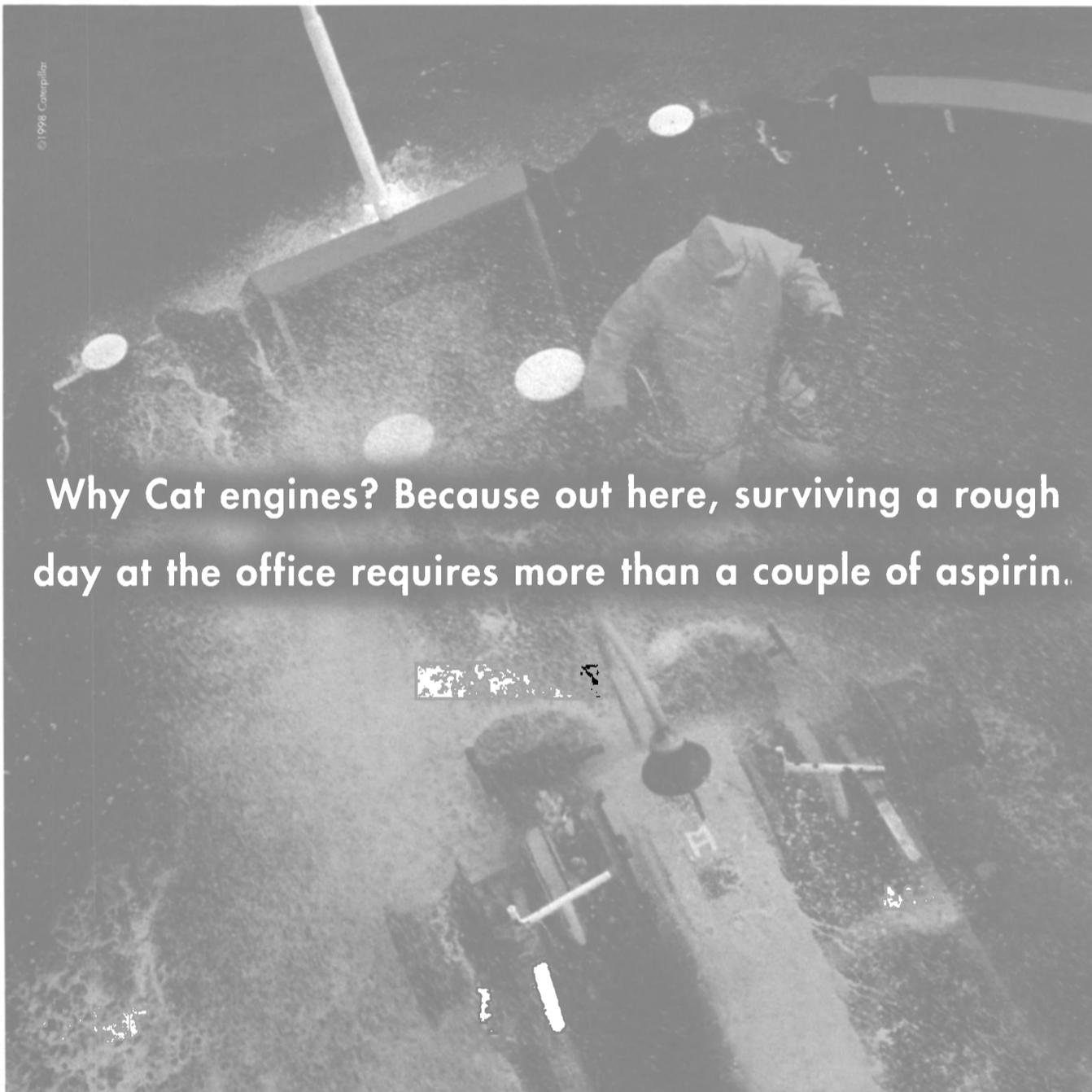
James N. McClintock

Simpson Corporate Park, Indigo House, Suite A, 206

South Tyler Street, Covington, La. 70433

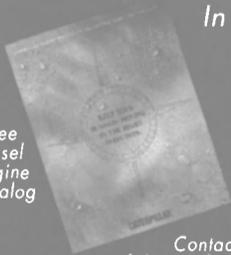
Tel: (504) 893-5099; Fax: (504) 893-5024

Advertising Sales Information  
Telephone: +212-477-6700



Why Cat engines? Because out here, surviving a rough day at the office requires more than a couple of aspirin.

Free Diesel Engine Catalog



Contact us at one of the numbers below.

*In rough weather, you learn what your engine is made of.*

*In the case of Cat® engines, that would be the best design, components and support available.*

*To learn more, hail us by phone, fax or e-mail.*

*After all, rugged seas call for rugged engines.*

Cat Marine Engines are rated from 200-9600 bhp (150-7200 kW)  
North America: 800-321-7332 • Worldwide: 309-578-6298 • Fax: 309-578-2559 • E-mail: [CAT\\_Power@Cat.com](mailto:CAT_Power@Cat.com)

**CATERPILLAR**

Circle 211 on Reader Service Card

# MARINE ENGINEERING TRAINING



The United States Merchant Marine Academy (USMMA) at Kings Point, New York is one of the five federal service academies and the America's premier maritime institution. Along with the undergraduate program, USMMA offers the most extensive maritime and transportation continuing education program in the United States. Most courses are one to two-weeks in duration.

We teach over 35 Marine Engineering courses and over 100 other courses in Nautical Science, Maritime Business, and Intermodal Transportation. Our instructor staff includes outstanding USMMA faculty, guest lecturers, and industrial experts. "Hands-on" lab exercises compliment classroom lecture where we use the Academy's 22 magnificent engineering laboratories and waterfront vessels. In addition to regularly scheduled courses, we can also tailor programs to meet specific company or organization needs.

## Marine Engineering Training

(Over 35 Engineering Programs such as:)

### 5 Week Diesel Propulsion Systems

\*\*\*USCG Approved Crossover Course, good for 75 sea days\*\*\*

### 5 Week Steam Propulsion Systems

\*\*\*USCG Approved Crossover Course, good for 120 sea days\*\*\*

### Repair Techniques for Slow/Medium Speed Diesels

Shipboard Electronic Control Systems

Basic and Advanced Welding/Pipefitting

Basic and Advanced Machine Shop

Auxiliary Systems for Marine Engineers

Sulzer Control Systems

Fundamentals of Diesel Engines

Pump Operation, Maintenance and Troubleshooting

Marine Diesel Surveyor

Marine Refrigeration

\*\*\*Certified under the new Environmental Protection Agency\*\*\*

Marine Engineering Economics

Ship Maintenance and Repair

Basic and Advanced Alignment

Qualified Member of the Engine Department - QMED

\*\*\*USCG Approved Course, good for 90 Sea Days\*\*\*

**\*\*\*CUSTOMIZED TRAINING PROGRAMS  
ALSO AVAILABLE !!!**



FOR MORE INFORMATION, PLEASE  
CONTACT:

United States  
Merchant Marine Academy  
Continuing Education  
Samuels Hall  
300 Steamboat Road  
Kings Point NY 11024-1699

Phone: 516.773.5149

Fax: 516.773.5353

E-mail: frangoss@usmma.edu

Internet:

[www.usmma.edu/ce/coned.htm](http://www.usmma.edu/ce/coned.htm)

***Vision: To be a world leader in providing professional maritime continuing education and training***

## Editor's Note

While many facets of the maritime market remain stuck in the doldrums, the passenger vessel end of the market is one which should continue to expand robustly through the coming year and far beyond. The cruise ship market continues its stampede forward, with 13 new ships and more than 16,000 berths coming on line in 1999 and 14 ships and more than 18,600 new berths scheduled to be delivered in 2000. On the smaller passenger vessel side, a significant development occurred last month when Australia's Austal Ships announced its new partnership with Bender Shipbuilding to construct a new facility in the Mobile area and vigorously pursue both passenger vessel and government contracts. As an industry leader in the design and construction of aluminum fast craft, this should serve as a strong signal that the U.S. passenger vessel prospects are positioned to perk up.

While most of the news emanating from the passenger vessel sector is positive, there are some disturbing trends which will command increasing attention from owners, builders and suppliers. There are an increasing number of lawsuits being brought about by passengers against carriers in the case of accident or mechanical failure. London law firm Lawrence Graham, in fact, has warned that cruise shipping companies are increasingly vulnerable, and that shipping companies in general can expect to face more stress at work personal injury claims.

The latest potential suit to the long list of litigation in 1999 revolves around reported engine problems on Carnival's Paradise, which was said to have hampered the millennium celebrations of several hundred passengers. At press time there were reports that there was a lawyer — who happened to be onboard the ship — who was chosen to head a committee to pursue a "possible" suit against the carrier. While it is understandable that passengers should expect comfort, safety and service to be the highest priority, it should similarly be noted that the litigation-happy public seems more than willing to take passenger vessel owners to court, and prudent protection measures should be enacted.

*Gregory R. Franthum*



## International Representatives

### INTERNATIONAL OPERATIONS

CHARLES E. KEIL, Vice President  
4400 N. Federal Highway, Ste. 121, Boca Raton, FL 33431  
Telephone: +561-368-1021; Fax: +561-368-1161  
24-hr Tel/Fax: +561-998-0313; Mobile Tel: +561-716-0338

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

### Australia/New Zealand

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

### Argentina

R. LESLIE RAMSAY  
Calle Pellegrini 173  
Primer Piso, Departamento C  
1009 Buenos Aires, Argentina  
Tel: +54 1 394 8821; Fax: +54 1 326 4377

### Benelux

PAULA TACQ  
Maritime Media ML  
Otweg 18 2771 VX Boskoop, Netherlands  
Tel: +31 172 230707; Fax: +31 172 230708

### Brazil

JOSE DUARTE DOS SANTOS  
Multipla Agencial Maritima, Ltda.  
Rua Caralino Rodrigues 28  
Cuarto Andar, CEP-11055-070  
Santos, Sao Paulo, Brazil  
Tel/Fax: +55 1 32 32 74 74

### Central America

EDUARDO F. LOPEZ/ISELA BAZAN  
Transmarine Media Services, P.O. Box 8579,  
Balboa Ave., Panama 5, Panama  
Tel: +507 617 1469; Fax: +507 223 8367

### China

WANG ZE/XU XIAO FENG  
Liaoning Foreign Trade Advertising Corp.  
2 Zhongshon Square, Dalian, China 116002  
Tel: +86 411 2801924; Fax: +86 411 2644606

### Eastern Europe

IVAN BERENYI/OLGA IVANOVA  
Pannonia Media Agency, 8630 Bolatonbaglar  
Radnoti Miklos u.14, Hungary  
Tel: +36 85 353 319; Fax: +36 85 353 442

### Egypt

CAPTAIN TARIQ M. OSMAN  
Osman Marine Media Co.  
Algamhoria St., P.O. Box 1248, Alkleej Bldg.,  
Port Said, Egypt  
Tel: +20 66 340988; Fax: +20 66 325706

### Franco

DANIEL SOLNICA  
Ediconsult Internazionale, 25 rue Saulnier  
75009 Paris, France  
Tel: +33 1 4246 9571; Fax: +33 1 4246 8508

### Germany/Switzerland

HANSJORG BRANS  
Maritime Media  
Freiherr v. Stein Str. 24, D-63303  
Dreieich, Germany  
Tel: +49 6103 697745; Fax: +49 6103 697743

### Italy/Malta

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

### Japan

AKIO 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

### Portugal/Gibraltar

PAULO BREHM  
AZ Publicidade Lda., Rua Almirante Barroso,  
52-1 D, P-1000 Lisbon, Portugal  
Tel: +351 1 3142256; Fax: +351 1 3525157

### 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

### Singapore

CATHERINE WONG  
The Euro-Asia Link, 20 Maxwell Road 07-18A  
Maxwell House, Singapore 069113  
Tel: +65 3231025  
Fax: +65 3237026, +65 4564610,

### South Africa

FINN KVAMSDAHL  
Finn's Enterprises, Media Marketing Division  
P.O. Box 99, 2250,  
Blinkpan, Republic of South Africa  
Tel/Fax: +27 13 2953 023

### 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

### Turkey

NIHAT BOYTUZUN  
Kamera Corp., Cumhurlyet Cad. 257/3,  
Harbiye 80230, Istanbul, Turkey  
Tel: +90 212 248 48 64;  
Fax: +90 212 230 36 97

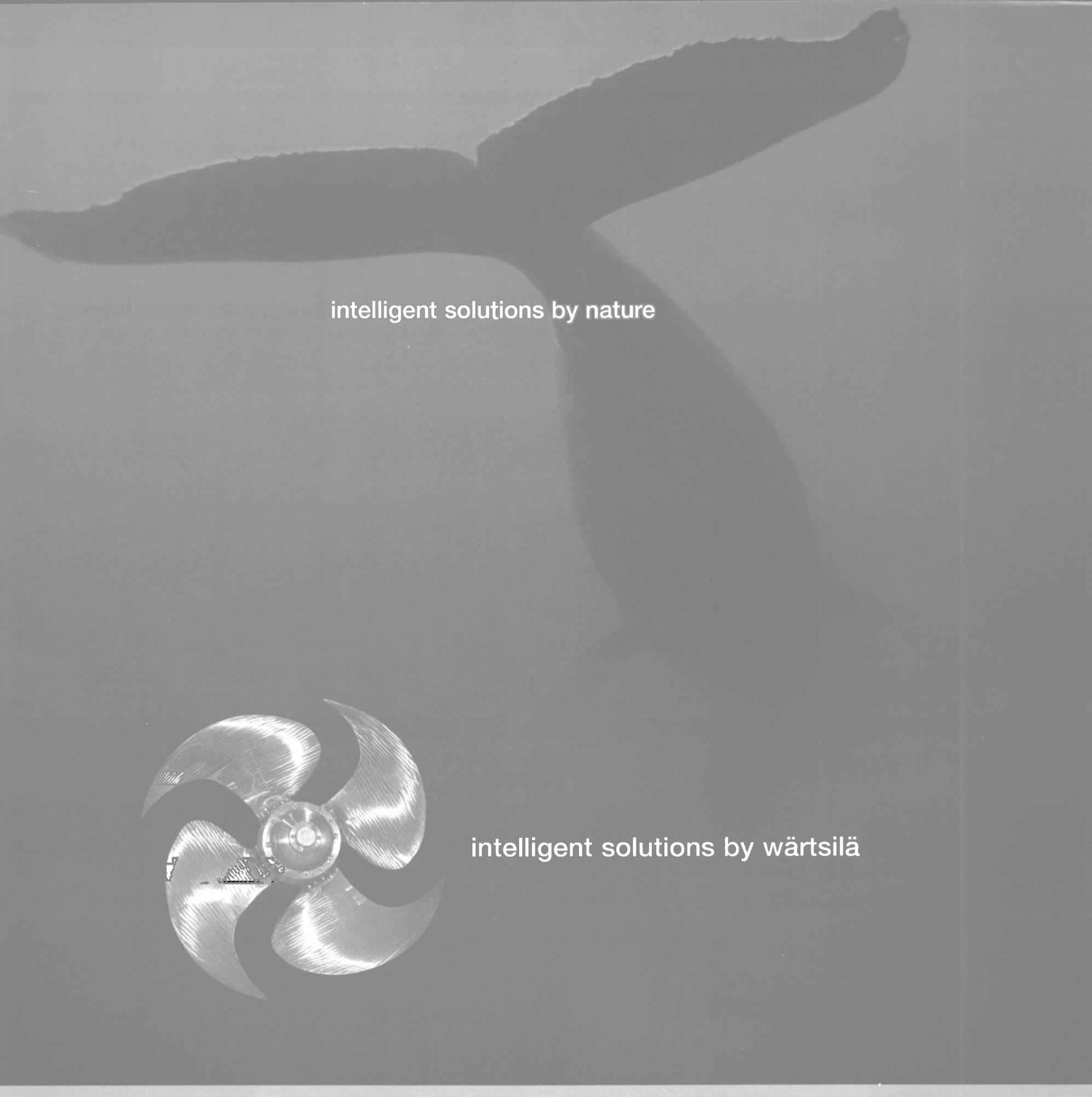
### United Kingdom

MICHAEL J. DAMSELL  
Euromedia Ltd., P.O. Box 122,  
Hayward's Heath, West Sussex  
RH16 1YF, England  
Tel: +44 1444 417360;  
Fax: +44 1444 410497

Don't think *about* support, use it.  
ABB Turbochargers

**ABB**

North Brunswick, call 24 hours: 732-932 6103



intelligent solutions by nature



intelligent solutions by wärtsilä

**Wärtsilä NSD provides high quality propellers up to 50 MW**

Regardless of vessel type and power, you can expect nothing less than state-of-the-art performance, efficiency, low noise, low vibrations and reliability from Wartsila Propellers. And of course, Wartsila Propellers are included in the global Wartsila service network.

WÄRTSILÄ **PROPELLERS**

Circle 262 on Reader Service Card



**WÄRTSILÄ NSD**  
CORPORATION

Please visit [www.wartsila-nsd.com](http://www.wartsila-nsd.com)

# A Manta in Dutch environs

By David Tinsley, technical editor

Flat-screen technology can be expected to make its mark on commercial vessel bridges in future years, once the necessary type approvals are forthcoming and once the manufacturers' costs come down on the back of volume demand for flat-panel TV displays in the equivalent size ranges.

Kelvin Hughes used the recent Europort Exhibition in Amsterdam to demonstrate how the advantages offered by flat screens might be married with the concept of bridge system multi-functionality on an unprecedented scale in the commercial shipping field. Its revolutionary Manta bridge layout caught many an eye for its styling and array of flat panels. But the thinking behind the good looks and ergonomic design springs from entirely pragmatic considerations. It reflects sensitivity to clients' increasingly sophisticated requirements and grow-

ing expectations, coupled with a true understanding of navigators' needs on the part of a management in which former seafarers are well represented.

Manta's adoption of high-definition, flat-screen displays makes for fundamental advantages with regard to space-saving and to the compact nature of the central command position. Moreover, the system signifies a major advance by virtue of its multi-screen nature and the level of interswitching and display interchangeability, which it encapsulates. By building-in the capability for operation in two distinct modes, spanning both the period when under way and also the time when alongside in port, the U.K. technicians have created a bridge display system which can be fully used for a range of tasks while in harbor. In this way, the utility value of equipment with a prime sea-going role has been considerably enhanced.

The system presented at the Amster-

dam show consisted of five displays, although the company is offering up to 11 screens with fully interchangeable displays, and any permutation required by the shipowner. While at sea, the functions covered by the array encompass radar, ECDIS (electronic chart display and information system), conning display, collision assessment and avoidance system (CAAS), alarm monitoring and control and communications, whereby each is available on any display.

In harbor mode, the same display equipment can be utilized for tasks such as power management, fire detection, security and video surveillance, office-based ship management applications, bilge, fuel and water tank control, and personnel locating. While the premium



currently commanded by such a refined, functionally-integrated system will probably put it outside the bounds of consideration of most mercantile operators, for the present at least, it is significant that interest has already been generated among the space- and weight-conscious, high-speed ferry companies and also in the cruise ship domain.

Moreover, the fast-paced development program that brought Manta to fruition has already been vindicated by a clutch of orders from the mega-yacht market, a field where design endeavors are truly rewarded in a financial sense. While the immediate business from such a capital-intensive, niche sector is all to the good,

## Get the Cover, Not the Shaft.

The old style R4 Enterprise subcovers have a nasty habit of cracking, especially when the last capscrew is being torqued down. Designed to withstand only 180 Lbf-Ft torque, they have a history of cracking under much less. **Powerhouse Diesel Services** has engineered an answer to this problem. By increasing the support cast surrounding the bosses and rocker shaft pads, metal fatigue from rocker arm motion is greatly reduced. Combine this with a beefing of the areas around the mount pads and you have added insurance against over-torquing maintenance strong arms. In fact, Powerhouse added iron to ALL of the mounting areas of the subcover. That's why we call it the "Heavy Boss". This subcover was designed to withstand 680 Lbf-Ft... tough enough to handle just about any kind of over-torquing. Keep in mind that the Powerhouse redesign has not changed the original configuration of the original R4 cover. The "Heavy Boss" covers are directly interchangeable with the old style.

Compare that with other redesigns requiring you to purchase not only the head subcover, but two new rocker shafts as well. Why? Well, we're not quite sure. Forcing a customer to purchase three new parts to fix one old problem is beyond our reasoning. Powerhouse understands the Enterprise better than anybody in the business. We are not a house divided; Enterprise is the ONLY engine Powerhouse manufactures parts for and services.

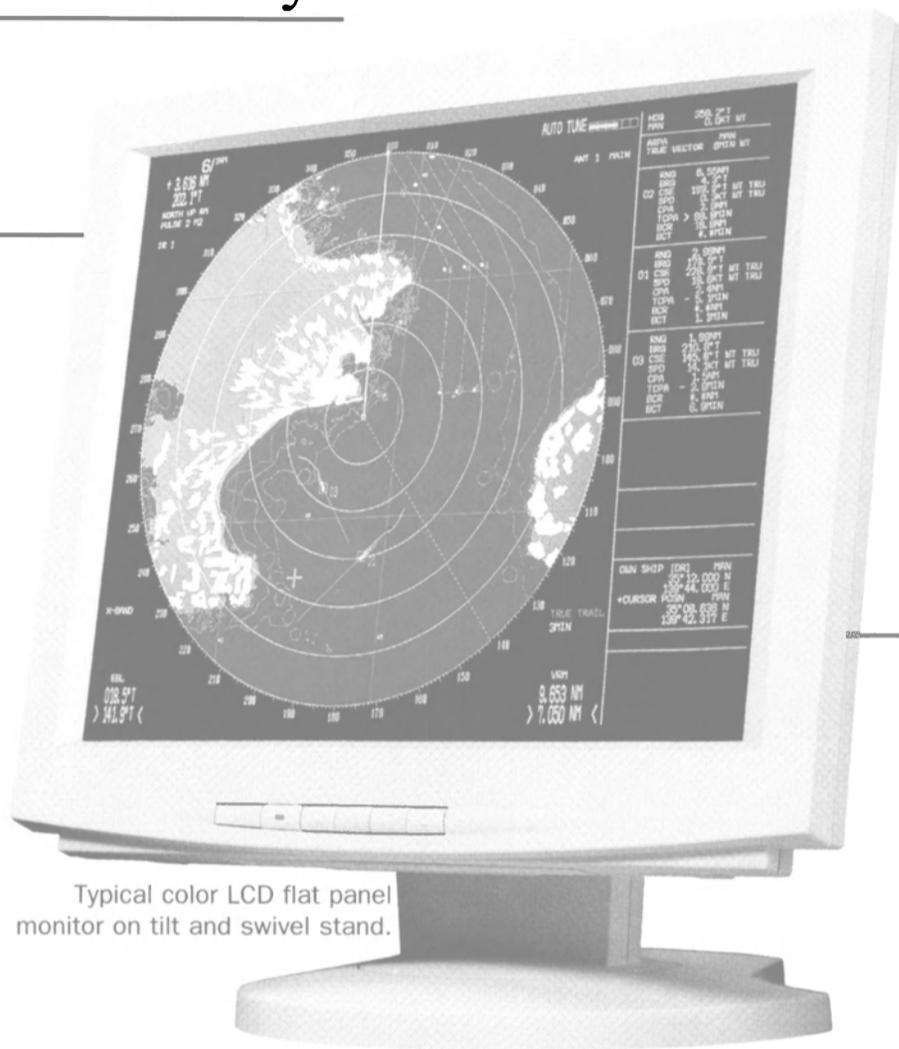
Downtime is costly. Don't complicate matters by involving any manufacturer but the best. Call Powerhouse: **800-545-5566** or **707-257-4360**; email: [sales@powerhouseinc.com](mailto:sales@powerhouseinc.com).



**Replacement Parts for Enterprise Engines**

Circle 247 on Reader Service Card

## You Want Flexibility?



Typical color LCD flat panel monitor on tilt and swivel stand.

## Try this on for size...

### ***Furuno Radars – Now Showing On A Monitor Near You!***

**Introducing Furuno's new FR2105BB Series of Black Box Color Radars.** Furuno is the first marine electronics manufacturer to create a Radar that incorporates industry standard, high quality PC monitor technology in a modular, component-based system.

Based on proven Furuno color Radar technology, the FR2105BB series allows you to customize and select the display of the Radar system according to the size limitations and requirements of the vessel. Virtually any size non-interlaced, multisync (SXGA) PC monitor in a CRT or LCD flat panel configuration can be used.

Because the FR2105BB series is modular (consisting of only three components – gearbox/transceiver,

keyboard and Radar processor unit) the installation and maintenance costs are dramatically lower. Furuno's FR2105BB series offers all of the popular features and options of the dependable and seaworthy FR2105 Radar Series, such as: 12kW, 25kW or 50kW X-Band T/R Up and 30kW S-Band configurations; multi-color multi-level target detection; optional 40-target automatic target plotter; optional Radar chart plotter utilizing Furuno's exclusive chart with radar overlay capability; electronic full function remote interswitching; Furuno's proven commercial USCG grade antenna designs; and new microprocessing technology with high-speed, high-density gate arrays and software.

# FURUNO

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

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

Circle 215 on Reader Service Card

## Investment in Design

the merit of the Kelvin Hughes initiative also derives from its expression of the industry's willingness to take a future-oriented approach, and to provide operators with a firm impression of what is practicable.

Circle 37 on Reader Service Card

## Good opening round for German contender

It is difficult to quantify the benefits that derive from putting resources and management time into trade fairs. As with any such promotion, the industry characteristically sees this as an element

of long-term commercial strategy.

Feedback from participation in maritime technology showcases has value in its own right. But success in sealing orders at the actual event is undoubtedly



a tangible endorsement of a company's involvement.

Among the sanguine community at Europort '99, STN Atlas Marine Electronics found that it was able to convert considerable interest in its newly-unveiled, Atlas Series 1000 radars into actual business. The Hamburg-based firm said that it officially logged orders at the show for over 150 of the innovative systems, mostly entailing the 16-in. version of the new design.

Europort provided the first public presentation of the high-resolution, color radars, distinguished by what is claimed to be very effective, automatic clutter suppression using the Clean Sweep process supported by an Automated Video Enhancement (AVE) facility. A novel docking function, operating at 250 m and 500 m ranges, is another attribute of the equipment, along with the means for switching the antenna revolution from the more standard 23-rpm to 46 rpm, to enhance close-range performance and the monitoring of high-speed targets. The series of 12-in. and 16-in. equipment promises to increase STN Atlas' market reach, and will in due course include a version for incorporation in the proprietary NACOS integrated navigation and command systems.

Circle 38 on Reader Service Card

## Dutch small-ship prowess

The shipbuilding cluster in the Netherlands' northernmost provinces is drawing fresh incentive from the market's reviving interest in the modest classes of ship needed to serve intra-European trade, and also to transport small parcels of goods between Europe and the Americas. A clutch of orders confirmed just prior to the Europort '99 event, where northern firms were encouraged to see a strong attendance by the shipowning community, vindicated the latest design

# It bakes, it roasts, it steams. But the best news?



## It's from Lang.

The Lang Combi is like owning three ovens in one. With simple controls you can expertly steam, roast or bake just about any dish you can imagine. But what sets this innovative steam convection oven apart from the rest is the way it has been engineered for durability and ease-of-use.

- Boilerless system means fast, easy cleaning (no de-liming necessary).
- Minimum water requirements allow you to use a wide range of hard and soft water.
- Constructed of AISI 304 (18-10) stainless steel for exceptional durability.
- Offered in a model to fit every need and budget.

We call it the Lang Combi. But you'll call it incredible.

# Lang

1-800-882-6368 [www.langworld.com](http://www.langworld.com)

Circle 292 on Reader Service Card



# MARITEL

## THE 21ST CENTURY MARINE COMMUNICATIONS NETWORK

### Simple, Low Cost Marine Communications That Work in a Complex World

In the United States, MarITEL is setting a standard for wireless telecom services. For the first time, all marine vessels -- commercial and recreational -- will enjoy complete US coastal coverage.

MarITEL's digital voice and data transmission provides the total answer to complex marine communication requirements.



By the year 2000, MarITEL will link your marine VHF radio to the telephone network with voice, e-mail, high-speed fax and data transfer systems. Get connected quickly, easily, privately and inexpensively.

**FREE** - call, write or e-mail today for more information on MarITEL's Marine Communications for the 21st century.

16 East 41st Street  
New York, NY 10017  
Tel: (212) 532-9300  
Fax: (212) 532-2677  
E-mail: [ramonah@mciworldcom.net](mailto:ramonah@mciworldcom.net)



# MARITEL

Marine Communications System

©1999 MarITEL C 509

endeavors at the lower end of the tonnage scale.

Among the recent additions to the workload, four 3,300 dwt maids-of-all-work were booked by Frisian shipbuilder Tille Scheepsbouw, while a new 7,250 dwt, ice-reinforced multi-purpose design generated a two-ship contract for

the Hoogezand yard of Bodewes Scheepswerven. One of the common threads in the succession of dry cargo vessels developed by Bodewes is the adoption of moveable bulkheads in the box-like holds. The simple expedient of incorporating a portable separation, whether in a one-hold or two-hold ship,

significantly increases cargo carrying flexibility, and enhances the scope for economically transporting smaller, individual consignments of commodities. While economies of scale favor much of world trade, an ability to make recourse to efficient means of conveying raw materials, forestry products, steel and

other semi-finished goods, can have important logistical and inventory benefits for many producers and buyers.

As with the 6,700 dwt sisters Andromeda and Capricorn, the latest newbuilds from the Bodewes Scheepswerven canal side establishment, the two-hold 7,250 dwt class incorporates moveable, partial tweendeck pontoons that can be deployed as vertical separation bulkheads. The preceding S-class series of 4,300 dwt vessels similarly featured a three-section, portable bulkhead, albeit in a single, box-like hold. The Andromeda type, like the S-class, is expected to strengthen the charterer's transatlantic operations.

Meanwhile, Tille Scheepsbouw has employed hull forms used in a breed of small feederships as the basis for a range of multi-purpose traders spanning the 2,000-4,000 dwt band. The new Tille Trader family accordingly offers laden speeds one or two knots faster than the average bulk commodity carrier on the coast. The design move is also notable in demonstrating that newbuild cargo-ship tonnage down to 2,000 dwt can still be competitively produced in northwest Europe. Tille's latest round of contracts emanates from owners based in the northern part of the Netherlands, and concerns the 3,300-dwt version of the new type.



## INTEGRATED BRIDGE SYSTEM

### Optimum Safety At Sea

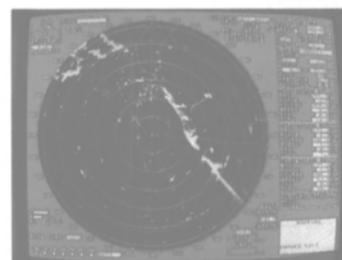
Safe sailing is ensured through a sophisticated combination of high-performance radar/ARPA, ECDIS, Conning display, and centralized management of critical alarms.

### Supreme Economy

State-of-the-art design enables one-man bridge operation, for unsurpassed economy. IBS optimizes navigational programming ease and permits automatic navigation of ships of all types.

### Centralized Information Management

Centralized management and display of inboard/outboard information and alarms enable instantaneous understanding of operating conditions, for swift response to emergency situations. This lightens both the physical and mental stress on the steersman.



Color Radar



ECDIS

**JRC** Japan Radio Co., Ltd.

Since 1915

**MAIN OFFICE:**  
Akasaka Twin Tower, 2-chome,  
Minato-ku, Tokyo 107-8432, Japan  
Telephone: 3-3584-8788  
Telefax: 3-3584-8795  
<http://www.jrc.co.jp/>

**JRC (UK) LTD.:**  
136, 1st Floor, Friars House  
157/168 Blackfriars Road,  
London SE18EZ  
Telephone: 171-261-1188  
Telefax: 171-803-0996

**SEATTLE BRANCH OFFICE:**  
1011 SW Klickitat Way Bldg. E,  
Suite 100 Seattle, WA98134  
Telephone: 206-654-5644  
Telefax: 206-654-7030

**NEW YORK SALES OFFICE:**  
Suite 208 2125 Center Avenue,  
Fort Lee N.J. 07024  
Telephone: 201-242-1882  
Telefax: 201-242-1885



Circle 227 on Reader Service Card

### Holland America Contracts Fincantieri For Two

Holland America Line, a unit of Carnival Corp. has signed an agreement with Fincantieri Cantieri Navali S.p.A. to build two new 84,000-ton vessels expected to enter service in the fall of 2002 and summer of 2003. The contract also options Holland America to order up to three sister-ships for delivery between 2003 and 2005. Able to hold 1,800 passengers, the vessels will be constructed at a price of \$400 million each at Fincantieri's Marghera shipyard. The vessel pair is the beginning of a new class of vessels for Holland America, who is introducing various new features, specifically the first "exterior elevators" located on both the port and starboard side of the vessel. Vertically transversing 10 decks, the elevators offer guests panoramic sea views.

Measuring 951 ft. (289.9 m), the new vessels will be among the longest in the world — yet able to transit the locks of the Panama Canal. Spacious staterooms — 85 percent of which will feature an ocean view also offer private verandas. An Azipod propulsion system was chosen to power the vessels.

Circle 1 on Reader Service Card

Maritime Reporter/Engineering News

## Contracts

### Hyundai Orders Five MAN B&W Engines

The largest diesel engine ever designed has been requested by the Korean owner Hyundai Merchant Marine for propelling five 6,400 TEU container vessels. The five engines, which will be constructed and tested in Korea by MAN B&W Diesel licensee Hyundai Heavy Industries, are due for delivery to the yard in late 2000 and early 2001 — the first vessel will be delivered in early 2001.

Noted as the most powerful low speed containership engine on the market today, the 12K98MC-C has an output of 7,760-bhp/cylinder, e.g. 93,120-bhp at 104 rpm. for this 12-cylinder version.

As a result of this order, 20 additional models of this engine are currently on order or in production.

Circle 2 on Reader Service Card

### Samsung Heavy Rings Up Significant Orders To Usher In New Year

Piraeus-based Hellespont Shipping Corp. has contracted Samsung Heavy Industries for the first two vessels in a new class of VLCC's. The contract also calls for the option to build two optional ships — with delivery beginning in the last quarter 2001.

With a lightweight of 46,500-tons, the vessels are touted as forming a new standard for large tanker strength and speed — while equipped with various features. The ABS and LR-approved structures and scantlings will be 10 percent in excess of both rules.

The vessels will be fitted with a 45,000-bhp main engine, about 6,500-hp above the largest engine that has been installed in a modern VLCC. These engines will provide the vessels with a loaded service speed of at least 17.2 knots. An inerting system utilizes the double scrubbing method developed in-house by Hellespont - resulting in sulphur dioxide levels less than 1 ppm.

### FPSO Order Taken From Nigeria, Australia

Samsung has been granted orders worth a combined \$250 million from Nigeria and Australia. The company said it will construct a floating production and storage offloading (FPSO) vessel valued at \$90 million for the Nigerian arm of Shell Petroleum Co., as well as an FPSO for the Australian unit of Phillips Petroleum worth \$160 million.

The new orders allow Samsung to reach its full-year sales target of \$2.2 billion. The company sold \$2.04 billion worth of vessels in 1998.

Circle 58 on Reader Service Card

### Leif Hoegh To Purchase Unicool Shareholding

Leif Hoegh & Co., who owns 49.8 percent of Unicool, has signed an agreement to purchase the 50 percent shareholding in the company owned by South African Marine Corp., effective early

January 2000. Unicool is a worldwide operator of reefers with a fleet of 68.

### Lockheed Martin Signs With Constanta Maritime

Lockheed Martin Naval Electronics & Surveillance Systems (NE&SS) has

agreed with National Company Constanta Maritime Port Administration to provide a Vessel Traffic Management Information System (VTMIS) worth an excess of \$2 million to monitor maritime traffic at the Port of Constanta along the Black Sea in Romania.

Circle 4 on Reader Service Card



## Foam Filled Marine Fenders

### Marine Guard™

*The Ultimate Protector for Ships, Harbor Craft, Wharves & Piers.*

- Construction complies with United States Navy and Coast Guard Specifications.
- Core consists of closed-cell, resilient, energy absorbing foam, covered with a protective, seamless polyurethane elastomer skin. Filament nylon tire cord reinforcement is continuously wound in the skin for added strength and durability. Will not mark or scratch vessel hulls.
- Constructed with integral swivel end fittings, internally connected with a heavy duty chain.
- Easy to install with very little maintenance.
- Light weight and extremely buoyant with a lower reaction force than either hard rubber or pneumatic fenders. (Almost 40% higher energy absorption than pneumatic fenders.)

### URETHANE PRODUCTS CORPORATION

**(800) 913-0062**

17007 South Broadway, Gardena  
CA 90248, U.S.A.  
Tel (310) 532-3662 • Fax (310) 532-9884

**Stocking Distributors:**  
**Waterman Supply Company**  
910 Mahar, Wilmington, CA 90744, U.S.A.  
**1-800-322-3131**  
Tel (310) 522-9698 • Fax (310) 522-1043

**Anchor Marine & Industrial Supply, Inc.**  
6545 Lindbergh, Houston, TX 77087, U.S.A.  
**1-800-233-8014**  
Tel (713) 644-1183 • Fax (713) 644-1185

## Contracts

### Totem Enters Into Agreement With NASSCO

With deliveries scheduled for late 2002, Totem Ocean Trailer Express (TOTE) of Anchorage, Alaska, has come to an agreement with National Steel and Shipbuilding Company (NASSCO) for

the construction of two 839 ft. (255.7 m) RoRo vessels for its Alaska service.

According to **Robert P. Magee**, TOTE's president and CEO, "This \$300 million private investment will further our commitment to Alaskans well into the next century by enhancing Alaskan job opportunities on our vessels and

shoreside."

"These ships, which carry more than 50 percent more cargo than our present ships, are designed specifically to endure the harsh conditions of the Alaska trade," Magee added.

The new vessels will be the same size as TOTE's existing three ships, "while

maintaining extra capacity to fulfill any surge cargo needs and allow for seamless service during dry docks," Magee furthered. Designed for the transport of trucks, trailers, trailer-borne products and equipment, and cars, the vessel is divided horizontally into decks and vertically into holds, interconnected by internal fixed ramps.

Circle 57 on Reader Service Card

#### Main Particulars

Length, (o.a)	839 ft. (256 m)
Length, (b.p.)	792 ft. (241 m)
Beam, (molded)	118 ft. (36 m)
Draft, (design)	30 ft. (9.1 m)
Draft, (scantling)	32 ft. (9.7 m)
Displacement	45,400 long tons
Deadweight	20,800 long tons
Trial speed	24 knots

### Coflexip Stena Awards Pipelay System

Coflexip Stena Offshore (CSO) signed a contract with Huisman Itrec for the supply of the pipelay system for its new-build ultra deepwater vessel. CSO will provide the major equipment for the new vessel allowing it to lay rigid and flexible pipes, and umbilicals to 8,202 ft. (2,500 m) water depth in 2001.

### U.S. Navy Awards Contract To Bath Iron Works

The U.S. Navy has granted the DD-21 Shipbuilder Alliance a \$238 million contract for the application of Phase II of the design and development of the next-generation destroyer. Led by General Dynamics Bath Iron Works, the Blue Team will receive \$98.4 million in phase II — a similar amount will go to the Gold Team led by Litton Ingalls Shipbuilding.

BIW and Ingalls were designated by the government in May 1998 as the DD-21 Shipbuilder Alliance, which oversees contractual management for the two teams who are developing competitive proposals.

### Dresser-Rand Garners Propulsion Turbine Contract



Newport News Shipbuilding has granted Dresser-Rand Company a \$9 million contract for the initial phases of production of the main propulsion turbines for the U.S. Navy's Nimitz Class

## You Didn't Get Into the Marine Industry to Face Difficult Operational Challenges. . . We did.



NEW CONTRACT

We operate the new, HSF Thomas Edison for Buquebus.



NEW CONTRACT

We operate a new, passenger ferry service in Hampton Roads, Virginia.



NEW CONTRACT

We operate a new, high speed ferry service in the Bahamas.

We offer critical solutions, analysis, strategic planning and assumption of responsibility for owners / operators in the fast-paced commercial marine environment.



**HORNBLOWER**  
MARINE SERVICES

[www.hornblower.com/hms](http://www.hornblower.com/hms)

For more information on our marine management and consulting services, please contact our corporate head office:  
Pier 3, Embarcadero • San Francisco, CA 94111 • Tel: (415) 438-8300 • Fax: (415) 438-8303

Circle 266 on Reader Service Card



## SEAARK MARINE

Over 40 Years of Boat Building Excellence!



26'09" Jo Boat



25' Little Giant



42' Dauntless



48' Transporter

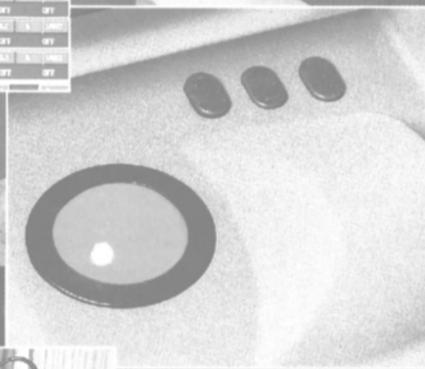
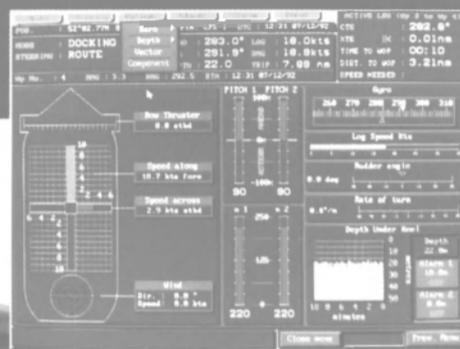
Since 1959, SeaArk (formerly MonArk Boat Company) has built quality work, patrol & excursion boats for all types of work all over the world. We are proud to be the leading manufacturer of small-to-medium workboats in the U.S.A. Consistent ownership, consistent location & consistent quality have been the secret to our success! How many other builders can say the same?

**SEAARK**  
MARINE  
P.O. Box 210  
Monticello, AR 71655  
(870) 367-9755  
[www.seaark.com](http://www.seaark.com)

Circle 252 on Reader Service Card

**KELVIN HUGHES**

**KELVIN HUGHES**



**ninas 9000 integrated bridge systems**  
**Nucleus 2 5000 & 6000 radar systems**  
**RCDS & ECDIS electronic charts displays**  
**mfd Multi-feature navigation display**  
**Paper chart supply & correcting agency**  
**Full GMDSS radio stations**  
**Nautical books & maritime supplies**  
**World-wide sales & service**  
**Naval navigation systems**



**Radio-Holland USA B.V.**

Member of the SAIT-RadioHolland Group

8943 Gulf Freeway Houston, Texas 77017-7004  
 Tel: (713) 943-3325 Fax: (713) 943-3802 Tlx: 795438

New York	(908) 298-9100	Houston	(713) 943-3325
Norfolk	(757) 431-2926	Corpus Christi	(512) 883-5283
Miami	(954) 920-8400	Long Beach	(562) 595-0039
Mobile	(334) 432-3139	Portland	(360) 737-0519
New Orleans	(504) 733-4024	Seattle	(206) 768-1603

Circle 27 on Reader Service Card

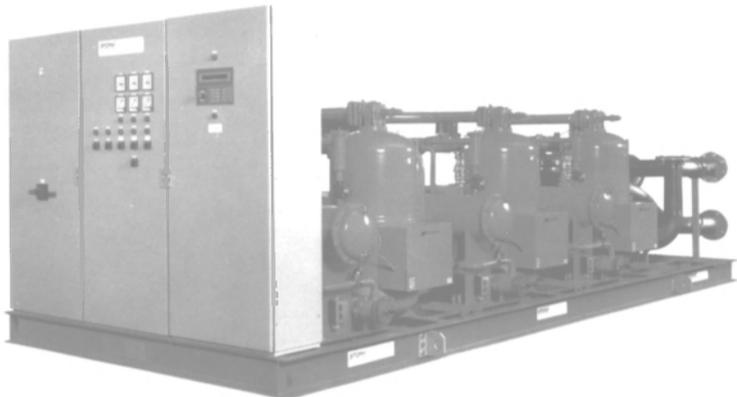
# STORK®

- Engineering
- Installation
- Manufacturing
- Service

## MARINE SPECIALISTS IN HEATING, VENTILATION, AIR CONDITIONING AND REFRIGERATION SYSTEMS & EQUIPMENT

### CUSTOM BUILT

- CHILLERS
- AIR HANDLING UNITS
- FIRE DAMPERS
- CONDENSING UNITS
- FAN COIL UNITS
- FANS
- WEATHER LOUVRES



### MAIN OFFICE

47 boul. Marie Victorin  
Candiac, Quebec  
Canada J5R 1B6

Tel: (450) 659-6571  
Tel: (800) 465-7749  
Fax: (450) 659-1035

stork@stork-mtl.com  
www.stork-mtl.com

### FIELD OFFICES

431 Mountain Highway  
Suite 3  
North Vancouver, B.C.  
Canada V7J 2L1

Tel: (604) 985-3447  
Fax: (604) 985-3462

26 Maclean Road  
Box 2026  
Westfield, New Brunswick  
Canada E0G 3J0

Tel: (506) 757-1198  
Fax: (506) 757-1897

2468 Dauphine Street  
Suite A  
New Orleans, LA 70117  
U.S.A.

Tel: (504) 943-6284  
Fax: (504) 943-0268

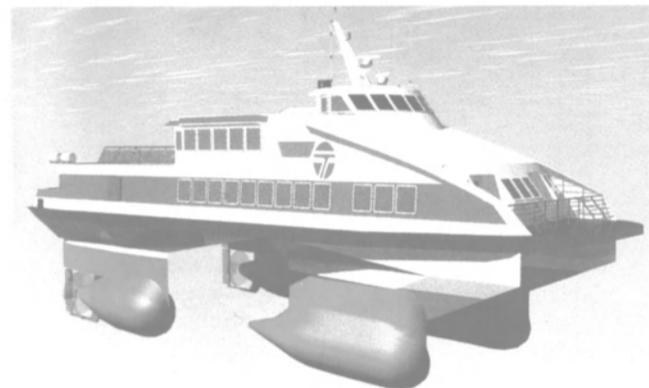


Circle 255 on Reader Service Card

CVN-77 nuclear powered aircraft carrier exceeding a top speed of 30 knots. Dresser-Rand, Wellsville, N.Y., will construct four high-pressure steam turbines and four low-pressure steam turbines with a combined output of more than 250,000-hp.

Circle 7 on Reader Service Card

### Atlantic Marine To Build SWATH Vessel



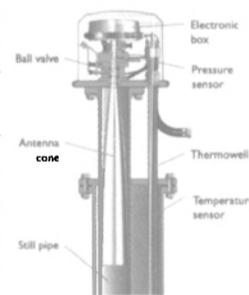
Atlantic Marine, Jacksonville, Fla., has been chosen by Lockheed Martin Launching System to construct a SWATH Oceanographic Research Vessel as part of the Navy's scientific fleet. The project, which will commence in August 2000, will take approximately 14 months.

Designated AGOR-26, the vessel will house small-waterplane-area, twin-hull design (SWATH) technology developed by Lockheed Martin, and will offer a stable platform with excellent motion characteristics and more useable deck space. Guido Perla and Associates of Seattle has signed a long-term domestic and international teaming agreement with Lockheed Martin to provide complete design and detail modular construction engineering for commercial and U.S. development of Lockheed's stealth SWATH.

Circle 56 on Reader Service Card

### Saab TankRadar Selected

Saab TankRadar has been chosen as primary Custody Transfer System by Hyundai Heavy Industries for two LNG newbuildings. Saab's radars have previously been installed on the existing LNG carrier LNG



Delta, and have also been ordered for the soon to be reactivated LNG/C Arzew. Presentation of measured and calculated values plus alarm handling will be performed on a work station using Saab TankRadar's presentation software, while customized custody transfer reports will be printed on a laser printer.

Circle 30 on Reader Service Card

### Friede Goldman Receives Conversion Project

Friede Goldman Offshore, the offshore energy division of Friede Goldman Halter, Inc., has been awarded a contract from Oceaneering International, for the shipyard work in Oceaneering's conversion of its Marine 7 jackup to a production unit. The unit will operate in the Legendre North and South fields on the Northwest Shelf of Western Australia.

Maritime Reporter/Engineering News

# SEA FORCE

## 24' I/O ALUMINUM HULL RIB

**EFFICIENT.** proven hull and F/G deck by Willard Marine, Inc. from the same design as hundreds of Navy standard RIBs.

**STRONG.** solid welded aluminum hull built by MetalCraft Marine, Inc.

**DURABLE.** heavy duty polyurethane tube built by Wing Inflatables

**LIGHT WEIGHT** -would you believe 3,500 lbs?

**55MPH** achieved with single Yanmar 300 HP Diesel with MerCruiser Bravo 1 Drive

1250 N. Grove Street,  
Anaheim, CA 92806  
U.S.A.  
Ph: 714-666-2150 x 211  
Fax: 714-632-8136  
willardmarine.com  
e-mail: webmaster@willardmarine.com

**WILLARD MARINE, INC.**  
Established 1957

Circle 265 on Reader Service Card

# LINDENAU - The power of ideas



Offshore Supply Vessels



Seismic Research Vessels



Safety Catamarans of Type "2000"



Passenger Ships and Ferry Boats



Viking 1000 Class Drillship



Multi - purpose Tugs



RoRo Paper Cassette Container Carriers



Container Ships 150 - 2.000 TEU



Reefer Ships 150.000 - 750.000 cbft



Luxury Cruise Liners



Fast RoRo Vessel



Multi purpose Container Vessels 150 - 2.000 TEU



Double hull Oil/Chemical Tanker Class 2000 from 1.500 to 40.000 dwt



## LINDENAU GmbH - Shipyard and Engine works

LINDENAU is one of the most modern and productive medium-sized shipyards in Western Germany and ideally located in Kiel close to the Kiel Canal.

LINDENAU is a long established shipyard with over 75 years of experience and the right partner to develop, design and construct in close cooperation with its clients any vessel, which the market requires.

**Please contact Mr. Dirk Lindenau**



- Designer and builder of all types of ship newbuildings up to 40.000 dwt
- Conversions and Lengthenings
- Repair and Classification Work
- Diversification and New Technologies
- Consulting and Engineering

Whether small or large projects, we are the shipyard with the right answers for all your future plannings.

**Phone + 49 431 39 93-0**  
**Fax + 49 431 39 30 62**  
**E-mail: info@lindenau-shipyard.de**



**SCHIFFSWERFT & MASCHINENFABRIK**  
 D-24157 Kiel - Germany - Telex 29 22 33 lindw  
 Phone + 49 431 39 93- -Fax + 49 431 39 30 62

"The ship has been approximately two years per installation," says **Hans-J Hollstein**, technical manager of Cargill International's Ocean Transportation Division. Powhatan and Paiute are being offered on the time-charter market with daily fuel consumptions of 27.5 tons for a speed of 15 knots

The main reason for Bebedouro's retrofit was to reduce propeller-excited vibration levels, with fuel saving being an additional benefit. Since then Cargill has experienced a nine percent improvement in fuel consumption.

**Circle 68 on Reader Service Card**

optimized geometry and design (together with a new seat ring) which, although more expensive in production, was more economical in terms of increased service life. MWH also optimized and adapted the onboard tools and developed an overhaul concept. The service lives were lengthened by more than 400 percent.

**Circle 69 on Reader Service Card**

**Allen Gears - Allen Power**  
 Atlas Works, Pershore  
 Worcestershire WR10 2BZ United Kingdom  
 Tel: 011-44-1386-552211  
 Fax: 011-44-1386-554491  
 Email: allen-gears@compuserve.com  
 Website: http://www.allengears.com

(Continued on page 62)

on-line at: [www.marinelink.com](http://www.marinelink.com)

## A to Z" Directory of Marine Propulsion Products

ving guide is an alphabetical of international Marine Equipment suppliers. Publish-responsible for errors or omis-

es

as 77587

}

**rfabrik, Heinrich Callesen A/S**

Box 81  
 Denmark  
 088  
 7407  
 i.com  
 w.bukh.com

ly

bergintie 1A  
 land  
 2-000  
 22-2350  
 eting@fi.abb.com  
 .fi.com

**ger Co**

venue  
 J.J. 08902

**ger Systems**

nizterland  
 5 4037  
 5144  
 ngg@ch.abb.com  
 v.abb.com/automation

**ional**

Ste. 100  
 387

aol.com

v.accordintl.com

**strial Products**

**ne Parts**

Parkway  
 108-3388

**ems**

23456

**s Ltd.**

gaseki Building, 2-5  
 mrigaseki, Chiyoda-ku Tokyo 100 Japan  
 3781  
 -1731

**lectric**

37

rn-lights.com

v.northern-lights.com/

## Marine Propulsion Guide

### Perkins Sabre Launches Two New Engines

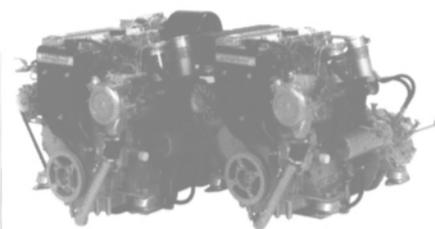
The latest additions to the Perkins Sabre Engines line were introduced this autumn. The naturally aspirated Perkins Sabre M92 and the turbocharged Perkins Sabre M115T have already

established themselves as the fastest selling Perkins Sabre Engines of all time. This is due largely to the fact that both are direct and easily fitted replacements for the Perkins Sabre M90/4.236, a highly successful marine diesel engine.

The M92 is a four-cylinder, 4.2 liter,

92-hp engine, while the M115T is a 4.0 liter engine that develops 115 hp at 2,400 rpm. When compared to the engine that they are replacing, the engines offer greatly improved all-round performance and lower emissions.

Targeting both the pleasure and commercial markets, the new engines offer a



The new Perkins Sabre M92 (right) and the new Perkins Sabre M115T.

new water pump and improved cooling of the engine. Also, a stiffened block and head, and the incorporation of the latest sealant technology, are designed to contribute to the 50 percent increase in engine life that is being claimed.

Compared with the M90, the M92, for example, is said to offer a nine percent increase in power output while delivering a 6.8 percent reduction in specific fuel consumption at the rated speed, while the lubricating oil capacity has been reduced by nearly 23 percent. Annual servicing costs look set to fall by more than 50 percent, and greater fuel efficiency, based on typical duty cycle figures over three years, will slash \$2,600 off the fuel bill.

The engines meet all existing and planned EU and IMO/EPA emissions legislation.

Circle 78 on Reader Service Card

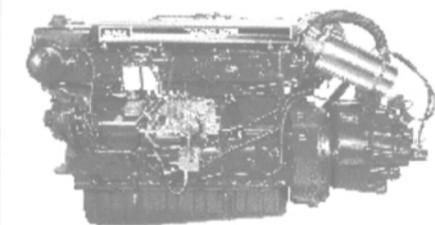
### Renold Develops High Temp Coupling

HTB is a new range of power transmission couplings from Renold Hi-Tec Couplings with the ability to work in heat up to 200

degrees C. The product has reportedly proven to be a hit, even before it officially comes onto the market, as the company reports that several prototypes have been ordered, with models already at work on generating sets in the U.K. and on a pusher tug in the U.S.

Circle 70 on Reader Service Card

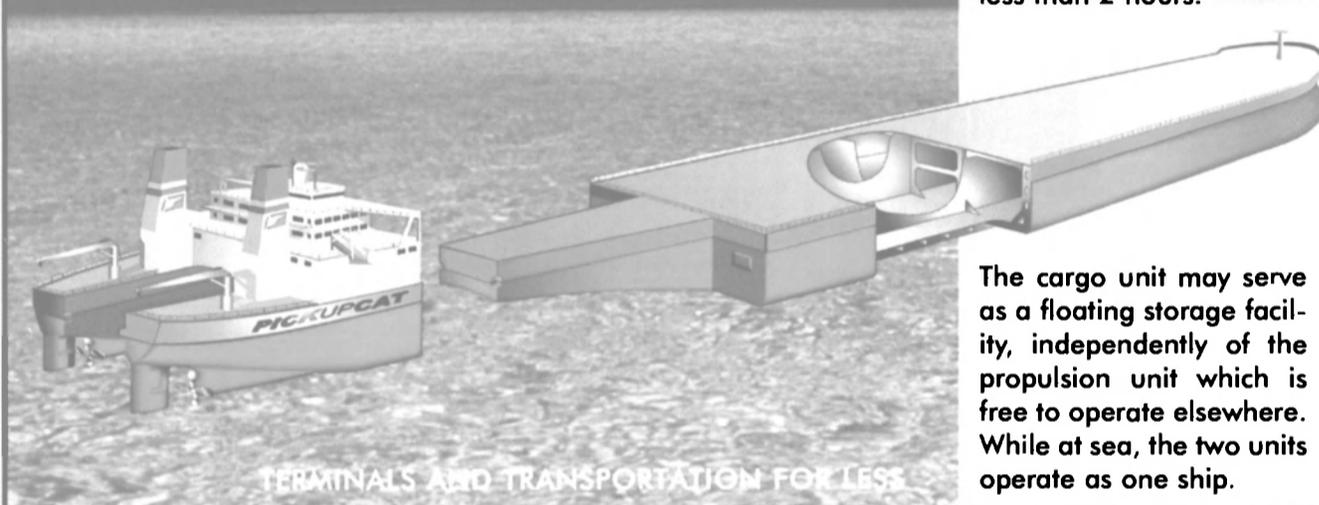
### Volvo Penta Offers New 10L Diesel Engine



The new Volvo Penta TAMD 103 is a 10-liter commercial diesel engine designed for increased power, lower emissions and lower fuel consumption courtesy of redesigned combustion chambers, cylinder heads and fuel injec-

## PICKUPCAT

The PICKUPCAT concept is based on dividing a vessel in two separate parts: a self contained catamaran containing power, propulsion and steering functions and an interchangeable cargo carrying unit.



The assembled units retain the same strength and structural properties as that of a traditional hull construction. The time spent in port to engage/disengage the two separate units takes less than 2 hours.

The cargo unit may serve as a floating storage facility, independently of the propulsion unit which is free to operate elsewhere. While at sea, the two units operate as one ship.

Karenslyst Alle 8 B  
0278 Oslo, Norway.

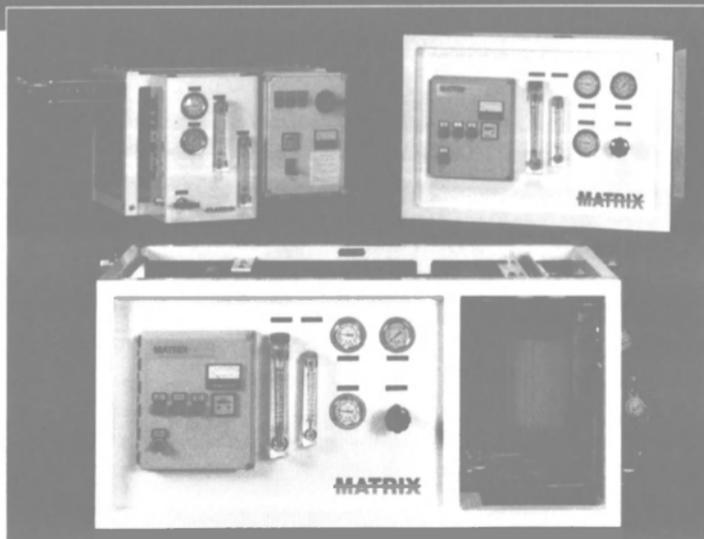
Phone: (+47) 23 12 06 08  
Fax: (+47) 23 12 06 78

e-mail: postmaster@pickupcat.no  
URL: <http://www.pickupcat.com>

Circle 246 on Reader Service Card

# We'd like to make one thing perfectly clear... your fresh water supply.

Wherever and whenever clean pure water is a necessity, Matrix Desalination, Inc. provides it. Over and over again, our reverse osmosis watermakers have proven themselves to not only give you the freshest water available, but in the quantities you demand. So whatever your freshwater requirements may be, consult the authorities at Matrix.



Silver Series Group - 350 - 20,000 Gallons per day. Component or Cabinet.

**R/O Systems...** packaged R/O units in light, medium and heavy duty designs from 100 to 20,000 gallons per day. Custom designed R/O plants are available up to 3,000,000 gallons per day.  
**Parts...** for all types of water systems and pumps including hard to find items.  
**Service...** engineers available 24 hours a day for servicing of all brands of R/O units, pumps, etc.

# MATRIX

DESALINATION, INC.

3255 S.W. 11th Avenue - Fort Lauderdale - Florida 33315 - U.S.A.  
Ph: (954) 524-5120 - Fax: (954) 524-5216

Circle 244 on Reader Service Card

tion system. The engine complies with the new IMO emission regulations. The TAMD 103 is interchangeable with previous Volvo Penta 10-liter engines, to facilitate re-power projects.

**Circle 71 on Reader Service Card**

**TAMD103A Technical Specifications**

Displacement ..... 9.6 l  
Cranksh. power rating 1 ..... 254 kW/345 hp  
Cranksh. power rating 2 ..... 287 kW/390 hp  
Dry weight ..... 1.190 kg

**TAMD103C Technical Specifications**

Displacement ..... 9.6 l  
Cranksh. power rating 1 ..... 339 kW/460 hp  
Cranksh. power rating 2 ..... 365 kW/495 hp  
Dry weight ..... 1.160 kg

**Making Mounting Easier**



Vibracon SM elements, the universal adjustable chocks, are reportedly gaining in popularity for the mounting and chocking of machinery such as diesel engines, turbines, gearboxes, compressors, generators, E-motors and bearings. Patented by Machine Support BV of the Netherlands, the product is designed to permit quick and accurate alignment, in many cases eliminating the machining of foundations or base frames. The element is approved by Germanischer Lloyd, as well as by Navsea.

**Circle 72 on Reader Service Card**

**Deutz Secures Large Order For N. Sea Installation**

Deutz has received another order from Wintershall for the installation of a power plant on its new production platform for operation in the German gas field A6A in the northernmost area of the German section of



the continental shelf. This order follows a similar one, in which Deutz equipment is performing well on another Wintershall platform in the North Sea gas field D15. The plant consists of three generating sets: a gas engine genset, driven by a 16-cylinder engine of the 441 series

and a diesel engine genset driven by an engine of the 620 series. The third set operates as an emergency genset.

**Circle 77 on Reader Service Card**

**Waller To Design Largest**

Houston based marine design compa-

ny Waller Marine has been contracted to design the world's largest single power barge. The 220 MW barge mounted power plant utilizes a combined cycle technology, comprising four LM 6000 aero derivative gas turbines, with chilled air intakes, each coupled to a Once Through Steam Generator (OTSG). The

steam generated from heat recovery drives a 55 MW steam turbine generator.

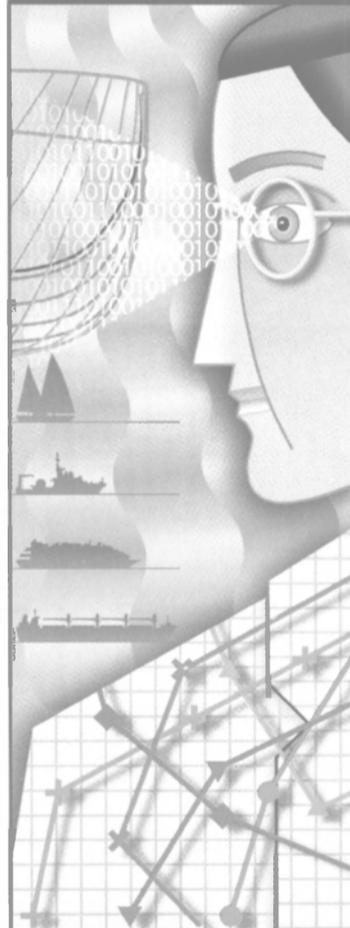
Measuring 348 ft. (106 m) with a 180 ft. (55 m) breadth designed per ABS structural standards, the barge, which will be constructed in Korea will be dry towed to the west coast of India, where it will supply power to the grid.

**Total CAD / CAM Solutions**



Look to Autoship Systems Corporation for setting the industry standard in innovative marine design and construction software.

**Autohydro**



Relied upon for years by naval architects around the world, Autohydro, the market leading hydrostatics and stability program, has just gotten better.

Our new 32 bit Autohydro brings you faster processing, more damage/flood simulations, an enhanced Windows™ user interface, both A4 and 8 1/2"x11" size reports, and much more.

These new features clearly show our continued commitment to providing affordable state of the art software solutions that meet your needs.

- > Autoship
- > Autopower
- > Autohydro
- > Autobuild
- > Autoplate
- > AutoNC

**"Autoship Systems: Your Total Solution Provider For CAD/CAM Marine Software."**

Contact us today for your free CD-ROM and product catalogue



Windows is a trademark of Microsoft Corporation. The Autodesk logo is registered in the U.S. Patent and Trademark Office by Autodesk, Inc.

**AUTHORIZED DEALERS**  
Australia & New Zealand, China, Egypt, France, Greece, India, Italy, Japan, Poland, Scandinavia & Germany, Singapore, Spain, Turkey, United Kingdom & Eire, Iceland, Venezuela, Vietnam

**SMART LEVEL SENSORS**

USCG & ABS Approved

**The Ballast Sensor**

**The Radar Sensor**

**The Bubbler Sensor**

**The Gauger**

**The Sea Switch**

**and much more...**

**OUR 20TH YEAR**



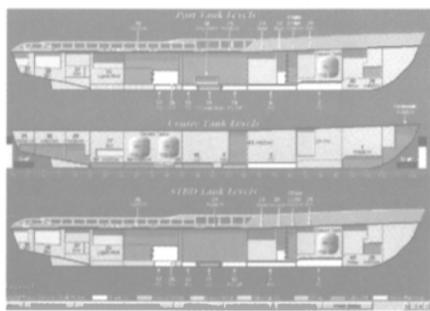
ELECTRONIC MARINE SYSTEMS, INC.  
800 Ferndale Place  
Rahway, NJ 07065

**Call today for more information!**

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

## Offshore Supply Vessels Rebuilt - Cargo Handling, Tank Sounding Automated

Two circa-1980 vessels are moored — decommissioned, but preserved from corrosion — in the frigid, dry climate of Murmansk, Russia. The hulls are a superior grade of 22 mm thick steel - not economical to duplicate today, and of significant value. The challenge: rebuild the vessels to meet newbuild standards,



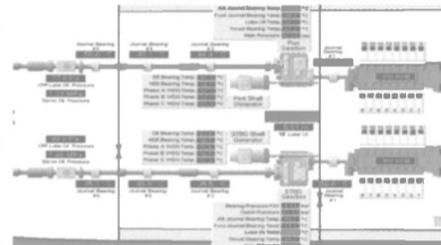
and use them in a pending long term contract with a large oil company to supply offshore rigs in the huge Terra Nova oil field off the east coast of Newfoundland. Secunda Marine Services Limited of Dartmouth, Nova Scotia, Canada met this challenge, and now has two multi function, ice class IC, anchor handling tug supply vessels to add to their fleet.

After purchasing the vessels from a Russian oil company in 1998, Secunda transported them to their Dartmouth shipyard. There, the boats were completely gutted in preparation for a rebuild to replace all equipment and meet newbuild standards. In each boat,

Visual Tag System monitors the status of the port propulsion engine, giving a visual representation of the cylinder temperatures.

only the steel hulls and propulsion shafts were saved and all other equipment was installed new, including two 5,500 hp Wärtsila 16V25 propulsion engines, an Ulstein triple drum waterfall type anchor handling/tow winch with 300 ton line pull, two Leroy Somer 2090 KVA shaft generators, and a Caterpillar 3512B generator. Secunda investigated many suppliers for the automated alarm and cargo operation systems, but found the solution right in their own backyard.

Secunda turned to Visual Tag System (VTS) monitoring and control software from Trihedral Engineering of nearby Bedford, Nova Scotia, Canada. The VTS software is used to automate three functions onboard the renamed MV Trinity Sea and MV Burin Sea: pump and valve



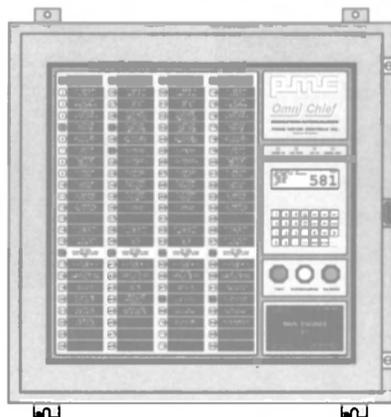
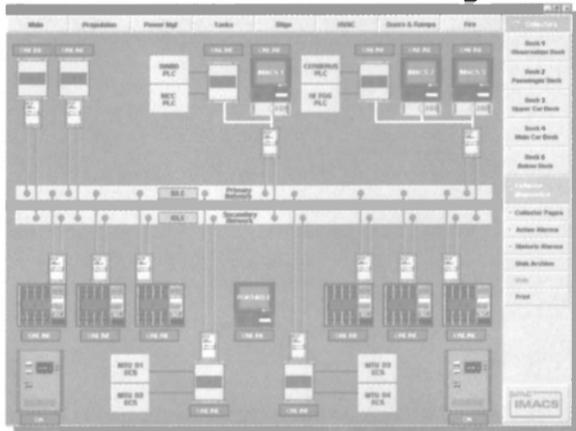
Overview screen showing tank levels of all ship-board tanks. Clicking on an individual tank takes the user to the system for that tank.

control, alarm and monitoring, and the tank sounding system. Communicating with Omron C200 series programmable controllers (PLCs), VTS reads 800 digital and analog I/O points. A dual monitor VTS station was installed in the engine control room, and a second similar system was installed on the bridge.

**PMC**

### IMACS

**Integrated Machinery,  
Alarm and Control System**



### *Omni Chief*

**DISTRIBUTED  
CONTROL and  
MONITORING  
UNITS.**

### PRIME MOVER CONTROLS INC.

DESIGN, MANUFACTURE and SERVICE of  
MARINE CONTROL COMPONENTS and SYSTEMS  
Electronic - Pneumatic - Hydraulic

3600 GILMORE WAY, BURNABY BC CANADA V5G 4R8  
TEL (604) 433-4644 FAX (604) 433-5570  
www.pmc-controls.com

Circle 248 on Reader Service Card

## LONSEAL

LONPLATE  
EXCEPTIONALLY  
TOUGH  
RESILIENT  
SHEET  
VINYL MARINE  
DECKING

LONSEAL, INC. 928 EAST 238TH STREET CARSON CA 90745 TEL 310 830 7111 www.lonseal.com

Circle 236 on Reader Service Card

The pump and valve control system provides automated control of 112 valves, and remote start/stop of 14 cargo pumps that handle liquid cargo (such as potable water, liquid mud, drill water, mineral oil or brine). The alarm and monitoring system monitors the condition of the main engine, gearbox, shaft lines, thrusters, generators and bilges, generating an alarm when certain set points or thresholds are reached. Finally, the tank sounding system automatically measures the quantity of fluid in approximately 50 cargo tanks. According to **Robert Field**, Trihedral Control Systems Engineer on the project, "The pace and complexity of this project were a particular challenge. The system design was changing continually, but the flexibility of the software allowed us to accommodate the changes as we progressed through the rebuild, commissioning, and sea trial stages."

With an overall length of 269.7 (82.2 m), breadth of 52.1 ft. (15.9 m) and draft of (20.3) 6.2 m, the MV Trinity Sea is currently working and the MV Burin Sea has completed sea trials, undergoing rigorous testing to meet Secunda's standards. According to company sources, Secunda exceeded the expectations of their large oil company client by providing a fully automated system.

Circle 32 on Reader Service Card

### Transas Launches Stand-Alone Engineroom Simulator

The new stand-alone simulator ERS Solo was launched by Transas in late November. This simulator broadens the



company's existing product range of Engine Room simulators, which includes the PC-based ERS 2000 and the ERS 3000, which is fitted with real engine room controls.

The ERS Solo possesses all the functionality of its networked predecessors, other than their on-line Instructor functions. With the ERS Solo simulator, the Instructor-generated tasks are performed in off-line mode. The main simulated machinery includes the ship's diesel propulsion power plant, with models for 2-stroke and 4-stroke diesel engines, an electric power plant and a number of auxiliary systems.

The main purpose of this new simulator development from Transas is to provide a cost-effective but efficient instru-

ment suitable for both preliminary and knowledge refreshment training of Engine Room watch-keeping personnel.

Circle 47 on Reader Service Card

### VTC Expands Possibilities With Cutler-Hammer Agreement

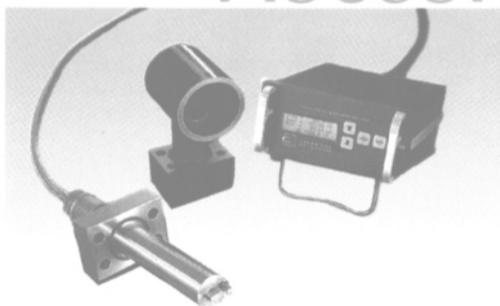
Vosper Thornycroft Controls (VTC) has expanded its expertise in electrical

power and propulsion systems by entering into a Systems Builder Agreement with Cutler-Hammer (C-H). Previously, VTC has just operated at the lower end of the market in switchboard and electrical systems, concentrating on ships with a requirement for up to 1,000 volts. The new link with C-H will enable VTC to supply the market where systems operate at up to 17.5 kV. The agreement

allows for VTC to make use of C-H products, with VTC applying its naval and marine knowledge to the packaging of the products, as well as the design and building. The first contract taking advantage of the new agreement is already in hand, as VTC will design and build a 6.6 kV switchboard for the new trimaran warship demonstrator.

Circle 67 on Reader Service Card

## Reliable Fuel Viscosity



- Accurate HFO control
- Small and easy to install
- Lower maintenance costs



Visit our website: <http://www.cambridgeapplied.com>



**CAMBRIDGE APPLIED SYSTEMS**  
LEADERS IN VISCOSITY MANAGEMENT

196 Boston Avenue  
Medford, MA 02155 USA  
Tel: 781 393-6500  
Fax: 781 393-6515  
info@cambridgeapplied.com

Circle 211 on Reader Service Card



## Water Weights Inc.

"LOAD TEST SPECIALISTS"

- ◆ Crane Testing
- ◆ Davit Testing ◆ Lifeboat Testing
- ◆ Bridge Testing ◆ Structural Testing
- ◆ Ballast & Counterweight



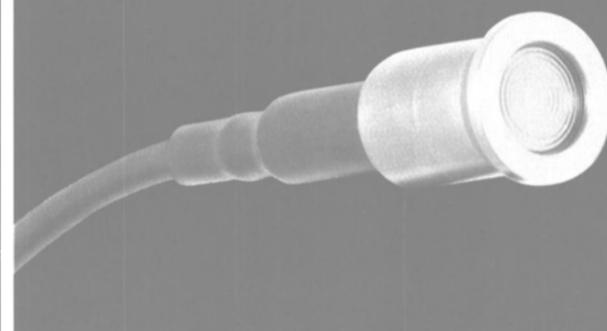
- Up to 750T capacity
  - Load Measurement
  - Sale
  - Rental
  - Lease
  - Complete Turnkey Service
  - Locations throughout US
- Highly certified system allows safe, practical and economical use of water as a weight for load testing.*

1 (888) WW TESTS (998 3787)

e-mail: [h2oweights@aol.com](mailto:h2oweights@aol.com)  
web page: <http://www.waterweights.com>

Circle 263 on Reader Service Card

# THE BALLAST



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

Use one sensor for all shipboard liquid levels

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

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

Many Options



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

732.382.4344  
732.388.5111 fax  
[emsmarcon@aol.com](mailto:emsmarcon@aol.com) e-mail  
<http://www.emsmarcon.com>

Call today for more information!

Circle 215 on Reader Service Card

## Columbia Coastal Christens Super Barge

U.S.-flag container feeder barge operator, Columbia Coastal Transport added Columbia Elizabeth — one of the largest container barges ever built — to its fleet. The 912 TEU barge, which was christened in Portland, Ore., is ready to transport empties, full container and project cargoes moving between the U.S. west coast, gulf coast and eastern seaboard ports. Completing the 5,900-mile journey from the west coast to the eastern seaboard through the Panama Canal, the vessel is expected to enter service in early January.



The new 912 TEU superbarge, Columbia Elizabeth constructed for Columbia Coastal Transport.

Constructed by Gunderson, Inc., the 343 x 94 x 21 ft. (105 x 29 x 6 m) deck cargo barge is specially fitted to carry 20-, 40- and 45 ft. ISO containers, including reefers. According to Columbia Coastal president, **Bruce Fenimore**, the vessel will be utilized in Columbia Coastal's Gulf Services linking the ports of Houston and New Orleans. Columbia Elizabeth sets the total number of the company's U.S.-flag container barges at 11, which will be deployed in regularly scheduled feeder service operations on the U.S. Atlantic and Gulf coasts, as well as Freeport, Bahamas.

Circle 55 on Reader Service Card

## De Poli Yard Launches Chem. Tanker

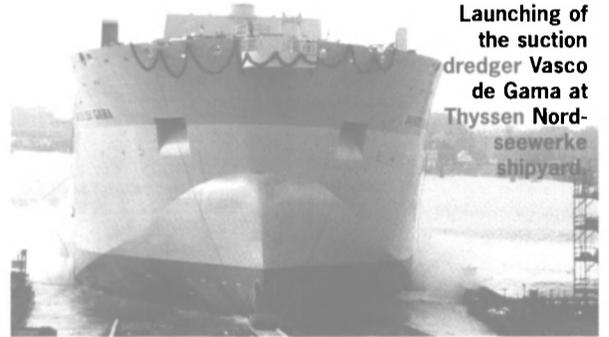
Based on the Island of Pellestrina (Venice), Cantiere Navale De Poli shipyard launched chemical tanker named Jo Laguna D built for venician company Ar.Co.In. The vessel, which will be used for the transport of oil and

Main Particulars	
Classification	RINA
Length. (o.a.)	446 ft. (136 m)
Length. (b.p.)	413 ft. (126.5 m)
Breadth, molded	75 ft. (23 m)
Depth, molded	40 ft. (12.2 m)
Draft	28 ft. (8.4 m)
Max. deadweight	14,000 t
Power at m.c.r.	6,300 kW
Speed	15 knot

chemical products, was scheduled for completion at the end of 1999, and is equipped with 14 tanks for the load, two slops, one recovery and two deck slop tanks. In accordance with the most recent U.S. standards, the vessel is equipped with a double hull located in correspondence of the cargo zone.

## Vasco De Gama Launched For Jan De Nul

Proceeding 19 months of construction time, the suction dredger Vasco de Gama - with a hold of 33,000 cu. m. — was launched at the Thyssen Nordseewerke construction yard on November 5, 1999. Owned by the Jan



Launching of the suction dredger Vasco de Gama at Thyssen Nordseewerke shipyard.

# BELIZE



*'the friendly flag'*

HEAD OFFICE:

MARINA TOWERS, 204, NEWTOWN BARRACKS  
BELIZE CITY, BELIZE - CENTRAL AMERICA  
Tel: 501-2-35031 / 35047 - Fax: 501-2-35048 / 35070

[immarbe@btl.net](mailto:immarbe@btl.net)

# IMMARBE

## DESIGNATED OFFICES:

PANAMA	HONG KONG
TOKYO	YOKOHAMA
KOBE	PIREAEUS
SINGAPORE	LONDON
ZURICH	GENEVA
NEW YORK	MANILA
ROTTERDAM	MADRID
HOUSTON	BANGKOK
PUSAN, KOREA	KARACHI
CONSTANZA	LIMASSOL
MALMOE, SWEDEN	TAIPEI, TAIWAN
LUXEMBOURG	ANTWERP
BANIAS, SYRIA	SHANGHAI, P.R.C.
CAIRO, EGYPT	NEW DELHI, INDIA
ISTANBUL	VALLETA, MALTA
LAS PALMAS, CANARY Is.	MOMBASA, KENYA
ARGENTINA	URUGUAY
ECUADOR	ST. PETERSBURG, RUSSIA

## EXCELLENCE IS OUR STANDARD IN SHIPS REGISTRATION

- ◆ Dependable common law system
- ◆ Fast and efficient ship registration and related services
- ◆ International conventions requirements
- ◆ Bareboat Charter registration (Charter in – Charter out)
- ◆ Special registration for delivery or scrap purpose
- ◆ Reliable system for recordation of ownership titles, mortgages and liens
- ◆ Competitive fees and taxes

INTERNATIONAL MERCHANT MARINE  
REGISTRY OF BELIZE  
"IMMARBE"

## RECOGNIZED ORGANIZATIONS

(Authorized by IMMARBE to perform statutory certification)

American Bureau of Shipping	Associated Consultants Bureau
Belize Maritime Bureau	Belize Register Corporation
Bureau Veritas	China Classification Society
China Corporation Register	Class NK
Det Norske Veritas	Germanischer Lloyd
Hellenic Register of Shipping	Korean Register of Shipping
Inspeccion y Clasificacion Maritima	Isthmus Bureau of Shipping
Lloyd's Register of Shipping	Panama Bureau of Shipping
Panama Maritime Documentation Serv.	Panama Shipping Registrar
Polski Rejestr Statkow	R. J. Del Pan & Co., Inc.
Registro Italiano Navale	Registro Internacional Naval
Registro Cubano de Buques	Maritime Register of Shipping

Ferriby Marine – Authorized for ISM certification

de Nul Group, the dredger, which is the largest in the world, will be utilized for international land reclamation projects. Krupp Fordertechnik GmbH supplied the dredging systems and components.

Before being passed over to its owner during 2000, the dredger is scheduled to carry out high-performance dredging operations.

**Main Particulars**

Length	656 ft. (200 m)
Width	119 ft. (36.2 m)
Draft	46 ft. (14 m)
Dredging depth	148/197/262/430 ft. (45/60/80/131 m)
Deadweight	58,000 tons
Total power (approximate)	37,060 kW
Speed (fully laden)	16.5 knots

**Pilot Boat Features  
New Hull Design**

Featuring a waterjet-powered fiberglass hull, a new pilot boat was constructed for Puget Sound Pilots at Nordlund Boat Co., Tacoma, Wash.

Measuring 74 ft. (22.5 m), the vessel will be based at Port Angeles, Wash., where it was scheduled to enter service during December 1999. Powered by two Cat® 3412E marine diesel engines, each rated 900-bhp at 2,300-rpm, driving Hamilton waterjets through Reintjes Gears, the vessel's top speed is estimated at 26 knots. The 1,800-bhp (1,342 kW) Puget Sound boasts a new hull design developed in conjunction with **Tim Nolan** of Tim Nolan Marine Design and **Ed Hagemann** of Hage-Marine, Inc.

Noted as the first marine engine to feature Caterpillar's patented Hydraulically-Actuated Electronically-Controlled Unit Injector (HEUI) fuel system — this will be the first pilot boat installation of Cat 3412Es. Regarding the engine's performance, Captain John Harris, of Puget Sound Pilots, cited increased fuel economy, emissions control and weight-to-weight power ratio.

Circle 83 on Reader Service Card

**Main Particulars**

Length	74 ft. (22.7 m)
Beam	20 ft. (6 m)
Design draft	3 ft. (9 m)
Propulsion engines	2x Cat 3412E
Marine gear	2x Reintjes WFS 334
Propulsion	2x Hamilton

**Conoco Christens Seventh  
DH Tanker**

Conoco Inc. has placed in service the seventh double-hulled crude oil tanker the company has built since 1990.

Sentinel will join Conoco's all double-hulled fleet, which includes: five similar double-hulled tankers primarily used to transport crude oil from Venezuela and Mexico to Conoco's Lake Charles, La. refinery, a double-hulled shuttle tanker in the North Sea, and two, state-of-the-art deepwater drillships.

January, 2000

**Schlumberger Launches  
Deepwater Vessel**

Schlumberger introduced DeepSTIM — an advanced stimulation vessel. Launched last month for operation in the Gulf of Mexico, the vessel measures 260 x 56 ft. with its large capacity providing reliability in unfavorable weather conditions — allowing it to remain at sea for extended periods. A fully enclosed North Sea-style deck houses

all pumping, mixing and blending equipment — eliminating exposure of equipment and personnel to weather.

Equipped with the most recent technology in antiroll systems, environmental waste containment, data acquisition and transmission, and fluid engineering, the vessel runs at 12,700-hhp at rates of 50 barrels per minute. DeepSTIM can also increase its hhp, with 48 hours notice, to 19,500-hhp. A process controlled, continuous-mix fluid system

permits "on-the-fly" mixing of both acid and fracturing fluids utilizing fresh water or seawater, thus significantly minimizing fluid wastes and reducing material costs. Features include an innovative dynamic positioning system, which allows the vessel to remain at a programmed position using computer-supported thrusters constructed into the vessel's hull. A high-speed satellite communications package allows transmission of critical wellsite information.

**BRAIDED  
ROPES**

Spectra® ♦ Kevlar®  
Polyester ♦ Nylon  
♦ Vectran



Double-Braid ♦ 12-Strand ♦ 8-Plait

**High Performance • Reasonable Price  
Excellent Value**

If your needs are 1 - 1/2 dia. and below  
then you should contact us.

Thanks for Calling

**(800) 464 -ROPE**

www.pelicanrope.com

**Pelican Rope Works**

Fax: (714) 545-ROPE

E-Mail: sales@pelicanrope.com

Circle 245 on Reader Service Card

**offshore systems international, inc.**  
5013 Pacific Highway East, Suite #16  
Fife, WA 98424 USA  
253-926-8711 Fax 253-926-8779  
www.gyrocompass.com info@gyrocompass.com

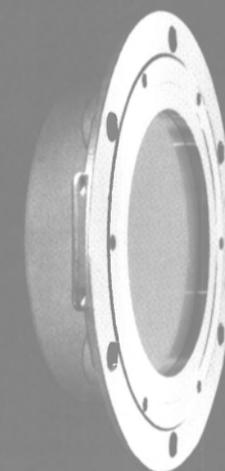
*Precise Control, Navigation and Information  
Systems for Safety and Environmental Protection*

Autopilots IBS / Stand Alone Gyrocompass  
Speed Log Magnetic Compass Charting Instruments



Circle 244 on Reader Service Card

**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 216 on Reader Service Card

## Ship Repair & Conversion

### Cascade Signs Maintenance/Repair Agreement

Cascade General and Alaska Tanker Company (ATC) have signed an alliance agreement for the maintenance and repair of ATC's fleet of Alaska North Slope (ANS) tankers. The function of this alliance is "to achieve a process of

continuous improvement in standards of safety, environmental protection and quality, which results in the reliable and cost effective performance of ATC vessels, while providing long-term benefits to both parties."

The non-exclusive agreement commits ATC to sending a majority of its vessels to Cascade General's Portland Shipyard for drydocking over the next two years and also earmarks 50 percent of its voyage repairs to be performed by Cascade



Cascade General and Alaska Tanker Company (ATC) have signed an alliance agreement for the maintenance and repair of ATC's fleet of Alaska North Slope (ANS) tankers. Photo: © 1999, Cascade General, Inc.

General outside of the shipyard at remote locations.

Cascade has already performed several major overhauls for ATC in 1999, including biennial drydockings of the S/S Denali, Overseas Ohio and Overseas New York.

Circle 95 on Reader Service Card

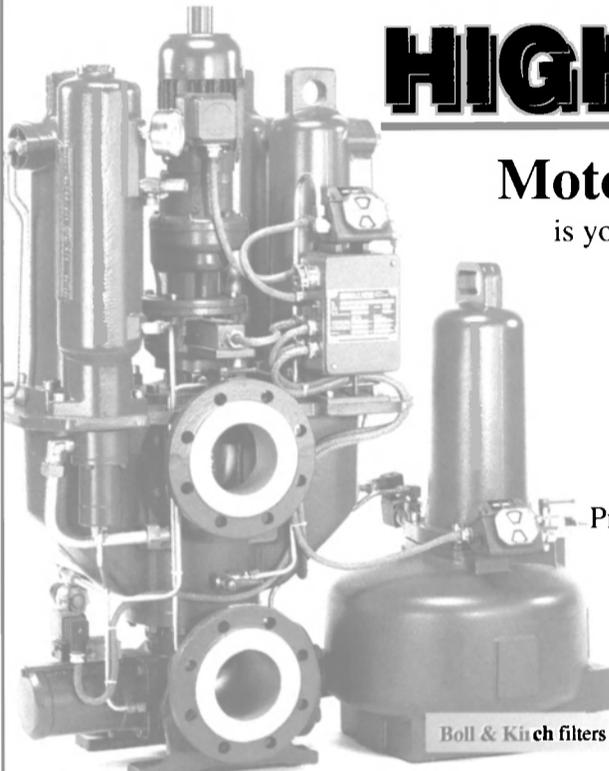


ECE-K, a 7,132-dwt Turkish vessel receives a new bow.

### Verolme Botlek Carries Out Vessel Upgrades

Verolme Botlek, a drydocking, repair and conversion yard located in Rotterdam, has been actively repairing various vessels including FPSO Uisge Gorm, which underwent tank damage repairs this past summer. The yard concluded yet another steel repair project - renewing of the 7,132-dwt Turkish vessel, ECE-K's bow - which utilized approximately 100 tons of steel.

Throughout the last quarter, Verolme Botlek has accommodated a total of five tankers for repair work. The ships included the 130,031-dwt Loch Rannoch (pictured in photo) for BP Amoco



# HIGH-EFFICIENCY

## Motor Services Hugo Stamp, Inc.

is your **Boll and Kirch** U.S. Authorized Service Center.

- ✓ Factory-trained technicians
- ✓ Installation analysis
- ✓ Retrofits and start-up
- ✓ Extensive inventory

Providing 24-hour service for all your filter needs.  
**Call 1-800-622-6747**  
 or fax your request to **(954) 763-2872.**

3190 S.W. 4th Avenue • Ft. Lauderdale, Florida 33315

Boll & Kirch filters 6.60/6.61 filter tube oils, diesel oils, heavy fuel oils, machine coolants and emulsions.



## MOTOR-SERVICES HUGO STAMP, INC.

AUTHORIZED DISTRIBUTORS & SERVICE CENTER

BOLL FILTER CORP. 15 International Drive, P.O. Box 515, East Granby, CT 06026-0515 • 1-800-910-BOLL • Fax (860) 653-3839

Circle 220 on Reader Service Card



## Smith Berger Marine, Inc.

### The leader in deck hardware for over 60 years.

Fairleads and Deck Sheaves are **IN STOCK** at the following locations:

PACIFIC NORTHWEST	Rasmussen Equipment Co. - Seattle, WA 1-800-227-7920 FAX 1-206-762-5003
CALIFORNIA and TEXAS	Waterman Supply Co., Inc. - Wilmington, CA 1-800-322-3131 FAX 1-310-522-1043
GULF COAST	Rasmussen Equipment Co. - Belle Chasse, LA 1-504-392-0442 FAX 1-504-392-0107

Call for competitive prices and immediate delivery on Smith Berger Fairleads and Deck Sheaves. Also call for:

- Pedestal Roller Fairleads
- Four Roller Fairleads
- Flag Blocks
- Chain Stoppers
- Towing Pins
- Stern Rollers
- Custom-engineered equipment to your specifications

Smith Berger Marine, Inc. 7915 10th Ave. S. Seattle, WA 98108  
 1-888-726-1688 206-764-4650 Fax: 206-764-4653  
 E-mail: sbm@smithberger.com



BALANCED HEAD FAIRLEADS MODELS MD-610, MC-622 AND MD-665

Circle 255 on Reader Service Card



Aerial view of Verolme Botlek, a drydocking, repair and conversion yard located in Rotterdam.

Shipping; the 80,745-dwt Petrotrym for Golar Nor Offshore; and Aberdeen with 87,055-dwt for Northern Marine Management.

Recent projects include the simultaneously drydocking of two drilling rigs — semisubmersible rig Noble Ton van Langevelt — as well as the Ensco jack-up rig Ensco 71.

Circle 64 on Reader Service Card

### Kennedy Ship Repair Inaugurated In Galveston

A new state-of-the-art facility consisting of a 315 x 96 ft. (96 x 29.2 m) basin dock with more than 40,000 sq. ft. of paved repair surface will be completed in the spring of 2000 — Kennedy Ship Repair. Located on Galveston Bay, the facility will be next to the Inter-Coastal waterway at mile marker 351.

Focusing on repair of marine vessels, new vessel construction and pre-cast concrete caisson for the use in new marine terminals, this is the first environmentally safe structure of its type on the Gulf Coast. The facility is also constructed to operate in compliance to all current, local, federal and clean air acts laws.

Circle 33 on Reader Service Card

### MacGregor Completes Modifications

MacGregor's RoRo division recently concluded stern ramp modifications on two freight RoRos that are changing route as a result of a new charter.

MacGregor converted the 4,600-dwt/1,045 lane-m sisterships Rodona and Sapphire for Rederi Engstrom, Delivered in 1980, respectively as Balder Dona and Balder Vinga by the Swedish yard Karlskrona Varv, the vessels required the ramp modifications (from 12 to 16 m) as a result of their new charter to P&O North Sea Ferries. Deployed on the Felistowe (England)-Zeebrugge (Belgium) route, the vessel pair received its new ramps in early October.

Circle 65 on Reader Service Card

### Argent To Reactivate LNG Carrier

Argent Marine Services, owner of LNG carrier Arzew, has reached an agreement of a time charter with a Shell company. In connection with this agreement, Argent will refurbish and reactivate Arzew for recommission. A sister-

ship of the recently redeployed LNG Delta was constructed as a U.S.-flag vessel in 1978 transporting gas from Algeria to the U.S. east coast until 1980. Formerly known as Southern, the vessel has been in lay-up in the James River since 1994 under the management of Argent Marine Operations — an affiliate of the owner. In anticipation of the

vessel trading in shipping routes for international gas markets, Arzew was re-flagged under Marshall Islands registry last year. The vessel will transport cargoes from Oman to specific terminals in Europe through Shell International Trading and Shipping Company, who will operate the vessel for Argent per the amended time charter.

## 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

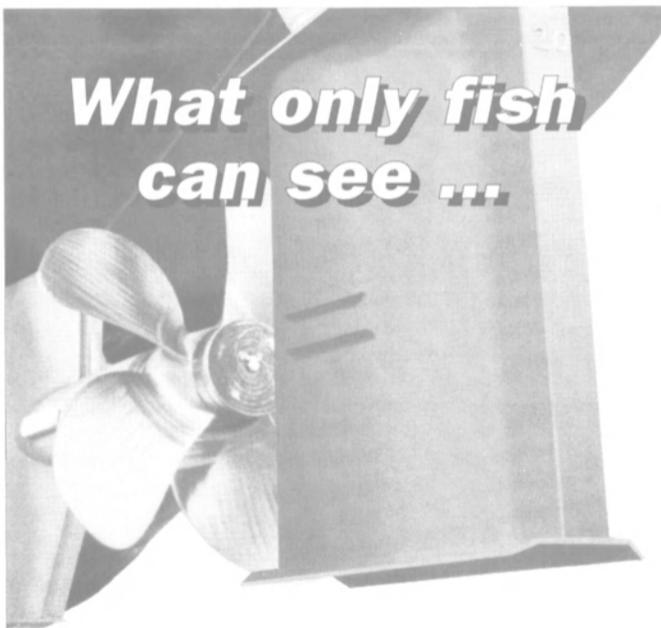
**AURAND**

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 206 on Reader Service Card

What only fish can see ...



Top quality steering • Maximum manoeuvrability

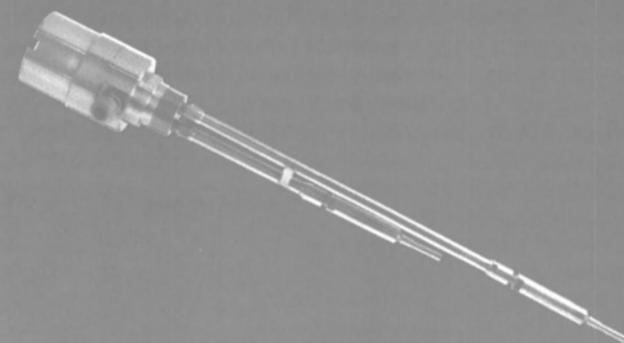
**A. van der Velden bv** Rotterdam

A. van der Velden B.V.,  
P.O. Box 2061  
2930 AB Krimpen a/d Lek  
The Netherlands  
Tel.: +31 (0)180 511577  
Fax: +31 (0)180 511578  
E-mail: 100417.654@compuserve.com  
Internet: www.vdvelden.nl

Agent for the U.S.A.  
Ships Machinery International Inc.  
8357 N.W. 56 Street  
Miami FL 33166 USA  
Tel.: (+1) 305 592 7350  
Fax: (+1) 305 591 8223  
E-mail: info@shipmachinery.com  
Internet: www.shipmachinery.com

Circle 200 on Reader Service Card

## THE SEA SWITCH TWO



### Smart Electronic Level Switch with No Moving Parts

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

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

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

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

Call today for more information!

**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 217 on Reader Service Card

## Passenger Vessel Report



# "Boutique" Cruise Vessel Keeps French Cruisers Nicely Coiffed

A "boutique" luxury cruise catamaran - set to meander the islands of the French Caribbean - has been delivered by Australian ship and boat builder Austal Ships. The vessel, built for discerning French owner Rivages Crossieres, is dubbed Rivage St. Martin and embodies many of the advanced technical and aesthetic design features, which define the latest advances in passenger vessel construction and outfitting.

Measuring 197 x 49 x 6.9 ft. (60 x 15 x 2.1 m), Rivage St. Martin is powered by a pair of MTU 12V 2000 M70 engines, which drive two fixed pitch propellers through ZF BW 256 gearboxes to a speed of 14.5 knots. While the vessel features a host of advanced design and equipment features, it is its positioning - between a cruise ship and a luxury charter yacht - which make it such a unique offering. The so-called "boutique" cruise market offers many of the benefits of the luxury charter yacht, such as exclusivity, but at a price much closer to that of the traditional cruise ship. To promote the feeling of exclusivity, Austal believes that the concept works best with up to about 100 passengers.

"In some cases, the boutique cruiser is a seasoned cruiser, 15 to 25 cruises already undertaken, middle aged or beyond, and is

very discerning," said Chris Norman, Austal's sales director.

Rivage St. Martin comfortably cares for 80 passengers, and is unique further in that it is built entirely from aluminum. The on-board domestic systems are designed to cope with the high demand of providing services to all passengers at the same time, and have back up systems to ensure that passenger comfort is never disrupted.

Rivage St. Martin is a catamaran-type vessel, which with its wide beam should provide its customers and crew with excellent stability and sea keeping. The twin hulls are also designed to provide a very "sea kindly" motion, due to the semi-swath hull shape. Cruising at 14.5 knots, it is intended that cruising will take place at night only, for about three hours at a time, so that passengers will awake each morning in a new port. Operating from a base in St. Martin, the vessel's shallow draft (6.9 ft. [2.1 m]) is well suited to its area of operation, effectively allowing it to anchor close to the shore in an area such as a lagoon protected by a reef, as opposed to berthing in a busy port. This adds to the feeling of seclusion, while offering direct access to water sports as well. Rapid transport to and from shore is handled via three

large fast rigid inflatable tenders.

The 80 guests are accommodated in 34 cabins spread over three decks. The vessel will operate with a crew of 20 (8 officers/12 hotel and catering). The bridge is equipped with three main consoles and two desk units located on the aft bulkhead. Main electronics include two Furuno radars, a steering system incorporating Gyro and Autopilot (C-Plath), Navtex GMDSS and Leica DGPS Navigator, EPIRB, Satcom Mini-M satellite telephone system and Aeronautical VHF system.

Circle 187 on Reader Service Card

#### Rivage St Martin Main Particulars

Length, o.a.	197 (60 m)
Length, waterline	180 ft. (54.8 m)
Beam, molded	49 ft. (15 m)
Hull draft	6.9 ft. (2.1 m)
Engines (Main & Aux)	MTU
Propellers	Veem, 1360 dia, 525 rpm
Bowthrusters	Vosper Thornycroft
Locks/Door Furnishings	Hafele Australia
Toilets	Evac
Carpets	Brinton
Decks	Bolidt
Ceilings	Isolamin
Panels	Isolamin
Lighting	Environmental Lighting
Air conditioning	Actrol / Danfoss
Galley	Hobart
Radars	Furuno
Gearboxes	ZF
Speed (100%MCR, 109 dwt)	14.5 knots
Fuel consumption @ MCR	34 tons/hr.
Classification	Bureau Veritas



## United States Lines Flying High Again

As far back to the early 1900's when the transatlantic crossing ruled the day, the motto of the cruise ship industry was to provide passengers with a vacation that was both relaxing and hospitable. For the most part, the majority of these passengers were of American descent — boarding vessels registered in foreign countries and were serviced by non-American crewmembers. Such is the case now as the major playing cruise companies adhere to these customs. All that changed though, this past March when, American Classic Voyages, headed by CEO, Philip C. Calian, broke ground in the cruise shipping industry with its decision to build and operate two U.S.-flag cruise vessels as part of its newly-established United States Lines. — By Regina P. Ciardiello, assistant editor

It has often been said that you never forget your roots. Such could be said about Philip C. Calian who grew up in the Midwestern town of Dubuque, Ia., situated along the Mississippi River where the state trio of Illinois, Iowa and Wisconsin meet. At the time, it was probably unimaginable to Calian that he would one day, after an East coast swing to attend college and work on Wall Street — would return to his roots by becoming head of the largest owner and operator of U.S.-flag cruise vessels — based in the Midwestern mecca of Chicago.



Philip C. Calian

It was history in the making last year as the cruise industry was abuzz with American Classic Voyages' (AMCV) decision to contract Litton Industries Ingalls Shipbuilding to undertake the innovative task of constructing the first U.S.-flag cruise ships in more than 40 years. Dubbed Project America, the \$1.4 billion deal requires Ingalls to provide two 1,900-passenger vessels scheduled for delivery in 2003 and 2004.

Maritime Reporter/Engineering News

This agreement also included the option for a third vessel (the first two will cost \$950 million). The fleet, which recently received the official title of United States Lines, will operate weekly cruises among the U.S. Hawaiian Islands. Complete with American crew, the former MS Nieuw Amsterdam will lead off U.S. Lines with its December 9, 2000 maiden voyage. The company reached an agreement with Holland America on August 10, 1999, to acquire the vessel for \$114.5 million — it will be transferred to AMCV in the fall of 2000 and renamed MS Patriot.

For a relatively lengthy span, U.S. cruise ship construction has been virtually dead in the water with no new ships being built on U.S. soil. But then in 1995, AMCV brought forth a notion that had been envisioned by many shipyards for some time — the plans to operate large, modern U.S.-flag cruise ships.

A driver in the revitalization of the U.S. flag is Calian, who has held his current position since AMCV's historical idea was formulated that year.

It was Calian and other AMCV executives who led the way for this new revolution, accomplishing two components — with the dual goals of reinventing the U.S. passenger vessel industry, while building the company.

When Calian arrived at AMCV five years ago, he was a welcome addition to the company, whose two brands had been receiving rather tepid returns both in revenue and sales. American Hawaii, which AMCV had purchased that same year was losing money, while the Mark Twain-esque Delta Queen Steamboat Company had new capacity requirements.

"We basically rolled up our sleeves and worked on and planned out what we needed to do to increase profits," Calian said. "It was a total management and employee effort to fix our business."

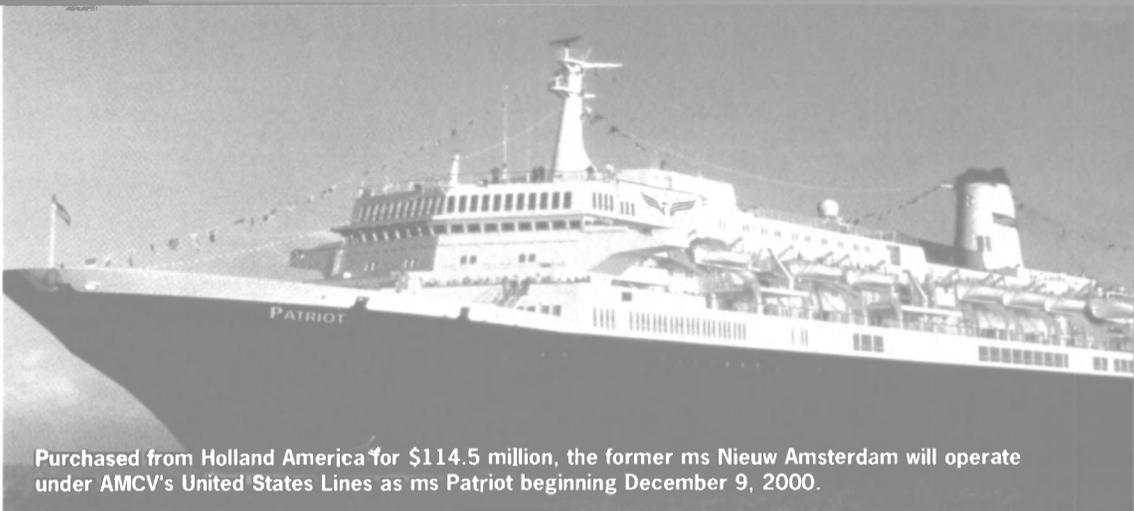
#### Climbing the corporate ladder

After graduating from Brown University, Calian, who majored in chemistry, went to work on Wall Street before landing a job at The Equity Group, an investment firm controlled by **Sam Zell** in Chicago. It was through Zell that Calian learned the ins and outs of corporate turnarounds and what it took to turn a business that was losing money — into one that was both strong and profitable. Soon after, Calian took on the position as president and CEO of packaging and plastics company, CFI Industries in Illinois.

The history of events that led up to Calian's presence at AMCV, date back to the mid-1980's when Zell, now chairman of AMCV, acquired Delta Queen, and eventually American Hawaii Cruis-

es in 1995. It was through these two business transactions that AMCV was established, and Calian — who had always held an interest in the hospitality industry — came onboard.

"Hospitality and maritime are interesting indus-



Purchased from Holland America for \$114.5 million, the former ms Nieuw Amsterdam will operate under AMCV's United States Lines as ms Patriot beginning December 9, 2000.

Someone else who's right at home  
in the middle of the ocean.



We're from Australia, the "land down under" an isolated island in the middle of the ocean.

In many ways, it's a lot like your ship. Only a heck of a lot bigger. Just like you, we Aussies rely on global satellite communications to keep in touch with the rest of the world. You could say our geography has thrown us in at the deep end in that regard.

So it's hardly surprising that Australia's Telstra is at the forefront of global satellite communications technology. We've got the experience, infrastructure and technical capability to meet your communications needs.

**Telstra Global Satellite. We're in the same boat.**

[www.telstra.com.au/globalsatellite](http://www.telstra.com.au/globalsatellite)



\*Registered trade mark and ™trade mark of Telstra Corporation Limited ACN 051 775 556. © Inmarsat and the Inmarsat logo are trade marks of Inmarsat, London, United Kingdom.

TIN0077/B

# 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 System



Dual track slide features the evacuation  
of 500 persons in 30 minutes

- Most 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 261 on Reader Service Card

## Passenger Vessel Report

tries," he said. "There are many operating and marketing challenges of running a marine operation as well as a hotel."

### Building for the future

In keeping up with his number one strategy rule of "helping to lead, but also helping to build a strong sense of management partnership," Calian and his team continue to focus on building up value for shareholders, as well as providing their clientele with a wide variety of vacation options.

"Stabilizing our business, along with cash flow, have put the platform in place for our long-term growth," Calian said. "It is now the responsibility of **Rod McLeod**, AMCV president and COO, to further define and lead the execution of our growth strategy."

With the plan for U.S. Lines fully in place, Calian is accomplishing a variety of favorable aspects, mainly an addition of more than 2,300 shipyard employees who will construct the two vessels, as well as an additional 2,000 employees

onboard and shoreside once the job is complete.

"The goal of U.S. Lines is to increase both maritime and travel interests, and helping to develop commercial ship-building procedures for yards," Calian said. "It's also a new cruise capacity for those who did not have the option of a Hawaiian experience by land and by sea until now."

Dubbed "America's cruise line," by AMCV, the original U.S. Lines was among the best during the heyday of the transatlantic crossing with a fleet that consisted of SS America, SS Manhattan, SS Leviathan and SS George Washington. The line remained in operation until 1969, when the last member of its fleet, SS United States was decommissioned.

"U.S. Lines is a perfect example of taking a product and bringing it into the new millennium," Calian said. "For too long, the American cruise industry was defined by what was in the past — not in the future."

## SeaArk Marine's Atlantis Explorer



Great Boat • 1999

SeaArk Marine, Monticello, Ark., recently built and delivered a 54 ft. passenger boat to Atlantis Marine World, Riverhead, N.Y. Marine World will use Atlantis Explorer to accommodate more than 70 people for eco-tours on the Peconic River. The two-hour cruise will educate passengers on geological aspects and natural resources of the Long Island area. As part of the excursion, passengers will be able to disembark on shore for further "hands-on" exploration. The new SeaArk vessel features bench seating for 72 people and two marine heads for passenger convenience. The pilot area is located just off the bow with a tour guide station across on the port side. A flush deck and "self-beaching" style bow-loading ramp provide safe and convenient access area for boarding. A color-coordinated overhead canopy protects passengers from the weather.

Constructed of all-welded marine alu-

minum, the hull is designed with twin sponsons, which offer a stable ride and permit shallow water operations.

Atlantis Explorer is powered by twin 200 hp Yamaha outboard engines mounted on engine brackets, which are extensions of the hull. Other equipment includes a 75-gallon holding tank, 30-gallon freshwater tank, sink with pump, overhead dome lights, life jacket storage boxes, hydraulic steering, lighted compass, digital depth sounder and a PA system with four speakers.

Circle 197 on Reader Service Card

Shipbuilder	SeaArk Marine
Owner/Operator	Atlantis Marine World
Designer	SeaArk Marine
Length, o.a. x Breadth	54 x 14.5 ft.
Draft (design)	12 in. molded
Speed, service	25 knots
Complement	72 passengers
Fuel Consumption	40 gph
Main Engine Mfr.	Yamaha

*You can't get any closer!*

Walk to the Smithsonian, the National Air and Space Museum, and the Lincoln Memorial. We're located near all the attractions on the mall, including the Holocaust Museum, the FDR memorial, and the Vietnam Memorial. Or stay in and enjoy amenities like our year-round rooftop pool. For reservations, call (202) 484-1000, 800-23-LOEWS or your local travel expert

**Winterfest rate:**  
**\$109\***

**LOEWS**  
**L'ENFANT PLAZA HOTEL**  
WASHINGTON D.C.  
www.loewshotels.com

\*Per night. Taxes not included. Subject to availability.

FOUR DIAMOND AWARD

Circle 235 on Reader Service Card

# HMS: Outfitting ferry for safety, success

Operating between Nassau and Harbor Island and Eleuthera in the Bahamas, M/V Bo Hengy carries passengers daily for this ferry service that provides an innovative form of transportation, inter-island in the Bahamas. Until now, the only form of transportation on this route was via air, mailboat or private vessel.

Along the designated route for Bo Hengy is a treacherous three-mile section located at the northern tip of Eleuthera. Known as the Devil's Backbone, this is the sole way around the north end - the primary destination of Bo Hengy. As a result, a comprehensive risk assessment was carried out to evaluate the risks associated with operating the vessel on the inter-island route.

The IMO High Speed Craft Code (HSC Code), was evaluated from a standpoint of risk mitigation in addition to external factors that were considered for downside potential with regard to safety. Findings based on the evaluation stated that the Bahamas environment is conducive to the operation of such a ferry service, and yet hazards still do exist which if not properly examined - could result in accidents - which could be fatal. The Risk Assessment led to various recommendations, such as the required installation of a Portable Pilot Unit, undertaking of enhanced training and that crew scheduling should take fatigue factors into account.

To ensure that proper safety measures are being taken, Hornblower Marine Services (HMS) specified that installation of a Starlink DGPS system. Both accurate and repeatable, this equipment suite offers an appropriate level of navigation enhancement - essential at high speed. Traditionally coupled with a laptop computer and the appropriate antennas, the Invicta 210M DGPS/Beacon Receiver provides an accurate navigation tool used by pilots for the transit and docking of ships. In the instance of M/V Bo Hengy, HMS matched the unit with an installed computer and flat screen display rather than a laptop. Utilizing Ocean PC marinized computers and a 15-in. high resolution flat screen display, placement of the display in an appropriate location on the dash of the vessel was an intricate consideration from an ergonomic standpoint. Reconfiguration of the dash layout was required to offer the captain an accurate view from the screen.

Additional operating challenges included the building and commissioning of the vessel to the

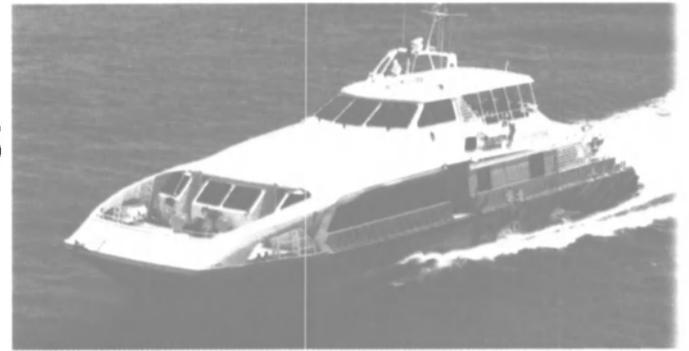
High Speed Craft Code under the Bahamian Flag, fueling and resupply logistics, maintenance and repair, mooring and boarding ramps, as well as the vessel timetable and crew training.

Although Hornblower routinely collaborates with the U.S. Coast Guard on similar matters, the idea of operation under another administration offered additional challenges. The London office of the BMA, along with Det Norske Veritas and the builder had detailed various critical issues with regard to the design, outfitting and construction of the vessel to the IMO High Speed Craft Code (HSC Code). Keeping in mind a possible inclusion of a number of normally required components, such as a sprinkler system and SOLAS approved lifeboat and davit, both the vessel owners and builder sought an early approval.

In each case of variance from the HSC Code alternative safety measures were proposed to provide a sufficient level of equivalency for HSC Code requirements. In some cases, the route geography and water temperature played a role.

As the vessel was in preparation for delivery, voyage departure roadblocks with class certificates and registry were remedied and a High Speed Craft Safety Certificate (Bahamas version) was administered - with special allowances agreed per the parties and agencies - which are noted on the certificate. As a result, BMA issued the HSC Code required Permit to Operate. Early on during the HSC Code compliance discussion that occurred with the BMA, the subject of safe manning and training levels came up. It was understood from the beginning that the agency would not consider the standard license issued in Nassau by the Port Authority as acceptable for the operation of this new high-speed passenger vessel. Although the service was to be offered on a domestic route - known in the Bahamas as a "Home Trade" vessel - it was agreed that additional training and certification would be necessary. This would in turn satisfy the requirements of the flag, owners, underwriters and standards. In addition to the training program, HMS has deemed it a necessity to provide a high level of active support throughout the daily operation of the vessel. A set of standing orders were recently developed to assure that Masters are operating the vessels on a consistent watch to watch basis.

Circle 196 on Reader Service Card



New reduced rates from the middle of the ocean.



On 1 October 1999, we cut the rates for many of our global voice, fax and data services using Satcom-A<sup>®</sup>, Satcom-B<sup>®</sup>, Satcom-C<sup>®</sup>, Satcom-M<sup>®</sup> and MiniSat<sup>®</sup>, and expanded our country zones to give you even more watertight maritime communications. And Telstra can save you more with free Internet access.\*

For a copy of Telstra's new reduced rates, call the Telstra 24-hour Customer Service Centre: **+61 7 5490 9090** or **FREECALL™ 1800 810 023\*** (Australia only) Or e-mail us at: **service@global-satellite.com**

Interested in having your maritime communications reviewed **free**? Find out how much you could save with a streamlined Telstra package.

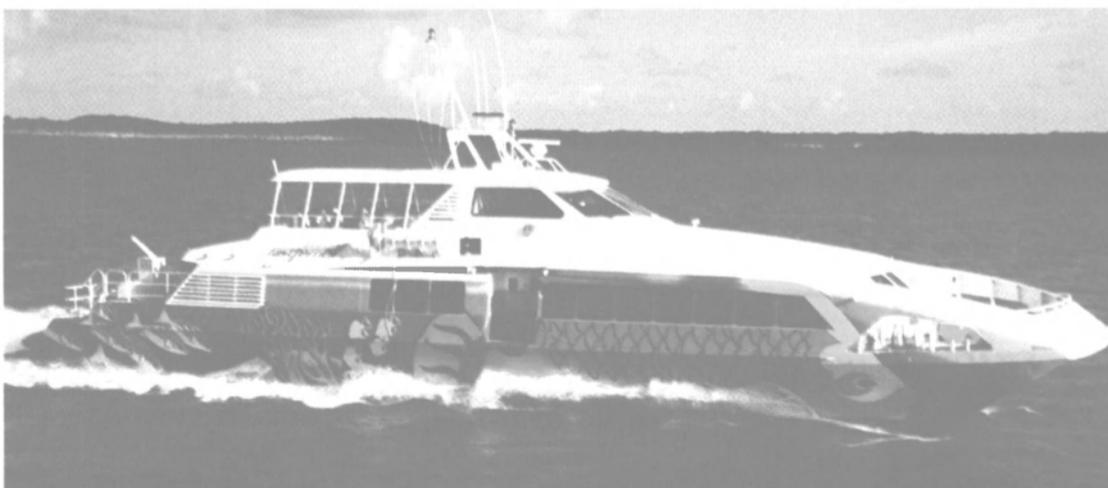
VIA  
INMARSAT

Telstra Global Satellite.  
We're in the same boat.

**Telstra™**

\*Inmarsat airtime charges apply. \*A free call within Australia unless from a mobile phone, which will be charged at the applicable rate. FREECALL not available from radio or Satcom terminals. \*\*Registered trade mark and ™trade mark of Telstra Corporation Limited, ACN 051 775 556. © Inmarsat and the Inmarsat logo are trade marks of Inmarsat, London, United Kingdom. TIN0079/E

Circle 25 on Reader Service Card

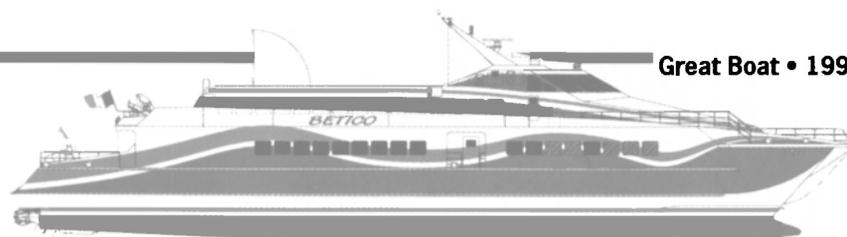


## Passenger Vessel Report

**Builder Name** Austal  
**Type** Catamaran  
**Owner** Govt. of New Caledonia

The custom designed livery emulating the waves of the ocean gives Betico, a 171 ft. (52 m) high speed passenger catamaran an original, striking appearance. The vessel has been purchased by

the Provincial Government of the Loyalty Islands of New Caledonia and will provide an essential link to the capital Noumea. Austal's well proven rounded-bilge and bulbous-bow hull form, the aluminium catamaran features a middle bow which only comes into effect in seas greater than two meters. To enhance passenger comfort, Betico is



The aluminum Betico measures 171 x 42.6 x 5 ft. (52.4 x 13 x 1.5 m).

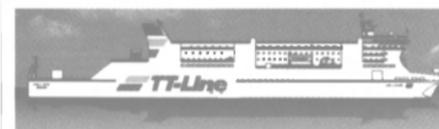
also fitted with the Austal Ocean Leveller ride control system.

Powered by quadruple MTU 12V engines, Betico comfortably achieved a

fully loaded speed of 34.5 knots during sea trials. A unique feature of "Betico" is the storage space located aft of the main deck. This area is suitable for 10 baggage crates, four of which are refrigerated for the storage of perishable goods. Each crate has a weight capacity of 1.5 - 2 tons. The catamaran is also equipped with a custom designed cargo handling system, allowing the vessel to be completely independent of shore facilities and thus, enhancing its suitability as an island commuter service. The wheelhouse is designed for a four man operation. Main electronics include the MTU MCS-5 monitoring system, 2 x Kelvin Hughes radars (Nucleus 2 5000 Ecdis and Nucleus 2 5000A), Skipper Echo-Sounder, electronic chart navigation, Navtex GMDSS and Leica DGPS Navigator.

Circle 50 on Reader Service Card

### Siemens Gets RoPax Order



TT-Line Shipping Company has placed an order with SSW Fahr- und Spezialschiffbau GmbH of Bremerhaven for a pair of new RoPax vessels for a ferry service between Travemünde and Trelleborg. The Siemens Marine Engineering Subdivision will be supplying and outfitting all the electrical machinery and systems as a \$40.4 million turn-key contract — which includes all the automation equipment employing SIMOS IMAC 55 equipment — as well as the communications systems. Two Siemens-Schottel SSP 10 Propulsors at 11 MW will propel each vessel. The new SSP pod-type propulsion system is developed for a very advanced type of vessel.

Circle 36 on Reader Service Card

### Fincantieri Wins Ferry Order

Tirrenia di Navigazione formalized an agreement with Fincantieri for the construction of two 35,000-gt new generation cruise ferries. Measuring 702 ft. (214 m) with a breadth of 85 ft. (26 m), these innovative vessels, which have the capacity to cruise up to 29 knots, and are capable of accommodating 900 cars and 2,200 passengers in 274 cabins. The two ferries will be constructed by Fincantieri Merchant Ship Business Unit at its Castellammare di Stabia Shipyard with delivery of the first vessel expected in summer 2001.

# 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](http://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)  
13115 Dulaney Valley Road  
Glenn Arm, MD 21057-9601, USA

Tel: (800) 540-5503 \*USA only

(410) 592-8540

Fax: (410) 592-3185

E-mail: [thermax@erols.com](mailto:thermax@erols.com)

## ISO 9001

Registered and Certified

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

Circle 259 on Reader Service Card

# SOUNDCOAT

Let Soundcoat assist you in meeting all of your acoustic requirements by providing Uncompromised Engineered Solutions

For Technical Support call 1-800-394-8913

## NOISE CONTROL SOLUTIONS FOR METAL, FIBERGLASS, OR COMPOSITE CONSTRUCTED VESSELS

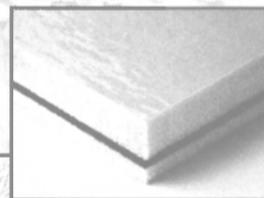
Use **Soundmat PB** to block noise paths from engine rooms to cabin

Various **Soundfoam** acoustic absorbers available for lining of passenger compartments and engine rooms

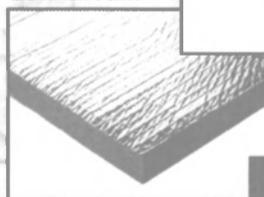
**Vibration Damping** methods available as spray on compounds or sheet products to eliminate structure borne noise in metal structures

Design assistance and noise testing services available

Soundmat™ PB-2



Soundfoam™



Vibration Damping



UL REGISTERED TRADE MARK  
A8350 ISO 9002  
The Soundcoat Company, Inc.  
Deer Park, New York

# SOUNDCOAT

One Burt Drive • Deer Park, NY 11729 (631) 242-2200 • FAX (631) 242-2246  
16901 Armstrong Ave., Irvine, CA 92606 • (949) 955-9202 • FAX (949) 222-0834  
e-mail: [info@soundcoat.com](mailto:info@soundcoat.com) • [www.soundcoat.com](http://www.soundcoat.com)

Circle 271 on Reader Service Card

# Austal To Start U.S. Shipbuilding Joint Venture

Australian shipbuilder Austal has signed a joint venture agreement to establish a U.S. shipbuilding operation, Austal USA. After extensive investigation, Austal's Chairman, **John Rothwell**, announced that Bender Shipbuilding & Repair Co. Inc. would partner Austal in the USA. The majority equity will be held by Austal.

Currently the coastwise trade laws in the U.S. (primarily the Jones Act and the Passenger Vessel Services Act) generally prohibit foreign-built vessels from operating on domestic routes. But the U.S. passenger vessel market is ripe, with an estimated 3,600 vessels carrying nearly 200 million passengers each year.

"With Austal's leading-edge technology, and world leadership in the design and production of high performance aluminum vessels, coupled to Bender's comprehensive capabilities and domestic knowledge, we will revolutionize light weight, high speed shipbuilding in the USA," said Rothwell.

"We are extremely excited about this opportunity to bring to the American people the most advanced and sophisticated technology available. Of equal importance will be the employment opportunities an operation of this scope will provide."

**Tom Bender**, President and grandson of the founder of Bender Shipbuilding, said, "I am looking forward to collaborating with our friends at Austal in building modern, high-speed aluminum vessels in Mobile. With our knowledge of the U.S. market, experience in hiring and retaining skilled shipyard workers and expertise in purchasing material and equipment, we expect to contribute significantly to the venture. Our new high-tech laser cutter - the first of its kind in a U.S. shipyard - should help Austal USA achieve sizeable cost savings in building these ships."

It is expected that the full product range will be built at the Mobile, Alabama shipyard. Austal has substantial growth ambitions not only to capture a significant share of the passenger ferry market with its sophisticated technology and vessels not presently available in the U.S., but is also seeking opportunities to supply to the U.S. Defense Department.

"We have already had comprehensive discussions with various U.S. Defense personnel in regard to the High-Speed Sealift Ships program. Additionally, we believe Austal USA will be well placed to supply future needs of the U.S. Coast Guard based on our experience and success as the supplier of patrol craft needs for Australia's Coast Guard equivalent, the Australian Customs Service," said

Rothwell. In addition to domestic orders, export opportunities will also be sought.

A site has been identified and construction on the first stage of the devel-

opment will commence as soon as the required approvals are received. It is anticipated that this site will grow in size comparable to Austal's Western Australian facility. Recruitment will

commence as early as January 2000 with training of key personnel in highly specialized aluminum shipbuilding skills to take place at Austal's Western Australian Shipyard. Substantial training initiatives will be implemented to facilitate commensurate skilled workforce growth and the quality for which Austal vessels are world-renowned.

**Circle 186 on Reader Service Card**



Riding  
the seas

**ASTILLEROS  
ESPAÑOLES**  
*Now and into the future*

Ochandiano, 14 - 16  
28023 El Plantío • Madrid - Spain  
Tel. +34 91 387 81 00  
Fax +34 91 387 81 14  
Email: astilleros@aesa.net

**Circle 205 on Reader Service Card**

## Passenger Vessel Report

**Builder** Astilleros Espanoles,  
Sevilla Yard  
**Name** Dawn Merchant  
**Type** RoPax  
**Owner** Cenargo Intl.

The 7,360-dwt Dawn Merchant melds a high operating speed, sustainable in bad weather, and an exceptional standard of passenger accommodation with 'best practice' as applied to Ro-Pax ferry design. But she is also a cut above many other units deployed by regional operators, as one of the first RoRo passenger ships to fully comply with the so-called Stockholm Agreement edicts, incremental to IMO damage stability and survivability requirements, governing such vessels working in North-West European waters. The ferry has accordingly been designed to withstand flooding to 50 cm on the main deck.

Dawn Merchant's birthmark is her 79.7 ft. (24.3 m) waterline breadth governed by the lock downstream of the Sevilla shipyard of Astilleros Espanoles (AESAs). Cenargo has ordered four such \$64 million vessels to date from AESA, although the program may be extended to six. Cargo capacity corresponds to 146 trailer units, with freight-handling effected on a drive-through basis using bow and stern openings. The composition and dimensioning of the powerful



Great Boat • 1999

propulsion plant, based on four, 9-cylinder Wärtsilä 38 engines. Manufactured by the Dutch arm of the Wärtsilä NSD group, the 38-series main machinery gives an aggregate power delivery of 23,760-kW (32,320-bhp). The maximum speed of 23 knots fulfills the berth-to-berth schedule to enable each vessel to maintain a daily round-trip rotation. Freight vehicle transfers between the main and upper deck levels are made by means of two tiltable and hoistable, 183.7 ft. (56 m) long ramps, each able to take four road trailers to a total load of 180 tons. These are placed adjacent to each side casing, and have a 8.2 ft. (2.5 m) high, watertight bulkhead running along inboard side. In keeping with

damage stability rules for passenger-carrying RoRos, the use of the tanktop level for revenue-earning purposes has been eschewed in the Dawn Merchant. Her 2,000-lane meters of freight carrying capacity, and a substantial, design deadweight of 7,360 tons, is based on the use of main and upper decks for cargo purposes, with no lower hold. Instead, the space below the main deck is subdivided into 11 watertight compartments.

Circle 195 on Reader Service Card

**Builder** Freeport Shipbuilding  
**Boat name** M/V Starship  
**Boat type** Dinner/Cruise  
**Owner** Starship Cruise Line

Measuring 175 ft. (53.3 m), the dinner cruise vessel Starship was recently delivered to Starship Cruise Lines of Biloxi, Miss. Boasting a mega-yacht style, the vessel was designed by Naval Architects Dejong & Lebet of Jacksonville, Fla., and constructed by Freeport, Fla.-based Freeport Shipbuilding. Plachter-Vogel Design provided interior architecture.

United States Coast Guard Certified under Subchapter K for 600 passengers, plus 30 crew. Starship carries a Stability Letter for Partially Protected waters.

The vessel is designed to have a five to 5.6 ft. full load draft enabling it to access



Great Boat • 1999

some of the Biloxi area's more shallow waterways. The hull features tunnels to allow large enough propellers while minimizing the draft.

Starship is powered by a pair of Detroit Diesel Series 60 main engines, developing 400-hp at 1,800-rpm, coupled to twin disc MG-516 gear gearboxes. The 250-hp Schottel bowthruster is powered by a Detroit Diesel Series 50 engine with a Twin Disc gear. Stewart & Stevenson supplied all engines. The boat also features Fernstrum grid coolers.

Circle 194 on Reader Service Card

#### Main Particulars

Length, (o.a)	175 ft. (53.3 m)
Beam, (molded)	40 ft. (12.1 m)
Depth	12 ft. (3.6 m)
Draft	6 ft. (1.8 m)
Fuel oil	4,500 gallons
Black/gray water	9,600 gallons
Main engines	Detroit Diesel
Grid Coolers	Fernstrum
Bowthruster	Schottel



## DO YOU WANT MAXIMUM PERFORMANCE FROM YOUR DIESEL ENGINE?

### PROTECT YOUR INVESTMENT.

When you've invested in the boat of your dreams, you need to protect the engine you depend on. FUEL MAG breaks down the sludge, algae and microbes that can clog filters and settle in tanks, contaminating the fuel. A one-time, maintenance-free installation increases filter life; reduces clogged injectors; extends diesel engine life and eliminates using toxic biocides.



# FUEL MAG

TOLL FREE (888) 825-4239  
WEB SITE [www.fueldyn.com](http://www.fueldyn.com)  
Dealer Inquiries Invited

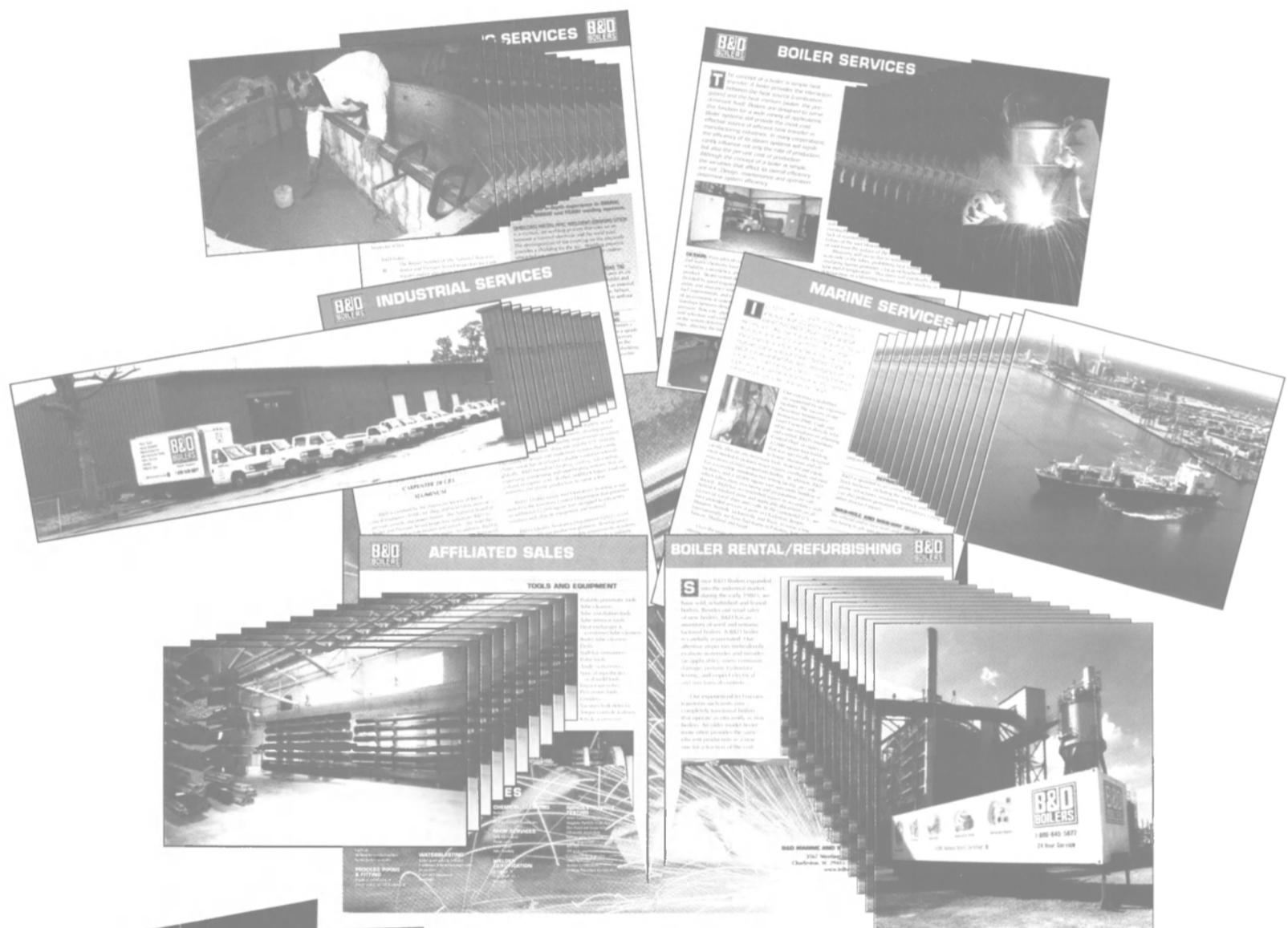
Fuel Dynamics • PO Box 523 • Cape Canaveral, FL 32920 • FAX (321) 784-5663

Bureau Veritas Certificate of Type Approval, Certificate #08446/AO BV

Circle 286 on Reader Service Card

Maritime Reporter/Engineering News

# When it comes to understanding and implementing marine and industrial boiler repairs, ASME welding and other fabrication services...



## We wrote the book... and it's FREE.

For your free copy of our B&D book, you may contact us by phone: 1-800-845-5877, E-mail: [service@bdboilers.com](mailto:service@bdboilers.com), or utilize the reader-service number at the bottom of this page.



**B&D MARINE AND INDUSTRIAL BOILERS, INC.**  
P.O. Box 71687 • Charleston, SC • 29415-1687  
[www.bdboilers.com](http://www.bdboilers.com)

**More Than Just Boilers**

Circle 209 on Reader Service Card

## Passenger Vessel Report

**Builder** Dakota Creek  
**Boat name** Snohomish  
**Boat type** Passenger ferry  
**Owner** Washington State Ferries

New passenger-only ferry Snohomish has made its debut on Puget Sound, entering service between Seattle and Bremerton, temporarily replacing Chinook. Snohomish will serve passengers

on the Seattle/Bremerton route. The new vessel is the sister ship to Chinook, which has been in service on the route since summer 1998. Both passenger-only ferries, which can carry 350 riders, were built by Dakota Creek shipyard in Anacortes. While the vessels are nearly identical to the casual observer, there are, some important differences,

explained **Cliff Hill**, project manager for the passenger-only fast-ferry (POFF) program. On Snohomish, eaves that extend over the doors at the stern of the boat were shortened to make the new ferry lighter. That modification saved one ton, and overall, Snohomish is four tons lighter than its predecessor, said Hill. This type of ferry — a catamaran

design with an aluminum hull — performs better if it's lighter, explained Hill. "Any weight savings translates into better performance and lower wake wash on these types of vessels," he said. Another modification was in the ferry's control system. Engineers also found ways to reduce the noise level in the rear areas of the lower passenger cabin. Modifying windows, increasing insulation and installing a baffle wall behind the seats, accomplished this. The completion of Snohomish marks the end of a two-boat building process that began at Dakota Creek in March 1997.

Circle 193 on Reader Service Card

**Builder** Fincantieri  
**Boat name** Superseacat Three  
**Boat type** Fast ferry  
**Owner** Seacontainers



Great Boat • 1999 |

The third in a series of fast ferries, Superseacat Three, built by Fincantieri's Mugliano Yard was delivered to London-based Seacontainers in March. With work on the vessel commencing in January

1998, Seacontainers signed the contract three years before in November 1995 for the construction of the three fast ferries. Holding 800 passengers and 175 automobiles, the monohull light alloy fast ferry measures 328 ft. (100 m) with a beam of 56 ft. (17.1 m). With a propulsion package based on four diesel engines and four steering water-jets, the vessel is also equipped with the comfort ensuring Ride Control System. Safety features include four "dry shod" slide chute escape systems providing a direct route to life-rafts. The first two ferries have been running on North European lines for the past two seasons.

**Builder** Wavemaster International  
**Boat name** Kristen  
**Boat type** Ferry  
**Owner** Jet Ferries

After years of development, Wavemaster International has presented its latest vessel, a 30 meter Wavemaster. With Manila-based Jet Ferries signing on as its latest customer, the Wavemaster possesses a three class layout equipped to hold 187 passengers for its

## Seaworthy Aluminum Hand Winches



We make over 13 Different Models of Hand Winches.

- Tough & durable, designed for use in a salt laden atmosphere. Ideal for marine duty.
- Conforms to world wide standard DIN 15020.
- Automatic braking system.
- Can be operated from either side.

Send for a complete catalogue of Jeamar products.

### JeamarWinches

1051 Clinton Street, Buffalo, New York, U.S.A. 14206

Toll Free Tel: 1-877-884-8118 • Fax: 1-877-569-9909

Visit our web site at: [www.jeamar.com](http://www.jeamar.com)  
 Email: [sales@jeamar.com](mailto:sales@jeamar.com)

Circle 280 on Reader Service Card



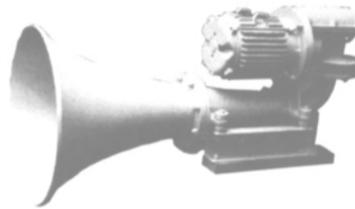
HEARD THE WORLD OVER SINCE 1929

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.bc.ca>

Circle 290 on Reader Service Card



® - **PREMET**  
 Electronic Engine Indicator

This is all you need for reliable and accurate diesel engine analysis.

**NO STRING ATTACHED!**

Mount the **PREMET** on the cylinder cock and store the data. Read it on the digital display, or Print it on the **PREMET** printer, perfect data, perfect curves, or Down-load to your P.C. for optimum engine analysis



MODELS:  
 PREMETS LS without TDC sensor  
 PREMETS XL with TDC sensor

LEHMANN & MICHELS  
 Marlowring 4 • D-22525 Hamburg



IN NORTH AMERICA  
**HERMONT MARINE INC.**

Tel.: (514) 735-6185 Fax (514) 735-0035

Circle 283 on Reader Service Card

## Maritime Week

If you're not getting the maritime industry's best weekly newspaper, you may be the last to know!

Call  
**1-212-477-6700**

for subscription information

Cut left. Slant right. Change direction on a dime. Our new Harbor Class Tugs run circles around the competition with moves that make them the most efficient ship assist and escort vessels ever created. Powered by new Voith Schneider cycloidal drives, they can go from full ahead to full starboard in just 11 seconds. Add our other high-performance cycloidal tugs, and you've got a winning team that meets your needs better than any other fleet afloat. Whether it's an emergency assist or a simple escort, you can count on Crowley for all the right moves. For more information, call Rob Grune at 1-800-248-8632.



**ANY MORE MOVES AND IT COULD PLAY PRO BALL.**

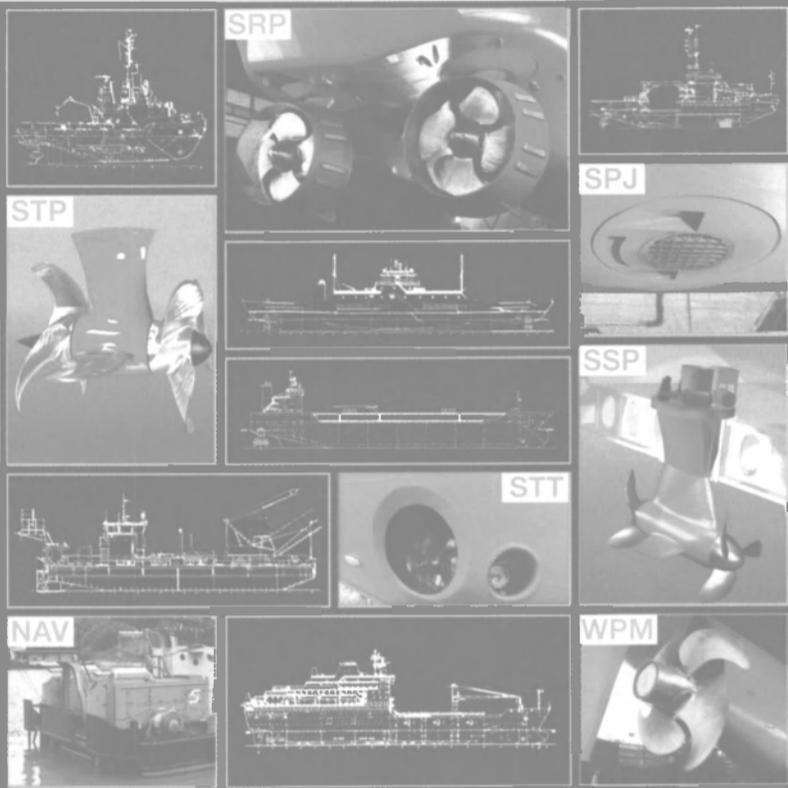


**CROWLEY**  
MARINE SERVICES  
A Subsidiary of Crowley Maritime Corporation

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

Circle 294 on Reader Service Card

# SCHOTTEL for the Shipping World



Our product range embraces 360° steerable propulsion systems rated at up to 30 MW, manoeuvring devices, and also complete conventional propulsion packages. Through our worldwide sales and service network we offer economical and reliable solutions for every imaginable maritime application. So we can provide the right thrust for your vessel.

SCHOTTEL, Inc. - Baylor Company · 500 Industrial Blvd. · Sugar Land, Tx 77478 · USA  
Tel.: 2 81 / 2 74 04 75 · Fax: 2 81 / 2 74 04 90 · e-Mail: jryan.schottel@baylor.com

*Innovators in steerable propulsion*

SCHOTTEL-Werft Josef Becker GmbH & Co. KG · Mainzer Strasse 99 · D-56322 Spay/Germany  
Tel.: + 49 (0) 26 28 / 6 10 · Fax: + 49 (0) 26 28 / 6 13 00 · e-Mail: info@schottel.de · http://www.schottel.de

Circle 287 on Reader Service Card

## Ship After Ship...

For more than 45 years, ship after ship has been fitted with Loeffler valves, deck drains and bells. The reason? High quality products at a good price.

Loeffler still offers high quality products at competitive prices ... and maintains a substantial inventory to meet your needs.

Get all the details. Ask for your FREE CATALOG today.

CALL 800-752-7595

www.loefflercorp.com

**Quality Products,  
Fast Delivery,  
Good Prices.**



**Loeffler**<sup>TM</sup>  
CORPORATION

201 East Lincoln Hwy, Penndel, PA 19047-4097  
CALL 215-757-2404 FAX 215-757-7105

Circle 215 on Reader Service Card

## Passenger Vessel Report



Great Boat • 1999

**Builder** Westport Shipyard  
**Boat name** Tanaina  
**Boat type** Excursion  
**Owner** Prince William Sound Cruises & Tours

Westport Shipyard delivered the 95 x 22.7 ft. (28.9 x 6.9 m) fiberglass excursion boat, Tanaina, to Prince William Sound Cruises & Tours (PWSCT). The boat will be based in Whittier, Alaska, to join other firms providing excursion services on Prince William Sound. Tanaina, an Alaskan word meaning, "the people," was constructed using Westport's 8500 series adjustable hull form, featuring modified propeller tunnels. The new 28-knot vessel is powered by Caterpillar 3512B engines delivering 1,960 hp at 1,835 rpm. Engines deliver power through ZF BW460 2.529:1 marine gears. The Bird-Johnson Nibral propellers have an 18-degree skew and .89 DAR. Twin Disc power Commander engine controls are installed. The ship's service power is provided by a Northern Lights M437 40-kW single phase generator and an M844L, 20-kW generator with wet exhaust. Ancillary equipment includes a 12-in., 25 hp dual prop Wesmar bowthruster.

Circle 185 on Reader Service Card



Great Boat • 1999

Classification ..... DNV  
Length ..... 100 ft. (30.5 m)  
Main engines ..... MTU  
Water jets ..... Hamilton  
Auxiliaries ..... Cummins-Onan  
Speed ..... 29 knots  
Deadweight ..... 12 tons  
Range ..... 250nm for 95% fuel  
Passengers ..... 176  
Radar, Sounder ..... Furuno  
Radio ..... Sailor DSC VHF

**Builder** Gladding Hearn  
**Boat name** Yankee Freedom II  
**Boat type** Catamaran  
**Owner** Yankee Roamer

Gladding-Hearn Shipbuilding, the Duclos Corp. constructed its first high speed excursion vessel for Yankee Roamer, Inc., Key West, Fla. The 92-ft. (28 m) boat has a top speed of more than 27 knots.

Phil Hercus of International Catamaran Designs Sydney, Australia, designed Yankee Freedom II. The Incat design uses a single chine Z-Bow hull shape that increases waterline length for improved high-speed performance and seakeeping ability.

Gladding-Hearn Shipbuilding, Somerset, Mass. built the all-aluminum vessel and designed the interior and mechanical systems. Gladding-Hearn is Incat's U.S. East Coast licensee and is schedule to launch two more Incat designed ferries this year.

Two Cat 3412C marine engines, each rated 1,050 bhp at 2,300 rpm power the vessel. The 3412s drive 40 in. diameter Bruntons propellers through ZF BW 190 marine gears. Compared to a 90 ft. (27.4 m), 2,600-bhp Lydia composite monohull previously making the Dry Tortugas run, Yankee Freedom II operates with a 20 percent increase in speed while using approximately one-third less fuel.

Circle 192 on Reader Service Card

	<b>Main Particulars</b>		ZF Industries
Length	92 ft. (28 m)	Gear	Bruntons Nibral
Beam	29 ft. (8.8 m)	Propellers	Mathers Clear Command
Draft	6 ft. (1.8 m)	Engine controls	Alaska Diesel @ 40 kW
Fuel cap.	2,000 gallons	Gensets	Industrial Power Systems
Fresh water cap.	200 gallons	Generator control panel	Wagner
Sewage holding	300 gallons	Steering system	Hydraulic Pot Hauler
Main engines	Caterpillar	Hydraulics	Furuno
Engine supplier	Southworth-Milton	Radar	Ritchie
		Compass	



Great Boat • 1999

**Builder** Willard Marine  
**Boat name** Nautilus  
**Boat type** Underwater viewing vessel  
**Owner** Catalina Adventure Tours

Willard Marine's Nautilus is a custom-built 65 ft. (19.8 m) inspected twin-diesel screw passenger-carrying underwater viewing vessel. The hull design mimics a submarine above the waterline, with rounded hull top-sides, a conning tower forward, flush deck and ventilation sail aft. The underbody consists of a trapezoidal rectangle hull, referred to as the Gondola. The Gondola contains the passenger seating area, and is fitted with 28 viewing ports. Hull construction is of resin-impregnated molded fiberglass, additionally reinforced by full and partial transverse wood and fiberglass bulkheads, foam cored fiberglass bulkheads and fiberglass over wood frames and stringers. The hull layout allows for a forepeak void accessed via a Freeman watertight hatch containing anchor gear. This compartment has a watertight bulkhead. On either side of the hull, running from the watertight bulkhead aft to the engine room, are the wing voids of the upper canoe hull. These areas contain the water and fuel tanks, ballast effect pumps, fish-feeding devices with through hulls (28 in total), and air handling compressors. There is a watertight bulkhead aft followed by the engine space. Each wing space is sealed from the hull centerline by watertight longitudinal bulkheads. Access is via port and starboard propulsion engines, centerline mounted auxiliary coupled to a generator and the hydraulic pump for bow and stern thrusters. Batteries, inverters and main disconnect switches are aft in the engine space.



Great Boat • 1999 |

**Main Particulars**  
 Length, o.a. .... 65 ft. (19.8 m)  
 Breadth, molded .... 16 ft. (4.8 m)  
 Displacement .... 203,000 lbs.  
 Draft (design) .... 6 ft. (1.8 m)  
 Speed, service .... six knots  
 Complement .... 4)  
 Main Engine ... General Motors  
 Auxiliary Engines .... GM  
 Reduction Gears .... Twin Disc  
 Engine Controls .... Kobelt  
 Steering Controls ... Marol Hyd.  
 VHF RadiO .... ICOM  
 Compass .... Ritchie  
 GPS .... Furuno

Circle 191 on Reader Service Card

**Builder** Incat Tasmania  
**Boat name** Bentayga Express  
**Boat type** High speed RoPax ferry  
**Owner** Fred. Olsen, S.A.

Launched from Incat Tasmania Coverdales shipbuilding facility at Prince of Wales Bay, Hobart, Australia, Bentayga Express was constructed for operation in the Canary Islands by Fred. Olsen, S.A. The 315 ft. (96 m) catamaran entered service in October 1999 between Santa Cruz and Tenerife and Agaete, on the Island of Gran Canaria. Measuring 40 percent larger than Incat's previous 315 ft. (96 m) class vessels, Bentayga's larger structure was accomplished by extending the superstructure aft to the stern and much further forward than normal - almost to the bow. The vessel's interior decor provides the passenger with a "modern, upbeat environment," while the operator is given a sense of "practical, functional and easily serviced" space. With passenger accommodation for up to 900 located on one deck, two classes of travel are offered. One of the vessel's most significant features is a central skylight with concealed fluorescent lighting around the base located in the Centrum area.



Great Boat • 1999

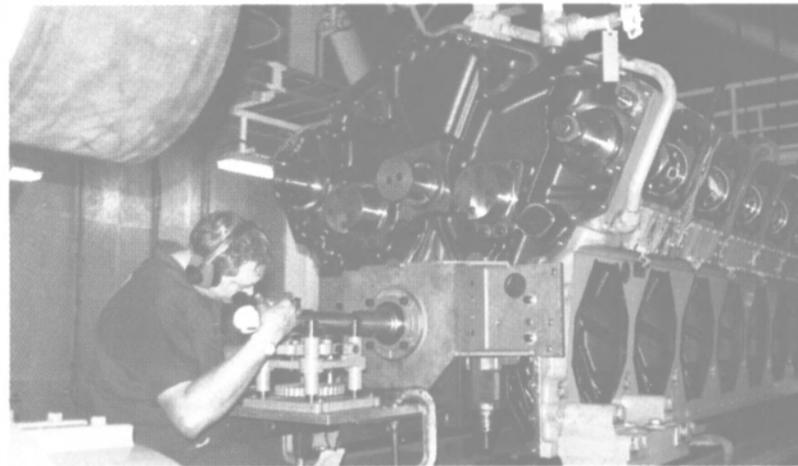


Classification .... DNV  
 Length, (o.a) .... 96 m  
 Beam, (o.a.) .... 26.1 m  
 Draft .... (4 m)  
 DWT .... 718 tons  
 Speeds .... 46.7 knots  
 .... lightship  
 Total passengers .... 900  
 Main engines ... CAT 3618  
 Transmission ... Reintjes  
 Waterjets .... LIPS

Circle 288 on Reader Service Card

# 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 288 on Reader Service Card

Do You Need Full Service Shipyard Capability?  
**MEET YOUR SCHEDULE!**



Experienced Ship Repair, New Construction & Drydocking  
 ...on San Francisco Bay!

## BAY SHIP & YACHT CO.:

2900 MAIN STREET • ALAMEDA, CA 94501  
 BILL ELLIOTT, GENERAL MGR. • MIKE ANDERSON, MARKETING MGR.

PLEASE CALL FOR QUOTES AND SCHEDULE:

**510/337-9122**  
 Fax: 510/337-0154

- 24 HOUR SERVICE
- 2800 TON DD CAPACITY
- PAINTING / SANDBLASTING
- LEAD PAINT REMOVAL
- GAS FREEING / ELECTRICAL
- STRUCTURAL STEEL
- PIPE FITTING
- MACHINE SHOP
- PROP SHOP
- LIFEBOAT REPAIR

Circle 284 on Reader Service Card

## Passenger Vessel Report

This part of the ship boasts tub style seats in clusters of four situated around circular tables, with additional rows of aircraft-style seating on either side. Ben-tayga Express reinforces the company's intention of maintaining a dominant presence in this niche of the fast ferry market. Offering a vehicle deck of 330 truck lane meters (at 2.7 m wide and 4.3

m clear height), and 370 car lane meters (at 2.3 m wide), thus providing the operator with the flexibility of transporting mixed traffic or up to 260 cars. The raised control station onboard the vessel is surprisingly small, but its large windows provide 360-degree visibility while an aft-facing docking console and television monitor replaces the necessity

for bridge wings and their associated structural weight. As with all recent Incat vessels, the control station is outfitted with the most recent electronic, navigation and communication equipment in compliance with the High Speed Craft Code Sea Area A2.

Powered by four Caterpillar 3618 medium speed diesel engines, develop-

ing in excess of 28,000 kW - the engines drive transom-mounted steerable Lips 150D waterjets, via Reintjes VLJ6831 gearboxes. All four waterjets are configured for steering and reversing while an independent hydraulic system in each hull covers the steering and reverse functions. In conjunction with Maritime Dynamics, Incat has developed a fully integrated Ride Control System.

Circle 189 on Reader Service Card

## Maneuver...Propel...Position



**Tunnel Thrusters**  
100 to 2000 HP

*Harbormaster thrusters and outdrives are found around the world in ships, boats and barges where economical performance is required.*

*For unassisted maneuvering in tight quarters. For easily-moved, deck-mounted propulsion.*

*For critical dynamic positioning.*

*For precision vessel control.*

*Harbormaster Marine products are designed to customer specification and built with utmost care and highest quality.*

*They provide years of durable service and are backed by a reliable support system.*



**Outboard and through-the-hull azimuthing drives**  
50 to 1500 HP

### Fast world-wide support!

*If you operate a Harbormaster or Murray & Tregurtha product anywhere in the world, we can provide spare parts and on-site field service. Call us first!*

**Harbormaster**  
**Harbormaster Marine, Inc.**  
31777 Industrial Road  
Livonia, MI 48150 USA  
(734) 425-1080 Fax (734) 425-1850  
Website: <http://www.harbormastermarine.com>

Circle 300 on Reader Service Card

**Builder** Nichols Brothers  
**Boat name** Catalina Jet  
**Boat type** Passenger catamaran  
**Owner** Catalina Cruises



Great Boat • 1999

Nichols Brothers, based in Whidbey Island, Wash. has completed the construction of a 144 ft. (43.8 m), 450-capacity passenger catamaran for Catalina Cruises, dubbed Catalina Jet. The vessel, which is the largest passenger catamaran to be constructed by Nichols, will run between Long Beach and Catalina Island at a speed of 36 knots.

Employing four Caterpillar electronically controlled 1,950-hp diesel engines, to power Ulstein Bird Johnson waterjets, Catalina Jet is constructed with an active ride control system for comfortable sailing along the Catalina Channel. The system, supplied by Maritime Dynamics is comprised of trim tabs and T-foils beneath the twin hulls to counteract the pitch and roll motions as caused by rough seas.

The catamaran is also equipped with three decks with indoor seating for 400 passengers and top side open air accommodations for an additional 50 people, as well as airline type and dinette seating.

Flag	U.S.
Owner	Catalina Cruises
Designer	International Catamarans, Pty. Ltd.
Builder	Nichols Brothers Boat Builders
Length	144 ft. (44 m)
Beam	39 ft. (11.9 m)
Draft, full load	6 ft. (1.65 m)
Fuel oil	2 x 2,230 gallons
Fresh water	750 gallons
Sewage	750 gallons
Main engines	Four Caterpillar rated at 1,950-hp @ 1,835 rpm
Jet drive system	Ulstein Bird Johnson
Active ride control system	Maritime Dynamics
Generators	N.C. Machinery
Electronics	Harris Electric
HVAC	Celsius Marine
Passengers	450

Sailed any uncharted waters lately?

Explore a Sea of Information on

**MARINELINK**

<http://www.marinelink.com>

# Your Profit!

It's the most important reason to own a SkipperLiner.

## Improve your profits!

You're in the marine business to make money.  
That's clear.

And we can help.  
Building dependable boats that can generate  
healthy profits is what SkipperLiner does best.

- Work boats
- Water taxis
- Canal boats
- Dinner yachts
- Paddle wheelers
- Luxury vessels
- Extensive business training
- Financing sources
- Craft that work hard and earn!

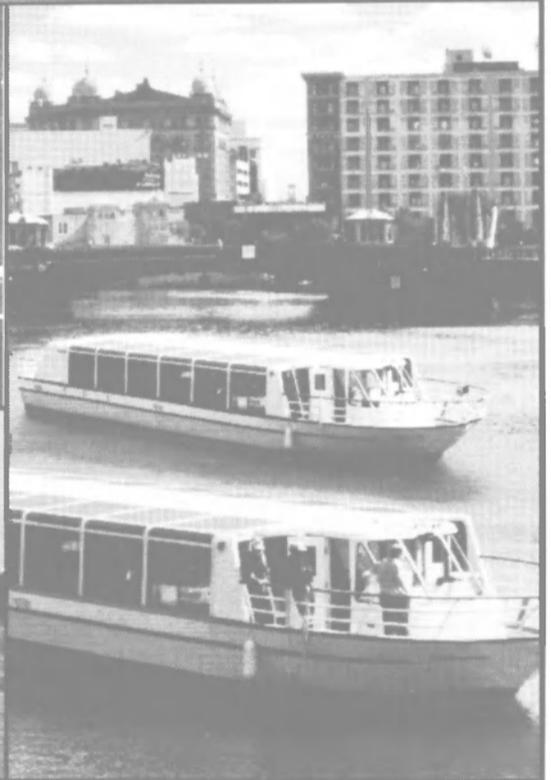
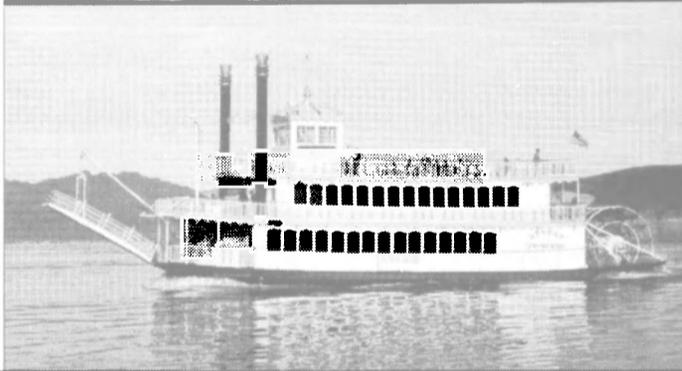
(Top) SkipperLiner luxury vessels rank among the finest and strongest, and earn profits in a variety of configurations. 30' to 160' lengths. 14' to 60' beams. We have excellent custom design/build abilities.

(Center) SkipperLiner's newest sternwheeler, the M.S. Dixie II operates as a sight-seeing and dinner cruiser. At 141' x 33', certified for 600 passengers, she is one of three SkipperLiners earning for their owners on Lake Tahoe.

(Bottom) Nostalgic SkipperLiner paddlewheelers from 49 to 800 passengers generate significant revenues for dinner cruise operators throughout the U.S.

(Far Right) SkipperLiner canal boats and water taxis in various designs are a source of consistent income for our customers. 49,100,150 passenger models, or we'll custom build to your needs.

**Call us at (608) 784-5110 today.  
Let's talk about a boat that will  
generate revenue for you!**



# SKIPPERLINER

*Where Excellence Takes To The Water*

Voted Outstanding  
Passenger Vessel

1989, 1990, 1991, 1992, 1993, 1994, 1996, 1997

*Maritime Reporter*

621 Park Plaza Drive La Crosse, WI 54601 (608) 784-5110 FAX (608) 784-7778

Circle 213 on Reader Service Card



# FERNSTRUM GRIDCOOLER®

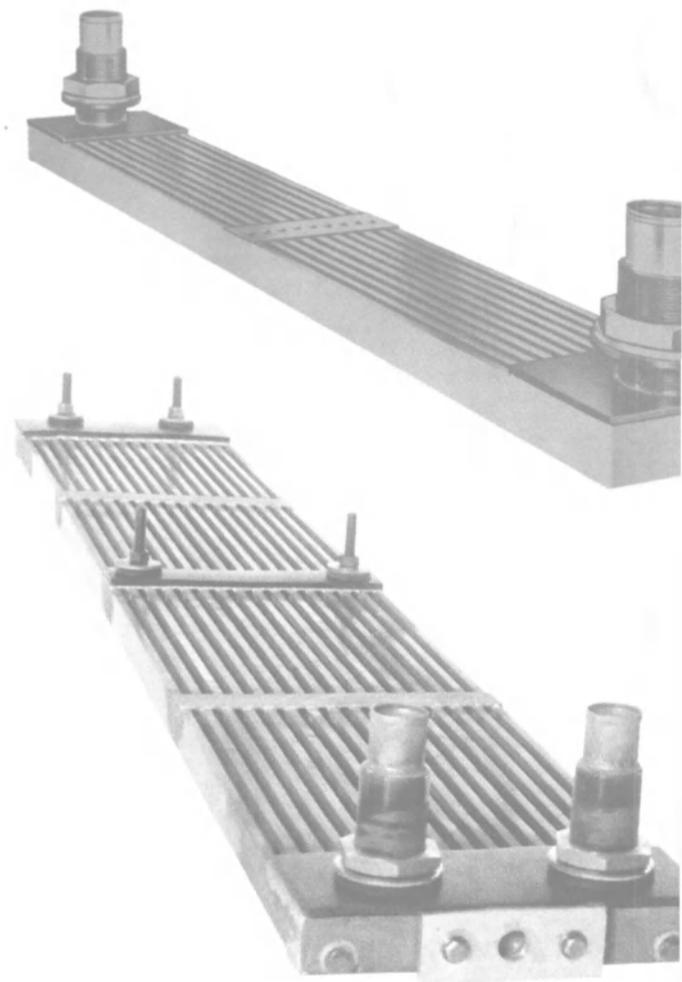
Over our 50-year history in marine keel cooling engineering and manufacturing, R.W. Fernstrum & Company has built a reputation of quality and service, worldwide. Throughout the years, we've made improvements in durability and efficiency to our GRIDCOOLER® line of keel coolers. Today, we're taking our product's efficiency to a higher level.

## *Introducing the **ENHANCED GRIDCOOLER** from R.W. Fernstrum*

By using an enhanced surface on the interior of our tubing, we've increased the heat transfer capability of our keel cooler by up to 30%. On large installations, this can reduce the number of coolers required for an application. It also allows us to fit keel coolers in spaces that previously were too small.

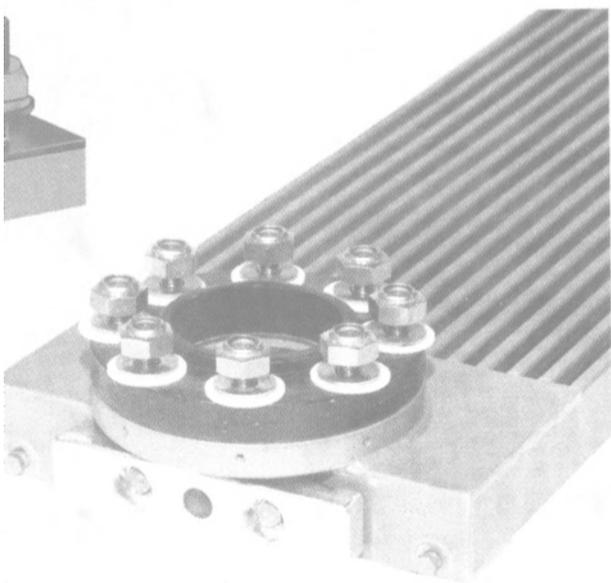
This new advancement shows our commitment to innovation in a field where we've long been the leader. If you need a solution to a cooling problem, give us a call. We will gladly work with you to design a keel cooling system to meet your needs.

**LOOK FOR THE GRID... FIND FERNSTRUM QUALITY**



**R.W. FERNSTRUM  
1716 11TH AVENUE  
MENOMINEE, WI**

**PHONE: (906) 863-5555  
INTERNET WEBSITE: [www.fernstrum.com](http://www.fernstrum.com)**



**Just** when you  
**thought**  
**we couldn't**  
get any  
**cooler!**



**R. W. FERNSTRUM & COMPANY**  
P.O. BOX 97  
MICHIGAN 49858

• FAX: (906) 863-5634  
<http://www.fernstrum.com>

Circle 25 on Reader Service Card

**Builder** Skipperliner Shipyards  
**Name** M/V Hope  
**Type** Commuter service liner  
**Owner** Blackstone Valley Tourism

Delivered this past April by Skipper-Liner Shipyards of La Crosse, Wisc., to Blackstone Valley Tourism, M/V Hope and sister vessel M/V Renaissance run on a scheduled route from Pawtucket to Providence, R.I.

The vessels' design features a maxi-



Great Boat • 1999

mum air draft of 6 ft. — unique among the passenger vessel industry. Despite this low air draft, the interior is exceptionally luxurious for a scheduled commuter service liner. Able to accommodate up to 46 passengers, the vessels boast Boeing 737 reclining seats. Additional amenities

include power hook-ups for laptop computers and removable front row seating.

**Circle 182 on Reader Service Card**

**Main Particulars**

Length (o.a)	54 ft. (16.4 m)
Breadth	14 ft. (4.2 m)
Hull depth	5 ft. (1.5 m)
Air draft	6 ft. (1.8 m)
Displacement	52,000-lbs.
Propulsion	200-hp Mercruiser Diesel
HVAC	48,000-btu Flagship Marine
Fuel oil capacity	383 gallons
Fresh water capacity	98 gallons
Waste capacity	98 gallons
Passengers	49

  
**SingoPort 2000**  
 29-31 March 2000  
 Singapore Expo

**Builder** Bender Shipbuilding  
**Name** Juanita Candies  
**Type** 220-ft. OSV  
**Owner** Otto Candies Inc.



Great Boat • 1999

At the beginning of 1999, Bender Shipbuilding in Mobile, Ala. delivered M/V Juanita Candies to Otto Candies, Inc. The vessel immediately departed Mobile enroute to Fouchon, La., where it went on long-term charter to Conoco in support of the company's deepwater drilling program. Both Juanita Candies and sister vessel Agnes Candies have gone to work on high profile, deep water drilling projects. According to operations personnel from Candies, the vessels have been adept at performing all missions very well. In particular, their customers comment positively in regard to the vessels' fast cargo pumping rates, station keeping ability and stability in high seas.

The Agnes Candies crew reported that the first time the vessel was called upon to unload in 10 to 12-ft. seas in the d/p mode, they experienced heavy rolling in the beam sea. The flume tank was filled to the required level, the roll smoothed out and the Agnes Candies proceeded to unload.

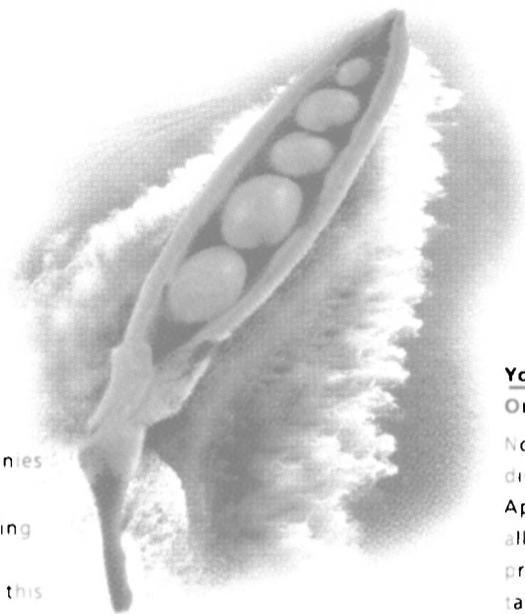
**Circle 183 on Reader Service Card**

**220' Class Offshore Supply Vessel**

**Main Particulars**

Class	ABS
Length, o.a.	218' (66.3 m)
Beam	54' (16.5 m)
Depth	20' (6.1 m)
Draft	16.1' Full Load (4.9 m)
GT	1830 ITC
Cargo Deck	150' x 45' (6,750 sq. ft.)
DWT	2,800 LT
Speed	11.5 knots
Main engines	EMD
HP	1,950 hp (3,900 hp total)
Z-Drive	Aquamaster
Bowthruster	Kamewa
Fuel oil	210,920 gal.
Potable water	32,680 gal.
Ventilation	Hartzell

## The Maritime Week you can't afford to miss!



Some 400 international companies from 25 countries including 12 country groups will be showcasing the latest state-of-the-art technologies and innovations at this leading Maritime Exhibition and Conference in the Asia-Pacific

**B E T H E R E**

- To gain timely and networking opportunities
- To meet key global industry players
- To update on latest technologies
- To forge new strategic alliances

**Visit Us:**

<http://www.singapore.com.sg>

**Admission** For trade professionals only  
 Minors below 18 will not be admitted

Singapore is strongly supported by these government bodies and international maritime associations:

- ASEAN Ports Association • Association of Singapore Marine Industries • Baltic and International Maritime Council • Economic Development Board • International Association of Ports and Harbors • International Chamber of Shipping • International Federation of Freight Forwarders Association • International Maritime Organisation • Maritime and Port Authority of Singapore • Oil Companies International Maritime Forum • Singapore Association of Ship Suppliers • Singapore Freight Forwarders Association • Singapore Shipping Association • Singapore Ship Chandlers Association • Singapore Tourism Board • Singapore Trade Development Board

For more information, please contact

**Exhibition:** Ms Chia Chui Lan  
 Reed Exhibitions Pte Ltd No 1 Temasek Avenue #17-01  
 Millenia Tower Singapore 039192  
 Tel: 65-434 3675 Fax: 65-338 8548  
 Email: [chuiar.chia@reedexpo.com.sg](mailto:chuiar.chia@reedexpo.com.sg)

**Conference:** Ms Phyllis Goh  
 Tel: 65-732 1970 Fax: 65-733 5087 Email: [phyllis@bcasia.com.sg](mailto:phyllis@bcasia.com.sg)

**Your Business Appointments  
On-Line Now!**

No more hassles and disappointments! The On-Line Appointment Scheduling System allows you to request and schedule prior appointments with your target business partners through the web before the exhibition. A brand new feature geared for your convenience and business success. Take Advantage Of This Facility Right Away!

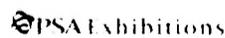
**POWER PACKED MARITIME CONFERENCE**  
 Thematic Challenges to The Day Come Fly

Come meet the shakers and movers of the maritime industry. This 2-day conference provides an excellent opportunity for YOU to interact, learn and network with international maritime gurus!

**SPECIAL HIGHLIGHTS**

- Feature Country Programme • Site Visits • Maritime Night • CEO Forum • Technology Transfer Pavilion

**JOINTLY ORGANISED BY**



**ENDORSED BY**



**OFFICIAL PUBLICATIONS**



**OFFICIAL AIRLINE**



MR & EN 99V

**Circle 302 on Reader Service Card**

# WORKHORSE.

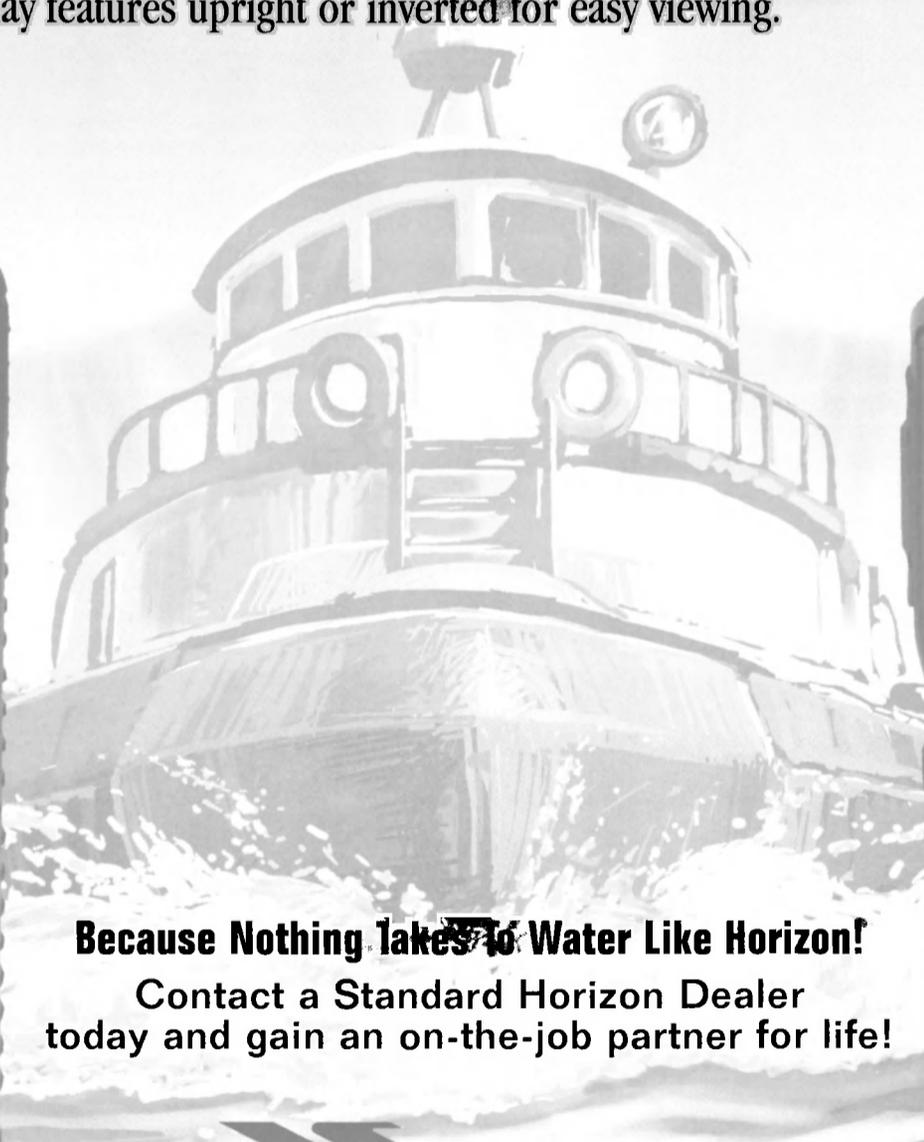
Our Word For The Day... Everyday!

## Intrinsically Safe and built to weather the hardest workday! The HX350AS and the VX-510M.

- Both models meet or exceed Mil Spec 810D and ANSI/UL913 Intrinsically Safe standards.
- The HX350AS is a 5 Watts VHF submersible handheld with all U.S., Canadian & International channels, scanning of any number or combination of channels, extra large LCD, and is easy to use.
- The VX-510M is a 16 channel UHF (4 pre-programmed channels) or VHF (channels 6, 9, & 16 pre-programmed) handheld. The transmit power is 5W/4W and for extended usage a huge 1700mAH rechargeable NiCad battery is included. The backlit LCD display features upright or inverted for easy viewing.



**The HX350AS**  
5 Watt  
Submersible VHF



**Because Nothing Takes To Water Like Horizon!**  
Contact a Standard Horizon Dealer  
today and gain an on-the-job partner for life!

**STANDARD HORIZON**

2210 Edwards Road  
Cerritos, CA 90703  
Phone: (562)404-2700  
Fax: (800)552-6813  
E-mail: [marinetech@att.net](mailto:marinetech@att.net)  
[www.yaesu.com](http://www.yaesu.com)



**The VX-510M**  
UHF or VHF  
16 Channel  
5W/4W

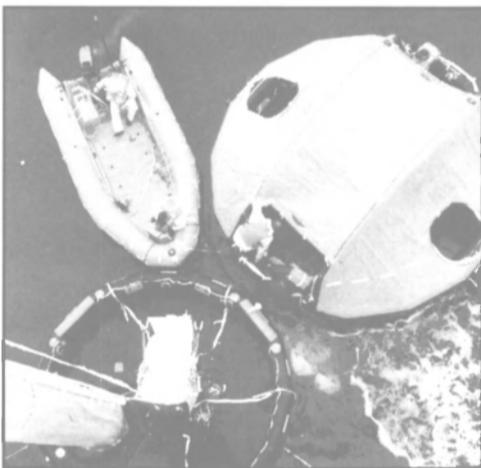
Circle 298 on Reader Service Card

**THE ONLY EVACUATION SYSTEMS THAT ARE US COAST GUARD APPROVED.**



**Evacuation Slide System.**

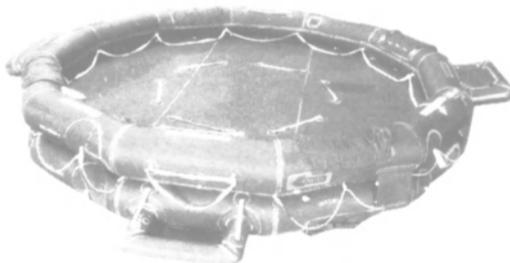
Designed specifically for Low Freeboard Vessels, it is a combination slide and platform. It provides speedy evacuation for all passengers - young, old and physically challenged. US Coast Guard Approved.



**Evacuation Chute System.**

The most efficient, easy-to-use, flexible, and cost-effective marine evacuation system available in the world. It evacuates passengers and crew in the shortest possible time.

Manufactured to meet or exceed all SOLAS requirements. US Coast Guard Approved



**We manufacture the only 100 person Reversible Inflatable Platform built in North America**

These sturdy platforms are designed for passenger carrying vessels operating in protected waters. Fully reversible - it offers instant boarding, which ever way it inflates. Also available in 10, 25 and 50 person sizes.



101-3760 Jacombs Road, Richmond British Columbia, Canada V6V 1Y6  
Ph. (604) 278-3221 Fax. (604) 278-7812  
1-800-931-3221  
sales@dbcmarine.com  
www.dbcmarine.com

Circle 291 on Reader Service Card

**Hvide Marine Emerges From Chapter 11**

Hvide Marine completed its exit financing arrangements and that its Plan of Reorganization has become effective, thereby marking the company's formal emergence from Chapter 11. 98 days after its initial filing on September 8.

**Alameda To Publish RFP**

The City of Alameda, Calif. will publish a Request for Proposal for the procurement of a new ferry for expansion of their successful Oakland, Alameda, San Francisco service. A 26-knot 350-

passenger ferry is required, and the expected RFP date is March 1, 2000 with a contract award date of June 1, 2000.

**MaK Buys Dieselmotorwerk Rostock**

Mak Motoren GmbH signed a purchase contract for Dieselmotorenwerk Rostock on December 16. Conversion of the two-stroke Rostock facility to four-stroke facility will take advantage of existing capacity rather than creating additional capacity in Europe — thus eliminating any unnecessary economic burden for Europe.

Circle 96 on Reader Service Card



**Your Ship Should Work As Hard As You Do**

**G**uido Perla & Associates has been designing profitable working vessels since 1979. A full-service naval architecture, marine engineering, and project management firm, GPA has extensive experience in design and construction of a variety of vessels. Working vessel experience includes all types of fishing vessels (including the largest factory trawler in the United States), offshore supply and anchor handling vessels, escort and harbor tugs.

Our support of shipyard construction means that we stay with you during the entire design and build process. Make sure you get the most from your new vessel, modification or conversion.

- Full range of naval architecture, marine, and electrical engineering design
- Shipyard construction engineering and support
- Project management and owner representation
- Technical consulting and operations support
- Regulatory agency liaison

**GUIDO PERLA & ASSOCIATES**  
Naval Architects, Marine, Mechanical, and Electrical Engineers

The Pacific Building  
720 Third Avenue, Suite 1200, Seattle, WA 98104  
Tel: (206) 382-3949, Fax: (206) 382-2090  
See us at PVA, Booth #209

Circle 299 on Reader Service Card

**Bostik Selects Gulf Atlantic As Rep**

Bostik, the international adhesives and sealants company, and manufacturer of a full line of maintenance products including Never-Seez anti-seize and lubricating compounds, has entered a business relationship with Gulf Atlantic Marketing.

Circle 93 on Reader Service Card

**Coffin Turbo Pump Acquires WWS**

Coffin Turbo Pump, manufacturer of marine boiler feed pumps and turbines, has acquired the assets of World Water Systems Inc. (WWS) of Irvine, Calif. The acquired company specializes in the design and manufacture of water treatment, purification and recycling systems.

Circle 94 on Reader Service Card

**BV Classes First CO2 Tanker**

Bureau Veritas Netherlands, the Dutch subsidiary of classification society Bureau Veritas, has classed the world's first CO2 tanker newbuilding — the 1,600-dwt Coral Carbonic, which is owned and operated by Coral Shipping. The 1,250 cu. m. capacity tanker was designed by Conoship International and constructed by Frisian Shipyard Welgelgen.

Circle 97 on Reader Service Card

**Bollinger Opens Engineering Office**

Bollinger Shipyards, Lockport, La., is scheduled to open a satellite marine engineering and naval architecture office in Slidell, La. to accommodate increasing business, expanding product lines and planned new services. According to **Scott Theriot**, Bollinger executive vice president/new construction, the new office will be managed by **Jude McDonald**, and will be linked to Bollinger's main engineering and design offices in Lockport via computers on real-time basis. This will provide a seamless integration into the company's wide area network and Oracle-based Enterprise Resource Planning (ERP).

Circle 98 on Reader Service Card

**Seabulk Appoints New Directors**

Seabulk Offshore has elected **Gerald L. Hoffman** as its new managing director. Formerly, Hoffman was manager of maintenance and logistics at MSRC. The company also named **William J. Merritt** as its director of operations, crew boat department.

### FirstWave Gets Contracts

FirstWave/Newpark Shipbuilding was awarded a contract by Blessey Marine Services of Hanrahan, La. for the construction of a 30,000-bbl capacity double-hulled tank barge. Measuring 298 x 54 x 13 ft. (90.8 x 16.4 x 3.9 m) the vessel will be built at FirstWave's Greens Bayou Facility for a June 2000 delivery.

FirstWave was also granted a contract by Global Industries of Carlyss, La. for a scheduled drydocking and routine regulatory maintenance of the Small Waterplane Area Twin Hull (SWATH) vessel MV Pioneer at the company's East Pelican Island Facility in Galveston.

Circle 82 on Reader Service Card

### GENSHIP Wins Repair Bid

The General Ship Corporation of Baltimore, Md., has been awarded the bid to drydock and repair the United States Army Corp of Engineers (USACE) Survey Boat Shuman.

### GD Receives Contract

General Dynamics Electric Boat signed an \$887 million contract modification with the Navy to modify Jimmy Carter, the third and final Seawolf-class submarine. The modification will entail alterations to the basic Seawolf design, specifically in ballast control, mission management spaces, and various services. The modification also features the formulation of a flexible ocean interface, referred to as the "wasp waist," that will allow the Navy to deploy and recover various payloads without having to use torpedo tubes.

### Kvichak Awarded Pilot Boat Project



Kvichak Marine Industries has been granted the contract to build a 72 ft. (22 m) all-aluminum pilot boat for the Columbia River Bar Pilots Association of Astoria, Ore. Named Chinook, the vessel was designed by Camarc, Ltd. It is scheduled for an August 2000 delivery. Chinook is designed to survive a 360-degree rollover while maintaining a safe return to its mooring with crew and equipment intact.

The vessel is powered by twin Detroit Diesel 16V2000 M70 engines rated for 1,285-bhp each. Propulsion is provided by Hamilton waterjets.

### Campbell Shipyard To Be Sold

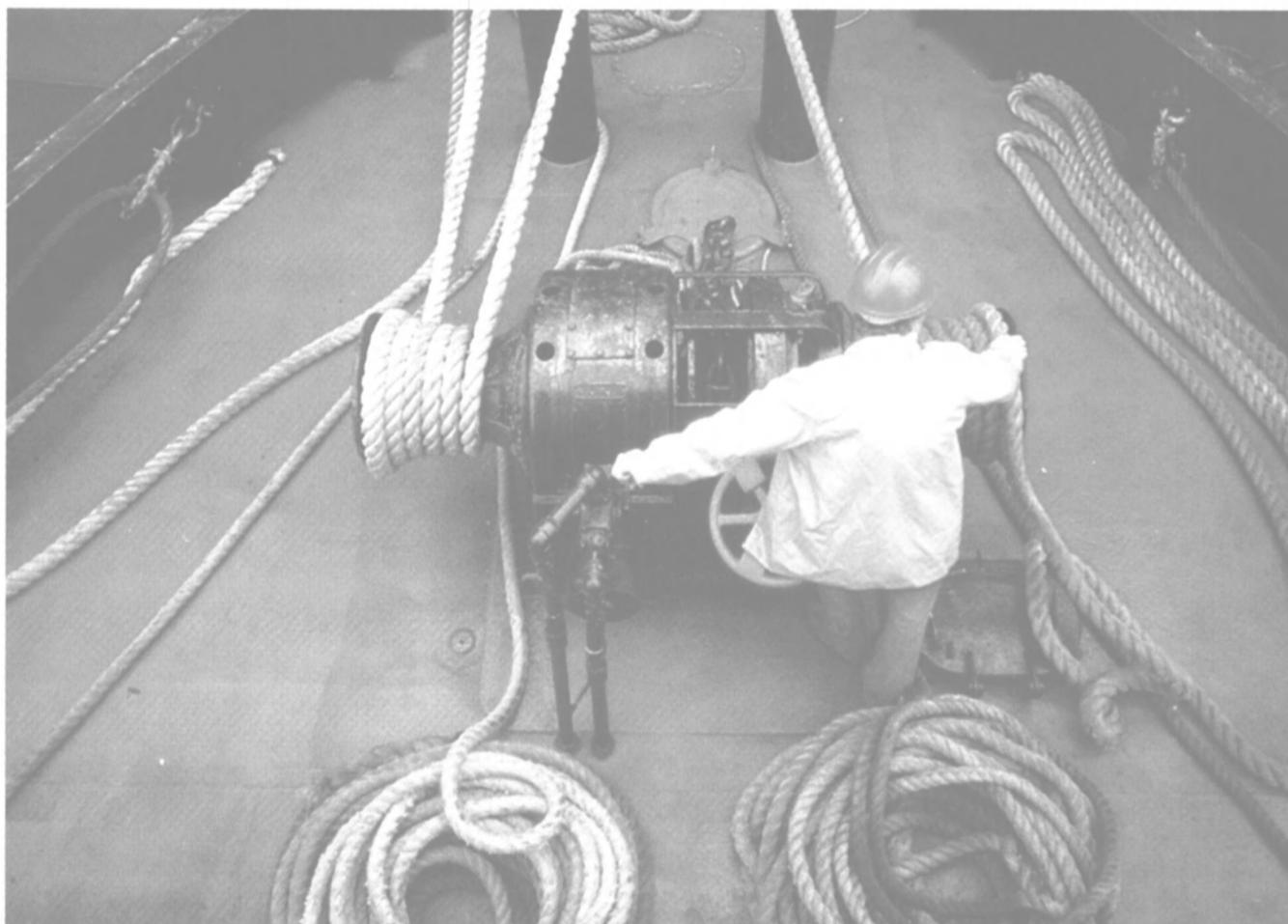
Thousands of items from the now-defunct Campbell Shipyard, including fabricating equipment, machine tools, complete woodworking shop, welding equipment and shipyard supplies will be sold to buyers from across North America who have come to bid. The auction will be held from January 27-28, 2000 in San Diego. Contact: (818) 508-7034 or [www.industrialassets.com](http://www.industrialassets.com).

### Finnegan Joins Drew Marine

The Drew Marine Division of Ashland Specialty Chemical Company has elected **John C. "Jack" Finnegan** as manager of new business development. Finnegan, comes to Drew from Newport News Shipbuilding and will be responsible for identifying and developing new business opportunities to expand the range of products and services Drew Marine offers to the marine industry. He

will also manage start-up operation and global implementation for the company's new business ventures and product lines. As part of consolidation of operations and marketing, the division has named: **Daniel P. Kelleher**, vp of marine sales for Europe and the Americas; **Nels J. Hendrickson**, vp of marine marketing and business development; and **Barry F. LaVista**, vp of marine operations, responsible for supply and distribution in Europe and the Americas.

## SIMPLY THE BEST...<sup>®</sup>



### COMMERCIAL AND MARINE, ALL IN ONE RADIO

ICOM's dual purpose radios are FCC approved\* for use on land and sea. Our 45 watt IC-F1020M is ideal for business and services needing to communicate with vessels underway. The IC-F30LTM offers 5 full watts of power and 8+ hours of operation. Both radios work all U.S. and international marine channels, and offer the latest in by-channel PC programming.



For free literature call us at 425-450-6088.



ICOM rugged! Our dual purpose radios feature die-cast aluminum chassis and surface mount technology. Meets MIL STD 810 C/D/E for shock/vibration.



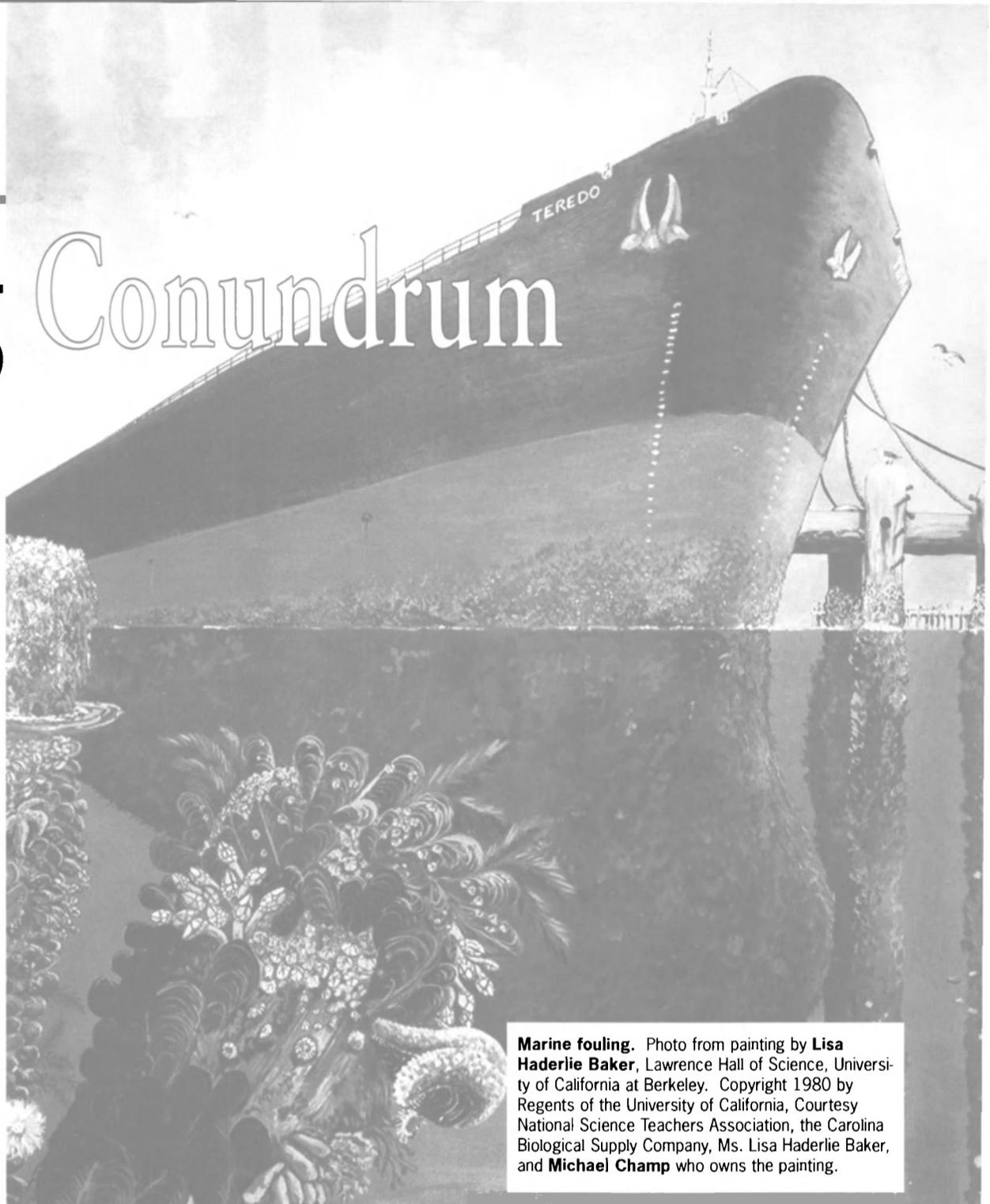
©1999 ICOM America, Inc. • 2380 116th Ave. NE, Bellevue, WA 98004 • 425-454-8155 • The Icom logo is a registered trademark of ICOM, Inc. • FCC PART 80 (Marine), PART 90 (Commercial 2-way) • F30LTM/1020MMR999

Circle 30 on Reader Service Card

# The Coating Conundrum

*Incorporating Good Environmental Science in the Current Organotin Regulatory Debate.*

A draft Assembly Resolution (Annex 21/11) prepared by the Marine Environmental Protection Committee (MEPC) of International Maritime Organization (IMO) was recently approved by the 21st Meeting of the IMO General Assembly. In it, the General Assembly "agrees that the legally-binding instrument to be developed by the Marine Environment Protection Committee should ensure a global prohibition of the application of organotin compounds which act as biocides in antifouling systems on ships by 1 January 2003, and a complete prohibition of the presence of organotin compounds which act as biocides in antifouling systems on ships by 1 January 2008." Extensive discussions at the meeting took place in selecting the term should rather than shall which insinuates that the dates are impermanent, without specifically stating "tentative". Representatives from BIMCO, ICS, INTERCARGO, INTERTANKO, OCIMF and SIGTTO were concerned that the setting of firm dates could be interpreted as binding, and should be adhered to regardless of the outcome of the global legally-binding instrument under develop-



**Marine fouling.** Photo from painting by **Lisa Haderlie Baker**, Lawrence Hall of Science, University of California at Berkeley. Copyright 1980 by Regents of the University of California, Courtesy National Science Teachers Association, the Carolina Biological Supply Company, Ms. Lisa Haderlie Baker, and **Michael Champ** who owns the painting.

## MAINTENANCE

### MARINERS AND MARINE OILERS

The New York City Department of Environmental Protection, Bureau of Wastewater Pollution Control, Marine Section, has positions available for: Mariners and Marine Oilers.

#### **MARINERS:**

The Marine section is seeking two Mariners, who under direct supervision will perform deck duties on a sludge vessel such as: operate valves to load or dump vessels to and from docks; clean, scales and paint vessels, boats and equipment. In addition; under supervision, the selected candidates will steer vessel; stand lookout and perform heavy manual labor.

#### **QUALIFICATION REQUIREMENTS:**

There are no formal educational and experience requirements, other than the license or Coast Guard requirements. Selectees must possess either a valid United States Coast Guard certificate as an Able Seaman, any waters unlimited; or a United States Merchant Mariner's document indicating endorsement as an Able Seaman, any waters, unlimited.

#### **MARINE OILERS:**

The Marine section is seeking two Marine Oilers, who under direct supervision will lubricate and assist in the maintenance and operation of marine propulsion and auxiliary equipment. When directed, will assist in handling mooring lines during docking and undocking operations of Bureau vessels. In addition, the selected candidates will operate valves associated with loading sludge in the cargo tanks aboard sludge vessels and perform related work.

#### **QUALIFICATION REQUIREMENTS:**

As listed above there are no formal educational and experience requirements, but selectees, must possess either a valid license for Third Assistant Marine Engineer or higher, issued by the United States Coast Guard Marine Inspection Service; or possess a valid United States Merchant Mariner's Document Indicating any of the following endorsements: Marine Fireman, Marine Oiler or Water Tender. All interested candidates for either of these positions should send three copies of their resume and salary history to:

**Ms Zoe Ann Campbell, 1st Deputy Director  
of Human Resources Management  
New York City Department of Environmental Protection  
Recruitment Office  
59-17 Junction Blvd. 18th Floor  
Corona, NY 11368**

NYC Residency is required within  
90 days of appointment The NYC  
Dept. of Environmental Protection is  
an Equal Opportunity Employer (M/F)



Circle 305 on Reader Service Card

ment (Annex 21/11/2). The Resolution requests a Conference in the 2000-2001 biennium to adopt a legal instrument (global convention) to implement a global ban on the use of organotin compounds. The present movement toward a global total ban suggests that the national approach has not been sufficient in some countries. Advocates of the global ban cite international findings of: (1) higher levels of TBT in surface waters of ports and open waters; (2) imposex still occurring and affecting larger number of snail species; (3) TBT bioaccumulation in selected fisheries; and (4) the availability of "comparable" alternatives (to TBT) with less environmental impact.

In the U.S. coastal zone, it is clear that federal and state regulations have had a significant impact on reducing TBT to well below the provisional water quality standards and in bivalve tissues. Current environmental and marine and estuarine water concentrations are well below predicted acute TBT toxicity levels. It should be noted that certain high use ports such as Galveston Texas, approximately 30 percent of the water measurements were above 10ng/L. In the 1997 Navy Report to Congress, about 20 percent of all water samples (which sampled U.S. Navy Home Ports, even though the Navy does not use TBT) were at or above the provisional standard. However, less than five percent exceeded it in "ecologically significant" areas. Estimation of chronic toxicity effects using mean water TBT con-

centrations indicate that current levels would be protective of 95 percent of species. Analysis of allowable Daily Intake/Oral Reference Dose Values from market basket surveys and the NOAA National Status and Trends data suggest that there is no significant human health risk from consuming seafood contaminated with TBT. Most of the data that exceeded these values were from a few areas of high TBT input from ports, harbors and marinas (commercial shipping, shipyards and drydock facilities) and sites of previous contamination.

National regulations for TBT have proven to be the antithesis of the popular environmental cliché — "Think Globally and Act Locally." Legislative policies enacted by "regulated" countries to regulate the use of TBT to protect (their) local marine resources have subsequently had far reaching environmental and economic impacts which have in essence transferred TBT contamination to those countries least able to deal with it. Market forces are selective for cheap labor and cheap environments. "Unregulated" countries have unknowingly accepted the environmental and human health risks to gain the economic benefits from painting TBT on ships. Unfortunately, these countries may not have the funding or environmental expertise available for monitoring, research and technology development that is essential to use these modern high technology compounds. Therefore, they end up with more contamination because they do not have the neces-

# Merchant Vessel Machinery

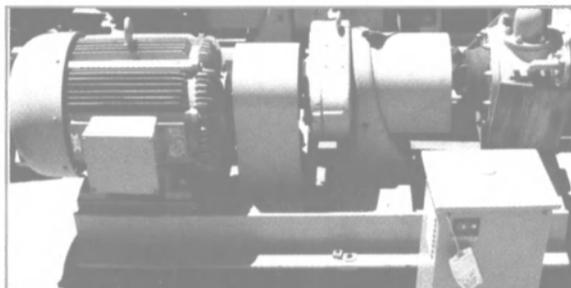
Phone: (310)830-0461

Fax: (310) 830-8355

Marine and Commercial Turbines • Pumps • Heat Exchangers • Blowers • Valves



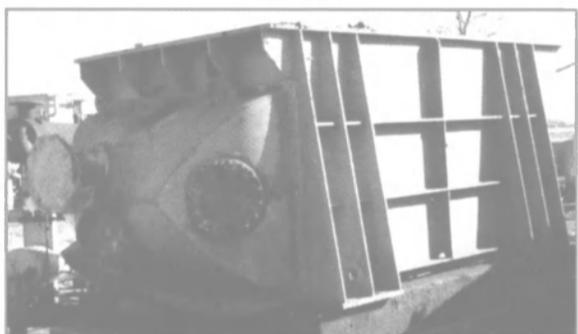
1 Bridge Crane 250'25 Ton Mfg: Ederer  
146'-4" Circular Span 16 Bridge Wheels 24" Diameter  
Cab-Operated Electric Traveling Bridge with Pendant  
and Radio Controls  
Motor: general Electric 75HP 460'3'60 1 165 RPM TEFC  
Completely Disassembled, Most of Unit Stored Inside



17 Bilge Stripping Pumps Mfg: Blackmer  
100GPM@60/70psig Horizontal Model BXL2.5NFA-NHRB  
Motor: Tech Systems 1800RPM 400/3/60 TEFC With  
Cutler-Hammer Control



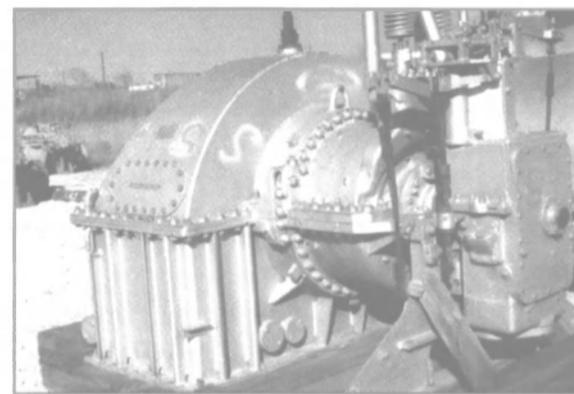
15 Foam Fire-Fighting Pumps Mfg: Blackmer  
35GPM@200psi Horizontal Model BXL1/25NFC-TB  
Motor: Reliance 7.5HP 440/3/60 With Controller,  
Spares and Educator Assembly



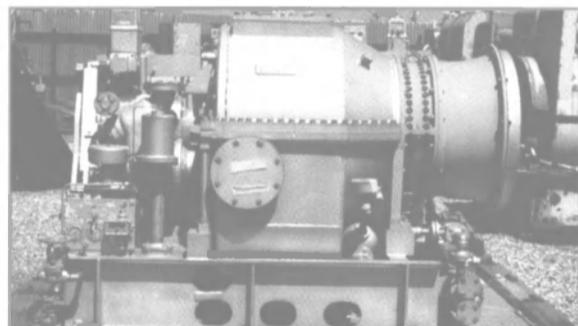
1 Unused Main Condenser Mfg: C.H. Wheeler  
3800 sq. ft. 1 Pass 2446 Tubes of 5/8" OD and  
0.049" Wall Thickness CuNi 70-30  
9'8 1/8" Long Waterboxes of CuNi & Tube Sheets  
180"x96"x92"High 18"Swing Bronze Check Valve on Ea. Unit



2 Fuel Oil Transfer Pumps Size 8x6 Mfg: DeLaval  
700/525/350/250GPM@150psi Horizontal Model A32NX437  
Motor: Continental 100/75/50/37.5HP 440/3/60 TEFC



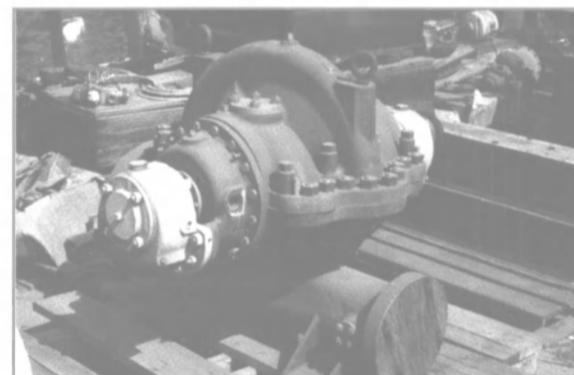
3 Steam Turbines 6000HP Mfg: General Electric  
5600RPM 410psi/725F Condensing to 28.5"Hg



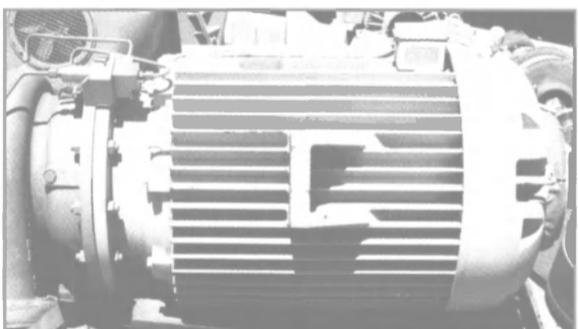
14 Forced Draft Blowers Size: 8 Mfg: Carrier-Elliott  
35,600 CFM@ 118" Ps@7220RPM 2700 CFM@ 61" Ps@5474RPM  
Model 44BH-2 916BHP Turbines: 575psig/530F 20psi Exhaust  
Replacement Parts Available



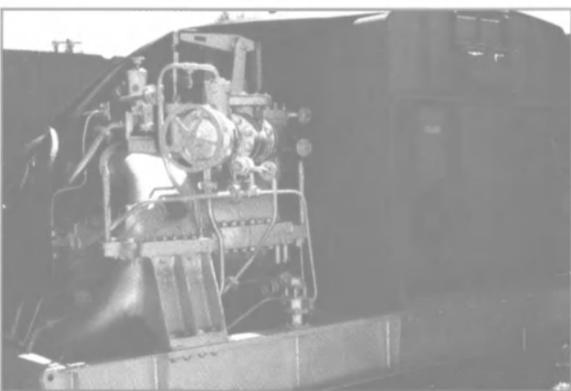
3 Circulating Pumps Size 8x8 Mfg: Carver  
3000GPM@10.25psi Horizontal Bronze Casings  
Motor: Reliance 40HP 440/3/60



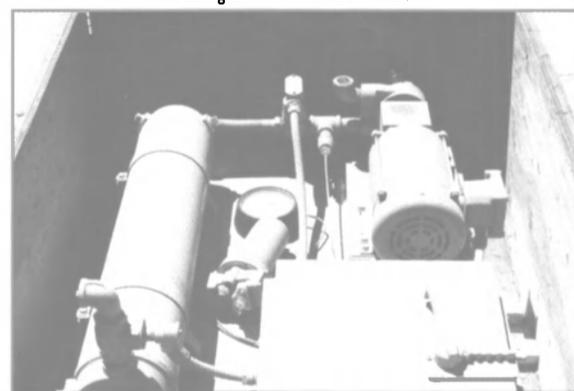
1 Cargo Pump Mfg: Ingersoll-Rand  
3000GPM @ 150psi Horizontal Bronze Casing Model 8SHW  
Missing 500HP 1800RPM Motor



1 Fire Pump Size 5x6 Mfg: Worthington  
1000GPM@125psi Vertical Titanium Casings Model 5DTVS-10  
Motor:Hansome 150HP 440/3/60 TEFC



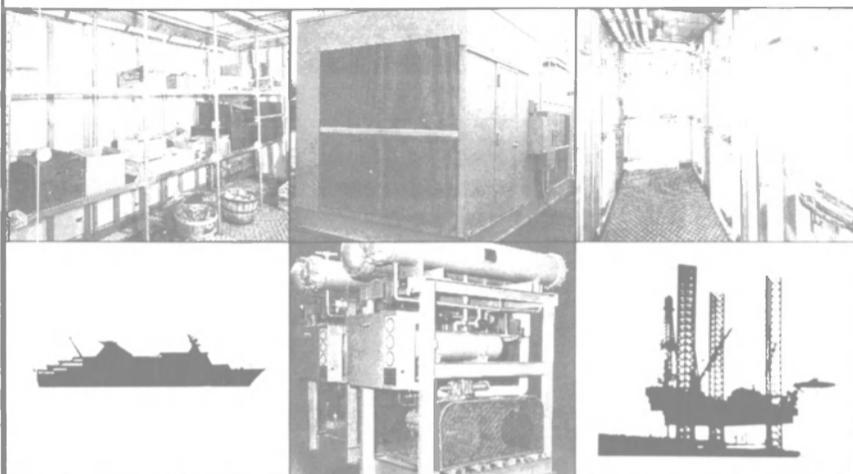
1 Turbogenerator 2000kW Mfg: Westinghouse  
Model 3S61P537 285psi/417F 3600RPM 10 Stage  
Generator: Westinghouse 2560kVA 3282Amps 450/3/60



6 Lube Oil Preheaters Mfg: Kim-Hotstart  
P/N SPOL3P 12044X-FC-1012-SUB  
Units Include Tuthill Model 2 CEV 6.2GPM Pump  
Driven By 1 HP 230/460/3/60 1 140RPM Motors

214 Lakme Street P.O. Box 716 • Wilmington, California 90748 • email: bzanettei@aol.com

## Complete Marine Refrigeration Systems Air Conditioning Compressor and Chiller Units Reefer Cargo Box Installation/Repair



Whatever Your Application It Pays To Contact  
ADRICK MARINE CORPORATION  
**CALL US To Put ADRICK'S INNOVATION To Work For You**

- Ships Air Conditioning Units
- Walk-in coolers and freezers
- Portable reefer storage units
- Portable A/C dockside systems
- Control room dehumidification systems
- Self contained A/C uprights and compacts
- Fan coil units
- Fiber glass panels with wire mesh
- Ship stores refrigeration unit
- Reefer cargo box doors
- Door gaskets

**ADRICK MARINE CORPORATION**  
81 Mahan Street  
West Babylon, NY 11704  
Call (800) 326-ADRICK  
(631) 491-9475  
FAX: (631) 491-9478



**ADRICK  
COOLING  
CORPORATION**

Circle 295 on Reader Service Card

## Your Firm Marine Partner in America / China

*Quest for Excellence*

### Stockist for New / Second-hand

- Main engine parts
- Turbocharger parts
- Auxiliary engine parts
- Anchor & chain cable
- Lifeboat & life-raft
- Other machinery equipment

### Ship Repair Service at Chinese Ports & Shipyards

- Voyage repair
- Dry-docking
- Overhauling & reconditioning service

### Foundry & Machine Shop for:

- Cylinder liner/cover
- Piston crown/skirt/ring
- Water guide jacket
- Other machinery parts

For more information visit us at:

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



### MARISO USA, Inc.

100 Davidson Avenue  
Somerset, NJ 08873, USA  
Tel: 1-732-271-2755  
Fax: 1-732-271-2744  
E-mail: [sales@mariso.com](mailto:sales@mariso.com)

### MARISO Co., Ltd.

18F, 1958 Zhong Shan Bei Rd.  
Shanghai, 200063, P.R. China  
Tel: 86-21-6203 0206  
Fax: 86-21-6203 3785  
E-mail: [sales@mariso.sh.cn](mailto:sales@mariso.sh.cn)

Circle 30 on Reader Service Card

sary regulatory structure to prevent it.

The regulatory discussion has lacked inclusive, comprehensive and public policy discussion of: (1) the economic benefits to shipowners from the use of TBT; (2) the "real" time period preferred for antifoulant protection on ships; (3) real drydock intervals (the three or five year debate); (4) the long-lived, cost of environmental impacts in marinas, ports and harbors; (5) the harsh effects of market forces in nations without TBT regulations; (6) the lack of "acceptable and approved" alternatives in many nations; (7) the potential liability of shipowners and shipyards for TBT contamination in ports and waterways by the courts given the increased cost of dredging and disposal after the global ban; and (8) the recognition of the environmental benefits (reducing invasive species, fossil-fuel consumption and greenhouse gas generation) from using TBT. The regulatory debate is not attracting peer review by the scientific community. The environmental science in the documents submitted to MEPC and IMO need scientific peer review. The organotin regulatory debate needs to balance environmental risk against benefits and effectiveness of available alternatives to TBT.

Today vessels can be painted with regulated or banned antifouling materials by boatyards in a country that does not have TBT regulations and subsequently travel in international and regulated national waters and bring the impact back to the country trying to prevent it.

A severely biofouled ship can transport on its hull almost two million marine organisms, which is significant when compared to the numbers transported in ballast waters. This may become in the future a "show stopper" environmental problem as a major pathway of introducing marine exotic species (i.e., zebra mussel in the Great Lakes) because in today's better water quality in port and harbors, these species may survive and replace endemic ones. Warmer estuarine waters can induce spawning of the biofouling (or hitch hikers in the biofouling) from a vessel entering a port.

Alternatives to TBT are available, but not proven and accepted by regulatory bodies on a global basis. In the remaining 1,000 days before the proposed IMO ban, we need to implement an international independent process to expedite the IMO recommendation to evaluate and select alternatives to TBT. The added costs to shipowners if they fail to find suitable alternatives to TBT and have to return to copper (which TBT replaced) have been estimated to range from \$500 million to one billion dollars annually. These 1998 costs estimates are lower than the previous 1990 ones, because there are better Copper AF coatings, ablative systems and new self-

polishing co-polymers available today that have much improved performance. However, many of the new coatings have cobioicide including organometals such as Zn- or Cu-Omadine (and others) which by company reports have extremely short half-lives, but have not been proven in the peer-review literature. Unfortunately, copper is becoming an environmental issue. It should be noted that effective September 1, 1999, Sweden and Holland have introduced bans on use of antifouling paints containing copper on pleasure boats. Increasing the risk of shipowners to select alternatives that do not have long-term environmental or performance evaluations. The paint companies would like to reduce their risk by shifting the five-year antifouling warranty to three years. In a \$500 million dollar annual antifouling marketplace, approximately 70 percent of the 27,000 vessels in global commerce today use TBT.

A third party, neutral, independent, international Marine Coatings Board has been proposed to complement national regulatory processes by providing international standardized scientific data and information to support the regulatory review and commercial selection processes. The cost of the Marine Coating Board to evaluate available alternatives has been estimated to be \$10 million dollars per year or one to two percent of the estimated above annual direct costs to shipowners of not having comparable antifouling alternatives to TBT or only \$1 dollar per day per vessel in global commerce.

### About the Author

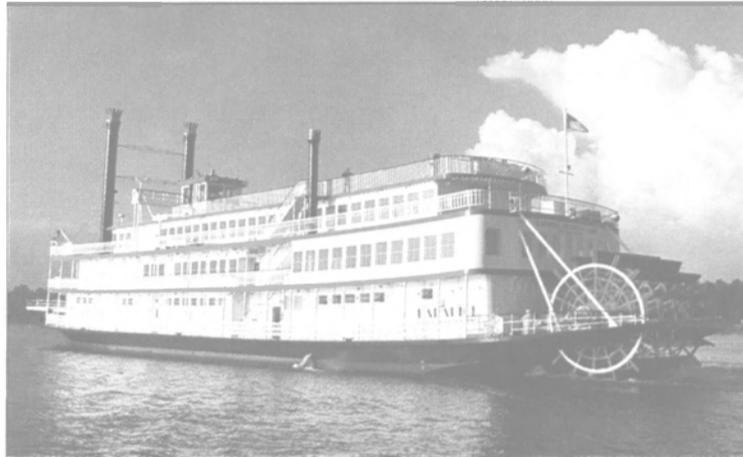


*Michael A. Champ is the President and CEO of the Advanced Technology Research Project Corporation, in Arlington, Va. Over the past 30 years, he has served in many roles in academia, government and industry. In the mid 1980s, he was a Senior Science Advisor at EPA and was extensively involved in the Special Review for TBT and helped write for Congress, the Antifouling Paint Control Act of 1988. He has co-chaired three international conferences on Organotins and authored over 300 scholarly publications and five books related to environmental and marine sciences.*

Maritime Reporter/Engineering News



Leevac-built Belle of St. Louis

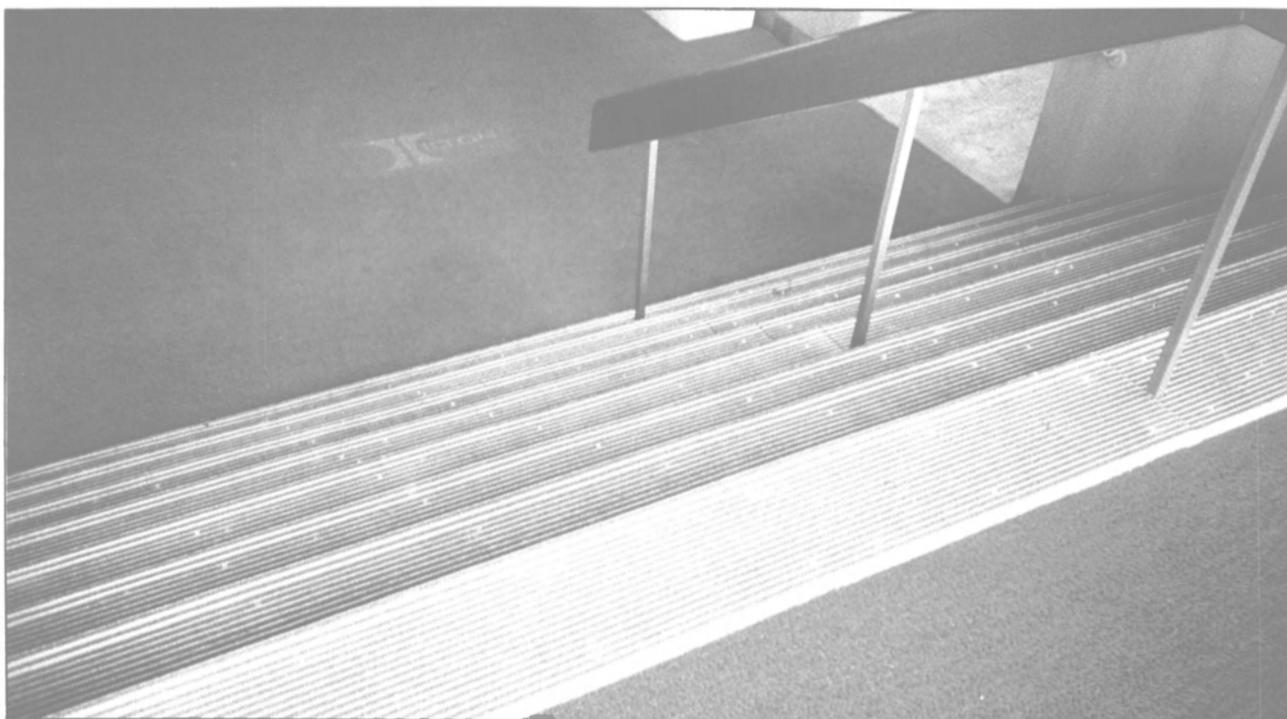


Atlantic Marine-built Par-A-Dice

**The finest vessels  
Use the finest Safety Treads...**

**Specify**

## **STAIRMASTER SAFETY TREADS**



**DON'T GAMBLE ON CUSTOMER SAFETY!**

Passengers may be visually or physically handicapped. Provide the best available anti-slip protection for all passengers by equipping your vessel stairs, ramps and walkways with **STAIRMASTER!**

**CALL 1-800-321-4936 FOR SAMPLE OR PRICE QUOTATION**



### **WOOSTER PRODUCTS INC.**

1000 Spruce Street, P.O. Box 6005 Wooster, Ohio 44691-6005

Fax (330) 262-4151 Call Toll Free: (800) 321-4936

Our Web-Site address will be: <http://www.wooster-products.com>

E-mail address: Sales @ wooster-products.com

# 12 x 12



**P**uget Sound Rope introduces the 12 x 12, our newest braided hawser. Because it is composed of 12 strands of Plasma™ 12-Strand rope, this patented construction makes the 12 x 12 the first truly repairable braided rope. And that saves you not only time, but money.

Plasma™ 12 x 12 has been proven to be 50% stronger than conventional Spectra® fiber rope, yet is 20% lower in cost.

Customers around the world depend upon our expertise in rope performance and safety.

PSR can help in your particular application of synthetic rope. Contact your distributor or PSR today for specific information about how we can help you.

tel: 360-293-8488  
email: sales@psrope.com



Spectra® is a registered trademark of AlliedSignal Inc.



Circle 249 on Reader Service Card

## MANLY DOORS

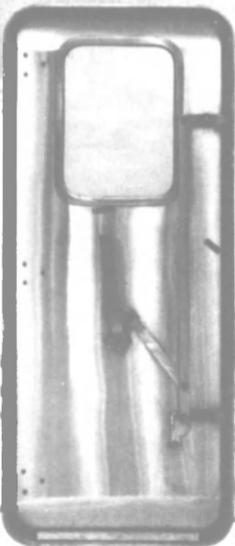
### Lock Out the Sea

Since 1946 Manly Marine closures have set the standard for quality.

Manly's patented marine doors are in worldwide demand.

When you choose Manly you open the door to the best closures money can buy.

Call for information on our windows and hatches.



20 Brooksbank Avenue  
P O Box 86788  
North Vancouver, B.C. V7L 4L3  
Telephone: (604) 984-4635  
Fax: (604) 983-2713  
www.manly.com

A Washington Company

Circle 270 on Reader Service Card

Available on-line at: [www.marinelink.com](http://www.marinelink.com)

## ABS OIL TESTING SERVICES

(Summary of Fuel Oil Samples analyzed at select ports, November 1999)

ABS Oil Testing Services is recognized as a global leader in the provision of quality, professional and practical fuel management, fuel analysis and consultancy programs for the marine, offshore and power generation industries.

	D@15C	V@50C	MCR%	ASH%	H2O%	S%	V	NA	AL+SI	TSP%
<b>ANTWERP, BELGIUM</b>										
AVERAGE	986.8	345.2	12.4	0.04	0.28	2.54	112	21	21	0.02
MAX	990.2	378	14.1	0.06	0.9	3.17	190	42		0.08
<b>BALBOA, PANAMA</b>										
AVERAGE	983.0	326.9	14	0.06	0.27	2.7	160	13	19	0.02
MAX	988.2	372.5	16.5	0.07	0.5	3.87	250	23		0.03
<b>BUSAN, KOREA</b>										
AVERAGE	967.4	332.7	10.8	0.01	0.06	3.1	67	5	19	0.01
MAX	981.0	467	14	0.02	0.1	3.74	100	10		0.04
<b>DUBAI, UAE</b>										
AVERAGE	985.3	328.8	16	0.16	0.42	2.97	72	37	14	0.03
MAX	989.7	342.6	17.8	0.39	0.5	3.35	87	54		0.04
<b>FOS, FRANCE</b>										
AVERAGE	985.7	335	13.9	0.03	0.09	2.58	100	36	29	0.02
MAX	989.3	377	15.4	0.05	0.15	2.84	128	55		0.03
<b>FUJAIH, UAE</b>										
AVERAGE	971.6	339.6	15.1	0.03	0.23	2.83	105	25	7	0.75
MAX	988.0	379.4	17.5	0.06	0.5	3.48	187	48		6
<b>GENOVA, ITALY</b>										
AVERAGE	974.6	308	11.9	0.02	0.4	3.38	82	16	18	0.01
MAX	988.3	318	14.7	0.02	0.75	3.58	98	20		0.01
<b>GIBRALTAR, SPAIN</b>										
AVERAGE	875.7	330	14.9	0.03	0.11	2.93	126	22	16	0.02
MAX	991.0	377	17.6	0.05	0.2	3.45	176	46		0.08
<b>GOTHENBURG, SWEDEN</b>										
AVERAGE	984.4	303.9	14.5	0.03	0.13	2.57	141	17	17	1.14
MAX	990.4	369	16.6	0.07	0.3	2.86	210	33		9
<b>GUAYAQUIL, ECUADOR</b>										
AVERAGE	955.2	318.9	10.1	0.03	0.08	1.35	145	5	12	0.01
MAX	973.9	395.7	10.9	0.04	0.3	2.05	926	12		0.02
<b>HOUSTON, TX</b>										
AVERAGE	987.1	277.5	15.7	0.05	0.19	3.23	135	10	16	0.02
MAX	995.7	382	18.4	0.11	1	3.89	250	74		0.08
<b>LOS ANGELES, CA</b>										
AVERAGE	913.2	284.7	11	0.05	0.33	1.82	158	19	23	0.14
MAX	996.3	624	14.9	0.07	0.7	2.43	305	30		0.97
<b>MARSEILLE, FRANCE</b>										
AVERAGE	982.5	168.8	13	0.02	0.06	2.49	70	22	19	0.01
MAX	989.5	183	14.3	0.06	0.1	2.88	94	40		0.02
<b>MOBILE, AL</b>										
AVERAGE	981.7	263.3	13.5	0.04	0.1	2.79	118	26	9	0.01
MAX	990.6	332	14.2	0.06	0.1	2.99	148	29		0.02
<b>MONTREAL, CANADA</b>										
AVERAGE	980.4	301.8	14.8	0.04	0.1	1.37	94	8	26	0.05
MAX	989.9	400.5	17.3	0.09	0.2	1.71	129	19		0.1
<b>NEW ORLEANS, LA</b>										
AVERAGE	983.0	228.8	14.9	0.05	0.14	3.27	156	28	16	0.07
MAX	990.4	364	18	0.07	0.2	3.63	297	56		0.24
<b>NEW YORK, NY</b>										
AVERAGE	987.0	279.9	13.6	0.06	0.34	2.56	193	13	25	0.05
MAX	991.0	376.8	17.7	0.08	0.7	2.92	285	29		0.09
<b>PHILADELPHIA, PA</b>										
AVERAGE	942.6	240.7	13.9	0.06	0.35	2.82	208	14	18	0.06
MAX	995.4	353.7	16.8	0.09	0.8	3.13	297	31		0.09
<b>PIRAEUS, GREECE</b>										
AVERAGE	967.2	290.3	10.6	0.03	0.12	3	106	18	19	0.02
MAX	988.3	372	17.4	0.06	0.35	3.45	156	40		0.04
<b>PORT ARTHUR, TX</b>										
AVERAGE	982.4	352.2	14.7	0.03	0.13	2.96	87	6	10	0.11
MAX	992.7	384	15.9	0.05	0.35	3.78	197	10		2
<b>PORTLAND, OR</b>										
AVERAGE	987.7	313.7	13.4	0.03	0.19	1.88	51	7	27	0.02
MAX	989.9	341.1	17.1	0.04	0.3	3.18	117	7		0.02
<b>ROTTERDAM, NETHERLANDS</b>										
AVERAGE	994.7	379.1	14.8	0.03	0.3	2.81	98	14	16	0.02
MAX	1008.7	466	19.4	0.04	1.5	3.54	136	34		0.03
<b>SAN FRANCISCO, CA</b>										
AVERAGE	984.5	271.6	12.2	0.04	0.13	2.15	95	22	14	0.03
MAX	995.0	375	17.9	0.07	0.3	3.16	150	74		0.05
<b>SANTOS, BRAZIL</b>										
AVERAGE	982.5	339.8	11	0.02	0.11	0.79	34	8	44	0.01
MAX	987.4	367	12.3	0.03	0.2	0.9	50	14		0.02
<b>SEATTLE, WA</b>										
AVERAGE	981.3	325.3	10.5	0.03	0.14	1.95	52	10	13	0.03
MAX	991.5	381.5	14	0.05	0.3	2.52	79	21		0.06
<b>SINGAPORE</b>										
AVERAGE	982.9	309.2	14.1	0.02	0.2	3.35	69	11	20	0.12
MAX	994.2	383.5	18.2	0.05	0.6	3.92	115	23		3.42
<b>SOUTHAMPTON, UNITED KINGDOM</b>										
AVERAGE	988.7	341.3	11.4	0.02	0.05	2	56	17	16	0.01
MAX	990.0	370	12.8	0.03	0.05	2.29	96	64		0.02
<b>SUEZ, EGYPT</b>										
AVERAGE	957.5	313.2	10.6	0.03	0.09	2.78	106	18	11	0.02
MAX	960.0	347	11.1	0.05	0.3	3.13	184	23		0.03
<b>TAMPA, FL</b>										
AVERAGE	982.7	259	14.9	0.05	0.33	3.75	110	25	16	0.01
MAX	986.9	329	15.5	0.07	0.5	3.8	157	54		0.02

#### KEYCODE

D@15c: Density at 15 degrees centigrade  
V@50c: Viscosity at 50 degrees centigrade  
MCR %: Microcarbon Residue %  
Ash %: Ash level in fuel  
H2O %: Percent water in fuel  
S%: Percent sulfur

V: Vanadium in ppm  
NA: Sodium in ppm  
AL+SI: Combination of aluminum and silicon expressed as ppm  
TSP%: Percent total dissolved solids

# U.S. Builders Make Waves At Year End

While consolidation and closures continue to reshape the ship and boatbuilding industry worldwide, 1999 ended on some positive notes, particularly for ship and boat building companies in the United States. U.S. builders, who have watched U.S. Navy business dwindle for more than a decade, have invested hundreds of millions of dollars to restructure their shipyards. The result: a smaller but more capable base of companies that are geared to fulfill demands of traditional clients down the block as easily as they fulfill the demands of customers around the world. A recent swing through the vibrant Gulf of Mexico region helped to quantify the strides that have been made. In particular, much capital has been expended in improving the capabilities processing and cutting steel. In fact, many of the GOM area yards currently have or will soon get some of the most innovative steel processing and cutting facilities in the world. From Steiner Shipyard's new subsidiary company — Enviro-Metals — in Bayou La Batre, Ala., to Bender's new First Operations Shop in Mobile, Ala. to Litton-Avondale's now thoroughly proven steel processing facility and Bollinger's enhanced capabilities, yards large and small have studied, emulated and improved on some of the world's premiere ship and boat building installations.

## Prospects: 2000 and Beyond

The past year was marked by a steady stream of unique and technically challenging orders being placed and begin-

## Halter Marine Launches Delta Mariner

Halter Marine, Inc., the marine vessel division of Friede Goldman Halter, Inc., late last month christened and launched the M/V Delta Mariner, designed and built for Foss Maritime Company on behalf of The Boeing Company, at the Halter Moss Point shipyard on the Escatawpa River.

The Delta Mariner will transport Boeing-built Delta IV rocket boosters from Decatur, Ala. to Cape Canaveral, Fla. and Vandenberg Air Force Base in California, for participation in the Evolved Expendable Launch Vehicle (EELV) program. The EELV program is a multi-year effort designed to reduce space launch costs by 25 percent. The vessel is 310 ft. (94.4) long, has a beam of 82 ft. (24.9 m), and is powered by a pair of 4,000 hp diesel engines. A unique feature is its dual mode design that enables it to operate in a shallow draft mode while in rivers and then ballast down to a deep draft mode for ocean passages. This variable ballasting system is incorporated with a stern-mounted ramp into the vessel's RoRo loading system.

Circle 184 on Reader Service Card

ning progress in U.S. yards. Last year saw arguably the most significant new passenger ship order in U.S. history when American Classic Voyages' (AMCV) contracted with Litton's Ingalls Shipbuilding to build the first U.S.-flag cruise ships in more than 40 years. The \$1.4-billion Project America

ship (see related story, page 26) is for two 1,900-passenger vessels, scheduled for delivery in 2003 and 2004. The fleet will sail under the United States Lines company name, will operate weekly cruises to the U.S. Hawaiian Islands.

San Diego-based National Steel and Shipbuilding Company (NASSCO) — a

General Dynamics company — has had its hand in a number of interesting projects, most recently winning a \$300 million contract to build two RoRo vessels for Totem Ocean Trailer Express (TOTE) of Anchorage, Alaska. NASSCO will build two 839 ft. (255.7 m) RoRo vessels for its Alaska service. According to **Robert P. Magee**, TOTE's president and CEO, "This \$300 million private investment will further our com-

# 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**

**REXPPELLER**

**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. Prime Mover Division: Phone: 81-3-3435-2366 Fax: 81-3-3435-2022  
 Kawasaki Heavy Industries (UK) Ltd. Phone: 44-171-588-5222 Fax: 44-171-588-5333  
 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

mitment to Alaskans well into the next century by enhancing Alaskan job opportunities on our vessels and shore-side."

The new vessels will be the same size as TOTE's existing three ships, "while maintaining extra capacity to fulfill any surge cargo needs and allow for seamless service during dry docks," Magee said. In the first part of the year, NASSCO signed a Memorandum of Under-

standing for the building of the first generation high-speed vessels comprised of the FastShip trans-Atlantic transportation fleet. FastShip is a gas turbine powered vessel concept that aims to economically fill the void between air transport and traditional ship transport. Under the proposed agreement, NASSCO, designer and builder of new ships headquartered in San Diego, will construct four revolutionary vessels in the

FastShip fleet. The agreement establishes a timeline to finalize a construction contract to include definitive pricing, delivery schedule and performance guarantees. NASSCO has also agreed to consider a financing commitment to FastShip, Inc. Powered by five marinized aero-derivative gas turbines, each turbine will drive one Kamewa water jet, delivering a total of 250 MW or 335,000-hp.

Earlier in the fall NASSCO was named the prime contractor on \$17.4 million in research and development contracts awarded by the MARITECH Advanced Shipbuilding Enterprise (ASE) Program. In addition to the funds awarded by MARITECH, industry participants will invest \$23.5 million of their own funds in the projects for a total program cost of \$40.9 million.

NASSCO will lead a team of U.S. shipbuilders, marine design and technology firms, and universities on two three-year projects to develop advanced systems for the construction of Navy and commercial ships. In mid-December, NASSCO launched USNS CHARLTON, the fifth strategic sealift ship being built for the U.S. Navy by NASSCO. Measuring 950 x 105 ft. (290 x 32 m), the strategic sealift ships are the largest ships ever launched down a sliding ways in the U.S.

### Alabama Launches ATB

Alabama Shipyard is hoping that last month's launching of its unique Articulated Tug Barge unit (ATB) for Reinauer Transportation signals the beginning of many more orders for the OPA 90 compliant product transporters. The company estimates that 50 single hull barges will need replacements by 2005, and the yard is expanding its market horizons by, for example, holding discussions with owners who are evaluating using the ATB as a shuttle tanker in the Gulf of Mexico. The 460-ft. (140.2 m) barge, designed by Alabama shipyard, is double-hulled and in compliance with the OPA 90 regulations. **Bob Hill** of Ocean Tug and Barge Engineering designed the 7,200-hp, 124-ft (37.7 m) tug, which was built at Atlantic Marine-Jacksonville. The ocean-going tug/barge unit offers the patented Intercon tug/barge coupler system, which was designed and built by Intercontinental Engineering and Manufacturing of Kansas City, Mo.

The shipyard used Foran 3-D modeling, allowing, for example, the pipeshop to manufacture the piping with flanges, which simplifies pipe installation and allows it to be bolted directly in place. The intention for future orders is to build the tugs at Alabama Shipyard as well, in order to fully realize the building capabilities of the bigger shipyard, which features far more lifting capacity, for example, than the Jacksonville facility. The end goal of the ATB program is to realize the many cost and efficiency benefits of series production, and Alabama Shipyard officials estimate that once production is fully up and running, that it will be able to build between 8 and 12 tug/barge units per year.

Circle 80 on Reader Service Card

**Don't Worry. They use an Owens Kleen Tank.™**  
The Educated Choice in MSDs.

- Easy Installation and Operation
- Low Maintenance
- Stock Availability
- New Central Control Panel

**Owens Mfg. & Specialty Co., Inc.**  
P.O. Box 1167 • Youngsville, LA 70592 • email: owens@smi.net  
**1-800-639-2744**  
(318) 856-6652 • Fax: (318) 856-6332  
www.owenskleentank.com  
Dealer Inquiries Welcome

Circle 274 on Reader Service Card

## HEAVY-DUTY SIGNALS by Kahlenberg

Kahlenberg Signals were developed to withstand the punishing use of commercial and military service. Their durability has been demonstrated over decades of service on ocean-going vessels ranging from naval warships to commercial vessels. Military specifications have required extensive testing for many of these whistles and the accessories supplied with them, which have proven the exceptional qualities of Kahlenberg design and manufacturing.

**Model S-120 Piston Horn**  
Chosen for use on aircraft carriers as well as commercial vessels over 200 meters in length, the S-120 utilizes an oscillating piston driven by 7-1/2 horsepower 3 phase 220/440 volt electric motor producing 143 dB and a fundamental frequency of 94 Hz in 1/3 octave band at one meter.

**Model S-203C S-203 CHT**  
For vessels over 75 meters in length, this design allows both whistles to exceed 143 dB (1/3 octave band). The S-2036 and S-203 CHT are virtually maintenance free. Durability is ensured by the use of bronze and marine aluminum construction materials through out. For the most extreme cold weather operation, Model S-203 CHT (shown) includes a thermostatically controlled, heated enclosure for both the combination manual/electric valve, and the horn sounding body.

**OTHER QUALITY KAHLENBERG PRODUCTS AND SERVICES INCLUDE:**  
FAIRWATERS, PROPELLER REBUILDING, PROPELLERS UP TO 120" DIA, SHAFTS, COUPLINGS, BEARINGS, STUFFING BOXES, AIR COMPRESSORS, SOLENOID VALVES, USCG- ASME AIR RECEIVERS, FOG SIGNAL TIMERS, WHISTLE LIGHTS, AUTOMATIC AND AT WILL CONTROLS.

**KAHLENBERG BROTHERS COMPANY**  
P.O. Box 358, 1966 MONROE ST  
TWO RIVERS, WISC. 54241  
PHONE: (920) 793-4507  
CABLE: KAHLENBERG  
FAX: (920) 793-1346  
www.kahlenberg.com

**MARINE PRODUCTS SINCE 1895**

Circle 23 on Reader Service Card

## Marine Products



### The Soundcoat Company

The Soundcoat Company has been involved in noise control for the marine industry for many decades. Working with naval architects, the U.S. Navy, boat yards and marinas, Soundcoat has provided solutions to a wide variety of shipyard noise problems for vessels of all sizes. Contact our headquarters at 800-394-8913 or visit them at [www.soundcoat.com](http://www.soundcoat.com) or **Circle No. 101**



### Manly Marine Closures

In business since 1946, Manly Marine Closures has earned a reputation for quality marine closures. Using their own design and construction techniques, Manly custom fabricates marine

doors, windows and hatches for shipyards and vessel owners around the world. Manly Marine Closures is a member of the Washington Marine Group. **Circle No. 102**



### Algae-X International

Algae-X is the next generation in magnetic fluid conditioning technology. Algae-X products clean your total fuel system by simply running your engine or re-circulating pump & slimy.

Magnetic fluid conditioning prevents paraffin & scaling. **Circle No. 103**



### Hornblower Marine

Hornblower Marine Services is a privately held company serving the high-speed ferry, car ferry and riverboat casino industry. It provides professional, effective management solutions through comprehensive marine management programs to vessel owners and operators. We help clients meet changing market conditions with high-technology resources and sophisticated management programs.

**Circle No. 104**



### Smith Berger Marine

Using innovative designs, Seattle's Smith Berger manufactures ship equipment that is unique and sturdy. From Flag Blocks to Chain Stoppers, the company offers many different

designs and can even custom manufacture most items. **Circle No. 105**



### Viking Life Saving Equipment

Viking Life Saving Equipment manufactures inflatable life rafts, throw overboard type from four-100 persons; David Launchable type lift rafts from 12-25

persons and IBA's 6-50 persons.

**Circle No. 106**



### Matrix Desalination

Wherever and whenever clean pure water is a necessity, Matrix Desalination, Inc. provides it. Over and over again, our reverse osmosis water-makers have proven themselves to not

only give you the freshest water available but in the quantities you demand.

**Circle No. 107**



### Cambridge Applied Systems

Cambridge Applied Systems manufactures patented electromagnetic viscosity management systems for "in-

line" and bench-top/laboratory use. Applications include accurate Heavy Fuel Oil viscosity control and reliable Condition-Based Maintenance monitoring of diesel, turbine and compressor lubricants.

**Circle No. 108**

### Schottel Maritime Systems

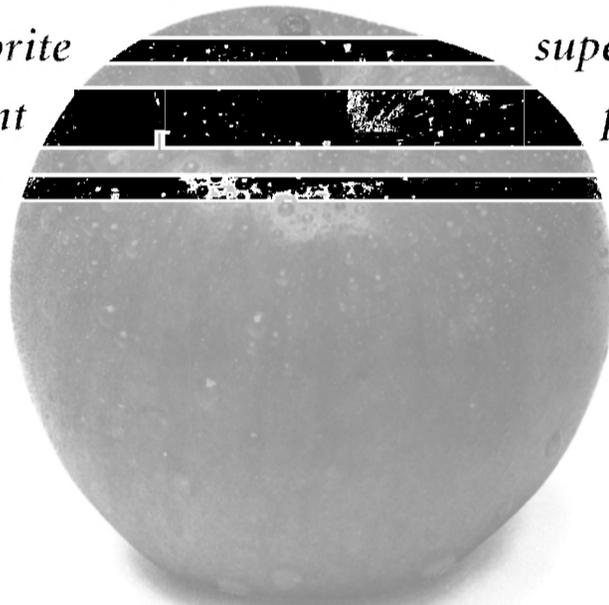
Schottel manufactures standard FP or CP



propellers rated at up to 3,400 kW with their transverse thrusters, pump jets rated at up to 3,500 kW, and manually operated mechanical steering systems on the propulsion unit itself to computer-aided remote-controlled joystick systems.

**Circle No. 153**

*From the orchards of New Zealand to the controlled atmosphere of the warehouse to the ship's cool hold to the reefer's chilled environment to the air-conditioned comfort of your favorite supermarket – with CMP replacement compressor parts to fit every along the way.*



# CMP OR OEM?

**THE COMPRESSOR DOESN'T CARE.  
THE GALAS DON'T CARE. WHO CARES?  
YOU DO.**

After it's on the compressor, there's only one way to tell whether the replacement part came from the OEM or from CMP - the world's largest independent manufacturer of compressor replacement parts for the transport and HVAC industries. By the money, time, and frustration you saved. They're both a perfect fit. But one also comes with a perfect price tag, and the best customer service department in the industry.

When you need replacement parts to fit **Thermo King, Trane, Carrier Transicold,** or just about any other brand of compressor, call CMP first. Remember, your compressor doesn't care, but you do.



**CMP**  
CORPORATION®

P.O. Box 15199 • Oklahoma City, OK • 73155-5199 • **800.654.4786** • <http://www.cmpcorp.com>

CMP is a registered trademark of CMP Corporation. ©2000 CMP Corporation

## Marine Products



**Pelican Rope Works**  
Considered the Best Value on the market, Pelican Rope manufactures braided ropes with a hard-to-beat quality, price and customer service. Double-Braid/12-Strand/8-Plait, sizes from 3/16" to 1.24" diam, Nylon/Polyester/Spectra/Kelvar, Colors and urethane coatings available.

Thanks for calling 800-464-ROPE or **Circle No. 109**

### Offshore Systems International

Offshore Systems International distributes Yokogawa Denshikiki Ltd. manufactured ISO approved navigational equipment. Gyrocom-

passes, electromagnetic logs and autopilots are only a few of the items they offer. All of these devices are the latest in the technology field and each comes with a multitude of features for ease of use, and versatility. **Circle No. 110**

### Specialty Products Ltd.

Specialty Products builds metal support brackets to keep things in place on land and

aboard ship! Looking for a support bracket aboard ship to anchor a PC, CPU, copier, printer, facsimile, phone, etc? Also, they specialize in both COTS (Commercial-Off-The-Shelf) and customized support brackets. For more information, call: 540-349-2018; fax: 540-349-0971 or e-mail: tws1@citizen.inli.net. **Circle No. 111**



### New England Marine and Industrial

New England Marine and Industrial has three convenient locations in the Northeast: Portsmouth, NH; Brant Rock, MA; and Stonington, ME. Since 1976 they have carried "from anchors to zincs and everything in between," including chain and fittings, Hooven Allison ropes, Sterans safety gear, and a full line of tuna gear. **Circle No. 112**

### The Ultimate Protector

Today's modern vessels require superior performance and protection from a Fendering system. Urethane Products Corporation has a proven system for today's demanding marine operations. Marine Guard fenders are designed to safely absorb the immense amount of energy generated by a ship's 'eight and relative velocity as it approaches a dock, pier or another ship. **Circle No. 113**

### Creative Systems

A pioneer developer of computer software for naval architects, Creative Systems goes back to 1972 when it began supplying stability calculations using main-frame computers. It was one of the first companies to provide comprehensive stability and strength software for desktop computers both in its own products and for its competitor, AutoShip Systems. Its current software, General HydroStatics (GHS) is used by architects, ship operators, regulatory agencies and salvors with an installed base of 1,118 copies. **Circle No. 114**

### ICG Satellite Services

ICG, based in Miami, has two divisions: Maritime Telecommunications Network (MTN), a major provider of C-Band voice, fax and data communications to the cruise industry, the U.S. Navy, and to offshore oil & gas platforms worldwide; the International Voice and Data (IVD) division provides satellite communications to U.S. backbone providers, foreign Internet Service Providers (ISP's) and telephony carriers. **Circle No. 115**



It's here...  
**Industrial Machinery AUCTIONS**  
on the Internet!  
Industry will never be the same.

**AUCTIONS**  
Machinery and Property  
-Plus-  
Machinery for Sale  
Businesses for Sale  
Commercial Real Estate  
REPs and REOs  
Employment  
Funding and Capital  
E-mail Notification Services

**i-com industry**  
[www.i-comindustry.com](http://www.i-comindustry.com)

Circle 223 on Reader Service Card

**Quality Products For The Worldwide Marine Industry**

**Marine Heads**      **Oily Water Separators**

**Microflush Marine Heads** in stainless steel or vitreous china use only 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 3 to 100 men. IMP approved. USCG certified. **Oily/Water Separators** in 7 models: .15-5.0 cu. Meters p/hour. No replacement filters required.

**Microphor**  
A MotivePower Industries Company  
Microphor, Inc.  
452 E. Hill Road, Willits, CA 95490-9721 USA  
Tel: 800-358-8280; 707-459-5563; Fax: 707-459-6617  
Email: info@microphor.com  
[www.microphor.com](http://www.microphor.com); [www.motivepower.com](http://www.motivepower.com)

Circle 275 on Reader Service Card

**Maritime Human Factors Conference 2000**

**CONFERENCE OBJECTIVES:**

- Review and discuss current human factors issues in the maritime and offshore industries.
- Present recent success stories including approach taken, solutions, and benefits or impacts realized.
- Provide tools and information that will facilitate human factor action plans, OSHA programs, and elements of SOLAS Chapter 9; the ISM Code.

Using the model proposed by Gerry Miller, CPE, "The Triangle of Effectiveness," the factors affecting the probability of human error will be discussed with the focus on recent work and solutions attendees may use to effect similar improvement.

**SPEAKERS INCLUDE:**

Human factor professionals from the Maritime Administration, US Coast Guard, American Bureau of Shipping, NASA, University of Pennsylvania, Ohio State University, Rensselaer Polytechnic University, US Navy, Tabak & Mellusi, the NTSB and others.

**CONFERENCE INFORMATION:**

March 13 & 14, 2000 • MITAGS, Linthicum, MD  
FOR REGISTRATION INFORMATION CALL MARY MATLOCK AT:  
**(443) 989-3246 or (410) 859-5700**  
[admissions@mitags.org](mailto:admissions@mitags.org)

CONFERENCE SPONSORS:

THE MARITIME INSTITUTE OF TECHNOLOGY AND GRADUATE STUDIES (MITAGS)      HFG THE HUMAN FACTORS GROUP

Circle 239 on Reader Service Card

**MARINE PRODUCTS**  
Design & Manufacture of Marine Products and Installation of Habitability Systems on Ships, Drill Rigs, Gaming Vessels and Cruise Liners

**DESIGN & MANUFACTURE**

- Bulkhead Systems (Honeycomb & Mineral Wool Core)
- Ceiling Systems
- Doors:
  - Joiner
  - Watertight & Weathertight
  - Hydrocarbon Fire
  - Pneumatically Controlled Siding
  - Fire Rated/Blast Doors
- Hatches, Scuttles and Manholes
- Fire Re Rated Enclosures & Containers
- Sound Attenuation Enclosures
- Floating and Raised Floors
- Furniture - Metal & Wood
- Toilet Modules & Sanitary Space Equipment
- Commissary Containers
- Prefabricated & Built-in Refrigeration Chambers
- Window Casing - Steel & Fiberglass
- Cabinetry - Electronic, Submersible
- Hydraulic Tanks & Pressure Vessels
- Galley Equipment

**INSULATION - Thermal, Fire & Sound**

- Machining & Sheet Metal Work
- Dampers & Expansion Joints of all Types

**SERVICES & SUPPLIES**

- Repairs & Rebuilding of:
  - Accommodations Systems
  - Hydraulic Hatches & Doors
  - Fluid Power Systems & Controls
- Commercial & MIL Spec Gaskets
- Rubber & Fluoroplastic Expansion Joints
- All Door Locks, Hinges, Hold-backs, Closures, etc.

**SPECIAL APPLICATION ITEMS**

- Design, Manufacture and Installation of Insulation Systems for Chemical and Gas Carriers such as Ammonia and L.N.G.
- Submarine Acoustical & Thermal Insulation

**Joiner Systems Inc.**  
Environmental & Marine Products  
1925 52nd Avenue, Lachine, Quebec, Canada H8T 3C3  
Tel. (514) 636-5555 Fax (514) 636-5410

Circle 229 on Reader Service Card



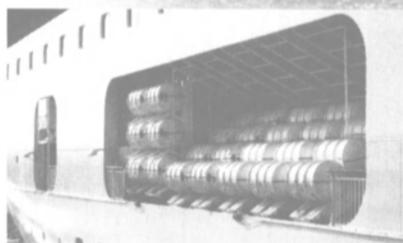
# Life Saving Solutions & Crew Training for all types of vessels



## Launch Rack Systems

Complete Liferaft Stowage and Deployment Systems for ALL container types and applications

- Ⓢ Local or Remote Release
- Ⓢ Aluminum fabrication (optional steel construction)
- Ⓢ Indexed Deployment (one at a time) an integral part of any Marine Evacuation System
- Ⓢ Designed to SOLAS specifications
- Ⓢ Block Construction Compatibility
- Ⓢ Optimum utilization of deck space
- Ⓢ High grade electrostatic paint finish
- Ⓢ Minimal installation impact
- Ⓢ Reduces manning requirements
- Ⓢ Ideal for refit or new construction
- Ⓢ Operation & Service Manuals
- Ⓢ Installation & Training Support



Superstar Leo & Virgo



Tugs



Workboats



Fuel Rack System (FRS)

## STCW 95 Courses Available:

- Ⓢ Basic Safety Training
  - Fire Fighting
  - Personal Survival
  - Medical Emergency
  - Personal Survival and Social Responsibility (PSSR)
- Ⓢ Crowd Control
- Ⓢ Crisis Management
- Ⓢ ISM Code

Available NOW



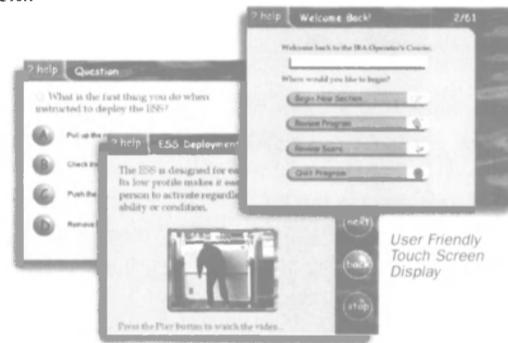
## CODE RED MARINER

The **ONLY** STCW 95 compliant computer-based training (CBT) solution. Designed to teach, assess, certify and record.

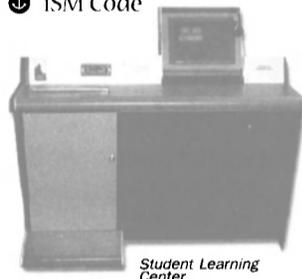
Standardized CBT & instructor lead courses aimed at large numbers of crew, either on board or at a shoreside facility. Training activity is automatically recorded on an individual basis, providing secure statistical data that can be reviewed by the trainee, employer or regulatory agency.

## Custom Courses Available:

- Ⓢ Safety Management System
- Ⓢ Vessel-Specific Training
- Ⓢ Survival Craft
- Ⓢ Customer Service



User Friendly Touch Screen Display



Student Learning Center

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

## Total Marine Safety Center

Division of MGI America, Inc.

Located in Seattle & Chicago these centers of excellence for Marine Safety, specialize in maritime training, equipment sales and survival craft maintenance and service.

### Training

STCW 95 Certificated Basic Safety Training courses:

- Ⓢ Personal Survival
- Ⓢ Basic Fire Fighting
- Ⓢ Medical Emergency

### Other Courses:

- Ⓢ Train the Trainer (required for all trainers & assessors of STCW)
- Ⓢ Fast Rescue Boat
- Ⓢ Bridge Resource Management

### Sales

- Ⓢ Liferrafts and IBAs
- Ⓢ Rescue Boats & Davits
- Ⓢ Lifejackets, lights and whistles
- Ⓢ Survival Suits
- Ⓢ Evacuation Systems

### Service

Two fully equipped service centers for liferaft and inflatable boat maintenance. We pick up and deliver to your vessel and guarantee service rates at time of purchase.

**Seattle Location:**  
1540 Northwest 46th St., Seattle  
Washington, 98107 USA  
Tel: (206) 782-7321  
Fax: (206) 789-8859

**Chicago Location:**  
8501 West 191st St., Bldg. 57  
Mokena, Illinois, 60448-8878 USA  
Tel: (815) 464-1102  
Fax: (815) 464-1105

## TPA THERMAL PROTECTIVE AID

An aluminized suit designed to reduce the loss of body heat and the risk of hypothermia, without restricting personal movement.

Its international orange colour & retro reflective strips make the TPA highly visible in all conditions.

Open lifeboats on passenger ships must carry TPAs for 100% capacity of the lifeboat—SOLAS.

The TPA is compact and lightweight (only 6oz).

Meets Chapter III SOLAS 1974/83  
EU (European Union) Approval  
Canadian Coast Guard Approval No. T.C. 059 069 001



## MGI INTERNATIONAL MARINE SAFETY SOLUTIONS INC.

- Ⓢ Design and Support in CAD
- Ⓢ Equipment Installation Supervision and Testing
- Ⓢ Shipboard Training

- Ⓢ Advice on complying with IMO rules and their interpretation by various authorities.

Web: [www.mgimarine.com](http://www.mgimarine.com)

### Head Office

113 – 980 West 1st Street,  
North Vancouver, BC,  
Canada V7P 3N4  
e-mail: [sales@mgimarine.com](mailto:sales@mgimarine.com)

Tel: (604) 986-2239  
Fax: (604) 984-3164  
North America Toll Free:  
1-800-394-9514

## Marine Products



### Stork — SP-432 I.M.O Type-Tested & Approved Fire/Smoke Dampers

Stork is pleased to announce that its Marine rated fire/smoke dampers model SP-432 have undergone extensive testing at Underwriters' Laboratories to provide you with a tested product which satisfied the latest in

International Marine Safety! The successful dampers have been developed to adapt to existing and new shipboard installations of A-O thru A-60 fire rated bulkhead and deck coamings.

**Circle No. 116**

### Saab Marine Electronics AB

Saab Marine Electronics, the inventor of radar level gauging, is now launching a



marine version of Saab TankRadar PRO. This offers a whole new way of measuring the cargo in barges and inland tankers. Radar waves are unaffected by dirt, tank atmosphere, temperature and pressure. There are no sensitive or moving parts inside the tanks that can break down and the electronics can be

easily serviced under closed tank conditions.

**Circle No. 118**

### Iridium

Iridium is the first handheld satellite communication service to provide a truly global coverage. With Iridium, satellite communication moves ahead of any other mobile communication of its kind, overcoming all obstacles, from non-existent terrestrial networks to incompatible cell phones.

**Circle No. 119**

### Hule Industrial

Hule Industrial is a company with more than 38 years of experience in the rubber industry, making products that have always met the highest international standards. For more than 20 years, Hule Industrial has been selling its products in the international market, experiencing excellent acceptance by engineers and contractors. Hule Industrial stands as one of the largest rubber marine fenders manufacturers in all America, offering the most complete and modern line of fender types and sizes.

**Circle No. 120**

### Fleet Technology Limited

Fleet Technology Limited (FTL) has provided engineering consulting services to the marine and offshore industry for 26 years. FTL offers expertise in a wide range of disciplines to address clients' operational and engineering problems, including Structural integrity and fatigue, concept design, cold regions technology, instrumentation and trials. FTL recently became an affiliate of the BMT group of companies.

**Circle No. 121**

### Viking Range Corporation

The originator of commercial-type cooking equipment for the home, Viking Range Corporation offers a complete line of professional-style cooking, ventilation, kitchen cleanup, and refrigeration equipment. Each product in the Viking line represents the finest in heavy-duty, commercial-type construction, performance, and appearance, providing designers, builders, and homeowners with features available only from Viking Range Corporation.

**Circle No. 122**

### CRANKSHAFT

Crankpin and Main Journals Grinding - "IN-ENGINE"

LINE-BORING All Engine Types

METALSTITCH® REPAIRS

IN-PLACE MACHINING COMPANY

AX 414 265 1000

Metal stitch repair of broken or cracked Cast Iron, machining Water Jackets, all types of on-board machining is accomplished by In-Place Machining Company, phone: 414-562-2000; fax 414-265-1000.

**Circle No. 154**

## Baltic Spares Service Ltd.



8 Astronomow Street  
80-299 Gdansk, Poland  
Phone: (+48 58) 554 55 86  
Fax: (+48 58) 554 55 85  
http: //www.bss.pl  
email: bss@bss.pl



We are one of the biggest Polish suppliers of ship spare parts and equipment for vessels which are being built and repaired in Polish shipyards. We have long standing relations with all major producers of ship equipment in Poland.

We can offer either from our own stock or directly from a producer of spare parts for main and auxiliary engines of Sulzer and Burmeister & Wain.

We supply, among others, the following spare parts and complete ship equipment:

- pumps of various types
- compressors and turbochargers
- electrical and electronic systems
- hydraulic devices
- centrifugal separators and filtrating devices
- ship coolers, condensers and evaporators
- cranes, ship lifts and winches
- anchors and chains

We run a bonded warehouse of valves and their spare parts produced by HOERBIGER - Vienna, thermometers from SIKA - Kaufungen and turbochargers with their spare parts from PBS - Velka Bites.

Cooperation with us safeguards fast and high quality services indispensable for effective ship operation.

**Circle 210 on Reader Service Card**

Unsure where to get USCG Approved GMDSS training?

Houston Marine Training Services is now offering a new 70-hour approved GMDSS course

- Meets STCW requirements
- FCC license examinations also available
- Personalized instruction with limited class size
- Experienced, qualified instructors
- Other USCG approved and license exam prep courses available



CALL TODAY!  
**1-800-947-7737**  
www.houstonmarine.com

**Circle 222 on Reader Service Card**



**ALGAE-X**  
CLEANS DIESEL FUEL FILTERS & TANKS

Optimal Fuel Quality  
**MORE POWER - LESS SMOKE**  
Zero Maintenance  
Lifetime Warranty

Call **ALGAE-X**. 800-403-3284  
Before Cleaning Tanks or Replacing your Fuel  
Dealer Inquiries: 941-463-0607 Fax: 941-463-7855  
www.algae-x.net e-mail: algae-x@att.net

**Circle 267 on Reader Service Card**



If you're not getting the maritime industry's best weekly newspaper, you may be the last to know!

Call  
**1-202-477-6000**

for subscription information

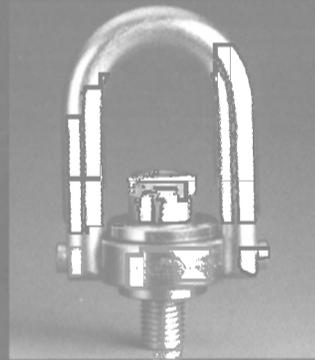
# Locks Out Rust

*Jergens exclusive new Envirolox™ protective plating provides superior protection for our Hoist Rings in harsh environments. Better yet, it stands up to salt spray without using the cadmium found in other protective coatings.*

Side-pull style. Makes flipping of lifted items easy. Oversized round ring and heavy-duty cast body. Capacities from 650 to 29,000 lbs.



Center-pull style. Has 360° swivel and 180° pivot action. Capacities from 800 to 50,000 lbs.



## And Under the Coating, a Superior Lifting Product!

When it comes to hoist rings, you truly get what you pay for. Insist on Jergens Hoist Rings: all are designed for a 5:1 strength factor; all material is domestically manufactured certified alloy steel; all components heat-treated and certified; all forged or cast components are 100% magnetic particle inspected.

Additionally,

- Each Hoist Ring pull-tested and certified to 200% of rated load capacity
- Individual certificate of proof-test accompanies each Hoist Ring
- Clearly identified
- Date code stamped
- Individually boxed
- Inch/metric color coding
- Multi-lingual instructions included with each unit

Call or write for our free lifting products catalog today.

# Jergens®

**The Standard Components with the Highest Standards™**

Jergens Way 15700 S. Waterloo Rd. Cleveland, OH 44110

Tel: (800) 537-4367 • Fax: (216) 481-6193

e-mail: [info@jergensinc.com](mailto:info@jergensinc.com) • web: [www.jergensinc.com](http://www.jergensinc.com)

**ISO9001**  
QUALITY SYSTEM CERTIFIED

**CE** Certified

©2000 Jergens

Circle 22 on Reader Service Card

## Marine Products

### Kimberly-Clark

Kimberly-Clark Corporation is a leading global manufacturer of tissue, personal care and health care products. The Kimberly-Clark Away From Home Sector provides tissue and towel products, skin care products, and industrial wipers for workplace settings. **Circle No. 123**

### Continental Refrigerator

Continental Refrigerator, a division of National Refrigeration and Air Conditioning Products Inc. since 1988, is a major manufacturer of commercial refrigeration. Over time, our full line of reach in refrigerators, freezers and warming cabinets has been refined and has expanded



to include over 1000 models. Continental Refrigerator now manufactures sandwich units, under-counter /worktop refrigerators and freezers, pizza prep tables and bottle coolers. All of our merchandise is environmentally safe utilizing CFC-FREE refrigerants in both refrigerators and freezers. Plus, Continental Refrigerator markets worldwide to the scientific, pharmaceutical, and maritime sectors. **Circle No. 124**

### Bakers Pride

Bakers Pride is a world renowned manufacturer of baking, cooking, and pizza equipment, serving the food-service and supermarket industries worldwide. For nearly 60 years Bakers Pride has provided a full array of deck ovens, countertop ovens, conveyor ovens, convection ovens, and underfired gas broilers. **Circle No. 125**



### Poly-Tak Protection Systems, Inc.

Poly-Tak Protection Systems is a national supplier of temporary adhesive films to the construction, recreational vehicle, building, marine, and retail markets. We were the original innovators of Carpet Mask, the leading brand in temporary carpet protection worldwide. Our products save contractors, home-builders, homeowners, and other trades thousands of dollars in cleaning and repair costs each year. **Circle No. 126**



### Andy Thornton Ltd.

Andy Thornton Ltd. is an internationally renowned design and contracting company who specialize in creating spectacular bar and restaurant interiors. They are famed throughout the world for their quality interiors whether they're traditional English and Irish pubs or contemporary restaurant environments. Plus, Andy Thornton is also the world's largest supplier of Architectural Antiques and themed decor. **Circle No. 127**



### Chute Master

Chute Master provides indoor environmental maintenance. This includes: air duct cleaning, odor control, linen/trash chute sanitizing, roof fan and chute door repair, and violation removal. **Circle No. 128**



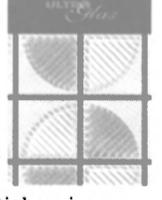
### The Coastal Group — Ideas That Make A Business Work

The Coastal Group has earned its reputation and awards for solid marketing and product positioning in developing well-designed catalogs and unique collateral — all produced from a highly talented base of Art Directors, Copywriters, Photographers, Graphic Designers and expert Production Services. **Circle No. 129**



### UltraGlas

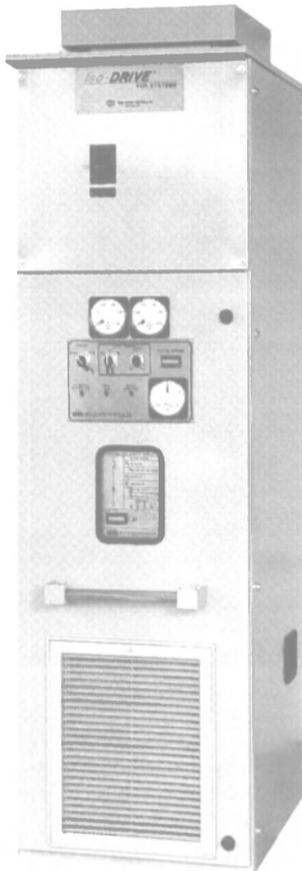
UltraGlas is an innovative, artful glass medium being used by architects, interior designers and principals around the world to create unique and functional spaces for hospitality, corporate, retail, healthcare and residential environments. With a comprehensive palette of embossed glass textures, patterns, designs, colors, shapes and finishes, UltraGlas is



# We'll Turn Your Wheel

2000 HP *Iso-DRIVE*™ SCR System in 26"x36"x90" Enclosure for Propulsion, Thruster or Winch

- Digital system: touch screen interface for monitoring, settings and maintenance; self diagnostics with status panel
- Convenient front access to all components
- No field adjustments for quick-disconnect single module regulator
- NEMA 1, NEMA 4, or NEMA 12 enclosures available
- Built to your specifications with worldwide regulatory bodies; i.e., USCG, ABS, and DNV
- We also provide:
  - Compatible generator controls to accompany D.C. drive
  - Complete system integration and power management
  - Upgrades/repowers of older SCR systems
  - Experienced engineering and service personnel
  - Reliable On-Time Deliveries



## TECH POWER CONTROLS CO.

10507 Fallstone, Houston, TX 77099  
Phone: (281) 530-8800 Fax: (281) 530-8803  
E-Mail: tpcsales@flash.net

Circle 277 on Reader Service Card

Worldwide spare parts deliveries for the ship department in time

**MOTOR-SERVICE AB, Sweden**  
Address: Stationsvägar 4, S-144 61 RÖNNINGE, Sweden  
Phn: +46-8 532 535 42, +46-8 532 551 40, Fax: +46-8 532 544 51  
Internet: www.motorservice.se e-mail: sales@motorservice.se

Circle 242 on Reader Service Card

## Marine Deck Hardware and Equipment

- ◆ **ANCHORS:** ◆  
50 to 60,000 Lbs. - New and Used  
Stockless - Danforth - 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 KEVELS:** ◆  
All Sizes Available. New & Used
- ◆ **FENDERS PNEUMATIC:** ◆  
For Rent or Sale  
All Sizes. New & Used

**GIGANTIC INVENTORY NEW & USED**  
Call Toll-Free (800) 322-3131  
IN STOCK NOW in the West Coast East Coast and The Gulf

**WE ARE DIRECT FACTORY DISTRIBUTORS & IMPORTERS**

**WATERMAN SUPPLY CO., INC.**  
P.O. BOX 596  
WILMINGTON, CA 90748  
PH: (310) 522-9698  
FAX: (310) 522-1043

Circle 284 on Reader Service Card

used to create unique walls, entrances, dividers, screens, doors, bath and shower enclosures, bar, table and counter tops and more!

**Circle No. 130**



**MicroPhor**

Today, MicroPhor enjoys an international reputation as a leading supplier of Microflush Marine Heads on many of the world's largest luxury yachts. Combined with MicroPhor

Marine Sanitation Devices, approximately 450 commercial fleet customers have purchased these systems ranging in size from 3-person to 100-person units that are installed on tankers, freighters, workboats, fishing vessels, and oil platforms.

**Circle No. 131**



**BARCO**

Barco's TCD 251 is a high-bright 20.1" flat panel display, which displays resolutions up to 1280 x 1024 (SXGA). The display features a removable backlight for easy maintenance. The

high-bright light output (up to 680 Nit), combined with a night dimming function, makes the TCD 251 the ultimate display for air traffic control applications.

**Circle No. 132**

**John Sabella & Associates, Inc.**

John Sabella & Associates manufactures and distributes instructional videotapes for the marine industry. This includes: \*Maritime Medical Emergencies \*Back Care for Maritime Industry \*Marine Survival Equipment Training Program \*Safety Videos for Ocean Going Industry \*Video Instruction for the Offshore Oil Industry \*Offshore Marine Survival Safety Series \*Inland Waterways Training & Safety.

**Circle No. 133**

**Goltens — Diesel Engine Repair, Maintenance & Spare Parts**



For more than 60 years, Goltens-New York has provided worldwide diesel engine repair, maintenance and parts. All Goltens' services and products are available in port, in dry dock, in-site or at one of

Goltens' worldwide fully staffed facilities. Crankshaft grinding; engine overhaul; fuel equipment repair; rebabbiting; line boring; steel & pipe fabrication and cogeneration services. For complete details, contact: Armando Giachin, Goltens-New York, 160 Van Brunt St., Brooklyn, NY 11231; tel: 718-855-7200; fax: 718-802-1147

**Circle No. 134**

**Tech Power Controls — We'll Turn Your Wheels**

2000 HP Iso-DRIVE SCR System in 26" x 36" x 90" — enclosed for Propulsion, Thruster or Winch. \*Digital system: touch screen interface for monitoring, settings and maintenance; self-diagnostics with status panel. \*Convenient front access

to all components. \*No field adjustments for quick-disconnect single module regulator. \*NEMA 1, NEMA 4, or NEMA 12 enclosures available.

**Circle No. 135**



**B&D Marine & Industrial Boilers, Inc.**

Capabilities: Welding in accordance with ABS, USCG & Lloyds; stick, MIG, TIG & flux-core welding procedures; ASNT Certified Inspectors: 24-

hour emergency boiler services; non-destructive testing; refractory, condenser & heat-exchanger repairs; hydrostatic testing; high-pressure waterblasting; in-house inventories of boiler casing, doors, tubes & pipe; tube renewal, man-hole and man-way seats & plates; general ship repairs — worldwide.

**Circle No. 136**



**IHC-Holland N.V. Lagernsmit**

IHC Lagernsmit's Supreme stern tube seals are suitable for all types of vessel, and for every shaft diameter. Because of their high reliability and the ease with

which they can be inspected and maintained, these seals are widely used in conjunction with controllable-pitch propellers. Plus, for more than 30 years, IHC has been among the world's leading producers of white meal bearing.

**Circle No. 137**



**MCA Engineers, Inc.**

Established in 1972, MCA Engineers specializes in ship structural analysis and repairs. MCA manufactures the Hull Monitoring system and the Mooring Line Tension Monitoring system to

help prevent accidents and reduce structural maintenance. Using its depth of experience in crude tanker structural inspection, the company developed customized multimedia relational databases to satisfy the US Coast Guard's CAIP document requirements. [www.mcaengineers.com](http://www.mcaengineers.com).

**Circle No. 139**



**Atlantic Marine, Inc.**

Atlantic Marine, Inc. founded in 1964, is a full-service shipyard located on 49 acres on the St. John's River and Inter-coastal Waterway in Alabama, only 2 miles from the Atlantic Ocean. Atlantic

Dry Dock Corp., located in Jacksonville, Fla., is its affiliate repair and conversion yard. Both Facilities are known throughout the world for high quality workmanship.

**Circle No. 140**



**Anchors - Chains - Winches**

G.J. Wortelboer Jr., B.V. specializes in supplying marine products — essentially anchors chain-cables, and windlasses — with

deliveries on a worldwide basis. The company is headquartered in Rotterdam, where a substantial stock is kept, guaranteeing immediate delivery to virtually every port in the world.

**Circle No. 141**



**Salthox Accessories**

Salthox Accessories—slippery tubs are hazardous to you and your guests! Salthox Accessories manufactures the following: non-slip bath mats, appliques, safety strips, and tape.

**Circle No. 138**



**RADIO HOLLAND USA, INC.**

Radio Holland USA provides turnkey marine electronic solutions which includes: supply, installation, maintenance of electronic communication, navigation, and engine room equipment. Additionally, we offer marinized computers, voyage data recorders, and vessel tracking systems for all your marine needs, according to the newest IMO requirements. Just contact: tel: 713.943.3325; fax: 713.943.3802; e-mail: [rhhoustonsales@radiohollandusa.com](mailto:rhhoustonsales@radiohollandusa.com).

**Circle No. 142**

**Ship Globe Hose Valves Catalog**

PENNDDEL, PA, U.S.A. Loeffler Corporation, a leading supplier of ship valves since 1926, offers a free catalog depicting globe type hose valves in 1-1/2 and 2-1/2 inch for 150 and 300 lb. Commercial and 250 lb.

**Circle No. 143**

**Walz & Krenzer — Custom Conveyor Belt Door For Self Un-loaders**

Patented Walz & Krenzer, Inc. design uses simple pneumatic and hydraulic operation and incorporates a unique rotating section between the upper trough belt and the return belt. \*Meets latest SOLAS & IMO requirements \*Tested and approved by Lloyds, ABS, DNV and others \*Custom designed for any application.

**Circle No. 144**

**GOLTENS-'ROUND THE CLOCK, 'ROUND THE WORLD.**

# CRANKSHAFT GRINDING

When Goltens reconditions crankshafts, crankpins and main journals, in most instances we are able to do the job without removing the shaft. Our in-situ grinding saves you downtime and money. Or, if your job is best handled in-shop, Goltens has facilities worldwide to do the job fast. And we've been doing it for over 50 years. For all your crankshaft needs, count on Goltens. We'll do the job right...and we'll do it right away.

## Goltens New York Corp.

160 Van Brunt Street • Brooklyn, NY 11231 U.S.A.  
Phone: (718) 855-7200 • Fax: (718) 802-1147  
E-Mail: [NewYork@Goltens.com](mailto:NewYork@Goltens.com)  
Web Site: <http://www.goltens.com>

**Worldwide Locations**  
New York • Florida • California • Norway • Holland • Hong Kong  
Indonesia • Singapore • China • United Arab Emirates

# SUNDIAL

SHIP REPAIR & CONSTRUCTION

**Sundial Marine**  
A full service shipyard located on the Columbia River, approximately 20 miles east of Portland, Oregon. Sundial Marine is organized as a marine repair facility, servicing Pacific Northwest barges, tugs, fishing vessels and various government vessels, for the purpose of providing quality ship and vessel repair, conversion and new construction.  
**Circle No. 145**



**Adrick Marine**  
Adrick Marine provides complete marine refrigeration systems, air conditioning compressor and chiller units, and reefer cargo box installation/repair. This includes: \*Ships Air Conditioning Units \*Walk-in coolers and freezers \*Portable reefer storage units \*Portable A/C dockside systems \*Control room dehumidification systems \*Self contained A/C uprights and compacts \*Fan coil units

\*Fiberglass panels with wire mesh \*Ship stores refrigeration unit \*Reefer cargo box doors \*Door gaskets.  
**Circle No. 146**



**Vapor Power Group**  
Vapor Power Group, a Niles, Illinois-based manufacturer of packaged steam generators and thermal fluid heaters, recently introduced its new thermal fluid heater designed specifically for

severe marine service. Available in output capacities ranging from 2.5 to 20 million BTU/hour, these hot oil heaters are intended for barge and shipboard cargo heating of products such as asphalt, heavy oils, sulfur and viscous food products.  
**Circle No. 147**



**Haynes Corporation**  
Haynes Corporation provides new and rebuilt fuel injection for most makes and models. Haynes delivers the following benefits: \*Over 20 year experience with Power Generation

Equipment \*Complete turnkey power plant installations, domestic & foreign \*Re-manufactured engines and generator sets to zero hour available with extended warranties \*Replacement parts and accessories \*Liquidations & removals — send us your surplus equipment and parts list for evaluation.  
**Circle No. 148**

**SENESCO Senesco**  
Senesco offers unmatched accessibility, flexibility and value to East Coast customers of shallow-draft vessels and other high-quality steel products. Our 25-acre flexible fabrication facility is conveniently located on the Southern coast of Rhode Island, and is accessible by sea, rail, interstate and air. Our manufacturing capabilities include: \*Barges \*Supply boats & tugs \*Shall Draft Vessels & Ocean-going Vessels \*Off-shore platform, Buoy systems & pontoons.  
**Circle No. 149**

**Pains Wessex Safety Systems & Revere Supply Co. Inc.**  
Pains Wessex is a world leader in marine safety products, producing pyrotechnic distress signals for over 100 years. Pains Wessex's reliability and technical expertise is respected and trusted by mariners throughout the world. Revere Supply Co. Inc. has been serving the marine industry since 1936, providing the finest in safety and survival equipment for recreational and commercial mariners alike.  
**Circle No. 150**

**Aarow Services, Inc.**  
Aarow Services, Inc. provides temporary employees during peak word-load periods to various industries who have decided it's not cost effective or feasible to hire permanent employees for short periods of high production. Aarow Services, Inc. provides a full service employment service to customers requiring Marine and Industrial Craftsmen, and Technical Support Services.  
**Circle No. 151**

**FUEL MAG**  
New FUEL MAG Magnetic Diesel Fuel Conditioner earns engineering benchmark: Bureau Veritas Certificate of Type Approval, Certificate #08477/AO BV, one of the industry's most prized acknowledgements. FUEL MAG diesel decontamination units, increase filter life, extend diesel engine life, eliminate the use of hazardous toxic biocides, and reduce costly maintenance and downtime. FUEL MAG is available in North and South America exclusively through Fuel Dynamics.  
**Circle No. 152**

# E N V I R O V A C

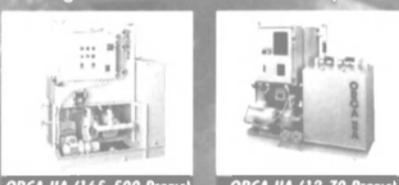
## ORCA IIA MARINE SANITATION DEVICE

Sizing to Fit 12 to 500 People



**EVAC 90 TOILET**

- Low Volume Fresh Water Flush Toilet (3 pints/flush)
- Small Diameter Piping . . . 1-1/2" and 2"
- Reduces Sewage Volume by 90%
- Flexible Piping Layout . . . With Vertical Lift
- Reduced Holding Tank Size . . . 80% Smaller
- Eliminates Toilet Vents
- Reduces Material & Labor Costs, and Topside Piping Weight
- Proven History of Reliability
- Now with a 5 Nozzle Flush Ring and Improved Flushing Activator



**ORCA IIA (165-500 PEOPLE)**    **ORCA IIA (12-70 PEOPLE)**

- 7 models (360 GPD to 15000 GPD)
- Microprocessor Control and Monitoring System
- Simple Operation & Maintenance
- Fully Automatic Hands-off Operation
- Simple and Inexpensive Installation
- Compact and Lightweight
- Designed Specifically for the Marine Industry
- Operates in Fresh, Salt or Brackish Water
- U.S.C.G. Certified and IMO Approved
- Available with ORCAFLOR Automatic Chlorine Generator

**ENVIROVAC INC.**  
1260 Turret Drive  
Rockford, IL 61115  
U.S.A.  
815/654-8300  
Toll Free:  
888-GET-EVAC (888-438-3822)  
e-mail: marine@evac.com.  
Fax:  
815/654-8306



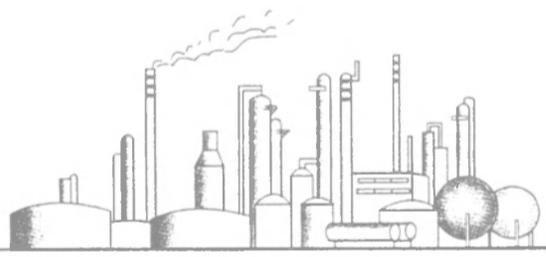
**SEWAGE SYSTEMS TO SOLVE ALL YOUR MARINE SANITATION NEEDS.**

Circle 218 on Reader Service Card



## SERVICE VALVE & FITTING

Supplying the world with all of your pipe, valve & fitting needs!



Mobile, Corp. 36609  
P.O. Box 9665  
Office: (334) 438-4470  
Fax: (334) 438-6809

**Opening Soon In September**  
New Location:

1301-C Ingleside Road  
Norfolk, VA 23502  
Office: (757) 858-1966  
Fax: (757) 858-0988

Moss Point, MS 39563  
7005 Elder Ferry Rd.  
Office: (601) 475-4875  
Fax: (601) 475-1050

Harvey, LA 70058  
213 Grefer Lane  
Rathbourne Ind. Park  
Office: (504) 362-2424  
Fax: (504) 362-0565

Mobile, AL 36615  
1920 Avenue C  
Office: (334) 438-5130  
Fax: (334) 438-5142  
Toll Free: (888) 659-5130

Brownsville, TX 78521  
1533 Rear N. Central Ave.  
Office: (956) 838-1278  
Fax: (956) 838-1288

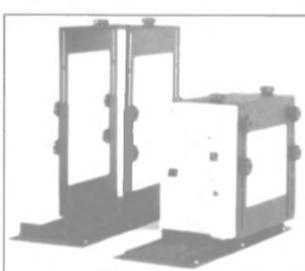
Elektroweg 5  
3144 CB Maassius  
The Netherlands  
Office: (010) 590 09 66  
Fax: (010) 590 13 76

Houston, TX 77060  
15864 W Hardy Rd. #710  
Office: (281) 999-6733  
Fax: (281) 999-7722

www.servicevalve.com

Circle 253 on Reader Service Card

## We build metal support brackets to keep things in place on land and aboard ship!

Looking for a support bracket aboard ship to anchor a PC, CPU, copier, printer, facsimile, phone, etc.?

**TALK TO US!**

We specialize in both COTS (Commercial-Off-The-Shelf) and customized support brackets.

HYPERLINK:  
<http://www.specialtyproductsinc.com>

**Specialty Products, Ltd.**  
3 Hotel Street Warrenton, VA 20186  
Ph: 540-349-2018    Fax: 540-349-0971  
e-mail: tws1@citizen.infi.net

Circle 254 on Reader Service Card

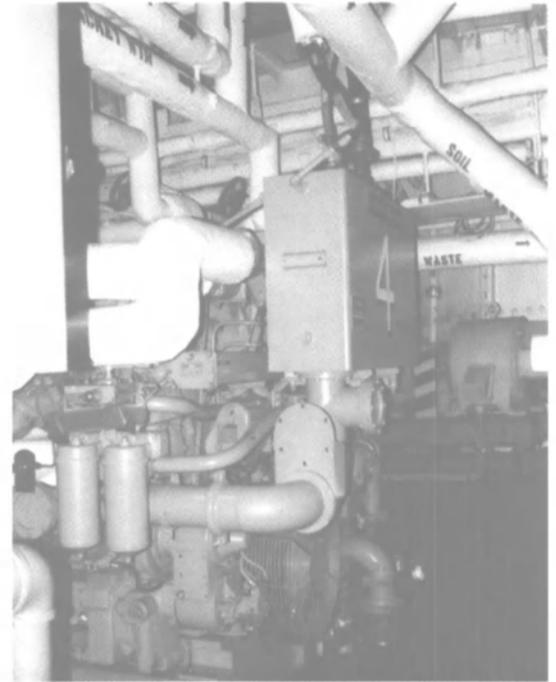


**TUG BALLISTICS** - **DISPLACEMENT:** 1,235 tons standard; **LENGTH:** 195 feet waterline, 205 feet overall; **BEAM:** 38-1/2 feet; **DRAFT:** 15-1/2 feet; **PROPULSION:** diesel-electric (4 Caterpillar D399 diesel engines); 3000 shp; 1 shaft; **SPEED:** 16.5 knots; **RANGE:** 15,000 n. miles at 8 knots, 6,500 n. miles at 15 knots.

**WE HAVE FOR SALE 4 TUGS & 3 RAIL BARGES** - Two tugs are at Portsmouth, VA, & two are at Port Richmond in California. The tugs in Portsmouth have had \$7 million of new government - supplied propulsion equipment installed & another \$5 million was reportedly spent at the shipyard on each vessel in the late 1980's. They all saw service in Desert Storm. The tugs have four (4) Catrpillar model D399-V16 diesel engines, a 100,000 lb. Almon Johnson towing machine and a 10 ton salvage boom rigged over the aft deck.

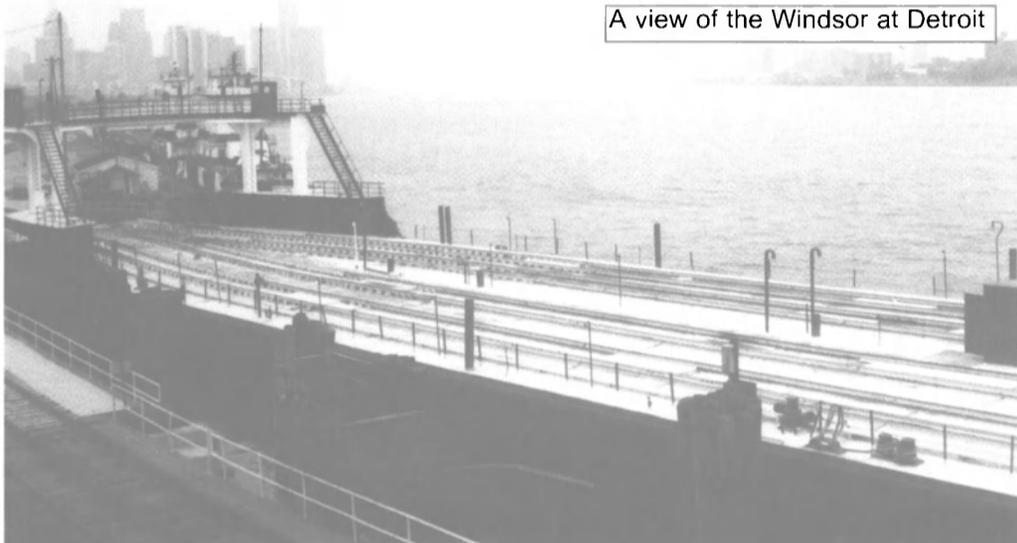
The price of the tugs on the **EAST COAST** are **\$1.1 MILLION** each OBO. The tugs on the **WEST COAST** are **\$510,000** each OBO.

Engine #4 in a squeaky clean engine room on Tug 159



**4 ATF CHEROKEE CLASS TUGS**  
**3 ex-NORFOLK SOUTHERN RAIL BARGES**  
**CALL JOHN LARKIN (906) 786-0693**

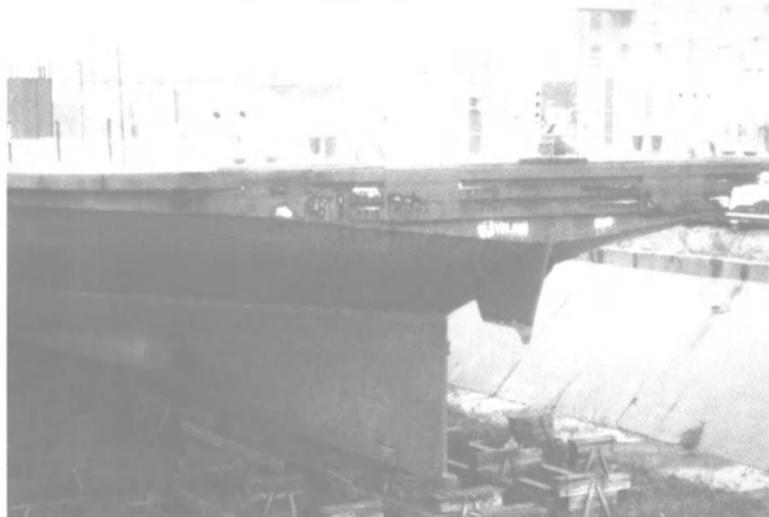
A view of the Windsor at Detroit



**WINDSOR, US 230113:** 358' x 65.1' x 19.4' Steel. 3131 GT; **BUILT:** Toledo, Toledo Shipbuilding Co., Hull No.183; **CAPACITY:** Four tracks, 28 cars. **\$400,000** each OBO  
**All Three Barges Are Located in Toledo, Ohio**



**ROANOKE, US 229316:** 369' x 57.3' x 20.3' Steel. 3327 GT; **BUILT:** Manitowoc, Manitowoc Shipbuilding Co. as Car Ferry, City of Flint 32; **CAPACITY:** Four tracks, 26 cars. **\$400,000** each OBO



Rail Barge MANITOWOC being repaired and ABS load line being established on the dry dock in December of 1994.  
 Barge MANITOWOC'S Hull is in great condition.



**MANITOWOC, US 225671:** 358' x 65.1' x 19.4' Steel. 3093 GT; **BUILT:** Manitowoc, Manitowoc Shipbuilding Co., Hull No.222; **CAPACITY:** Four tracks, 27 cars. **\$400,000** each OBO.  
**All Three Barges Are Located in Toledo, Ohio**

## Propulsion Directory (continued from page 17)

**Alstom Diesels Inc.**  
10801 Kempwood Dr., Ste. 1  
Houston, Texas 77043  
Fax: 713-892-8277

**Alstom Engines Ltd. (Mirreles Blackstone)**  
Bramhall Moor Lane  
Hazel Grove, Stockport, Cheshire SK7 5AH  
United Kingdom  
Tel: +44-161-483-1000  
Fax: +44-161-487-1465  
Email: mirreles.blackstone@ind.alstom.com  
Website: http://www.engines.ind.alstom.com

**Alstom Engines Ltd. (Paxman Division)**  
Hythe Hill  
Colchester, Essex CO1 2HW United Kingdom  
Tel: +44-1206-795151  
Fax: +44-1206-797869

**Alstom Kelvin Diesels**  
151 Kyle St.  
Glasgow G4 0JL United Kingdom  
Tel: +44-141-552-3565  
Fax: +44-141-552-0735

**Alstom Ruston Diesels**  
Newton-Le-Willows  
Merseyside WA3 2EP United Kingdom  
Tel: +44-1925-225151  
Fax: +44-1925-222055

**American Bow Thruster**  
517-A Martin Avenue  
Rohnert Park, Calif. 94928  
Tel: 707-586-3155; Fax: 707-586-3159  
Email: abt@thrusters.com  
Website: http://www.thrusters.com

**American Diesel Corp.**  
P.O. Box 1838, RT#3 North  
Kilmarnock, Va. 22482  
Tel: 804-435-3107; Fax: 804-435-6420

**American Hydro Jet**  
Tel: 305-978-8996 Fax: 305-978-6597

**American Industrial Plastics**  
724 Fentress Blvd.  
Daytona Beach, Fla. 32114  
Tel: 904-274-5335 Fax: 904-274-4746  
Website: http://www.aipdaytona.com

**American Vulkan Corp**  
P.O. Drawer 673  
Winter Haven, Fla. 33884  
Tel: 863-324-2424 Fax: 863-324-4008  
Email: vulkanusa@vulkanusa.com  
Website: http://www.vulkanusa.com

**Anglo Belgian Corp.**  
9958 North Alpine Rd., Ste. 101  
Machesney Park, Ill. 61115  
Tel: 815-637-2880; Fax: 815-637-2877  
Email: anglobel@aol.com

**Anglo Belgian Corp. NV**  
Wideaukaai 43, Gent B-9000 Belgium  
Tel: +32-9-267-0000  
Fax: +32-9-267-0067  
Email: abcdiesel@village.mumet.be  
Website: http://gallery.mumet.be/abcdiesel

**Aquadrive Systems**  
17 Avenue D  
Atlantic Highlands, N.J. 07716  
Tel: 908-291-9392  
Fax: 908-291-9380

**ATA Gears**  
P.O. Box 77  
Tampere FIN-33101 Finland  
Tel: +358-31-2870-111  
Fax: +358-31-2870-249

**Atlas Engine & Pump**  
P.O. Box 845  
Groton, Conn. 06340  
Tel: 860-445-2457 Fax: 860-448-1038

**Automation Products Inc.**  
303 Maxroy St.  
Houston, Texas 77008-6294  
Tel: 713-869-0361 Fax: 713-869-7332

**Baylor Company**  
500 Industrial Blvd.  
Sugar Land, Texas 77478  
Tel: 281-274-0475 Fax: 281-274-0490  
Website: http://www.baylor.com

**Bazan Motores**  
Box 617  
Cartagena E-30205 Spain  
Tel: +34-68-50-63-00  
Fax: +34-68-50-09-02

**Beird Industries Inc**  
601 Benton Kelly St., P.O. Box 31115  
Shreveport, La. 71106  
Tel: 318-865-6351 Fax: 318-868-1701

**Bestweld, Inc.**  
1210 Stanbridge St.  
Norristown, Pa. 19401  
Tel: 610-279-4611; Fax: 610-279-8546  
Email: fittings@bestweld.com  
Website: http://www.bestweld.com

**Beta Marine Ltd.**  
Merretts Mills, Bath Rd.  
South Woodchester, Stroud, Gloucestershire  
GL5 5EU United Kingdom  
Tel: +44-1453-835-282  
Fax: +44-1453-835-284

**BHS-Cincinnati Getriebetechnik GmbH**  
Hans-Boeckler Str 7  
Sontholen, Bavaria D-87527 Germany  
Tel: +49-8321-8020  
Fax: +49-8321-802685  
Email: info@bhs-cincinnati.de  
Website: http://www.bhs-cincinnati.de

**Bird-Johnson Co**  
110 Norfolk Street, Walpole, Mass. 02081  
Tel: 508-668-9610 Fax: 508-660-6111

**Black Dog Propellers**  
1108 Butterworth Ct  
Stevensville, Md. 21666  
Tel: 41-604-2861 Fax: 410-604-2863  
Email: bdp@dmv.com  
Website: http://www.blackdogprops.com

**Blohm & Voss Industrie GmbH**  
P.O. Box 100720  
Hamburg 1 D-2000 Germany  
Fax: +49-40-31193394

**Brunvoll AS**  
Postboks 370, Strandgatan 4-6  
Molde N-6401 Norway  
Tel: +47-71-21-96-00  
Fax: +47-72-53424

**C-Power Marine Ltd.**  
P.O. Box 832  
Bellshill, Lanarkshire ML4 3JZ United Kingdom  
Tel: +44-1698-748-181  
Fax: +44-1698-746-021

**Carolina Fluid Components**  
5411 W. Crenshaw St.  
Tampa, Fla. 33634  
Tel: 813-885-7416 Fax: 813-886-1250

**Castoldi SpA**  
Viale Mazzini 161  
Abbiategrosso I-20081 Italy  
Tel: +39-2-94821  
Fax: +39-2-9496-0800  
Email: info@castoldijet.it  
Website: http://www.castoldijet.it

**Caterpillar**  
P.O. Box 610  
Mossville, Ill. 61552  
Tel: 309-578-6298 Fax: 309-578-2559  
Email: cat\_power@cat.com  
Website: http://www.cat-engines.com

**Caterpillar Americas Co**  
100 NE Adams Street  
Peoria, Ill. 61629-6330  
Tel: 309-675-1762 Fax: 309-675-1764

**Caterpillar Overseas SA**  
76 Route de Frontenex  
Geneva 6 CH-1211 Switzerland  
Tel: +41-22-7374444  
Fax: +41-22-7374984

**Centa Antriebe Kirschev GmbH**  
Postfach 1125  
Haan D-42755 Germany  
Tel: +49-2129-9120  
Fax: +49-2129-2790  
Email: centa@centa.de  
Website: http://www.centa.de

**Centa Corp.**  
815 Blackhawk Drive  
Westmont, Ill. 60559  
Tel: 630-734-9600 Fax: 630-734-9669  
Email: centacorp@aol.com

**Cincinnati Gear Co**  
5657 Wooster Pike  
Cincinnati, Ohio 45227  
Tel: 513-271-7700 Fax: 513-271-0049  
Email: cintgear@worldnet.att.net  
Website: http://www.cintgear.com

**Coastal Prop Technology**  
67 Elgin St., Ft. Walton Beach, Fla. 32547

Tel: 850-864-5203 Fax: 850-864-2816  
Email: coastalprp@aol.com  
Website: http://www.coastalprop.com

**Coastal Prop Technology**  
820 N.E. 24th Lane, #108  
Cape Coral, Fla. 33909  
Tel: 941-573-1138 Fax: 941-573-1147  
Email: coastalpr2@aol.com  
Website: http://www.coastalprop.com

**Con-Select**  
P.O. Box 8745  
Mandeville, La. 70470  
Tel: 504-892-6446 Fax: 504-892-6621

**Coupling Corp Of America**  
2422 S Queen St  
York, Pa. 17402  
Tel: 717-741-4904 Fax: 717-741-0886  
Email: cca@ptd.net  
Website: http://www.couplingcorp.com

**Cummins Engine Company**  
4500 Leeds Ave., Ste. 301  
Charleston, S.C. 29405  
Tel: 843-745-1620 Fax: 843-745-1549  
Email: wavemaster@cummins.com  
Website: http://www.cummins.com

**Cummins Mid-South, Inc.**  
110 East. Airline Highway  
Kenner, La. 70062  
Tel: 504-465-3403

**Cummins Wartsila**  
BP 115-La Combe  
Surgeres F-17700 France  
Tel: +33-5-46-303132  
Fax: +33-5-46-303159

**Cummins Wartsila Americas**  
4500 Leeds Ave., Ste. 301  
Charleston, S.C. 29405  
Tel: 843-740-2986 Fax: 843-745-1549  
Email: smtandy@chs.cummins.com

**Custom Hydraulic & Machine**  
22911 86th Ave. South  
Kent, Wash. 98031  
Tel: 253-854-4666 Fax: 253-854-4674  
Website: http://www.customhydraulic.com

**Custom Nozzle Fabrication Inc.**  
P.O. Box 547, Pascagoula, Miss. 39568-0547  
Tel: 601-762-4612 Fax: 601-769-0558

**Daihatsu Diesel Manufacturing Co Ltd**  
2-10, 2-chome  
Nihonbashi-Honcho, Chuo-ku Tokyo 103 Japan  
Tel: +81-3-3279-0827  
Fax: +81-3-3245-0395

**Dalian Marine Diesel Works**  
Xiang Lu Jiao  
Dalian China  
Tel: +86-411-363-1558  
Fax: +86-411-363-7499

**Daytona Marine Diesels**  
1815 N. U.S. 1  
Ormond Beach, Fla. 32174  
Tel: 904-676-1140 Fax: 904-676-0164  
Email: diesels@datonamarine.com  
Website: http://www.daytonamarine.com

**De Wijs Marine Intl.**  
9471 Baymeadows Rd., Ste. 307  
Jacksonville, Fla. 32256  
Tel: 904-448-0321 Fax: 904-731-5893

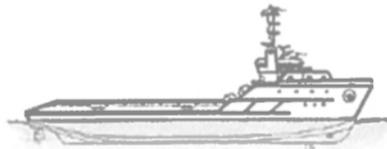
**Deere Power Systems**  
P.O. Box 5100  
Waterloo, Iowa 50704  
Tel: 800-533-6446 Fax: 319-292-5075  
Email: jdpower@deere.com  
Website: http://www.deere.com/jdpower

**Detroit Diesel**  
13400 Outer Drive West, Detroit, Mich 48239  
Tel: 313-592-5000 Fax: 313-592-8176  
Website: http://www.detroitdiesel.com

**Detroit Diesel - Allison Canada East**  
70 Raddal Ave.  
Dartmouth, N.S. B3B 1T7 Canada  
Tel: 902-468-6200 Fax: 902-468-3325  
Email: larder.colin@ddace.com  
Website: http://www.ddace.com

**Deutz AG**  
Muehlheimer Str. 147-149  
Cologne S-51057 Germany  
Tel: +49-221-822-2516  
Fax: +49-221-822-2352  
Email: matejat.d@deutz.de  
Website: http://www.deutz.de

# NORDIC GROUP



## NORDIC SHIP CONSULTANTS INC.

NORDIC MARINE  
MANAGEMENT, INC.

NORDIC  
INTERNATIONAL  
HOLDINGS, SA

NORDIC TECHNICAL  
DEVELOPMENT, INC.

www.nordicship.com

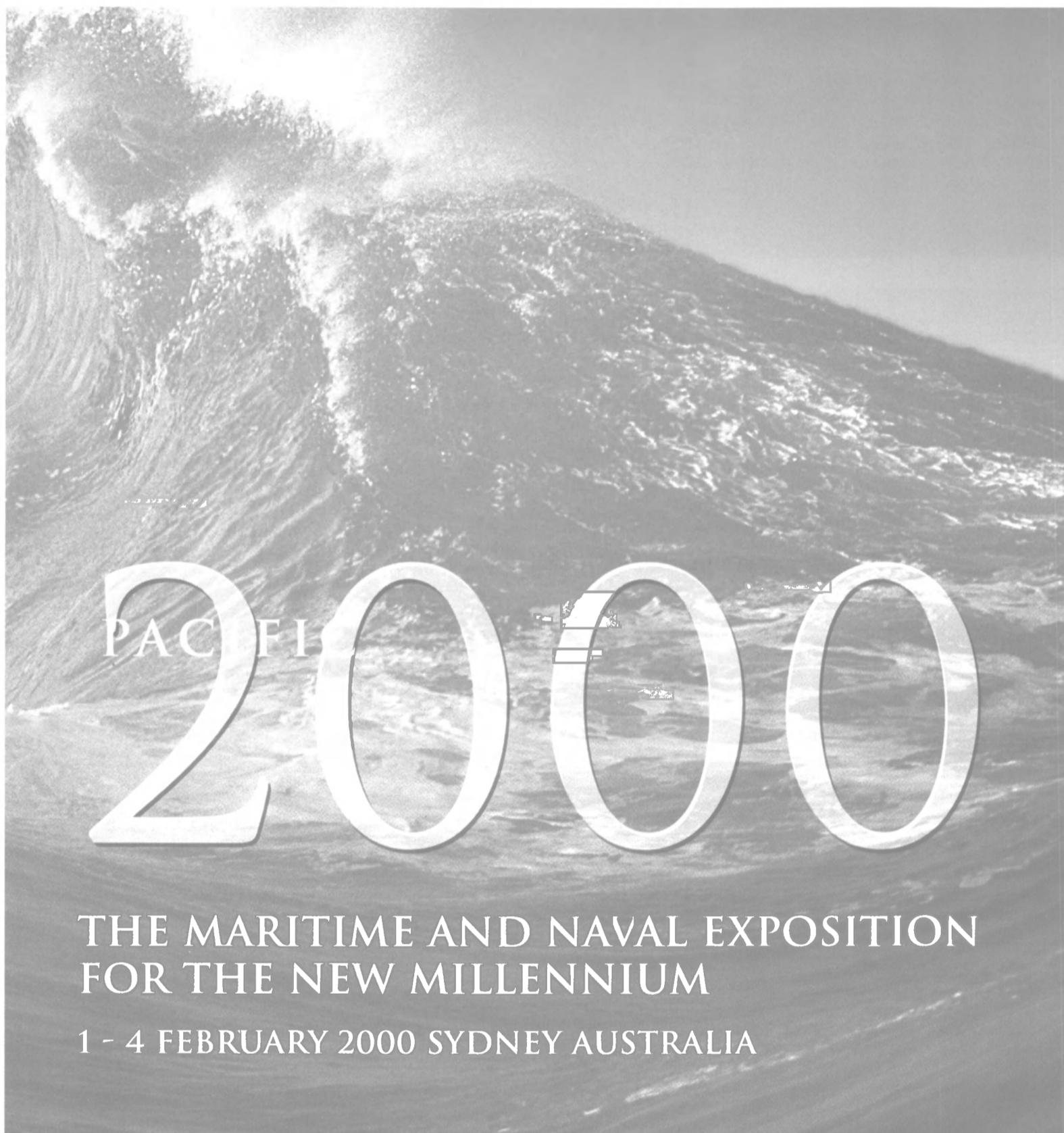
US-BASED INT'L TUG & BARGE OPERATORS WITH "FOREIGN FLAG UNITS", SPECIALIZED IN REGULAR CARGO AND SHIP SERVICES. CARGO-BARGES AND VESSEL-TOWING FROM U.S. WATERS TO/FROM CANADA, CENTRAL- & SOUTH-AMERICA.

VISIT OUR WEB-SITE AND SPECIFY YOUR REQUIREMENTS IN OUR SPECIAL FORM THROUGH OUR E-MAIL OR REGULAR FAX:

**TEL: 954-524-0025**

**FAX: 954-524-0056**

**E-MAIL: nsci@nordicship.com**



## THE MARITIME AND NAVAL EXPOSITION FOR THE NEW MILLENNIUM

1 - 4 FEBRUARY 2000 SYDNEY AUSTRALIA

Pacific 2000 will be the most comprehensive commercial maritime and naval defence exhibition ever held in the Asia Pacific region.

Directed towards both the naval defence and commercial maritime industry sectors, Pacific 2000 will cover the full range of naval and commercial maritime equipment, facilities and operations.

Supported by the Royal Australian Navy, the Institute of Marine Engineers, the Royal Institution of Naval Architects and the Institution of Engineers, Australia.

Pacific 2000 will incorporate a range of maritime industry, technical and defence forums, featuring the Sea Australia 2000 conference and Royal Australian Navy Conference.

Pacific 2000 is an event that must not be missed.

Telephone +61 (0) 2 9806 9900  
Facsimile +61 (0) 2 9806 9922  
Email [expo@pacific2000.com.au](mailto:expo@pacific2000.com.au)  
Website [www.pacific2000.com.au](http://www.pacific2000.com.au)



# Propulsion Directory

**Deutz Canada**  
4420 Garand St.  
Montreal, Que. H4R 2A3 Canada  
Tel: 514-335-3150 Fax: 514-332-4173  
Email: deutzcan@msn.com  
Website: http://www.deutzcanada.com

**Deutz Canada (Deutz Corp.)**  
3883 Steve Reynolds Blvd.  
Norcross, Ga. 30093  
Tel: 954-767-0205 Fax: 770-564-7222

**Devall Diesel Service**  
P.O. Box 130, Hackberry, La. 70645  
Tel: 337-583-7014 Fax: 337-583-2579  
Email: ddiesel@camtel.net  
Website: http://www.devalldiesel.com

**Diesel America**  
74257 Hwy. 25, Covington, La. 70435  
Tel: 504-892-0107 Fax: 504-898-5824

**Dieselmotorenwerk Vulkan GmbH**  
Werftallee 13, Rastack 18119 Germany  
Tel: +49-381-1232130  
Fax: +49-321-1232132

**Geislinger & Co**  
Hallwanger Landesstrasse 3  
Hallwang/Salzburg A-5300 Austria  
Tel: +43-662-66999-0  
Fax: +43-662-66999-0  
Email: info@geislinger.co.at  
Website: http://www.geislinger.com

**Duramax Marine**  
P.O. Box 67, Middlefield, Ohio 44062  
Tel: 216-632-1616 Fax: 216-632-5265  
**Eaton Corp Airflex Division**  
9919 Clinton Road  
Cleveland, Ohio 44144  
Tel: 216-634-8312 Fax: 216-634-8341

Email: lindahall@eaton.com

**Electro-Motive Div. of General Motors Corp.**  
9301 West 55th Street  
La Grange, Ill. 60525  
Tel: 708-387-6000 Fax: 708-387-5845  
Website: http://www.gmcmd.com

**Electronic Design**  
3020 20th Street  
Metairie, La. 70002  
Tel: 504-836-2996 Fax: 504-833-4119  
Email: edi@e-d-i.com  
Website: http://www.e-d-i.com

**Elkhart Brass International Division**  
P.O. Box 1127, 1302 W. Beardsley  
Elkhart, Ind. 46515  
Tel: 219-295-8330 Fax: 219-293-9914

**Elliott Turbocharger Group**

201 Production Drive  
Yorktown, Va. 23693  
Tel: 757-596-3100 Fax: 757-596-9109  
**Fairbanks Morse (Coltec Industries)**  
701 White Ave  
Beloit, Wis. 53511  
Tel: 608-364-8100 Fax: 608-364-8194  
Email: nstiener@fairbanksmorse.com  
Website: http://www.fairbanksmorse.com/

**FCS Inc. (Malin CDM)**  
22 Main Street  
Centerbrook, Conn. 06409  
Tel: 860-767-3095 Fax: 860-767-1263  
Website: http://www.fcscorp.org

**Fetterolf Corp.**  
P.O. Box 103, Skippack, Pa. 19474  
Fax: 610-584-5904

**Fincantieri - Cantieri Navali Italiani SpA**

Via Cipro 11, Genova I-16129 Italy  
Tel: +39-10-59951 Fax: +39-10-599-5379

**Flagship Marine**  
2427 S.E. Dixie Highway, Stuart, Fla. 34996  
Tel: 561-283-1609 Fax: 561-283-4611

**Fleetguard Inc**  
402 BNA Dr., Ste. 500, Nashville, Tenn. 37217  
Tel: 800-356-6606 Fax: 877-247-1292  
Website: http://www.fleetguardnelson.com

**Fuel Dynamics**  
707 Mullet Dr., #110, P.O. Box 523  
Cape Canaveral, Fla. 32920  
Tel: 321-784-4227 Fax: 321-784-5663  
Email: fuelmag@fueldyn.com  
Website: http://www.fueldyn.com

**GE Industrial & Marine Engines**  
1 Neuman Way, Cincinnati, Ohio 45215  
Tel: 513-552-5465 Fax: 513-552-5059

Email: sales@iconresearch.demon.co.uk  
Website: http://www.iconresearch.org

**International Electric Co. (IEC)**  
2818 Maxroy, Houston, TX 77007  
Tel: 713-869-1192 Fax: 713-869-0808  
e-mail: sales@iec-inc.com  
Website: iec-inc.com

**IHC Lagersmit**  
Postbus 5, Smitweg 6  
Kinderdijk 2960 AA Netherlands  
Tel: +31-78-6910472  
Fax: +31-78-6910477  
Email: info@lagersmit.ihcholland.com  
Website: http://www.ihcholland.com

**Inland Detroit Diesel Allison**  
210 Alexandra Way  
Carol Stream, Ill. 60197  
Tel: 800-236-9559  
Fax: 630-871-8997

**Integrated Power Systems**  
730 Sartaria Rd., Sugar Land, Texas 77487  
Tel: 281-565-5150 Fax: 281-565-0445

**Inventory Locator Service**  
3965 Mendenhall Rd. South, Ste. 10  
Memphis, Tenn. 38115  
Tel: 901-794-4784  
Fax: 901-794-1760

**Isotta Fraschini**  
800 Principal Ct., Ste. C  
Chesapeake, Va. 23320  
Tel: 757-548-6000  
Fax: 757-548-6012  
Email: isotta@fdgm.com

**J C Marine Diesel**  
277 Howard Ave.  
Biloxi, Miss. 39530  
Tel: 228-436-3316  
Fax: 228-435-5939

**John Crane Inc (Lips)**  
1653 Barclay Blvd., Buffalo Grove, Ill. 60089  
Tel: 847-808-9240 Fax: 847-808-9295  
Email: dtocler@johncrane-lips.com

**John Crane Lips**  
2112 Bienville Blvd., Ste. D  
Ocean Springs, Miss. 39564  
Tel: 228-872-5970 Fax: 228-872-5973  
Email: lipsusa@digiscap.com  
Website: http://lips-propulsion.nl

**John Crane Marine-Lips**  
Postbus 176  
Drunen 5150 BB Netherlands  
Tel: +31-416-388175  
Fax: +31-416-3743162  
Email: info@lips-propulsion.com  
Website: http://www.lips-propulsion.com

**John J. McMullen Associates**  
4 Legacy Court, Hilton Head, S.C. 29926  
Tel: 803-342-5922 Fax: 803-342-5923  
Website: http://www.jjma.com/

**Kahlenberg Bros Co**  
1700 12th Street, P.O. Box 358  
Two Rivers, Wis. 54241  
Tel: 920-793-4507 Fax: 920-793-1346  
Email: info@kahlenberg.com  
Website: http://www.kahlenberg.com

**Kamewa Group**  
106 Park Place, Ste. 200  
Covington, La. 70433  
Tel: 504-871-3900 Fax: 504-871-3933  
Email: sales@kamewaamerica.com

**Karl Senner**  
P.O. Box 10055, Kenner, La. 70181  
Tel: 504-469-4000 Fax: 504-469-7528

**Kawasaki Heavy Industries Ltd**  
4-1 Hamamatsu Cho, 2-chome Minato ku  
Tokyo 105-6116 Japan  
Tel: +81-3-3435-2374  
Fax: +81-3-3435-2022  
Email: miura.r@toh.khi.co.jp  
Website: http://www.khi.co.jp

**Kelvin Diesels pic**  
Cardowan Park, Tannochside Park  
Uddingston, Lanarkshire G71 5PF UK  
Tel: +44-1698-810666  
Fax: +44-1698-810999  
Email: kdplc@msn.com

**KHD Canada**  
4420 Garand St., St. Laurent, Que. Canada  
Tel: 514-335-3150 Fax: 514-332-4173

**Klattenberg Marine Agency**  
17 Grandview Ave W, Orange, N.J. 07052  
Tel: 201-731-4018 Fax: 201-325-3681

**Kobelt Manufacturing Co Ltd**  
8238-129 Street, Surrey B.C. V3W 0A6 Canada  
Tel: 604-572-3935 Fax: 604-590-8313  
Email: sales@kobelt.com  
Website: http://www.kobelt.com

**Gerhardt's**  
P.O. Box 10161, Jefferson, La. 70181  
Tel: 504-733-2500 Fax: 504-734-7730

**GMT**  
Bagnoli Della Rosandra, Trieste 334 Italy  
Tel: +39-40-3193111 Fax: +39-40-827371

**Gottens New York Corp**  
160 Van Brunt Street  
Brooklyn, N.Y. 11231  
Tel: 718-855-7200  
Fax: 718-802-1147  
Email: newyork@gottens.com  
Website: http://www.gottens.com

**Gulf Global**  
P.O. Box 10158, New Orleans, La. 70181  
Tel: 800-817-0895 Fax: 504-367-8557  
Email: gullglo@bellsouth.net  
Website: http://www.gulfglobal.com

**Hailey Marine Gears**  
1820 Highway 1 North  
Greenville, Miss. 38701  
Tel: 601-332-8716  
Fax: 601-335-4322  
Email: hmgen@tecinfo.com

**Hall & Stewart**  
West Royalty Industrial Park  
Charlottetown, PE C1E 1B0 Canada  
Tel: 902-566-3335  
Fax: 902-566-9258

**Hamilton Jet**  
P.O. Box 709, Christchurch New Zealand  
Tel: +64-3-348-4179  
Fax: +64-3-348-6969  
Email: info@hamjet.co.nz  
Website: http://www.hamjet.co.nz

**Hanshin Diesel Works**  
4th Floor, Shinko Bldg., 8 Kagan-dori  
Chuo-ku, Hyogo Pref Kobe 650 Japan  
Tel: +81-78-332-2081  
Fax: +81-78-332-2080

**Harbormaster Marine Inc**  
31777 Industrial Road, Livonia, Mich 48150  
Tel: 734-425-1080 Fax: 734-425-1850  
Email: hmimarine@aol.com  
Website: http://www.harbormastermarine.com

**Hatch & Kirk Inc**  
5111 Leary Ave., Seattle, Wash. 98107  
Tel: 206-783-2766 Fax: 206-782-6482

**Hawboldt Propellers**  
4540 Downman Rd., New Orleans, La. 70126  
Tel: 504-244-8767 Fax: 504-241-5260

**Hedemora Diesel A/B**  
Box 206, Hedemora 776 28 Sweden  
Tel: +46-225-595800  
Fax: +46-225-595801  
Email: diesel@hedemoradiesel.se  
Website: http://www.hedemoradiesel.se

**Hermont Marine Inc**  
3528 rue Griffith  
Ville St Laurent, Que. H4T 1A7 Canada  
Tel: 514-735-6185 Fax: 514-735-0035

**Holland Roerpropeller USA**  
432 Realty Drive, Gretna, La. 70056  
Tel: 504-433-9004 Fax: 504-433-9026  
Email: HRP\_USA@compuserve.com  
Website: http://www.hrp.nl

**Hutchison-Hayes Separators**  
P.O. Box 2965, Houston, Texas 77252  
Tel: 713-455-9600 Fax: 713-455-7753

**Hydraquip**  
947 Industry Rd., Kenner, La. 70062  
Tel: 504-471-0830 Fax: 504-471-0369

**ICON Research**  
Old Town Hall, High Street  
Ellesmere, Shropshire SY12 OEP UK  
Tel: +44-0-1691-624-707  
Fax: +44-0-1691-623-095



## 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

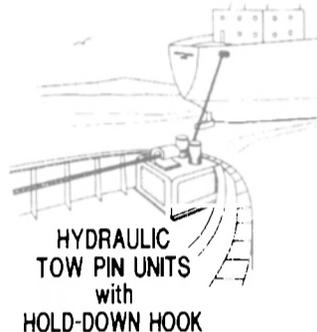
WANT SUPERIOR QUALITY  
WANT SUPERIOR SERVICE  
CALL SUPERIOR ENERGIES INC.

# 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 256 on Reader Service Card

## 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 268 on Reader Service Card

## DON'T WORRY ...BE THIRSTY!

All the dependable, pure water you need...AT A PRICE YOU CAN AFFORD NOW!  
IF...you let us install what we think are the world's best Watermakers, FCI Dolphin.

Neptune or Posidon Commercial series Reverse Osmosis units that...  
\* Produce 200 to 25,000+ gallons per day \* Feature comprehensive digital monitoring for water quality, temperature, operating pressures, salinity control, maintenance scheduling with superior vessels & pumps/motors \* Use our exclusive fresh water flush to extend membrane life \* Have an extra quiet, 316SS pulsation dampened high pressure pump that runs lower than 50% of rated output on most commercial units \* Over 2006 units installed since 1983

"The Pure Water Solution"



REVERSE OSMOSIS OF  
SOUTH FLORIDA, INC.  
1-800-255-8115  
(954) 462-4114  
FAX 1-954-467-6080  
E-mail:  
rosmosis@shadow.net

Circle 250 on Reader Service Card

## 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 297 on Reader Service Card



KORT NOZZLES  
IN STANDARD  
AND CUSTOM  
CONFIGURATIONS



**HARRINGTON MARINE**  
6720 124TH AVE., FENNVILLE MI 49408  
PHONE 800-962-5000 FAX 616-543-4251

VISIT OUR WEBSITE AT  
http://www.harringtonmarine.com

Circle 221 on Reader Service Card

# Propulsion Directory

**Kvaerner Masa-Azipod**  
P.O. Box 132, Munkkisaarekatu 1  
Helsinki FIN-00151 Finland  
Tel: +358-9-1941  
Fax: +358-9-194-2480

**Lincoln Electric Co.**  
22801 St. Clair Ave., Cleveland, Ohio 44117  
Tel: 216-481-8100 Fax: 216-383-8381

**Lips BV**  
Postbus 6, Drunen 5150 BB Netherlands  
Tel: +31-416-388227  
Fax: +31-416-370256  
Email: info@lips-propulsion.nl  
Website: http://www.lips-propulsion.nl

**Lister-Petter Marine**  
Thrupp, Stroud  
Gloucestershire GL5 2BW United Kingdom  
Tel: +44-1453-885-166  
Fax: +44-1453-546732

**Lo-Rez Vibration Control Ltd**  
186 West 8th Avenue  
Vancouver, B.C. V5Y 1N2 Canada  
Tel: 604-879-2974 Fax: 604-879-6588  
Email: lo-rez@lo-rez.com  
Website: http://www.lo-rez.com

**Lohmann & Stollertohl GmbH**  
Postfach 1860, Witten D-58408 Germany  
Tel: +49-2302-877245  
Fax: +49-2302-877400  
Email: info@lus.de

**Lufkin Industries**  
P. O. Box 849, Lufkin, Texas 75902

Tel: 409-637-5612 Fax: 409-633-3916  
Email: terryorr@lufkin.com  
Website: http://www.lufkin.com

**MAAG Gear AG**  
Hardstrasse 219  
Zurich CH-8023 Switzerland  
Tel: +41-1-278-7878  
Fax: +41-1-271-6976  
Email: marine-gears@maag-gear.ch  
Website: http://www.maag-gear.ch

**MaK Americas Inc.**  
3450 Executive Way  
Miramar Park of Commerce  
Miramar, Fla. 33025  
Tel: 954-447-7100  
Fax: 954-447-7104  
Email: makm004@maka.com  
Website: http://www.mak.de

**MaK Motoren GmbH & Co.**  
Falckensteiner Str. 2  
Kiel H-24159 Germany  
Tel: +49-431-399501  
Fax: +49-431-3995-157  
Email: ju\_marketing@CAT.com  
Website: http://www.mak.de

**Makita Corp.**  
1-1, 4-Chrome  
Asahi-Machi, Takamatsu 760 Japan  
Tel: +81-878-215500  
Fax: +81-878-215510

**MAN B&W Diesel AG**  
Postfach 100080  
Augsburg D-86135 Germany

Tel: +49-821-3220  
Fax: +49-821-322-3382  
Email: marineengines@manbw.de  
Website: http://www.man.de

**MAN B&W Diesel AS**  
Tegholmsgade 41  
Copenhagen SV DK-2450 Denmark  
Tel: +45-33-85-1100  
Fax: +45-33-85-10-30  
Email: manbw@manbw.dk  
Website: http://www.manbw.dk

**MAN B&W Diesel AS Holeby**  
Ostervej 2  
Holeby DK-4960 Denmark  
Tel: +45-53-906026  
Fax: +45-53-906676  
Email: alpha@manbw.dk

**MAN B&W Diesel AS-Alpha Diesel**  
Niels Juels Vej 15  
Frederikshavn DK-9900 Denmark  
Tel: +45-9620-4100  
Fax: +45-9620-4030  
Email: alpha@manbw.dk  
Website: http://www.manbw.dk

**MAN B&W Diesel Inc**  
17 State Street, New York, N.Y. 10004  
Tel: 212-269-0980 Fax: 212-363-2469

**MAN Engines & Components**  
595 S.W. 13th Terrace, Ste. A  
Pompano Beach, Fla. 33069  
Tel: 800-MAN-2842 Fax: 954-946-9098  
Website: http://www.man-mec.com

**MAN Nutzfahrzeuge AG, Nuremberg Works**  
Vogelweierstr 33  
Nuremberg D-90441 Germany  
Tel: +49-911-420-6218  
Fax: +49-911-420-1915  
Email: brigitte-koehier@mn.man.de  
Website: http://www.man-nutzfahrzeuge.de

**Mapeco Products**  
91 Willenbrock Rd., Unit B4  
Oxford, CT 06478  
Tel: 203-267-5712 Fax: 203-267-5716  
Email: sales@wk-mapeco.com  
Website: http://www.wk-mapeco.com

**Marine Corp of America**  
980 Hurricane Road, Franklin, Ind. 46131  
Tel: 317-738-9408, Fax: 317-738-4330

**Marine Diesel Traders**  
P.O. Box 331, Bulimba 4171 Australia  
Tel: +61-7-3893-2388  
Fax: +61-7-3893-0541

**Marine Gears Inc**  
1820 Highway 1 North, P.O. Box 689  
Greenville, Miss. 38701  
Tel: 601-332-8716 Fax: 601-335-4322

**Marine Propulsion Inc.**  
1505 Corbin Avenue, Hammond, La. 70403  
Tel: 504-542-5344 Fax: 504-542-5347  
Email: marprop@belsouth.net  
Website: http://www.marinepropulsion.net

**Marine Turbine Technologies**  
298 Louisiana Rd., Franklin, La. 70538  
Tel: 318-924-0298 Fax: 318-924-1290

**Markisches Werk GmbH**  
Postfach 1355, Halver D-58543 Germany  
Tel: +49-2353-91-72-45  
Fax: +49-2353-917155

**Mathers Controls Inc**  
675 Pease Road, Burlington, Wash. 98233  
Tel: 360-757-6265 Fax: 360-757-2500  
Email: tammyc@matherscontrols.com  
Website: http://www.matherscontrols.com

**Matsui Iron Works Co. Ltd**  
70 Takkegahana-Cho  
Ise-City Mie Pref Japan  
Tel: +81-36-2222  
Fax: +81-596-36-3598

**Mecklenburger Metallguss GmbH**  
Teterower Strasse 43151  
Waren D-17192 Germany  
Tel: +49-3991-736162  
Fax: +49-3991-736210

**Mermaid Marine Engines**  
Ferndown Industrial Estate  
Wimborne, Dorset BH21 7RN United Kingdom  
Tel: +44-1202-891824  
Fax: +44-1202-895882  
Email: engines@mermaid-marine.co.uk

**Michigan Wheel Corp**  
1501 Buchanan Avenue SW  
Grand Rapids, Mich 49507  
Tel: 616-452-6941  
Fax: 616-247-0227  
Email: info@miwheel.com  
Website: http://www.miwheel.com

**Mitsubishi Heavy Industries Ltd**  
5-1 Marunouchi  
2-chome, Chiyoda-ku Tokyo 100 Japan  
Tel: +81-33212-9080  
Fax: +81-33212-9779

**Mitsui Engineering & Shipbuilding Co Ltd**  
6-4 Tsukiji  
5-chome, Chuo-ku Tokyo 104 Japan  
Tel: +81-3-3544-3625  
Fax: +81-3-3544-3063  
Email: diesel@mes.co.jp  
Website: http://www2.mes.co.jp/

**Motor Services Hugo Stamp Inc**  
3190 SW 4th Avenue  
Fort Lauderdale, Fla. 33315  
Tel: 954-763-3660 Fax: 954-763-2872  
Email: are@mshs.com

**Motor-Service AB**  
P.O. Box 2115, Stationsvagen 4  
Ronninge S-144 04 Sweden  
Tel: +46-8-5325-3542  
Fax: +46-8-5325-4451

**MPR Associates**  
320 King St.  
Alexandria, Va. 22314  
Tel: 703-519-0560  
Fax: 703-519-0224

**MTU**  
Olgastrasse 75  
Friedrichshafen 1 D-88040 Germany  
Tel: +49-7541-900  
Fax: +49-7541-90-5000

## PC control anywhere from stem to stern

Tired of failure-prone data displays and operator workstations?  
Try ProPanel for all your critical control applications. Use on the  
bridge, in the engine room – even on deck!

- *Barge tested and military certified reliable; stands up to extremes of shock, vibration and temperature*
- *Big, self-adjusting hi-brite display is sunlight-viewable*
- *Fully-sealed design withstands submersion, humidity and dust*
- *Low-power design for extended MTBF*
- *Small footprint, low profile – conserves valuable space*



**azonix**  
A DIVISION OF CRANE CO.

Find out why marine systems and equipment  
suppliers specify ProPanel.  
Call 800-365-1663 to speak  
with an applications engineer



Lloyds certifiable

900 MIDDLESEX TURNPIKE, BUILDING 6 • BILLERICA, MA 01821  
978-670-6300 • FAX 978-670-8855 • www.azonix.com  
ProPanel is a registered trademark of Azonix Corporation.

Circle 208 on Reader Service Card



## The LEADER in Maritime Communications

### Maritime Telecommunications Network

The Leading Provider of Passenger  
and Crew Voice, Internet & Data  
Communications.

On 13 Major Cruise Lines and  
Over 70 Ships.

Provider of Voice & the High Speed  
Data Required for Offshore  
Drilling Operations.

The Leading Provider of C-Band  
Networks for U.S. Navy Vessels.



**MARITIME TELECOMMUNICATIONS NETWORK**

305.599.9434 • 800.799.2411 • satellite\_info@icgws.com

Circle 224 on Reader Service Card

# Propulsion Directory

**MTU Friedrichshafen**  
Postfach 2040  
Friedrichshafen D-88040 Germany  
Tel: +49-7541-90-3381  
Fax: +49-7541-90-3945  
Email: ebenhoch@mtu-friedrichshafen.c  
Website: http://www.mtu-friedrichshafen.com

**Nakashima Propeller Co.**  
68-1 Jodo-Kitagoto  
Okayama Japan  
Tel: +86-279-51111  
Fax: +86-279-6411

**Niigata Engineering Co Ltd**  
10-1 Kamatahoncho, 1-chome  
Ohta-ku Tokyo 144-8639 Japan  
Tel: +81-3-5710-7735  
Fax: +81-3-5710-4752  
Website: http://www.niigata-eng.co.jp/WEL-COME.HTM

**NLB Corporation**  
29830 Beck Road, Wixom, Mich 48393  
Tel: 248-624-5555 Fax: 248-624-0908

**North American Marine Jet**  
P.O. Box 1232, 216 E. Seiver St.  
Benton, Ark. 72018  
Tel: 501-778-4151 Fax: 501-778-6381  
Email: namj@marinejet.com  
Website: http://www.mannejet.com

**NREC Power Systems**  
P.O. Box 3016  
Houma, La. 730361  
Tel: 504-872-5480  
Fax: 504-872-0611

**NTN Bearing Corp. of America**  
1600 East Bishop Ct.  
Mt. Prospect, Ill. 60056  
Tel: 800-468-6528  
Fax: 847-294-1230  
Email: sales@ntnamerica.com  
Website: http://www.ntnamerica.com

**Omega Marine Equipment**  
P.O. Box 643, Station 2  
Houma, La. 70360  
Tel: 504-851-3093  
Fax: 504-851-3094  
Email: pbsencv@iamenca.net

**Omnitruster Inc**  
743 N Main Street

Orange, Calif. 92868-1105  
Fax: 310-941-0309

**Orion Corp**  
1111 Cedar Creek Road  
Grafton, Wis. 53024  
Tel: 262-377-2210 Fax: 262-377-0729  
Email: sales@orion.corp.com  
Website: http://www.orion-corp.com

**Orkot Ltd.**  
Cornish Way, Barbot Hall Ind. Est.  
Rotherham S62 6EG United Kingdom  
Tel: +44-0-1709-376044  
Fax: +44-0-1422-311900

**Parker Hannifin Corp**  
6035 Parkland Blvd.  
Cleveland, Ohio 44124  
Tel: 216-896-3000 Fax: 216-896-4045  
Website: http://www.parker.com

**Performance Diesel**  
1906 Marvin Circle  
Seabrook, Texas 77586  
Tel: 281-474-2667 Fax: 281-474-2927  
Website: http://www.mandiesel.com

**Perkins - Sabre**  
22 Cobham Rd., Ferndown Industrial Estate  
Wimborne, Dorset BH21 7PW United Kingdom  
Tel: +44-01202-893-720  
Fax: +44-01202-851-700  
Email: post@sabre-engines.co.uk  
Website: http://www.perkins-sabre.com

**Philadelphia Gear Corp**  
181 South Gulph Road  
King of Prussia, Pa. 19406  
Tel: 610-265-3000  
Fax: 610-337-5637

**Railko Ltd.**  
Boundary Rd. Loudwater  
High Wycombe, Bucks HP10 9QU UK  
Tel: +44-0-16285-24901  
Fax: +44-0-1628-810761  
Email: info@railko.co.uk

**RCI Purifier West**  
466 W. Arrow Hwy., Ste. D  
San Dimas, Calif. 91773  
Tel: 909-305-1241 Fax: 909-305-1245  
Email: rrandie@aviastar.net  
Website: http://www.rcipurifier.com

**Reintjes GmbH**  
Eugen-Reintjes Str. 7  
Hameln, Niedersachsen D-31785 Germany  
Tel: +49-5151-1040  
Fax: +49-5151-104300  
Email: reintjes-gears@t-online.de  
Website: http://www.reintjes-gears.de

**RENK Aktiengesellschaft**  
Goggunger Str. 73  
Augsburg D-86159 Germany  
Tel: +49-821-5700-0  
Fax: +49-821-5700-559  
Email: mar@renk.de  
Website: http://www.renk.de

**Renk Tacke GmbH**  
Augsburg Works  
Augsburg D-86159 Germany  
Tel: +49-821-57000  
Fax: +49-821-570-0559

**Renold Hi-Tec Couplings**  
551 Canvas Back Circle  
Cincinnati, Ohio 45246  
Tel: 513-346-7510 Fax: 513-346-7523

**Rice Propulsion**  
Av. Rios Espinoza #88  
Mazatlan 82180 Mexico  
Tel: 526-983-6552  
Fax: 526-984-2533  
Email: ricepropellers@red2000.com.mx  
Website: http://www.ricepropellers.com.mx

**Rolla Sp Propellers**  
Via Silva 5, P.O. Box 251  
Balerna 6828 Switzerland  
Tel: +41-91-695-2000  
Fax: +41-91-695-2001  
Email: rolla-sp@bluewin.ch  
Website: http://www.rolla-propellers.ch

**Rolla Sp Propellers USA**  
4030 Mustang Rd., Melbourne, Fla. 32934  
Tel: 407-242-7771 Fax: 407-242-7552

**Rolls-Royce**  
PO Box 43, Ford End Rd.  
Bedford MK40 4 JB United Kingdom  
Tel: +44-1234-272000  
Fax: +44-1234-353934

**S.E.M.T. Pielstick**  
2, Quai de Seine, BP no 75  
Saint-Denis Cedex 93202 France

Tel: +33-148097600  
Fax: +33-148097878  
Email: sales\_marine@pielstick.com

**S&S Propellers**  
26-15 123rd St., Flushing, N.Y. 11354  
Tel: 718-359-3393 Fax: 718-358-9324  
Website: http://www.sspopeller.com

**Scania Industrial & Marine Engines**  
Soderlajie SE-15187 Sweden  
Tel: +46-8-553-81-000  
Fax: +46-8-553-82-993  
Email: info@scania.com  
Website: http://www.scania.com

**Scardana Americas Brokerage**  
502 Empire Street  
Greenfield Park, QC J4V1V7 Canada  
Tel: 450-465-6556 Fax: 450-671-3898  
Email: service@scardana.ca  
Website: http://www.scardana.ca

**Schelde Gears BV**  
P.O. Box 560  
Vlissingen 4380 AN Netherlands  
Tel: +31-118-485600  
Fax: +31-118-482813  
Email: gears@ni.schelde.com

**Schottel Inc**  
500 Industrial Blvd.  
Sugar Land, Texas 77478  
Tel: 281-274-0484 Fax: 281-274-0490  
Email: jryan.schottel@baylor.com  
Website: http://www.schottel.de

**Schottel-Werft**  
Mainzer Strasse 99  
Spay/Rhein D-56322 Germany  
Tel: +49-2628-610  
Fax: +49-2628-61300  
Email: info@schottel.de  
Website: http://www.schottel.de

**Scot Forge**  
8001 Winn Rd.  
Spring Grove, Ill. 60081  
Tel: 847-587-1000  
Fax: 847-587-2000

**Ships Machinery**  
8375 N.W. 56th St.  
Miami, Fla. 33166  
Tel: 305-592-7350  
Fax: 305-591-8223

Email: smithrust@aol.com

**Siemens AG**  
Postfach 105609  
Hamburg 20038 Germany  
Tel: +49-40-2889-2700  
Fax: +49-40-2889-3680  
Email: marine.engineering@hbg.siemens.de  
Website: http://www.atd.siemens.de

**Siemens Electric**  
7300 Trans Canada Hwy.  
Pointe Claire, Que. H9R 4RC Canada  
Tel: 514-426-6163 Fax: 514-426-6071

**Simplex-Turmar**  
P.O. Box 675  
Tonawanda, N.Y. 14151-0675  
Tel: 716-695-0142 Fax: 716-695-0144  
Website: http://www.simplex-turmar.com

**Simpson Power Products**  
11545 Kingston St.  
Maple Ridge, B.C. V2X 0Z5 Canada  
Tel: 604-460-3611 Fax: 604-460-1974

**Sims Pump Valve Co Inc**  
P.O. Box 3338, 1314 Park Ave.  
Hoboken, N.J. 07030  
Tel: 201-792-0600  
Fax: 201-792-4803

**Sisu Diesel, Inc.**  
Linnavuon FIN-37240 Finland  
Tel: +358-3-341-7111 Fax: +358-3-341-7330

**SKL Motoren Und Systemtechnik GmbH**  
Buckau-Wolf  
Fredrich-List -Str. 8,  
Magdeburg D-39122 Germany  
Tel: +49-391-40320 Fax: +49-391-4032340

**Solar Turbines**  
Incorporated  
2200 Pacific Highway, P.O. Box 85376  
San Diego, Calif. 92186  
Tel: 619-595-7424  
Fax: 619-544-2633  
Email: donovan@solarturbines.com  
Website: http://www.solarturbines.com

**Sound Propeller**  
1608 Fairview Ave. East  
Seattle, Wash 98102  
Tel: 206-325-5722  
Fax: 206-325-5977

**SSS Clutch Company**  
610 West Basin Rd.  
New Castle, Del. 19720  
Tel: 302-322-8080  
Fax: 302-322-8548  
Email: ssscliclutch@compuserve.com

**Star Power**  
74257 Hwy. 25, Covington, La. 70435  
Tel: 504-892-0107  
Fax: 504-898-5824

**Stewart & Stevenson Services Inc**  
2707 North Loop West  
Houston, Texas 77008  
Tel: 713-868-7700  
Fax: 713-868-7692

**Stewart & Stevenson Services Inc**  
1400 Destrehan Avenue  
Harvey, La. 70058  
Tel: 504-347-4326  
Fax: 504-348-8970  
Email: b.marquette@ssss.com  
Website: http://www.ssss.com

**STN Atlas Marine Electronics GmbH**  
Behringstrasse 120  
Hoboken, N.J. 07030  
Tel: 201-792-0600  
Fax: +49-40-8825-4000  
Website: http://www.stn-atlas-marine.de

**Stork Services B.V.**  
Klompemakerstraat 71  
Hoogvliet RT 3194 DD Netherlands  
Tel: +31-10-2310555  
Fax: +31-10-4163842  
Email: eki@maritime.storkgroup.com

**Stromag AG**  
Hansastraße 120  
Unna D-59425 Germany  
Tel: +49-23-03-1-02-0 Fax: +49-2303-102416

**Stromag Couplings**  
569 St. Andrews Rd.  
Winter Haven, Fla. 33884  
Tel: 941-326-9893 Fax: 941-326-9894

**Tech Power Controls**  
10507 Fallstone Rd.  
Houston, Texas 77099  
Tel: 281-530-8800 Fax: 281-530-8803  
Email: tpcsales@flash.net  
Website: http://www.techpowercontrols.com

# 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**

[www.anchormarinehouston.com](http://www.anchormarinehouston.com)  
[gabriel@anchormarinehouston.com](mailto:gabriel@anchormarinehouston.com)

Circle 203 on Reader Service Card

GET IT ON THE WEB ...

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

is the electronic home for all of *The Maritime Group's* printed publications.

Under the "Data & Statistics"

button you will find the

**MARINE PROPULSION**

**DIRECTORY** in its entirety, as

well as a cross-referenced

**PRODUCT CATEGORY**

breakdown which lists manufac-

turers of specific products and

systems. If you do not have

web access and would like this

**PRODUCT CATEGORY**

breakdown faxed to you,

contact Regina Ciardiello @

tel: 212 477-6700

fax: 212 254-6271

FOOD SERVICE EQUIPMENT FOR THE **MARINE INDUSTRY**

**Food Machines • Cooking • Refrigeration • Steam • Warewashing & Waste Disposal**



**A.R. LARSEN COMPANY INC.**

*...committed to every aspect of your project.*

**GALLEY DESIGN • INSTALLATION • SPECIALTY PRODUCTS • CUSTOM FABRICATION**

**1-800-735-7286** [www.marinegalley.com](http://www.marinegalley.com)

(425) 861-8868 • Fax: (425) 861-8668 • email: arlarsen@yale.com • P.O. Box 88 • Redmond, WA 98073-0088

**HOBART**

**MARKET FORGE**

**COSPOLICH**

**INSINGER**

**& MORE!**

Circle 204 on Reader Service Card

**Thordon Bearings Inc**  
3225 Mainway Dr.  
Burlington, Ont. L7M 1A6 Canada  
Tel: 905-335-1440 Fax: 905-335-4033  
Email: pamelac@thordonbearings.com  
Website: <http://www.thordonbearings.com>

**Thrustmaster of Texas Inc**  
P.O. Box 840189  
Houston, Texas 77284-0189  
Tel: 713-937-6295 Fax: 713-937-7962  
Website: <http://www.thrustmastertexas.com>

**Turboned N.A.**  
12 Petersburg Circle  
Port Colborne, Ont. Canada  
Tel: 905-835-6790 Fax: 905-835-0414

**Twin Disc Inc**  
1328 Racine Street  
Racine, Wis. 53403  
Tel: 414-638-4000 Fax: 414-638-4482  
Website: <http://www.twindisc.com>

**Twin Disc Inc**  
2619 Powers Ave.  
Jacksonville, Fla. 32207  
Tel: 904-739-6648  
Fax: 904-739-7383

**Ultra Dynamics Inc**  
1110 A Claycraft Road  
Columbus, Ohio 43230  
Tel: 614-759-9000  
Fax: 614-759-9046  
Email: 70414.1337@compuserve.com  
Website: <http://www.ultradynamics.com>

**Valmet Power Transmission Inc**  
P.O. Box 158, Rautopohja/Martinkatu  
Jyväskylä FIN-40101 Finland  
Tel: +358-14-296611  
Fax: +358-14-296868  
Website: <http://www.valmet.com>

**Verhaar Bowthruster**  
Rhyndotweg 11  
BB Oegstgeest NL-2342 Netherlands  
Tel: +31-71-5172631 Fax: +31-71-5171926

**Vickers Ulstein Marine Systems**  
N-6065 Ulsteinvik, Norway  
Tel: +47 70 01 4000; Fax: +47 70 01 4001  
Website: [www.vickersmarine.com](http://www.vickersmarine.com)

**Victaulic Co of America**  
4901 Kessleville Rd.  
Easton, Pa. 18040  
Tel: 610-559-3300 Fax: 610-250-8817, Email: [victaulic@victaulic.com](mailto:victaulic@victaulic.com)  
Website: <http://victaulic.com>

**Voith Schneider America Inc**  
121 Susquehanna Avenue  
Great Neck, N.Y. 11021  
Tel: 516-466-5755 Fax: 516-466-5380

**Volvo Penta**  
Gothenburg S-40508 Sweden  
Tel: +46-31-235460 Fax: +46-31-510348

**Volvo Penta of the Americas**  
1300 Volvo Penta Dr.  
Chesapeake, Va. 23320  
Tel: 757-436-2800  
Fax: 757-436-5158  
Website: <http://www.penta.volvo.se>

**Vulkan**  
Heerstraße 66  
Herne D-44653 Germany  
Tel: +49-2325-922-0 Fax: +49-2325-711-10  
Email: [info@vulkan-vkg.de](mailto:info@vulkan-vkg.de)  
Website: <http://www.vulkan-vkg.de>

**Walter Machine Co Inc**  
84-98 Cambridge Ave.  
Jersey City, N.J. 07307  
Tel: 201-656-5654 Fax: 201-656-0318

**Walz & Krenzer Inc**

90 Forest Ave., Locust Valley, N.Y. 11560  
Tel: 516-759-1802

**Wartsila NSD**  
P.O. Box 196  
Helsinki 00531 Finland  
Tel: +358-6-327-1628 Fax: +358-6-327-1373  
Email: [outi.riikonen@wartsila-nsd.com](mailto:outi.riikonen@wartsila-nsd.com)  
Website: <http://www.wartsila-nsd.com>

**Wartsila NSD North America Inc**  
201 Defense Highway, Suite 100  
Annapolis, Md. 21401  
Tel: 410-573-2100  
Fax: 410-573-2200  
Email: [christerbroman@wartsila-nsd.com](mailto:christerbroman@wartsila-nsd.com)

Website: <http://www.wartsilausa.com>

**Wartsila NSD Switzerland**  
FIN-6501 Switzerland  
Fax: +41-52-212-4917

**Wartsila Sacm Diesel**  
1 rue de la Fonderie  
Boite, Postale 1210 France  
Tel: +3389666868  
Fax: +33-546-30-31-59

**Wesmar**  
14120 N.E. 200th St.  
Woodinville, Wash. 98072  
Tel: 425-481-2296

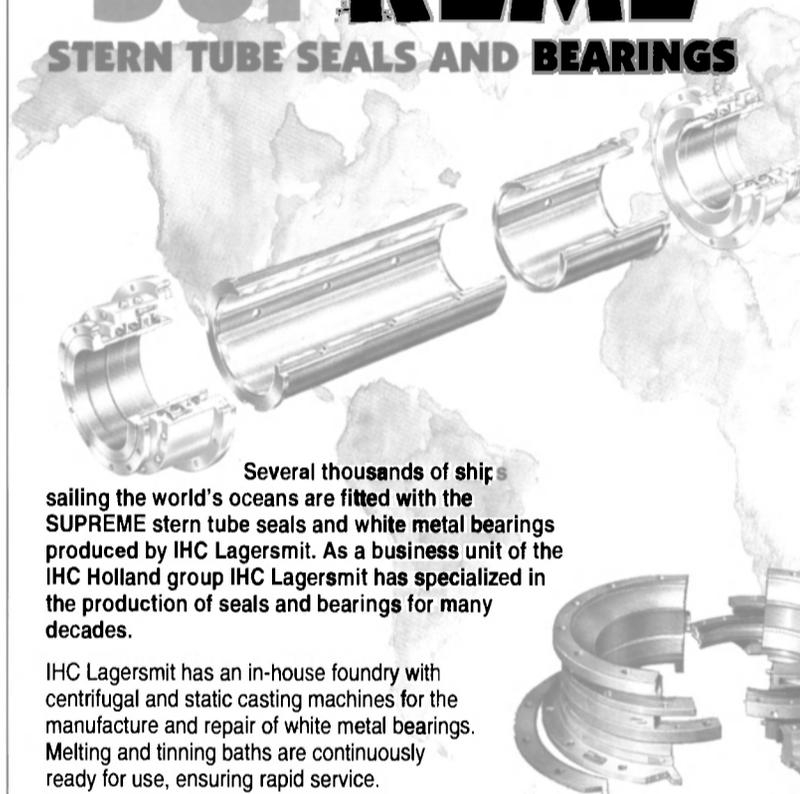
Fax: 425-486-0909  
Email: [promo@wesmar.com](mailto:promo@wesmar.com)  
Website: <http://www.wesmar.com>

**Yanmar Diesel Engine Co Ltd**  
1-1, 2-chome, Yaesu, Chuo-ku Tokyo 104 Japan  
Tel: +81-3-3275-4933  
Fax: +81-3-3272-0687

**ZF Marine Marine GmbH**  
D-88038, Friedrichshafen, Germany  
Tel: +49 7541 772207  
Fax: +49 7541 77 4222

# SUPREME

## STERN TUBE SEALS AND BEARINGS



Several thousands of ships sailing the world's oceans are fitted with the SUPREME stern tube seals and white metal bearings produced by IHC Lagersmit. As a business unit of the IHC Holland group IHC Lagersmit has specialized in the production of seals and bearings for many decades.

IHC Lagersmit has an in-house foundry with centrifugal and static casting machines for the manufacture and repair of white metal bearings. Melting and tinning baths are continuously ready for use, ensuring rapid service.

SUPREME seals offer many advantages, where long inspection-intervals are envisaged. These include:

- high quality sea-water resistant bronze housing parts
- wear-resistant lip seals with optimum geometry
- glueable seals for rapid replacement of the seals without the withdrawal of the propeller shaft
- ceramic coated bush of the forward seal
- extended life of the after seal by a removable split spacer ring, to reveal unworn areas for the lip seals

Under rigorous operating conditions and high loads, the SUPREME after seal can be equipped with optional extra's, such as sand barrier, VITON lip seals, wire winder, net cutters or permanent lubrication (oil or grease).

The fully split version SUPREME 2/2 permits inspection of the shaft seal or replacements without the withdrawal of the propeller shaft.

The combination of equipment and experience guarantees a fine product and prompt service anywhere in the world, with spare parts available from stock.



### IHC LAGERSMIT

PO Box 5 - 2960 AA Kinderdijk - Holland  
Tel. + 31 (0)78 6910472 - Fax + 31 (0)78 6910477

Circle 225 on Reader Service Card

"Survey underwater sites quickly and safely with the TOV-1."



Only \$4,295

Call for a free catalog or to order our demonstration video.



"The best low cost towable camera system on the market today, the TOV-1 is ideal for large scale searches, visual inspections of dive sites, and many other applications because it can cover a large area quickly. With the TOV-1, you don't have to put your divers in the water until you have found the target."

Please Send Corrections to CHRIS PALERMO at:

118 E. 25th St., NY, NY 10010  
tel: 212-477-6700  
fax: 212-254-6271  
e-mail: [palermo@marinelink.com](mailto:palermo@marinelink.com)

<p><b>Pulse 8X</b> u/w Metal Detector \$1,395</p>	<p><b>DHC-1</b> Diver-held Camera \$3,795</p>	<p><b>SSS-100 K/600K</b> Side Scan Sonars from \$19,995</p>	<p><b>SeaLion ROV</b> ROV's from \$19,995</p>	<p><b>Proton 3</b> Marine Magnetometer \$8,995</p>
---	---	---	---	--

1953 County St., E Taunton, MA 02718 USA • (800)822-4744 Tel: (508)822-7330 • FAX: (508)880-8949 or 822-1931 • [JWFishers@aol.com](mailto:JWFishers@aol.com)

Circle 230 on Reader Service Card

# New Shipyard Orders

Available on-line at: [www.marinelink.com](http://www.marinelink.com)

Ferliship is a strategic consultancy highly specialized in market researches guided to the shipping industry. For additional information, please contact Ferliship @: Pza. Sta. M<sup>a</sup> Soledad Torres Acosta, 2. 2<sup>o</sup> C, 28004 Madrid, Spain, Tel. : +34 91 531 01 78 , 689 01 45 66; Fax: +34 91 531 01 78' e-mail: [ferliship@iies.es](mailto:ferliship@iies.es) (Prices are in U.S. Dollars)

OWNER OPERATOR	COUNTRY SO	SHIPYARD	TYPE	No	TEU	DWT	DELIV	M US\$
AUGUSTA OFFSHORE	ITALY	ORSKOV	AHTS	1	0	5,000	Oct-02	30
BOCIMAR	BELGIUM	DAEWOO	BULK CARRIER	2	0	173,000	2002	72
OAK STEAMSHIP	CANADA	DAEWOO	BULK CARRIER	2	0	173,000	2002	74
CERES HELLENIC (G P LIVANOS)	GREECE	SASEBO	BULK CARRIER	2	0	170,000	2000	70
GOLDEN UNION	GREECE	HYUNDAI HEAVY INDUSTRIES (HHI)	BULK CARRIER	2	0	170,000	2001/2002	72
KAWASAKI KINKAI KISEN	JAPAN	NAMURA DOCK	BULK CARRIER	1	0	170,000	Dec-01	36
BOTTIGLIERI NAV.	ITALY	HITACHI SINGAPORE	BULK CARRIER	2	0	75,800	2001	44
ANGELICOUSSIS	GREECE	DAEWOO	BULK CARRIER	4	0	75,000	2001/2002	43.5
TAIWAN NAVIGATION	TAIWAN	SUMITOMO	BULK CARRIER	1	0	75,000	2000/2001	19.5
TOMASOS BROS	GREECE	HUDONG SHIPYARD	BULK CARRIER	1	0	74,500	2001	20.36
AEOLOS MANAGEMENT	GREECE	DAEWOO	BULK CARRIER	2	0	74,000	2001	43
ANGELAKOS	UK	NAMURA DOCK	BULK CARRIER	2	0	74,000	2002	46
MARMARAS NAVIGATION	GREECE	NAMURA DOCK	BULK CARRIER	2	0	74,000	2001	44
HORIZON SHIPPING	GREECE	JIANGNAN	BULK CARRIER	2	0	73,150	May-02	40.6
ITOCHU CORP.	JAPAN	IMABARI SHIPBUILDING	BULK CARRIER	4	0	53,500	2002	69.96
JAPANESE INTERESTS	JAPAN	IMABARI SHIPBUILDING	BULK CARRIER	3	0	53,500	2001	63.6
YASA NAVIGATION	TURKEY	TSUNEISHI	BULK CARRIER	4	0	52,300	2002	80
CHIOS NAVIGATION	UK	TSUNEISHI	BULK CARRIER	1	0	52,200	2001	19.5
ALMI MARITIME	GREECE	TSUNEISHI	BULK CARRIER	2	0	52,000	2001	39
LEVANT MARITIME	GREECE	SANOYAS CORP	BULK CARRIER	2	0	52,000	2001	40
ATLANTICA SHIPPING	NORWAY	JIANGYANG	BULK CARRIER	2	0	51,000	2001	35.8
MARMARAS	GREECE	OSHIMA SHIPBUILDING	BULK CARRIER	1	0	50,800	Aug-00	19
MARMARAS NAVIGATION	GREECE	DAEDONG SHIPBUILDING	BULK CARRIER	4	0	50,500	2001	76
KASSIAN NAVIGATION AGENCY (PAPADAKIS GROUP)	GREECE	mitsui	BULK CARRIER	1	0	50,000	2001	19.5
SEVEN SEAS MARITIME	SINGAPORE	SHANGHAI EDWARD	BULK CARRIER	1	0	48,000	2001	18.5
PACIFIC CARRIERS	SINGAPORE	mitsui	BULK CARRIER	3	0	46,634	2000/2001	57
MASSOEL GROUP	SWITZERLAND	mitsui	BULK CARRIER	3	0	46,000	2001	55.5
YASA NAVIGATION	TURKEY	TSUNEISHI CEBU	BULK CARRIER	2	0	45,000	2002	36
CENTENARY INT. CORP.	US	RIO SANTIAGO	BULK CARRIER	2	0	27,000	2001	27
KG JEBSEN ( GEARBULK )	NORWAY	HYUNDAI MIPO	BULK CARRIER	1	0	25,000	2001	39
ESL SHIPPING	FINLAND	TSUNEISHI	BULK CARRIER	1	0	20,000	Jan-01	21
BERGESEN	NORWAY	DAEWOO	BULK CARRIER					
			ORE STRENGTHENED	1	0	175,000	Oct-01	43
MONTANARI GROUP	ITALY	HYUNDAI MIPO	CHEMICAL TANKER	2	0	35,000	2002	47
TARNTANK REDERI	SWEDEN	SHANGHAI EDWARD	CHEMICAL TANKER	1	0	14,000	Aug-01	20.85
YANG MING MARINE CORP	TAIWAN	HYUNDAI HEAVY INDUSTRIES (HHI)	CONTAINER	2	5,500	68,000	2001	110
BERNHARD SCHULTE	GERMANY	HYUNDAI HEAVY INDUSTRIES (HHI)	CONTAINER	5	2,530	32,000	2002	150
LEONHARDT & BLUMBERG	GERMANY	WENCHONG SHIPYARD	CONTAINER	2	1,200	20,000	2001	35
BELUGA	GERMANY	QING SHAN SHIPYARD	CONTAINER	1	660		2001/2002	12
BELUGA	GERMANY	JIANGDONG CHANGJIANG	CONTAINER	1	660		2001/2002	12
CHINA SHIPPING GROUP	CHINA	DALIAN NEW	CONTAINER	3	5,500		2002	66
COSCO	CHINA	NANTONG COSCO KHI	CONTAINER	2	5,250		2001	132
COSCO	CHINA	KAWASAKI ILL.	CONTAINER	5	5,250		2001	330
COSTAMARE SHIPPING CO	GREECE	HYUNDAI HEAVY INDUSTRIES (HHI)	CONTAINER	2	5,551		2000	110
HYUNDAI MERCHANT MARINE	KOREA	HYUNDAI HEAVY INDUSTRIES	CONTAINER	5	6,400		2001	325
RICKMERS	GERMANY	SAMSUNG	CONTAINER	2	5,500		2001	110
HOLLAND AMERICA	US	FINCANTIERI	CRUISE SHIP	2			2002/2003	800
ROYAL CARIBBEAN Intl.	US	MEYER WERFT	CRUISE SHIP	2			2003/2004	800
HAM DREDGING	-	IHC CALAND NV	DREDGER	1		36,450	2001	93.5
NEL LINES	GREECE	ALSTHOM	FAST FERRY	1			2001	70.5
NEL LINES	GREECE	ALSTHOM	FAST FERRY	1			2001	35.5
TIRRENIA SOC. NAV.	ITALY	FINCANTIERI	FERRY	2			Jun-01	204
INDIAN INTERESTS	INDIA	HYUNDAI HEAVY INDUSTRIES (HHI)	FLOATING POWER STATION	1			2001	160
PHILLIPS PETROLEUM / SHELL	US	SAMSUNG	FPSO	1			2002	90
PHILLIPS PETROLEUM / SHELL	US	SAMSUNG	FSO	1			Mar-03	160
ULVAN REDERI	NORWAY	VAAGLAND BAAT	GENERAL CARGO	1	44	1,200	2001	5.84
SRI LANKA SHIPPING	SRI LANKA	KVAERNER FJELLSTRAND SING.	MULTI-HULL PASS/FERRY	2			2000	11
WARRING HARLE	-	WAVEMASTER	MULTI-HULL PASS/FERRY	1			2000	5.8
BRIESE SCHIFFFAHRT GMBH.	GERMANY	XINGANG SHIPYARD	MULTI-PURPOSE	2		7,000	2001	23
TT- LINE	GERMANY	SSW FAHR UND SPEZIALSCHIFFBAU	PASS-FERRY	2			2001	194
HAVILA SHIPPING	NORWAY	KVAERNER KLEVEN AS	PLATFORM SUPPLY VESSEL	2		1,600	2000/2001	31
NFDS	NORWAY	BRATTVAG SKIPSVERFT AS	PLATFORM SUPPLY VESSEL	1			Dec-00	19.4
TFDS	NORWAY	BRATTVAG SKIPSVERFT AS	PLATFORM SUPPLY VESSEL	1			Sep-00	19.4
PACIFIC CARRIERS	SINGAPORE	ONOMICHI	PRODUCTS TANKER	2		47,500	2001	52
EUROPEAN NAVIGATION	GREECE	SPLIT	PRODUCTS TANKER	3		45,000	2001/2002	81
ANDROMEDA SHIPPING	MONACO	DAEDONG SHIPBUILDING	PRODUCTS TANKER	1		35,700	2001	24.5
GEMARFIN	SWITZERLAND	GUANGZHOU	PRODUCTS TANKER	2		35,000	2000/2001	48
NORDEN	DENMARK	DAEDONG SHIPBUILDING	PRODUCTS TANKER	2		35,000	2001	41.4
B & N NORDSJOFRAKT	SWEDEN	GDYNIA	RO-RO	1		14,800	Mar-01	30
MINOAN LINES	GREECE	SESTRI CANTIERE NAVALE	RO-RO	2		6,700	2001/2002	22.5
VISAKHAPATNAM	INDIA	HINDUSTAN SHIPYARD	SUCTION HOPPER DREDGER	1		400	Mar-01	5.9
TORCH DEEPWATER	US	DAKOTA CREEK INDUSTRIES	SUPPORT VESSEL	1			2000	52
SEALUCK	-	SAMSUNG	TANKER	2		308,000	2002	140
ATHENIAN SEA CARRIERS	GREECE	HYUNDAI HEAVY INDUSTRIES (HHI)	TANKER	4		153,000	2002	164
NESTE	FINLAND	HYUNDAI HEAVY INDUSTRIES (HHI)	TANKER	2		105,000	2002	80
INDONESIAN NAVY	INDONESIA	DAEWOO	TUG	1			2001	15

# BUYERS DIRECTORY

This directory section is an editorial feature published in every issue for the convenience of the readers of MARITIME REPORTER. A quick-reference readers' guide, it includes the names and addresses of the world's leading manufacturers and suppliers of all types of marine machinery, equipment, supplies and services. A listing is provided, at no cost for one year in all issues, only to companies with continuing advertising programs in this publication, whether an advertisement appears in every issue or not. Because it is an editorial service, unpaid and not part of the advertisers contract, MR assumes no responsibility for errors. If you are interested in having your company listed in this Buyers Directory Section, contact Angela Criscola at (212) 477-6700.

## AIR CONDITIONING AND REFRIGERATION -

Repair & Installation, Equipment & Services  
ABB Flakt Marine, Box 1043, S-436 21 ASKIM SWEDEN  
Adrick Marine, 81 Mahan St., West Babylon, N.Y. 11704  
Bailey Refrigeration Co., 2323 Randolph Ave., Avenel, NJ 07001  
Carrier Transicold, P.O. B. 4805, Syracuse, NY 13221  
Quality Refrigeration, 533 N.Fries Ave., Wilmington, CA 90744  
Unitor Ship Service Inc., 2375 West Esther Street, Long Beach, CA 90813  
Stork Canada, 47 boul. Marie Victorin, Candiac, Quebec, Canada, J5R 1B6

## AIRHORNS/SIGNALING EQUIPMENT

Kahleberg Marine, P.O. Box 358, Two Rivers, WI 54241

## ALARMS, FACTORY MUTUAL-APPROVED

Datostar Marine Products Inc., Unit 100 18 Gostick Pl., N.Vancouver, Canada V7M3G31  
SELCO 353 A Asbury Commons Dr., Atlanta, GA 30338

## ALIGNMENT SYSTEMS

FCS, Inc., 22 Main Street, Centerbrook, CT 06409

## ALUMINUM BOATS

American Eagle Mfg., P.O. Box 597, La Conner WA 98257

## ANCHORS AND CHAINS

All Alpha Int'l., Inc. P.O. Box 498985, Cincinnati, OH 45249  
Crandall Dry Dock Engineers Inc., P.O. B. 505804, MA 02150  
G.J. Wortelboer Jr. BV, P.O. B. 5003, 3008 AA Rotterdam, Nether  
Schoelhorn-Albrecht, 575-105 Rudder Rd. St 63026, St. Louis, MO 63116  
Washington Chain Inc., Box 3645, Seattle, WA 98124  
Waterman Supply Co., P.O. Box 596, Wilmington, CA 90748  
Willem Pot, P.O. B. 29102, 3001 GC Rotterdam

## ASSOCIATION

Marine Machinery Assoc., 2300 Clarendon Blvd., Arlington, VA 22201

## AUCTIONEERS

Plant & Machinery, P.O. Box 19100, Houston, TX 77224  
MACI Auctioneers, 2334 Willis Rd., Richmond, VA 23230  
EG&G Services, 3702 Pender Dr. Ste.400, Fairfax, VA 22030

## AUTOMATION SYSTEMS

Tano Corp., 5700 Citrus Blvd., Suite E, New Orleans, LA 70123

## AUTOPILOT SYSTEMS

Mackay Communications, 2721 Discovery Dr., Raleigh, N.C. 27616-1851  
ComNav Marine, 1915 Stainsburg Ave., Vancouver, B.C. CANADA  
Raytheon Marine Co., 676 Island Pond Rd., Manchester, NH 03109

## BALLAST

Ballast Technologies, 4620 S. Coach Dr., 85714, Tucson, AZ  
Redland Genstar Inc., Executive Plaza IV, Hunt Valley, MD 10912-1031

## BASKET STRAINERS

Beard Industries Inc, 601 Benton Kelly St., Shreveport, LA 71106-7198

## BATTERY CHARGERS

Schaefer, Inc., 200 Butterfield Dr., Ashland, MA 01721

## BEARING—Rubber, Metallic, Non-Metallic

Blohm & Voss Industries GmbH, P.O. B. 112289, D-2042 Hamburg 1, GERMANY  
Craft Bearing Company, Inc., 2506 58th St., Hampton, VA 23661  
U.S.A. Repts: Simplex-Turmar Inc., P.O. B. 675, Tonawanda, NY 14151

## RAILKO LTD., Loudwater, High Wycombe, Bucks

Hamshire ENGLAND HP109QV  
Kahleberg Bros. Co., P.O. Box 358, Two Rivers, WI 54241  
Orion Corp., 1111 Cedar Creek Rd., Grafton, WI 53024  
Orkot Inc., 2535 Prairie Rd., Unit D, Eugene, OR 97402  
Orkot Composites Ltd., Bradmarsh Business Park, Rotherham S60 1BX  
Thorndon Bearings Inc., 3225 Mainway, Burlington, Ont., CANADA L7M 1A6  
NTN Bearing, 1600 E. Bishop Court, Mt. Prospect, IL 60056  
Vesco Plastics, P.O. B. 40647, Cleveland 2022 SOUTH AFRICA

## BILGE SYSTEMS

Fast Systems, 3240 N. Broadway, St. Louis, MO 63147-3515  
Nelson Div., Exhaust & Filtration Sys., Hwy. 51 West, P.O. Box 428, Sloughon, TX 53589

## BLOCKS & RIGGING

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

## BOILERS

B&D Marine & Ind. Boiler, P.O. Box 71687, Charleston SC 29415

## BRIDGE WIPERS

In-Mar Systems, Yellowstone Street, Kenner, LA 70064

## BROKERS

151 Maritime Services, 34062 El Encanto/B, Dana Pt. CA 92629  
Captain Astad Company, Inc., P.O. Box 350486, Ft Lauderdale, FL 33335  
Jack Faulkner, 2419 Caddy Lane, P.O. Box 371, Flossmoor IL 60422  
Mowbray's Tug & Barge Sales Corp., 35 De Hart St., Morristown NJ 07960

## BULKHEAD SEALS/PANELS

CSD North America, 880 Candia Rd., Unit 10, Manchester, NH 03109  
Blohm & Voss Industrie GmbH, P.O. B. 100720, D-2000 Hamburg 1, GERMANY  
U.S.A. Repts: Simplex-Turmar Inc., P.O. B. 168, Little Neck, NY 11363-0168  
Panel Specialists, Inc./Thermax, 3115 Range Rd., Temple, TX 76501  
King Wholesale Supply, Co., Inc., P.O. Box 4002, New Orleans, LA 70178-4002  
Rox Corp., 12402 E. 60th St., Tulsa, OK 74146-6922  
Thermax, 3115 Range Rd., Temple TX 76501

## CABLE TRANSIT SYSTEMS

CSD North America, 880 Candia Rd., Unit 10, Manchester, NH 03109  
O-Z Gedney + Nelson Firestop, P.O. B. 726, Tulsa, OK 74101  
Rox Corp., 12402 E. 60th St., Tulsa, OK 74146-6922  
MCT Brattberg, 4407 Spring Cypress, Spring TX 77388

## CAD/CAM SYSTEMS

Albacore Research, 4196 Kashtan Place, Victoria, B.C. Canada V8X4L7  
All Alpha Int'l., Inc. P.O. B. 498985, Cincinnati, OH 45249  
Autoship Systems Corp., #403, 611 Alexander St., Vancouver, BC, Canada V6A1E  
Creative Systems, Inc., P.O. B. 1910, Port Townsend, WA 98368

IMSA, 13 Jenkins Court, Suite 200, Durham, NH 03824  
Kockums Computer Systems AB, PO Box 50555, S-202 15 Malmo SWEDEN  
Scientific Marine Services, Inc., 101 State Pl., Suite F, Escondido, CA 92029  
TIMSCO, P.O. B. 91360, Mobile, AL 36691  
Ship Motion Associates, 10 Danforth St., Portland, ME 04101-4567

## CAPSTANS

Superior Lidgerwood Mundy, 1101 John Ave., Superior, WI 54880

## CARGO MONITORING & CONTROL SYSTEM

Ian-Conrad Bergan, Inc., 3409 Gulf Breeze Parkway, Gulf Breeze, FL 32561  
Radio-Holland USA, 8943 Gulf Freeway, Houston, TX 77017

## CHAINS

Columbus McKinnon Corp., 140 John James Audobon Pkwy. Amherst, NY 14228

## NEW ENGLAND MARINE & INDUSTRIAL, 200 Spaulding Trunpike, Portsmouth, NH 03801

Washington Chain, P.O. Box 3645, Seattle, WA 98124

## CHARGE AIR COOLERS

Crane Heatex, 17 Grandview Ave., W. Orange, NJ 07052

## CHEMICALS

Uniservice Americas, 57174 Hardin Rd., Slidell, LA 70461  
Unitor Ship Service Inc., 2375 W. Esther St., Long Beach, CA 90813

## CLASSIFICATION SOCIETY

Det Norske Veritas, 70 Grand Ave., Riveredge, N.J. 07661

## CLEANING EQUIPMENT

Drew Marine, 1 Drew Plaza, Boonton, NJ 07005

## CLEATS

Washington Chain, P.O. Box 3645, Seattle, WA 98124

## CLUTCHES

Haley Clutch and Coupling Corp., 1820 Hwy. 1 North, Greenville, MS 38702

## COATINGS / CORROSION CONTROL / PAINT

Eureka Chemical Co., 234 Lawrence Ave., South San Francisco, CA 94080  
Coroseal Inc., 545 Rainier Blvd., N #15, Issaquah, WA 98027  
Flexible Decking, 2708 N. Australian Ave. Ste. 9, West Palm Beach, FL 33407  
Mascoat Products, 3500 E. T. C. Jester, Suite N, Houston, TX 77018  
Nace Int'l, 1440 South Creek Dr., Houston, TX 77084  
Enecon Corporation, 125 Baylis Rd., Melville, NY 11747-3800  
Esgard, Inc., P.O. Drawer 2698, Lafayette, LA 70502  
Ferro Corp., 1301 North Flora St., Plymouth, IN 46563  
Jameslow Distrib., P.O. Box 348, Jamestown, RI 02835  
Jergens, Inc., 15700 S. Waterloo Rd., Cleveland OH 44110  
Graco, Inc., P.O. Box 1441, Minneapolis, MN 55440-1441  
Sherwin Williams, 101 Prospect Ave., Cleveland, OH 44115  
Sigma Coatings, P.O. Box 816, Houston, TX 77029, 330 Harvey, LA 70059,  
Atlantic Systems Supply Co., 1100 Adams St., Hoboken, NJ 07030  
Sound Specialty Coatings Corp., P.O. Box 13160, Burton, WA 98103  
TNO Institute of Industrial Technology, P.O. B. 3, 2600 AA Delft, Netherlands

Dow Corning Corp., P.O. Box 994, Midland, MI 48686-0994  
Unitor Ship Services Inc., 2375 West Esther Street, Long Beach, CA 90813  
Chlor-rid, P.O. Box 908, Chandler, AZ 85244

## COMMERCIAL DIVING COMPANIES

Cruzan Diver's Inc., 300 Strand St., Frederiksted Steriox, Virgin Islands 00840

## COMMUNICATIONS SERVICE

ICG Satellite Services, 8400 NW 52nd St., Suite 110, Miami, FL 33166  
Maritime Telecommunications Networks, Inc., 8400 NW 52nd St., Suite 110, Miami, FL 33166  
Ascom Tateco AB, Eppendorfer Weg 234, D-20251 Hamburg, GERMANY  
Maritel Marine Communications, 16 E. 41st St., NY, NY 10017  
Comsat Maritime Services, 6560 Rock Spring Drive, Bethesda, MD 20817-1146  
Watercom, 458 E. Park Place, Jefferson, IN 47130

## COMPOSITE PROCESSING

Composite Technology Consultants, Inc. 12310 Northwinder Row, Bayonet Point, Fla. 34667

## COMPOUNDS

ITW Philadelphia Resins, 130 Commerce Dr., Montgomeryville, PA 18936

## COMPRESSOR PARTS

CMP Corporation, P.O. Box 15199, Oklahoma City, OK 73155

## COMPUTER LOFTING

Baratana Lofting Co., Inc., 1616 Barataria Blvd., Ste. 4, Marrero, LA 70072

## COMPUTER / COMPUTER SOFTWARE

Autoship Systems Corp., #403, 611 Alexander St., Vancouver, BC, CANADA V6A1E  
Coastal Oceanographics, Inc., 11-G Old Indian Trail, Middlefield, CT 06455  
Fleet Technology, 311 Legget Dr., Karata, Ontario, Canada K2K 1Z8  
Sener, C/Severo Ochoa, 4 Parque Tecnologico de Madrid, 28760 Tres Cantos - Madrid SPAIN  
Intecolor Corp., 2150 Boggs Rd., Deluth GA 30096  
Lloyd's Register, 100 Leadenhall St., London, England EC3A 3BP  
Ship Motion Associates, 10 Danforth St., Portland, ME 04101  
Azonix Corp., 900 Middlesex Tpke., Billerica, MA 01821  
Proteus Engineering, 301 Pier One Rd., Stevensville, MD 21666  
Information Management Consultants, Media House, Mann Island, Pier Head, Liverpool, England L31DQ  
Spar Associates, 927 West St., Annapolis, MD 21401  
Creative Systems, Inc., P.O. B. 1910, Port Townsend, WA 98368

## CONDENSERS/SEPARATORS

Beard Industries Inc., P.O. Box 31115, Shreveport LA 71130

## CONSULTANTS

Hornblower Marine, Pier 3 Ferryboat Santa Rosa, San Francisco, CA 64111  
Coretec Inc., Prince Charles Bldg., 120 Torbay Rd., Suite E100, St. Johns, Newfoundland, Canada A1A 2G8

## CONSOLE - QMDSS

Mackay Communications, 2721 Discovery Dr., Raleigh, N.C. 27616-1851  
Raytheon Marine Co., 676 Island Pond Rd., Manchester, NH 03109

## CONTROL SYSTEM - Monitoring/Steering

Control General Corporation, 2845 Hwy 311, Schriever, LA  
Engine Monitor, Inc., 179 Hickory Ave. Harahan, LA 70123  
Ian-Conrad Bergan, 3409 Gulf Breeze Pkwy, Gulf Breeze, FL 32561

MMC International, 60 Inp Dr, Inwood NY 11096

Robertson Marine Systems, 3000 Kingman St., Suite 207, Metairie, LA 70006

Scientific Marine Services, Inc., 101 State Pl., Suite F, Escondido, CA 92029

Kobell Mfg Co., Ltd., 8238-129 St, Surrey, B.C. V3W0A6

Stork-Kwant BV, P.O. B. 23, 8600 AA Sneek, Netherlands

Prime Mover Controls, 3600 Gilmore Way, Burnaby

V5G 4R8 Canada

Raytheon Marine Co., 676 Island Pond Rd., Manchester, NH 03109

Electronic Marine Systems, 800 Ferndale Pl., Rahway, N.J. 07065

AutoNav Marine Systems Inc., 55A Clipper St., Coquitlam, B.C., Canada V3K 6X2

Kockum Sonics, Inc., 819 Veterans Blvd., Suite 201, Kenner, LA 70068

Tano Corp., 5700 Citrus Blvd., Suite E, New Orleans, LA 70123

G.R. Bowler, 261 Lake Rd., Ontario, NY 14519

## CONVERSIONS & REPAIRS

Vancouver Shipyards, 50 Pemberton Ave., N. Vancouver, B.C. CANADA V7P 2R2

## COOLERS/FREEZERS

Western Engineers, 2112 SE 8th Ave., Portland, OR 97214

## CORDAGE

Yale Cordage, 26 Morin St., Biddeford, ME 04005

## COUPLINGS

Mapeco Products, 91 Willenbrook Rd Unit B, Oxford, CT 06478

Centa Corp., 815 Blackhawk Dr., Westmont, IL 60559

Haley Clutch and Coupling Corp., 1820 Hwy. 1 North, Greenville, MS 38702

Fetteroll Corp., P.O. Box 103, Skippack, PA 19474

Lo-Rez Vibration Control, Ltd., 186 West 8th Ave., Vancouver, B.C. V5Y 1N2

American Vulcan, P.O. Drawer 673, Winter Haven, FL 33882

MMC Int'l, 60 Inp Drive, Inwood, NY 11096

Renold Hi-Tec, 512 W. Crescentville Rd, Cincinnati, OH 45246

## CRANE-HOIST-DERRICK-WHIRLEYS

Bisso Marine Co. P.O. Box 4113, New Orleans, LA 70178

Holly Hoist Corp., P.O. Box 86, St. Clair Shores, MI 48080-0086

Edgewater Machine & Fabricators, P.O. Box 358, Edgewater, FL 32132-0358

Marine Travelift, Inc., 49 E. Yew St., Sturgeon Bay, WI 54235

McElroy Machine & Mfg Co., Inc., P.O. Box 4454, Biloxi MS 39535-4454

Kroll Cranes, 17432 Chefmenteur Hwy, New Orleans, LA 70129

Liebherr-Werk Nenzing GMBH, A-6710 Nenzing/Austria, Tschalanga 3, P.O. Box 10

Xtek, Inc., 11451 Reading Road, Cincinnati, OH 45241

## CRANKSHAFT DEFLECTION ANALYZER

FCS, Inc., 22 Main St., Centerbrook, CT 06409

## CRANKSHAFT GRINDING

Goltens - New York Corp., 160 Van Brunt St., Brooklyn, NY 11231

In-Place Machining, 1929 North Buffum St., Milwaukee, WI 53212

## CRANKSHAFT REPAIR

In-Place Machining, 1929 North Buffum St., Milwaukee, WI 53212

Goltens - New York Corp., 160 Van Brunt St., Brooklyn, NY 11231

## CUSTOM CLOSURES

Waltz & Krenzer, 91 Willenbrook Rd., Oxford, CT 06478

## CUTTING AND WELDING MACHINES

Bug-O-Systems, Inc., 3001 W. Carson St., Pittsburgh, PA 15204

## CYLINDER LOAD ANALYZER

General Thermodynamics, 210 S. Meadow Rd., Plymouth, MA 02360

## DECK MACHINERY - Cargo Handling Equipment

Markey Machinery Co., Inc., P.O. Box 24788, Seattle, WA 98124-0788

McElroy Machine & Mfg Co., Inc., P.O. Box 4454, Biloxi, MS 39535-4454

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

Intercontinental Engineering, P.O. Box 9055, Kansas City, MO 64168

Edgewater Machine & Fabricators, P.O. Box 358, Edgewater, FL 32132-0358

E.H. O'Neill, 1405 Chippendale Rd., Lutherville, MD 21093

New England Trawler Equipment Co., 291 Eastern Avenue, Chelsea, MA 02150

Fusnes, PO Box 102, N-4818, Faerrik, NORWAY

Schoelhorn-Albrecht, 575-105 Rudder Rd. St 63026, St. Louis, MO 63116

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

Timberland Equipment, P.O. Box 490, Woodstock, Ontario N4S 722 CANADA

Waterman Supply Co., P.O. Box 596, Wilmington, CA 90748

Superior Lidgerwood-Mundy, 1101 John Ave., Superior, WI 54880

Jered Industries Inc., P.O. Box 904, Brunswick, GA 31521

## DECK STRUCTURES

Carolina Cockpit, P.O. Box 83037, Portland, OR 97283

## DEHUMIDIFIERS

Dry Air Technologies, 313 N. Oak St., Burlington, WA 98233

Munters Corp., 79 Monroe St., Amesburg, MA 01913

## DESALINATION - REVERSE OSMOSIS

Matrix Desalination, 3295 S.W. 11th Ave., Fort Lauderdale, FL 33315

Reverse Osmosis of South Florida, 12301 SW. 133 Court, Miami, FL, 33186

## DESIGN CONSULTING

Fleet Technologies, 311 Legget Dr., Kanata, Ont, K2K 1Z8 Canada

## DIESEL ENGINE ANALYZER

Drew Marine, 1 Drew Plaza, Boonton, NJ 07005

FCS, Inc., 22 Main Street, Centerbrook, CT 06409

Icon Research, 8 Market Street, Ellesmere, Shropshire SY12 0AN, England

Hermont Marine Inc., 3528 Griffith, St. Laurent, Quebec Canada

## DIESEL ENGINE - Spare Parts & Repair

Scardana Americas Bkg., 502 Empire St., Greefield Park, J4V1V7 Canada

Alaska Diesel, 4420 14th Ave., NW, Seattle, WA 98107

Brigantine Services Ltd, 48 Wang Lok St., Yuen Long

Hermont Marine Inc., 3528 Griffith, St. Laurent, Quebec Canada

Industrial Estate, New Territories, HONG KONG

Caterpillar, Inc., Engine Div., P.O. Box 610, Mossville, IL 61552-0610

Castoldi S.p.A., Viale Mazzini, 161, 20081, Abbiategrasso, ITALY

Cummins Engine Co., 4500 Leeds Ave., Ste. 301, Charleston, SC 29405-8521

Cummins Mid-South, Inc., 110 E. Airline Highway, Kenner, LA 70062

## ENGINES

GE Marine Engines, 1 Neuman Way, Cincinnati, OH 45215

## EVACUATION SYSTEMS

DBC, 12351 Bridgeport Rd., Richmond, BC Canada

## EVAPORATORS

Alfa-Laval Separation, Inc., 955 Meams Rd., Warminster, PA 18974

Beaird Industries Inc., P.O. Box 31115, Shreveport, LA 71130

## EXPANSION JOINTS

Silex Inc., 7850 Tranmere Dr., Mississauga, Ontario L5S1L9

Applegate Industrial, 1440 Government Street, Baton Rouge, LA 70802

## FAIRING COMPOUND

Philadelphia Resins, P.O.B. 309, Montgomeryville, PA 18936

## FANS - VENTILATORS - BLOWERS

Dry Air Technologies 313 N. Oak St. Burlington, Wa 98233

Jon M. Liss Associates, Inc., 411 Borel Ave., San Mateo, CA 94402

## FASTENERS

Jamestown Distributors, P.O. Box 348, Jamestown, RI 02835

Superbolt, P.O.B. 683, Carnegie, PA 15106

## FENDERING SYSTEMS/BUOYS - Dock & Vessel

Plastic Pilings Inc., 1485 South Willow Ave., Rialto, CA 92376

Kahienberg Bros. Co., P.O. Box 358, Two Rivers, WI 54241

Duramax Marine, 16025 Johnson St., P.O. Box 67, Middlefield, OH 44062-0067

Viking Fender Co., 1160 State St., Perth Amboy, NJ 08861

Ultra Poly, Inc., 2926 South Steele St., Tacoma, WA 98409

Urethane Products Corp., 17007 South Broadway, Gardena, CA 90248

Promar, 115 Industrial Blvd., Kearneysville, W. Va 25430

Schuyler Rubber Co., 16901 Woodred Rd., Woodinville, WA 98072

## FILTERS/FILTER SYSTEMS

Boll-Filter Corp., 15 Int'l Dr. E. Granby, CT 06026

Luber-Finer, Inc., 200 South 4th St., Albion, FL 62806-1313

## FIN STABILIZERS

Blohm & Voss Industries GmbH, P.O. B. 112289, D-2042 Hamburg 1, GERMANY

U.S.A. Repts: Simplex-Turmar Inc., P.O. B. 675, Tonawanda, NY 14151

Railko Ltd., Loudwater, High Wycombe, Bucks

Hamshire ENGLAND HP109QV

## FIRE & SAFETY PRODUCTS

Brookdale International, 1-8755 Ash St., Vancouver BC, V6P6T3

Nautical Safety Products, P.O. Box 590462, Houston, TX 774259

IMSSCO, 2040 Harbor Island Dr., Suite 201A, San Diego, CA 92101

Insulations, Inc., Rt. 5, 12360 Leisure Road, Baton Rouge, LA 70807

Unitor Ship Service Inc., 2375 West Esther Street, Long Beach, CA 90813

Ginnell Fire Protection Systems, 835 Sharon Drive, Westlake, OH 44145

Panel Specialists, Inc./Thermax, 3115 Range Rd., Temple, TX 76501

## FLUID HANDLING EQUIPMENT

Graco, Inc., P.O. Box 1441, Minneapolis, MN 55441

## FRESH WATER GENERATOR

Sasakura Engineering, 7-32 Takeshima, 4-chome, Nishiyodogawa, KY, Osaka 555, Japan

## FUEL CONSERVATION

Instruments Computer & Controls, Inc., 70 South Bow Rd., Hookset, NH 03106

## FUEL DECONTAMINATION

Algae X Int'l, PO Box 4011, Ft. Myers Beach, FL 33932

Fuel Dynamics, 707 Mullet Dr. #110, Cape Canaveral, FL 32920

## GALLEY EQUIPMENT

Cospolich Refrigerator Co., 949 Industry Rd., Kenner, LA 70062

Dutchess Baker's Machinery Co., 1101 John Ave, Superior WI 54880

Jamestown Metal Marine Sales, Inc., 4710 Northwest Second Ave, Boca Raton, FL 33431

Lang Manufacturing, 6500 Merrill Creek Pkwy, Everett, WA 98203

Marine Accommodations, Inc., 3830 Williamsburg Park Blvd., Building 7, Jacksonville FL 32257

Richard Galley Supply, PO Drawer 4035, Houma, LA 70361

## GANGWAYS, LADDERS

Nautical Safety Products, P.O. Box 590462, Houston, TX 77259-0462

Schoellhorn-Albrecht, 575-105 Rudder Rd., St. Louis, MO 63026

SlipNot Safety Flooring, 2545 Beaufait St., Detroit, MI 48207

Wooster Products Inc., 1000 Spruce St., P.O. Box 896, Wooster, OH 44691

## GASKETS/CLEATS

Harbor Industries, Inc., 9471 Baymeadows Rd. Ste 307, Jacksonville, FL 32256

## GEARS & GEAR REPAIR

Goltens - New York Corp., 160 Van Brunt St., Brooklyn, NY 11231

Haley Marine Gears International, Inc., 2600 N. Concord Belle Chasse, LA 70037

Nico Marine Specialties, 39 Louisiana St., West Wago, LA 70094

The Falk Corp., PO Box 492, Milwaukee, WI 53201-0492

Marine Gears, P.O. Box 689, Greenville, MI 38702

Centofanti Marine Systems, Inc., P.O. Box 660, West Elizabeth, PA 15088-0660

Cincinnati Gear Co., 5657 Wooster Pike, Cincinnati, OH 45227

## GENERATOR

Baylor Co., 500 industrial Blvd., Sugarland, TX 77478

Insulide Recycling B.V., Deccaweg 3, 1042 AT Amsterdam, NETHERLANDS

## QMDSS

International Communications, 813 Diligence Dr. Ste 120, Newport News, Va., 23606

Furuno USA, Inc., 271 Harbor Way, S. San Francisco, CA 94080

Radio-Holland USA, 8943 Gulf Freeway, Houston, TX 77017

## HATCHES AND DOORS

Schoellhorn-Albrecht, 575-105 Rudder Rd., St. Louis, MO 63026

Railway Specialties Corp., 2979 State Rd., P.O. Box 29, Bristol, PA 19007

## HEAT EXCHANGERS

Alfa-Laval Separation Inc., 955 Meams Rd., Warminster, PA 18974

Beaird Industries Inc., P.O. Box 31115, Shreveport, LA 71130

Computube (Britannia Heat Transfer) Ltd., 15-20 Coleshill Industrial Estate, Station Road, Coleshill, Birmingham B46 1JP UK

Crane Heatex, 17 Grandview Ave., West Orange, NJ 07052

Tranter, Inc., 1054 Claussen Rd., Augusta, GA 30907-3215

Tranter, Inc. (Texas Div.) P.O. Box 2289, Wichita Falls, TX 76307

## HEAT TRANSFER FLUID

Paratherm Corp., 1050 Colwell Rd., Conshohecken, PA 19428

## HOISTS

Holly Hoist Corp., P.O. Box 86, St. Clair Shores, MI 48080-0086

## HOIST RINGS

Jergens, Inc., 15700 S. Waterloo Rd., Cleveland OH 44110

## HORNS/WHISTLES

Archime Mfg. Co. Ltd., 5478 267th Street, Gloucester Industrial Estate, Langley, B.C. Canada V4W 3S8

Kahienberg Bros Co., P.O. Box 358, Two Rivers, WI 54241

Kockum Sonics, Inc., 933 Industry Rd., Ste 105, Kenner, LA 70062

## HYDRAULICS

Cunningham Marine Hydraulics Co., 201 Harrison St., Hoboken, NJ 07030

Dayton T. Brown, 555 Church St., Bohemia, NY 11716

Engine Monitor, Inc., 179 Hickory Ave. Harahan, LA 70123

Hamilton Jet, P.O. Box 709, Christchurch, NEW ZEALAND

Offshore Inland, Inc. 3521 Brookdale Drive, Mobile, AL 36618

Ultra Hydraulics Limited, Cheltenham Road East, Gloucester, GL2 9QN, ENGLAND

Demarce Intafables Boats, 410 Oak St., Friendsville, MD 21531

Ocean Technical Services Inc., 1140 Peters Rd., Harvey, LA 70058-1705

## HYDRAULIC TRAINING

Consolidated Fluid Power, 155 Wright Ave., Dartmouth, N.S Canada B4C 3M1

## INCINERATORS

Therm-Tec Inc., PO Box 1105, Tualatin, OR 97062

## INFLATABLES

Ocean Technical Services Inc., 1140 Peters Rd., Harvey, LA 70058-1705

Zodiac of North America, P.O. Box 400, Thompson Creek Road, Stevensville, Sparks, MD 21152

## INSULATION

Blohm & Voss Light Insulation, Bartels & Laders GmbH, Norderebstrasse 15, 20457 Hamburg GERMANY

Panel Specialists, Inc./Thermax, 3115 Range Rd., Temple, TX 76501

Insulations, Inc., 1101 Edwards Ave., Harahan, LA 70123

Mascoat Products, 3500 E. T.C. Jester, Suite N, Houston, TX 77018

Pacor, Inc., P.O. Box 107, Westville, NJ 08093x

Superior Energies Inc., P.O. Drawer 386, Groves TX 77619

INTEGRATED MONITORING SYSTEMS

Datastar, Unit 100, 18 Gostick Place, N. Vancouver, BC Canada

## INTERIORS

Bauer Interiors, 733 Dante St., New Orleans, LA 70118

Custom Ship Interiors, Inc., P.O. Box 882, Solomons, MD 20688

Hopeman Brothers, P.O. Box 820, 435 Essex Ave., Waynesboro, VA 22980

Insulations, Inc., Rt. 5, 12360 Leisure Rd, Baton Rouge, LA 70807

Jamestown Metal Marine Sales, Inc., 4710 NW Second Ave, Boca Raton, FL 33431

Marine Accommodations, Inc., 3830 Williamsburg Park Blvd., Building 7, Jacksonville FL 32257

Maritime Services Corp., 3457 Guignard Drive, Hood River, OR 97031

## ISOLATORS

Lo-Rez Vibration Control, Ltd., 186 West 8th Ave., Vancouver, B.C. V5Y 1N2

## JET BOWTHRUSTERS

Thrustmaster of Texas, P.O. Box 840189, Houston, TX 77084-0189

## JOINER—Watertight Door—Paneling—Ceiling System—Decking

All Alpha Int'l., Inc. P.O. Box 498985, Cincinnati, OH 45249

Branton Ind., 1101 Edwards Ave., Jefferson, LA 70181

CustomShip Interiors, Inc. P.O. Box 882, Solomons MD 20688

Hopeman Brothers, Inc., P.O. Box 820, Waynesboro, VA 22980

Insulations, Inc., 1101 Edwards Ave., Harahan, LA 70123

Marine Accommodations, Inc., 3830 Williamsburg Park Blvd., Building 7, Jacksonville FL 32257

Maritime Services Corp., 3457 Guignard Drive, Hood River, OR 97031

Panel Specialists, Inc./Thermax, 3115 Range Rd., Temple, TX 76501

Walz & Krenzer, 91 Willenbrock Rd., Unit B4, Oxford CT 06478

## KEEL COOLERS

R.W. Fernstrum & Co., 1716 Eleventh Ave., Menominee, MI 49858

Kahienberg Bros. Co., P.O. Box 358, Two Rivers, WI 54241

The Walter Machine Co., Inc., 84-98 Cambridge Avenue, Jersey City, NJ 07307

## LASER ALIGNMENT

Boland Industrial & Consulting Services, P.O.B. 91360, Mobile, AL 36691

## LAUNDRY EQUIPMENT

Richard Galley Supply, PO Drawer 4035, Houma, LA 70361

## LIFEBOATS/RAFTS

American Eagle Mfg., Inc., 780 Pearle Jensen Way, LaConner, WA 98257

DBC Manne Safety Systems, 12351 Bndgeport Rd., Richmond, B.C. CANADA V6V1J4

Norsate AS, P.O. Box 115, N-4818 Faervik, Norway

Edgewater Machine & Fabncators, P.O. Box 358, Edgewater, FL 32132-0358

Viking Life Saving Equipment, 1625 N. Miami Ave., Miami, FL 33136

Willard Marine Co., Inc., 1250 N. Grove St., Anaheim, CA 92806

Zodiac of North America, P.O. Box 400, Stevensville, MD 21666

## LIFEBOATS REPAIR

Nautical Safety Products, P.O. Box 590462, Houston, TX 77259

Willem Pot, P.O.B. 29102, 3001 GC Rotterdam

## LIFESAVING EQUIPMENT

MGI International, 119-225 West 1st St., North Vancouver, B.C. CANADA

Stearns Manufacturing, P.O. Box 1498, St. Cloud, MN 56302

Viking Life Saving Equipment, 1625 N. Miami Ave., Miami, FL 33136

Zodiac of North America, PO Box 400, Thompson Creek Rd., Stevensville, Sparks, MD 21152

## LIFT EQUIPMENT

JLG Industries, Inc., JLG Dnve, McConnellsburg, PA 17233-9533

## LIFT EQUIPMENT TESTING

Water Weights Inc., 5139 Brooks St., Suite E, Montclair, CA 91763

## LIGHTING SYSTEMS / EQUIPMENT

ACR Electronics, Inc., 5757 Ravenswood Rd., Ft. Lauderdale FL 33310-5247

Archway Marine, 4501 Swan Ave., St. Louis, MO 63110

Goltens Marine, 160 Van Brunt St., Brooklyn, NY 11231

Kockum Sonics, Inc., 933 Industry Rd., Ste 105, Kenner, LA 70062

Pauluhn Electric Mfg. Co., Inc. P.O. Box 53, Pearland, TX 77588

Francis Searchlights/Stam Supply Co., 4415 8th N.W., Seattle, WA 98107

## LIQUID OVERFILL PROTECTION SYSTEMS

King Engineering Corp., P.O. Box 1228, Ann Arbor, MI 48106

## LOGISTICS

VL Logistics Consultants, Inc., 3420 Bienville Blvd., Ocean Springs, MS 39564

## MACHINERY MAINTENANCE, REPAIR, OVERHAUL, AND TESTING

Goltens - New York Corp., 160 Van Brunt St., Brooklyn, NY 11231

Mackay Communications, 2721 Discovery Dr., Raleigh, N.C. 27604-1851

Maritime Power 200 Henderson St. Jersey City, NJ 07302

## MANAGEMENT SYSTEMS & SERVICE

Homblower Marine, Pier 3 Ferryboat Santa Rosa, San Francisco, CA 94111

PCS Marine, 174 Colonnade Road S., Nepean, Ontario K2E715

## MARINE ACCOMMODATIONS

Marine Accommodations, Inc., 3830 Williamsburg Park Blvd., Building 7, Jacksonville FL 32257

## MARINE BUILDING SUPPLIES

King Wholesale Supply Co., Inc., P.O. Box 4002, New Orleans, LA 70178-4002

## MARINE CEILINGS

Hydro-Aluminium, Vik Verk, N-5880 VIK I SOGN, Norway

Insulations, Inc., Rt. 5, 12360 Leisure Road, Baton Rouge, LA 70807

Panel Specialists, Inc., 3115 Range Rd., Temple, TX 76501

## MARINE CONSULTANTS

PCS Marine, 174 Colonnade Road S., Nepean, Ontario K2E715

Homblower Marine, Pier 3 Ferryboat Santa Rosa, San Francisco, CA 94111

Boland Industrial & Consulting Services, P.O.B. 91360, Mobile, AL 36691

Schoellhorn-Albrecht, 575-105 Rudder Rd., St. Louis, MO 63026

## MARINE DECKING & FLOORING

Hopeman Brothers, Inc., P.O. Box 820, Waynesboro, VA 22980

E.H. O'Neil, 1405 Chippendale Rd., Lutherville, MD 21093

Insulations, Inc., Rt. 5, 12360 Leisure Road, Baton Rouge, LA 70807

Polyspec Corp., P.O. Box 1600, Sapulpa, OK 74067

Flexible Decking, 2708 N. Australian Ave. Ste. 9, West Palm Beach, FL 33407

Lonseal Inc., 928 E. 238th St., Carson, CA 90742

SlipNot Safety Flooring, 2545 Beaufait St., Detroit, MI 48207

## MARINE DRILLING & BLASTING

Marine Drilling & Blasting, Inc., P.O. Box 18098, Beverly Hills, CA 90209-4098

## MARINE ELECTRONICS

Frank L. Beier Radio, 2001 Ridgeway Dr., Metairie, LA 70001

Autronica USA, 234 Industrial Pkwy, Northvale, NJ 07647

Kockum Sonics, Inc., 933 Industry Rd., Ste 105, Kenner, LA 70062

Saab Marine Electronics AB, Box 13045, 402 51 Goteborg, SWEDEN

Marine Electric & Process Control, 3931 Leary Way NW, Seattle, WA 98107

ACR Electronics, Inc., 5757 Ravenswood Rd., P.O. Box 5247, Ft. Lauderdale, FL 33310-5247

Raytheon Manne Co., 676 Island Pond Rd., Manchester, NH 03109

Scandinavian Micro Systems, P.O. Box 155, N-1411, Kolbotn, NORWAY

Enecon Corporation, 125 Baylis Rd., Melville, NY 11747-3800

#### POWER SUPPLIES

Schaefer, Inc., 200 Butterfield Dr., Ashland, MA 01721

#### PROPELLERS—Repairs

Kahlenberg Bros., P.O. Box 358, Two Rivers, WI 54241  
Byrne Rice & Turner, 1172 Camp St., New Orleans, LA 70130  
Holland Roer Propellers, 2273 Batataria Blvd, New Orleans LA, 70072

Rice Propeller, Av Rios Espinoza No. 88, Col. Benito Juarez, Mazatlan, Sin, Mexico 82180  
Proper Pitch, P.O. Box 314, Seybeyville, DE 19975

#### PUSPULSION EQUIPMENT

—Bowthrusters, Diesel Engines, Gears, Propellers, Shafts, Turbines  
Avondale Industries, Harvey Quick Repair, P.O. Box 116, Harvey, LA 70058

American Air Filter, P.O. Box 35690, Louisville, KY 40432  
ABB Drives Inc., P.O. Box 372, Milwaukee, WI 53201-0372,  
ABB Industry Oy, P.O. Box 185, 00381 Helsinki, FINLAND  
ABB TURBOCHARGER, INC., 1460 Livingston Avenue, N. Brunswick, NJ 08902

Aquamaster-Rauma Ltd., Box 220, SF-26101, Rauma, FINLAND  
Kamewa America Inc., 106 Park Place, Suite 200, Covington, LA 70433, USA

Kamewa AB, Box 1010, S-68129, Kristinehamn, Sweeden  
Kamewa Finland Oh, "Aquamaster", Box 220, FIN-26101 Rauma, Finland

Kawasaki Heavy Industries, Ltd., Tokyo Head Office, World Trade Center Bldg., 4-1 Hamamatsu-cho 2-chame, Minato-ku, Tokyo 105-6116 Japan  
Brunvoll A/S, P.O. Box 370, N-6401, Molde, Norway

ZF Marine 3131 SW 42nd St., Ft. Lauderdale, FL 33312  
Caterpillar, 100 NE Adams Street, Peoria, IL 61629-2320  
Centa Corp., 8185 Cass Ave., Darien, IL 60561

The Falk Corp., PO Box 492, Milwaukee, WI 53201-0492  
Fincantieri, Diesel Engines Div.—GMT, Bagnoli della Rosandra 334, Trieste, ITALY

GEC ALSTHOM Diesels Inc., 10801 Kempwood Dr. Ste 1, Houston, TX 77043-1412  
Goltens Worldwide, 160 VanBrunt St., Brooklyn, NY 11231

Harbormaster Marine Inc., 31777 Industrial Rd., Livonia, MI 48150  
Harrington Metal, 6720 124th Ave., Lennville, MI 49408

Kahlenberg Bros. Co., P.O. Box 358, Two Rivers, WI 54241  
Krupp Mak, 7555 Danbro Crescent, Mississauga, Ontario, CANADA L5N 6P9

LIPS B.V., P.O. Box 6, 5150 BB Druenen, The Netherlands  
Lohmann & Stolterfoht, P.O. Box 1860, D-58408 Witten, Germany

Lo-Rez Vibration Control, 186 West 8th Ave., Vancouver, BC CANADA, V5Y 1N2

Mapeco, Inc., 91 Willenbrock Rd., Unit B4, Oxford CT 06478  
Markisches Werk, P.O. Box 1442, D-5884 Halver GERMANY  
MAN B&W Diesel, 17 State St., New York, NY 10004

MAN B&W Diesel A/S, Ostervej 2, DK-4960 Holeyb, DENMARK  
MAN B&W Diesel A/S, Alpha Diesel, Niels Juels Vej 15, DK-9900 Fredenkskshavn, DENMARK

MAN B&W Diesel GmbH, Stadtbachstrasse 1, D-86153 Augsburg 1 GERMANY  
Onon Corp., 1111 Cedar Creek Rd., Grafton, WI 53024

Oy Wartsila Ab, Vasa and Abo Divisions, P.O. Box 244, SF65100 Vasa, FINLAND  
Propulsion Systems Inc., 601 N.E. 26 Cr., Pompano Beach, FL 33064

Karl Senner Inc., 25 W Third, Kenner LA 70062  
Schottel-Werft, Manizer Strasse 99, D-56322 Spay/Rhein, GERMANY

Schottel Inc., 500 Industrial Blvd., Sugar Land, TX 77478  
Siemens Electric Ltd., 1180 Courtneypark Rd., Mississauga, ONTARIO

Stewart & Stevenson, 1400 Destrehan, P.O. Box 8, Harvey LA 70059-0008  
Thrusmaster of Texas, P.O. Box 840189-12227 IFM 529, Houston, TX 77284-0189

Ustein Bergen Diesel A/S, P.O. Box 924, N-5002, Bergen, NORWAY  
Ultra Hydraulics Limited, Cheltenham Road East, Gloucester, GL2 9QN, ENGLAND

Voith Hydro Marine Technology, P.O.B. 1125, D89509, Heidenheim, GERMANY  
Marine Propulsion Inc., 1505 Corbin Ave., Hammond, LA 70403

The Cincinnati Gear Company, 5577 Wooster Pike, Cincinnati, OH 45227  
Renold Hi-Tec, 512 W. Crescentville Rd. Cincinnati, OH 45246

U.S. Rep. Voith Schneider America Inc., 121 Susquehanna Ave. Great Neck, NY 11021  
Schottel-Werft, Josef Becker GmbH & Co. KG, Mainzer Strasse 99, D-56322 Spay/Germany

HRP, 432 Realty Dr., Dreina, LA 70056

#### PUMP—Repair—Drives

Scardana Americas Bkg., 502 Empire St., Greenfield Park, J4V1V7 Canada  
Advanced Environmental Systems, 2 Sutton Rd., Webster, MA 01570

Gilkes, Inc., PO Box 628, Seabrook, TX 77586  
Hamworthy Marine, Inc., 1129 Hospital Dr. Ste 3C, Stockbridge, GA 30281

Marine Electric & Process Control, 3931 Leary Way NW, Seattle, WA 98102  
Kraissl Co., 299 Williams Avenue, Hackensack, NJ 07061

Vita Motivator, 566 Parker St., Newark, NJ 07104

#### PURIFIERS

American Ship Repair, 1011 38th St., Brooklyn, NY 11219

#### RADARS —ARPAS

Furuno USA, Inc., 271 Harbor Way, S. San Francisco, CA 94080  
Radio-Holland USA, 8943 Gulf Freeway, Houston, TX 77017

#### REFER COMPRESSORS

CMP Corporation, P.O. Box 15199, Oklahoma City, OK 73155

#### REFRIGERATION COMPRESSOR REPLACEMENT PARTS

CMP Corporation, P.O. Box 15199, Oklahoma City, OK 73155  
Bailey Refrigeration, 2323 Randolph Ave., Avenel, NJ 07001

#### RH PROPULSION

Boll Filter, 15 International Dr., East Granby, Ct., 06206  
Goltens, 160 Van Brunt St., Brooklyn, NY 11231

#### RIGID INFLATABLE BOATS

Willard Marine, Inc., 1250 N. Grove St., Anaheim, CA 92806  
Zodiac of N. America Thompson Creek, P.O. Box 400, Stevesville, MD 21666

#### ROPE—Manila—Nylon—Hawsers—Fibers

Phillystran, Inc., 151 Commerce Drive, Montgomeryville, PA 18936-9628  
Puget Sound Rope, 1012 Second St., Anacortes, WA 98221

Pelican Rope Works, 4001 W Carriage Way, Santa Ana, CA 92704  
Rasmussen Equipment Co., P.O. Box 81206, Seattle, WA 98108

#### ROTATING EQUIPMENT

FCS, Inc., 22 Main Street, Centerbrook, CT 06409

#### ROVS/LIGHTS/CAMERAS

Deep Sea Systems Int'l, P.O. Box 622, Falmouth, MA 02541

#### RUBBER FLOORING

Tullex, Inc., 4521 West Crest Ave., Tampa, FL 33614

#### RUDDER BEARINGS & BUSHES

Duramax Marine, 16025 Johnson St., P.O. Box 67, Middlefield, OH 44062-0067  
Thordon Bearings, Inc., 3225 Mainway, Burlington, Ontario Canada L7M 1A6

#### SAFETY PRODUCTS

Brookdale International, 1-8755 Ash St., Vancouver BC, V6P6T3  
Viking Life Saving, 1625 N. Miami Ave., Miami, FL 33136  
Wein Lambie N.A., Inc., 18 Ridgecrest Drive, Bridgewater Nova Scotia, Canada B4V 3V8  
New England Marine & Industrial, 200 Spaulding Turnpike, Portsmouth, NH 03801

Nautical Safety Products, P.O. Box 590462, Houston, TX 77259  
Sanitation Device—Pollution Control

Byrne, Rice & Turner, Inc., 1172 Camp Street, New Orleans, LA 70130  
Exceltech International Corp., 1110 Industrial Blvd., Sugarland, TX 77478

Envirovac Inc., 1260 Turret Dr., Rockford, IL 61111  
Fast Systems, 3240 North Broadway, St. Louis, MO 63147

AllaTec, Inc., 4027 21st Ave. West, Seattle, WA 98199  
Microphor, 452 E. Hill Rd., Willits, CA 95490  
Owens Mfg., Hwy 92, Youngsville, LA 70592

#### SATCOM

Motorola, 1500 Dundee Dr., Arlington Heights, IL

#### SATELLITE COMMUNICATIONS

Boatrac, Inc., 10675 Sorrento Valley Rd., Ste. 200, San Diego, CA 92121-1609  
Furuno USA, Inc., 271 Harbor Way, S. San Francisco, CA 94080

KVH Industries, Inc., 110 Enterprise Center, Middleton, R.I. 02842-5268  
ICG Satellite Communications, 8400 NW 52nd St., Suite 110, Miami, FL 33166

Mackay Communications, 2721 Discovery Dr., Raleigh, N.C. 27604-1851  
Iridium N.A., 8449 S.River Pkwy, Tempe, AZ 85284

Norwegian Telecom, Postboks 6701 St. Olavs Plass, N-0130, Oslo, Norway  
PTT Telecom, Station 12, P.O. Box 30150-2500 JD The Hague, NETHERLANDS

Radio-Holland USA, 8943 Gulf Freeway, Houston, TX 77017  
Raytheon Marine Co., 676 Island Pond Rd., Manchester, NH 03109

Singapore Telecom, 15 Hill Street, Telephone House, 2nd Storey, Singapore 0617  
Telstra Mobile Satellite & Radio Services, 79 St. Hilliers Rd, Auburn NSW 2144, AUSTRALIA

Magellan Systems, 960 Overland Court, San Dimas, CA 91773  
Stratos, 150 Metcalfe St., Suite 1900, Ottawa, Ontario K2P 1P1 Canada

Comsat Maritime Services, 6560 Rock Spring Drive, Bethesda, MD 20817-1146  
Station 12, P.O. Box 30150, NL-2500 JD Den Haag, Netherlands

#### SCARIFIERS

Desmond-Stephan, P.O.B. 30, Urbana, OH 43078

#### SEALS

John Crane Marine, USA, 1536 Barclay Blvd, Buffalo Grove, IL 60089  
Blohm & Voss Industries GmbH, P.O. B. 112289, D-2042 Hamburg 1, GERMANY

U.S.A. Reps: Simplex-Turmar Inc., P.O. B. 675, Tonawanda, NY 14151  
Duramax Marine, 16025 Johnson St., Middlefield, OH 44062

Circle Seal Controls Inc., 2301 Wardlow Circle, P.O. Box 3300 Corona, CA  
Orkol Inc., 2535 Prairie Rd., Unit D, Eugene, OR 97402

Orkol Composites Ltd., Bradmarsh Business Park, Rotherham S60 1BX  
Station 12, P.O. Box 30150, NL-2500 JD Den Haag, Netherlands

#### SEPARATORS—LUBE OIL/FUEL OIL

SOTECO, 276-16010 Ceranesi Genova, Italy  
American Ship Repair, 1011 38th St., Brooklyn, NY 11219

#### SHAFT HORSEPOWER MEASURING SYSTEM

FCS, Inc., 22 Main Street, Centerbrook, CT 06409  
Instruments Computers & Controls, 78 Londonderry Tpke, Suite E 12 Hookset, NH 03106

#### SHAFT SEALS

Duramax Marine, 16025 Johnson St., Middlefield, OH 44062  
Blohm & Voss Industries GmbH, P.O. B. 112289, D-2042 Hamburg 1, GERMANY

U.S.A. Reps: Simplex-Turmar Inc., P.O. B. 675, Tonawanda, NY 14151

#### SHAFTS

American Vulcan, 2525 Dundee Rd., Winter Haven, FL 33884

#### SHIP LIFTS

Synchrolift Inc., Two Datron Center, 9130 S. Dadeland Blvd, Miami, FL 33156-7850

SHIPBOARD MANAGEMENT SYSTEMS  
Spar Associates, 927 West St., Annapolis, MD 21401

#### SHIPBOARD TESTING

Dayton T. Brown, 555 Church St., Bohemia, NY 11716

SHIPBUILDING—Repairs, Maintenance, Drydocking  
American Eagle Mfg., 780 Pearle Jensen Way, La Conner WA 98257

Amtels, Inc., P.O. Box 3107, Brownsville, TX 78523  
Asilieres Espanoles, S. A. Ochandiano, 14-16 28023 El Planitio SPAIN

Atlantic Marine, Inc., P.O. Box 3202, Mobile, AL 36652  
Atlantic Marine, Inc., 8500 Heckscher Dr., Jacksonville, FL 32226

Avondale Industries Inc., P.O. Box 50280, New Orleans LA 70150  
Bender Shipbuilding & Repair, P.O. Box 42, Mobile AL 36601

Bisso Marine Co., P.O. Box 4113, New Orleans, LA 70178  
Blount Marine, 461 Water St., Warren, R.I. 02885

Bollinger Lockport & Larose, P.O. Box 250, Lockport, LA 70374  
Caridoc, P.O. Box 1147 Port Of Spain, Trinidad, W.I.

Chris-Marine AB, P.O. Box 9025, S-2000 39, Malmo, SWEDEN  
Conrad Industries, 1501 Front Street, P.O. Box 790, Morgan City, LA 70381

Eastern Shipbuilding Group, 2200 Nelson Street, Panama City, FL 32402  
Fincantieri SpA Cantieri Navali Italiani, Via Cipro 11, 16129 Genoa ITALY

Goltens - New York Corp., 160 Van Brunt St., Brooklyn, NY 11231  
Gulf Coast Fabrication, Inc., P.O. Box 539, Lakeshore, MS 39558

HDW, Kiel, Germany, USA Rep., Roland Marine Inc., 90 Broad St., NY, NY 10004  
Halper Marine Group, Inc., 13085 Industrial Seaway Rd, Gullport, MS 39503

Hitachi Zosen, Hitachi Shipbuilding & Engineering Co., 1-1-1 Hitotsubashi Chiyoda-Ku Tokyo 100 Japan  
In-Place Machining Co., Inc., 929 North Buffum Street, Milwaukee, WI 53212-3793

Jacksonville Shipyards, 750 E. Bay St., Jacksonville, FL 32202  
Jeffboat, Inc., P.O. Box 610, Jeffersonville IN 47130

Kawasaki Heavy Industries, Ltd., Tokyo Head Office, World Trade Center Bldg., 4-1 Hamamatsu-cho 2-chame Minato-ku Tokyo 105-6116 Japan

Leevac Shipyards, P.O. Box 1190, HWY 90 East, Jennings, LA 70546

Lindenaub GmbH, Skagerrakruder 10, Postfach 9093 D-2300 Kiel, Friedrichsort GERMANY

Mariso USA, Inc., 100 Davidson Ave., Sommerset, NJ 08873  
Motor-Service AB, Box 2115, 144 04 Ronninge, SWEDEN

Munson Hammerhead, 780 Pearle Jensen Way, La Conner WA 98257  
Newport News, 4101 Washington Ave., Newport News, VA 23607

Peterson Builders, Inc., 101 Pennsylvania Ave., Sturgeon Bay, WI 54235-0650  
Thomas Marine, 37 Branford Street, Patchogue, NY 11772

Samsung Heavy Ind., 25, 1-ka, Bongrae-dong, Chung-ku, Seoul, Korea  
SeaArk, P.O. Box 210, Monticello AR 71655

SeaFab, P.O. Box 1651, 4111 Cedar St. Pascagoula, MS 39567  
Service Marine Industries, P.O. Box 3606, Morgan City LA 70381

Southwest Marine, Foot of Sampson Street, P.O. Box 13008, San Diego, CA 92170  
Skipperliner Shipyards, 621 Park Plaza Dr, Dept 21, LaCrosse WI 54601

Steiner Shipyard, Inc., P.O. Box 742, Bayou la Batre, AL 36509  
Swath Ocean, 979 G Street, Chula Vista, CA 92011

Talleres Navales del Golfo, Isote San Juan de Ulva S/N, 91800 Veracruz, Ver. Mexico  
Washburn Doughty, P.O. Box 296, E. Boothbay, ME 04544

Westport Shipyard, P.O. Box 308, Westport, WA 98595  
Willard Marine, Inc., 1250 N. Grove St., Anaheim, CA 92806

Zodiac of North America Inc., Thompson Creek Rd., P.O. Box 400, Stevensville, MD 21666  
Friede Goldman, 525 E. Capitol Street, Suite 402, Jackson, MS 39201

Tampa Bay Shipbuilding, 1130 McClosky Blvd., Tampa, FL 33605  
Ocean Technical Services Inc., 1140 Peters Rd., Harvey, LA 70058-1705

FirstWave/Newpark Shipbuilding, 2102 Broadway, Houston TX 77102  
Cascade General Inc., 5555 N. Channel Ave., Bld. 71, Portland, OR 97217

Ocean Technical Services, 1140 Peters Rd., Harvey, LA 70058

#### SHIPYARD / CABLES

American Shipyard Corp., One Washington St., POB 570, Newport, R.I. 02840-0943  
Anixter Wire & Cable, 2617 Edenboro Ave., Metairie, LA 70002

#### SHEAVES

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

#### SHOWERS AND FAUCETS

Scannix Corp., 230 Bartlett St., Lewiston, ME 04240

#### SHRINKWRAP CONTAINMENT

Hipp Plastic Wrap, 4070 Kearny Mesa Rd., San Diego, CA 92111

#### SILENCERS

Silex Inc., 7850 Tranmere Dr., Mississauga, Ontario L5S1L9  
Applegate Industrial, 1440 Government Street, Baton Rouge, LA 70802

Beaird Industries Inc., P.O. Box 31115, Shreveport, LA 71130  
Nelson Division, Exhaust & Filtration Systems, Hwy. 51 West, P.O. Box 428, Stoughton, WI 53589

Houston Marine Training Services, 5728 Jefferson Hwy, New Orleans, LA 70123  
Applied High Technology, 4 Place Dee Commerce

Brossard, Suite 201 Quebec Canada J4W-3B3  
Marine Safety, Marine Air Terminal, Laguardia Airport, NY 11371

#### SIMULATION TRAINING

Ship Analytics, Inc., Rte. 2 & 184, N. Stonington, CT 06358

#### SKILLED LABORERS

Amerforce, 650 E. 27th St., Jacksonville, FL 32206

#### SOUND CONTROL

Soundcoat, One Burt Dr., Deer Park, NY 11729

#### STAIRMASTER SAFETY TREADS

SipNot Safety Flooring, 2545 Beaufail St., Detroit, MI 48207  
Wooster Products, Inc., 1000 Spruce Street, Wooster, OH 44691

#### STEERING GEARS/STEERING SYSTEMS

A. Van der Velden B.V., Rotterdam, P.O.B. 2061, 2930 AB Krimpen a/d Lek, NETHERLANDS  
Cunningham Marine Hydraulics Co., 201 Harrison St., Hoboken, NJ 07030

Engine Monitor, Inc., 179 Hickory Ave., Harahan, LA 70123  
Summer Equipment, 24 West 4th Ave., Vancouver, B.C. V5Y1G3

Kobelt Manufacturing Co., Ltd., 8238-129 street, Surrey, B.C. V3W0A6  
Jastram Engineering, 485 Mountain Hwy N., North Vancouver, B.C. CANADA V7J 2L3

#### STERN TUBE BEARINGS/ BUSHES

IHC Lagersmit, P.O.B. 5 - 2960 AA Kinderdijk - HOLLAND  
Blohm & Voss Industries GmbH, P.O. B. 112289, D-2042 Hamburg 1, GERMANY

U.S.A. Reps: Simplex-Turmar Inc., P.O. B. 675, Tonawanda, NY 14151  
Raiko Ltd., Loudwater, High Wycombe, Bucks

Hamshire ENGLAND HP109QV  
Duramax Marine, 16025 Johnson St., P.O. Box 67, Middlefield, OH 44062-0067

Thordon Bearings, Inc., 3225 Mainway, Burlington, Ontario Canada L7M 1A6  
Vesco Plastics, P.O. Box 40647, Cleveland 2022, South Africa

#### STERN TUBE SEALS

Blohm & Voss Industries GmbH, P.O. B. 112289, D-2042 Hamburg 1, GERMANY  
U.S.A. Reps: Simplex-Turmar Inc., P.O. B. 675, Tonawanda, NY 14151

Duramax Marine, 16025 Johnson St., P.O. Box 67, Middlefield, OH 44062-0067  
IHC Lagersmit, P.O.B. 5 - 2960 AA Kinderdijk - HOLLAND

John Crane Marine USA, 1536 Barclay Blvd., Buffalo Grove, IL 60089

#### STORAGE/WORKSHELTERS

Poly-Steel Shelters, 1209 E. Ocean Blvd., Stuart, FL 34996

#### STRAINERS

Kraissl Co., 299 Williams Ave., Hackensack, NJ 07061

#### STUD/BOLT TENSIONERS

Superbolt, P.O. Box 683, Carnegie, PA 15106

#### SURFACE PREP TOOLS

Advanced Environmental Systems, 2 Sutton Rd., Webster, MA 01570  
Aurand Mfg., 1210 Ellis St., Cincinnati, Ohio 45223

Graco, Inc., P.O. Box 1441, Minneapolis, MN 55440-1441  
Flow International Corp., 23500 64th Ave. S., Kent, WA 98032

#### TANK GAUGING SYSTEMS

FCS, Inc., 22 Main Street, Centerbrook, CT 06409

#### TANK LIQUID GAUGES

Technical Marine Services, 6040 N. Cutter Circle, Portland, OR 97217

#### TANK LEVELING INDIC

# INFORMATION

## S H O W C A S E

### Get Free Information Fast

Circle the appropriate Reader Service Number  
on the opposite page.



Page	Advertiser	Product	R/S#	Page	Advertiser	Product	R/S#
25	A. Van der Velden B.V.	steering gear & rudders	200	36	Loeffler Corp.	valves & bells	285
6	ABB Turbo Systems AG	marine equip. & supplies	201	28	Loews L'Enfant Plaza Hotel	hotel	235
48	Adrick Marine	refrigeration/air conditioning	295	20	Lonseal, Inc.	marine flooring	236
34	Airchime Manufacturing Co. Ltd.	sound signal systems	290	50	Manly Marine Closures	hatches	270
56	Algae X International	fuel decontamination	267	1	Marex.com	internet service	237
66	Anchor Marine	marine equip. & supplies	203	48	Mariso USA, Inc.	diesel engine parts & repair	301
66	AR Larson Co.	marine equip. & supplies	204	11	Maritel Marine Communications	communications	238
31	Astilleros Espanoles	shipyard	205	54	Maritime Human	conference	239
c2	Atlantic Marine	ship builder	278	18	Matrix Desalination	desalination equip.	240
25	Aurand Mfg.	surface prep tools	206	47	Merchant Vessel Machinery	marine equip. & supplies	303
19	Autoship Systems	software	207	55	MGI International	marine safety products	241
65	Azonix Corp.	electronics	208	54	Microphor	sanitation devices	275
33	B&D Boilers	boiler maintenance & repair	209	24	Motor Services Hugo Stamp	diesel engine parts	220
56	Baltic Spares Service Ltd.	ship parts & equipment	210	58	Motor-Service AB	propulsion	242
37	Bay Ship & Yacht Co.	marine equip. & supplies	284	46	N.Y.C. D.E.P.	employment	305
21	Cambridge Applied Systems	viscometers	211	62	Nordic Group	marine equip. & supplies	243
4	Caterpillar	propulsion	212	23	Offshore Systems Int'l	navigation	244
53	CMP Corporation	compressor parts	213	52	Owens Manufacturing	sanitation	274
35	Crowley Marine Services	shipyard	294	63	Pacific 2000	exhibition	281
44	DBC Marine Safety Systems	evacuation systems	291	23	Pelican Rope Works	marine equip. & supplies	245
c3	Eastern Shipbuilding	shipyard	273	18	PickUpCat AS	marine equip. & supplies	246
19	Electronic Marine Systems	technology	214	8	Powerhouse Diesel	diesel engine parts	247
21	Electronic Marine Systems	technology	215	20	Prime Mover Controls	control system monitoring	248
23	Electronic Marine Systems	technology	216	50	Puget Sound Rope	ropes	249
25	Electronic Marine Systems	technology	217	15	Radio-Holland USA	electronics	271
60	Envirovac	sanitation device	218	64	Reverse Osmosis of S. Florida	desalination	250
61	Escabana & Lake Superior RR	marine equip. & supplies	279	40,41	RW Fernstrum	cooling systems	251
32	Fuel Dynamics, LLC	fuel decontamination	286	36	Schottel Werft	propulsion	287
9	Furuno USA	marine equip. & supplies	219	14	Sea Ark Marine	marine equip. & supplies	252
59	Goltens Worldwide	diesel engine repair & parts	276	60	Service Valve & Fitting	valves & fittings	253
44	Guido Perla Assoc.	marine equip. & supplies	299	42	Singapore 2000	exhibition	302
38	Harbormaster	propulsion systems/equipment	300	39	Skipperliner Shipyards	shipyard	283
64	Harrington Marine	kort nozzles	221	24	Smith-Berger Marine	deck hardware	269
34	Hermont Marine	marine equip. & supplies	293	30	Soundcoat	noise control	272
14	Hornblower Marine	marine management services	266	60	Specialty Products	marine equip. & supplies	254
56	Houston Marine	marine equip. & supplies	222	43	Standard Communications	communications	298
54	I-Com Industry	marine equip. & supplies	223	16	Stork Canada	HVAC & R systems & equip	255
65	ICG Satellite Services	satellite communications	224	64	Sundial Marine	shipbuilding	297
45	Icom America, Inc.	communications	304	64	Superior Energies Inc.	manufacturing & contracting	256
67	IHC Holland N.V. Lagersmit	marine equip. & supplies	225	58	Tech Power Controls	electrical motor drives	277
22	IMMARBE	Merchant Marine Registry	226	27	Telstra Global Satellite	satellite communications	257
37	In-Place Machining	crankshaft repair	288	29	Telstra Global Satellite	satellite communications	258
12	Japan Radio Co.	marine equip. & supplies	227	30	Thermax	bulkhead panel	259
34	Jeamar Winches	winches, sheaves	280	13	Urethane Products Corp.	foam filled fenders & buoys	260
57	Jergens, Inc.	protective coatings	228	5	USMMA	merchant marine academy	296
54	Joiner Systems	marine equip. & supplies	229	28	Viking Life Saving Equipment	life rafts	261
67	JW Fishers	underwater cameras	230	7	Wartsila NSD Norway AS	propulsion	262
52	Kahlenberg Bros. Co.	signals	231	21	Water Weights	lifting equipment testing	263
c4	Karl Senner	propulsion equip.	232	58	Waterman Supply	marine equip.	264
51	Kawasaki Heavy Industries	marine equip. & supplies	233	64	Western Machine Works	shipbuilders	268
10	Lang Manufacturing	marine equip.	292	16	Willard Marine	inflatable boats	265
3	Leica Navigation	marine navigation	234	49	Wooster Products	safety treads	289

The listings above are an editorial service provided for the convenience of our readers.

# THE MARINE MART

**The Classified  
and Employment Section**



## HOW TO PLACE YOUR CLASSIFIED AD • IT'S EASY!

### MARITIME REPORTER'S Classified Section has it all:

- For Sale • Products & Services • Schools & Training •
- Vessels for Sale or Charter • Employment/Recruitment •

**DEADLINE:** The 20th of the month for the following month's ad.

**Contact NY Office:** Carrie Rivera • Phone 212-477-6700  
• Fax 212-254-6271 • Rivera@marinelink.com

**Contact FL Office:** Patti Hawthorn • Phone 561-368-3306  
• Fax 561-368-2374 • Hawthorn@marinelink.com

### FREQUENCY DISCOUNT RATES

	Per Column Inch
1x .....	\$95
3x .....	\$90
6x .....	\$85
9x .....	\$80
12x .....	\$65

### Column Width

1 Column - 3" • 2 Column - 6 1/4"  
3 Column - 9 1/2"

### Column Depth

Minimum - 1" • Maximum - 12"

## 2-Day MAJOR SHIPYARD AUCTION

Thurs. & Fri., January 27 & 28  
Campbell Industries  
San Diego, California

Download Brochure on the Web:  
[www.industrialassets.com](http://www.industrialassets.com)

**INDUSTRIAL ASSETS, INC.**  
Phone: 818-508-7034  
Fax: 818-508-3025  
e-mail: [iai@industrialassets.com](mailto:iai@industrialassets.com)

## FOR SALE

### FOR SALE.

New England Trawler Anchor Windless  
70 ton capacity with Re-haul  
unit 13,000 LP 20f/min.  
Call Davies Rail & Mechanical 281-449-4717

### FOR SALES/LEASE/JOINT VENTURE.

Duty Cycle American. 650 ton/hour or 80  
ton/50'. Ideal small port facility or barge mount.  
Excellent condition. Fax inquiries 281-449-  
4697. Davies Rail & Mechanical.

**FOR  
SALE**

### BOILERS

20,000-400,000 #/Hr.

### GEARS & TURBINES

25-4,000 HP

### TURBINE & DIESEL GENERATORS

50-25,000 KW

#### WE STOCK A LARGE SELECTION OF:

Air Pre-Heaters • Economizers • Deaerators  
Pumps • Motors • Fuel Oil Heating & Pump Sets  
Valves • Tubes • Controls • Compressors  
Pulverizers • Rental Boilers & Generators

Phone: 847-541-5600 • Toll-free 1-800-704-2002  
FAX 847-541-1279 • [www.wabashpower.com](http://www.wabashpower.com)

**Wabash** POWER  
EQUIPMENT CO.

444 Carpenter Avenue  
Wheeling Illinois • 60090-0427 • U.S.A.

## BARGES FOR SALE

### Immediate Availability

- (1) 195 x 35 x 11 - SELF-CONTAINED DIESEL/ELECTRIC SAUERMAN DRAG/FULLER PUMP CEMENT BARGE. On board equipment: 750 hp / 500 kw diesel generator, Fuller 8" "11" pump, Fuller C-350 compressor, 3000 cfm dust collector, closed compressor cooling system, 1500 gallon fuel tank, 1400 ton capacity.
- (1) 250 x 52 1/2 x 11 - SELF-CONTAINED DIESEL/ELECTRIC FULLER AIRSLIDE CEMENT BARGE. On board equipment: 750 hp / 500 kw diesel generator, (2) 8" Fuller "11" pumps, (2) Fuller C-350 compressors, (2) Sutorbuilt aeration blowers, closed compressor cooling system, 480 volt / 4160 step up trans former, 5000 cfm dust collector, 2200 gallon fuel tank, 2600 ton capacity
- (4) 195 x 35 x 12 - CARLSEN TYPE CEMENT BARGES. On board equipment: (16) Air pads and (4) longitudinal air slides controlled by 110 volt actuators. 1500 ton capacity. *Requires separate vacuum system (shore or vessel mounted) to withdraw product.*

All barges alternate conveyable products: other types, classes of Portland Cement, Flyash, or other powders.

For more information and a brochure please contact:

**Ed VanderMeulen at 319-328-6222**

E-mail - [Ed.VanderMeulen@LafargeCorp.com](mailto:Ed.VanderMeulen@LafargeCorp.com)

OR

**Jay Darlington at 618-543-3984**

E-mail - [Jay.Darlington@LafargeCorp.com](mailto:Jay.Darlington@LafargeCorp.com)

## PRODUCTS & SERVICES



### ALL WEATHER PROTECTION™ FROM CAROLINA COCKPIT

Corrosion Proof, Lightweight, Engineered,  
Deck Structures and Control Cabs  
Ready to install aboard your vessels  
and equipment.

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

P.O. Box 83037, Portland OR 97283  
503-735-0339 Fax 503-735-0337

**Peck & Hale** 180 Division Avenue, West Sayville NY 11796  
Tel: (516) 589-2510 Fax: (516) 589-2925  
Web Site: [www.peckhale.com](http://www.peckhale.com)

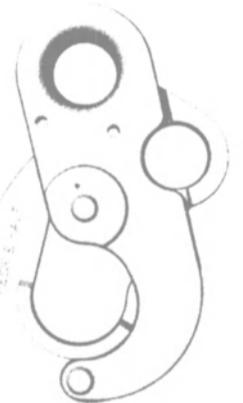
## Release-A-Matic H44 R.A.M. Hook

### 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

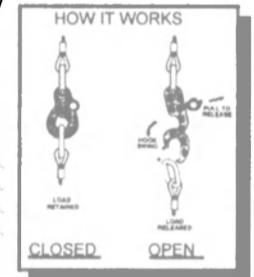


### Specifications:

**Material:** Heat Treated Forged Steel

**Finish:** Zinc or Cres

Strength:	S.W.L.	M.B.S.
H44-3	4,500 lbs.	18,000 lbs.
H44-3L	2,000 lbs.	8,000 lbs.
H44-6	8,400 lbs.	33,000 lbs.
H44-9	18,000 lbs.	71,700 lbs.



**Distributor Territories Available!!**

**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

## PRODUCTS & SERVICES

### 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

## PLAINBEARINGS

gold engineering gmbh

HAMBURG / GERMANY

FAX: +49 40 229 58 24

TEL: +49 40 229 58 14

e-mail: Info@gold-ltd.com

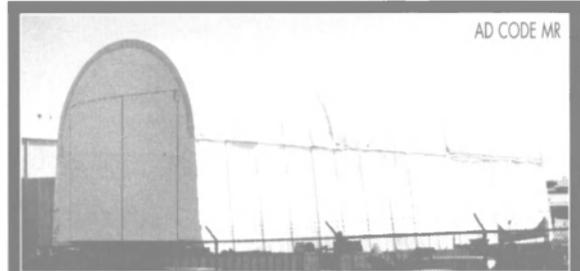
## DIESEL ENGINE PARTS

RECONDITIONED + NEW

## SHIP MODELS

UNCOMPROMISED DETAIL COMPETITIVE COST  
For ship owners, shipyards, architects, collectors.  
Individually handcrafted from brass-custom & series models.

13015 S.W. 89<sup>th</sup> PL., #210 - Miami, FL 33176  
ph (305) 238-5444 fax (305) 238-1006  
website: www.maritimereplicas.com



AD CODE MR

60' W x 150' L x 60' H PAINTING & SANDBLASTING ENCLOSURE

We have economical solutions for anything — from permanent drydock enclosures to temporary work & storage shelters!

CALL THE BEST! 800-424-5142



P.O. Box 1588 • Quincy, FL 32353  
Tel: 850-875-2300 • Fax: 850-627-3854  
25 Years of Manufacturing Excellence

**ALSTOM**  
ENGINES INC

10801 Kempwood Dr. Ste. 1  
Houston, Texas 77043  
Tel: (800) 965-4322  
Fax: (713) 939-0105  
sales@gecadiesels.com

**GENUINE**  
PAXMAN, RUSTON, MIRRLEES BLACKSTONE  
and REGULATORS EUROPA  
Spare Parts.  
Repairs and Overhauls

Spare Parts + Equipment  
for foreign built ships

## SCARDANA

FAX: (1) - 450 - 671 - 3898

TEL: (1) - 450 - 465 - 2480

TLX: (21) - 014 - 47313

E-mail : service@scardana.ca

Web Site : www.scardana.ca

Procurement Contractors  
+ Spareparts Brokers  
Since 1974

## SHAFT HORSEPOWER MEASUREMENT

THE "DIGITAL TORQUE METER SYSTEM"

\*\*FIBER OPTIC SENSORS \*\*STAND ALONE SYSTEM  
\*\*SOFTWARE PACKAGE FOR IBM OR COMPATIBLES  
\*\*CAN MONITOR UP TO THREE SHAFTS  
\*\*24 HOUR TECHNICAL SUPPORT LINE  
\*\*PATENTED



**I.C.C., CORP.**  
603-485-3800  
Fax 603-485-5209



### Tired of nautical reproductions



Maritifacts has only **authentic marine collectibles** rescued from scrapped ships: navigation lamps, sextants, clocks, bells, barometers, flags, binnacles, telegraphs, portholes & more. Current Brochure - \$1.00.

www.martifacts.com / maritifacts@aol.com

**MARTIFACTS, INC.**

P.O. Box 350190 Jacksonville, FL 32235-0190  
Phone/Fax: (904) 645-0150

REPLACEMENT PARTS FOR:

SKL/DMR • Pielstick • Sulzer • Fairbanks  
MTU • Alfa Laval • GMT • Deutz • Superior  
Alco • Cooper • Delaval/Enterprise  
"If it's Made in America, we can get it!"

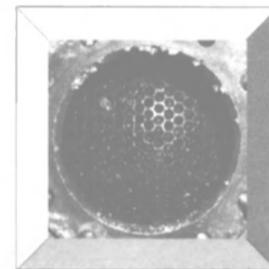
PHONE: 719-227-1821

FAX: 719-227-7498

**APPLIED ENERGY CORP**

EMAIL: APPLIED@JTP.COM  
WEBSITE: WWW.JTP.COM/APPLIED

2446 BLANDHORN ST. • COLORADO SPRINGS, CO 80909

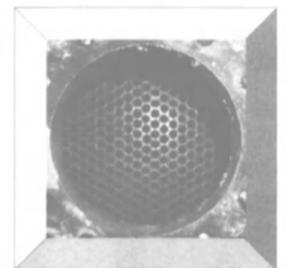


**IN-PLACE SEWAGE/  
HEAT EXCHANGER  
CHEMICAL CLEANING**

**Q.E.D.**  
SYSTEMS, INC.

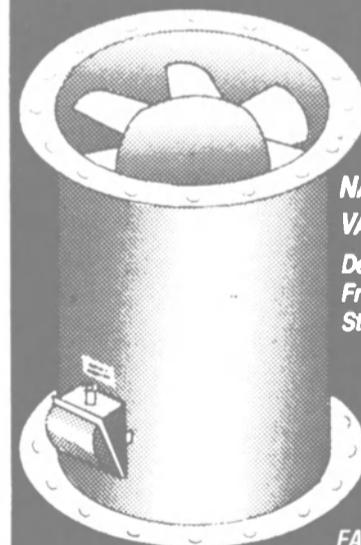
Point of contact: Carl W. Spraberry  
Phone: (757) 490-5072  
cspraberry@emh.qedsysinc.com

After chemical cleaning



## JON M. LISS ASSOCIATES, INC.

411 BOREL AVENUE, SUITE 505 • SAN MATEO, CALIFORNIA 94402



**NAVY STANDARD  
VANEAXIAL FANS**

Delivery  
From  
Stock

(650) 573-9191

FAX: (650) 572-8458

## PRODUCTS & SERVICES

### NAVTECH MARINE SURVEYORS COURSE

Complete step by step course, forms, certification and education requirements. Best in the business. Includes USCG NVCS and standards for inspection, safety. Audio and Video Cassette. Diploma upon completion. Inspection Certification and Update from US Surveyors Association. Approved for USCG fishing vessel inspection program.  
**1-800-245-4425**

### MOSS MARINE USA, Inc.

Ship & Equipment Repair

☎ 410-542-8775 fax 410-542-1115

Baltimore, MD 21209



### SHAFT TACHOMETER

Speed & Direction

Accurate to 1 RPM

Economical & Reliable

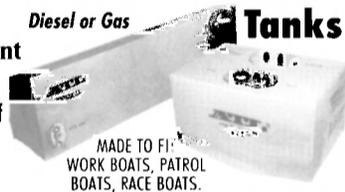
**AETNA ENGINEERING**

800-776-7962 FAX 616-454-8256

### Custom Fuel Cell Bladder Tanks

Diesel or Gas

- Impact Resistant
- Non-Expanding
- Vibration Proof
- Lightweight
- Fully Baffled



MADE TO FIT:  
WORK BOATS, PATROL  
BOATS, RACE BOATS.

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

## Control General

Marine Controls

ORIGINAL EQUIPMENT MANUFACTURER  
OF HIGH QUALITY, MARINE ELECTRONIC  
& ELECTRO-HYDRAULIC CONTROL SYSTEMS  
ALARMS • STEERING • CONSOLES • INSTRUMENTATION

A MarineOne Company

### CONTROL GENERAL CORPORATION

2845 HIGHWAY 311 • SCHRIEVER, LA

PHONE: (504) 872-9002 • FAX: (504) 872-9004

WWW.CONTROLGGENERAL.COM • EMAIL@MARINEONE.NET

### Blastcleaning Abrasives

## Steel Shot and Grit.



Recyclable

Effective

Low Cost Option

### AMASTEEL FROM ERVIN INDUSTRIES

Ervin Industries, Inc., 3893 Research Park Drive, Ann Arbor, MI 48106  
Toll Free: (800) 748-0055 Fax: (734) 663-0136

## INCINERATORS

Burn MARPOL shipboard waste and sludge in  
US built equipment designed for your vessel  
Rugged containerized units also available.  
THERM-TEC www.thermtec.com 503.625.7575

### World wide location service for slow speed diesel parts

Liners, covers, inserts, pistons,  
crowns, skirts, rings, crankshafts,  
camshafts, conrods, pins, bearings,  
blocks, frames, bases.

## SCARDANA

FAX: (1) - 450 - 671 - 3898

TEL: (1) - 450 - 465 - 2480

TLX: (21) - 014 - 47313

E-mail: [service@scardana.ca](mailto:service@scardana.ca)

Web: [www.scardana.ca](http://www.scardana.ca)

All makes, models, slow speed  
diesel engines.

New or reconditioned major parts  
with class certificates.

## DONJON MARINE CO., INC.



WORLDWIDE SALVAGE & WRECK REMOVAL  
FIRE-FIGHTING, LIGHTERING  
OCEAN / INLAND TOWAGE (1,200 - 7,000 HP)  
DEAD-SHIP TOW PREP  
CARGO HEAVY LIFT (1,000 TON)  
U.S. NAVY SALVAGE CONTRACTOR SINCE 1979  
OPA' 90 OIL SPILL RESPONSE SERVICES

Phone (908) 964-8812. Fax (908) 964-7426

Web site: [www.donjon.com](http://www.donjon.com) Email: [DONJONHISE@AOL.COM](mailto:DONJONHISE@AOL.COM)

1250 Liberty Ave., Hillside, NJ 07205-2033 USA

## VESSELS FOR SALE/CHARTER

[www.e-marine.com](http://www.e-marine.com)

### CENTRAL BOAT RENTALS, INC.

SHIP/VESSEL FLEETING  
TUGS & BARGE  
INLAND/OFFSHORE

Phone: 504-384-8200

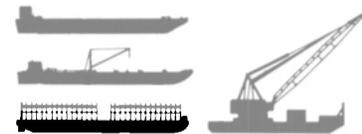
FAX: 504-384-8455

Web-site: [www.centralboat.com](http://www.centralboat.com)

E-mail: [office@centralboat.com](mailto:office@centralboat.com)



## VESSELS FOR SALE/CHARTER



### 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

503-228-8891 1-800-547-9259

3121 SW Moody Avenue, Portland, Oregon 97201

## EMPLOYMENT/RECRUITMENT

### POSITION WANTED

Admiralty/general corporate/litigation attorney seeks  
entrepreneurial/legal position in marine industry. Equity  
participation possible. Telephone: 713/227-7444:  
E-mail: [cnkennedy@earthlink.net](mailto:cnkennedy@earthlink.net). fax: 713/225-8569.

Subsidiary of Fortune 500 Company located in  
Quincy, MA seeks Mgr. Personnel & Labor Rel.  
Successful candidate will have a min. of 5 years  
experience in marine crewing and management of  
sea-going personnel. Must have a good working  
knowledge of STCW 95 and ISM/ISO systems as  
well as US maritime laws and regulations. Strong  
organizational and interpersonal skills and comput-  
er literacy (MS office) required. Competitive start-  
ing salary and benefits. Resumes to American  
Overseas Marine, Attn: Human Resources; 116 E  
Howard St., Quincy, MA 02169. Fax: (617) 773-  
4436. Email: [hr@gdamsea.com](mailto:hr@gdamsea.com). Equal Opportunity  
Employer.

### Crewing Manag

-Responsibilities include manning cables with  
merchant seaman; Maintaining detailed personnel  
and training records, and Processing and  
responding to employment and training inquiries  
from seamen. Minimum Qualifications: Five years  
of seagoing or shoreside maritime experience;  
Demonstrated knowledge of maritime personnel  
regulations.

Tyco provides a competitive package including  
a generous bonus and fully paid benefits. Please  
forward a resume to Chris Marlow via fax at  
(208) 275-4379.

**tyco** submarine systems ltd.

## EMPLOYMENT/RECRUITMENT



Administration - Construction  
Crewing - Engineering  
Finance - M & R  
Operations - Sales

(Established 1969) P O Box 260 • Mercer Island, WA 98040 • 206-232-6041

**Chartering Manager/Mediterranean** - Responsible for booking cargoes on vessels operating between U.S. and Mediterranean, as well as vessels operating between U.S., North Europe, Africa and South Asia or vice versa. In this regards, will maintain day-to-day contact with shippers and brokers who may have available cargo; develop new business and search for tonnage; maintain daily contact with vessels and vessel owners; ensure smooth operation of vessels and avoid any problems which may arise; calculate voyage budgets, gathering all necessary information for cost of stevedoring, port expenses, bunkers and other expenses; negotiate charter parties and booking notes as needed; maintain accounts for personal visits through brokers, forwarders, and owners both in the U.S. and abroad with emphasis on Scandinavia. B.S. Maritime Law, Maritime Transportation or Business (with emphasis on shipping); two years experience charter shipping and vessel operations, including all types of cargo tonnage. \$52,210 - \$55,000/yr., 50 hrs/wk; 8AM to 6PM. Contact LA Office of Employment Security, Job Order 1561917, 6701 Airline Hwy., Metairie, LA 70003.

### MECHANICAL ENGINEER

Wanted by marine vessel manuf. in Savannah, GA. Responsible for engineering & design of hull & superstructure of glass reinforced plastic (GRP) vessels. Draft related correspondence with American Bureau of Shipping. Develop cohesive design package of hull-related issues. Perform hull performance and hydrostatics studies, towing tank studies and propulsion system selection. Provide weight estimates/reports. Optimize fiberglass structure design, testing lamination schedules & fiberglass designs. Provide structural & naval architecture design drawings and finite element analysis using Algor Software and MathCAD. B.S. in Mechanical Engineering req'd. Working knowledge of Italian. \$28,808 per year. Send resume to: Richa Speir, Intermarine Savannah, 301 North Lathrop Ave., Savannah, GA 31415.



**SEABULK OFFSHORE**  
A HVIDE MARINE COMPANY

QUALITY, SAFETY, INNOVATION  
In Marine Support and Transportation Services

### Engineers, 100 Ton Captains, Able Seaman

Seabulk Offshore, Ltd., a Lafayette based leading vessel operator, has immediate opportunities for Supply Boat Engineers, Crewboat Captains, and Able Seamen

We require candidates to be experienced, highly motivated, self-starters who are interested in their own professional development and advancement and wish to work on some of the most modern vessels in the world

We offer competitive salary, comprehensive benefits, and a progressive work environment with a world-class organization. Successful candidates can expect extensive company support of career advancement training including 100% coverage of tuition and partial pay while in training

Applicants meeting the above requirements should contact Human Resources for an application by Phone at (318) 234-4111, extension 214; M-F, 6-5 or apply in person at 146 Calco Boulevard, Suite 101, Lafayette, LA 70503.

INTERNET: [www.hvide.com](http://www.hvide.com)  
e-mail: [gh@worldnet.att.net](mailto:gh@worldnet.att.net)  
EOE



### Naval Architect/Project Engineer

HEC is a small company in San Francisco with a division specializing in the design and production of loading computers for commercial and naval ships.

We are looking for someone with a solid engineering education who has an aptitude and interest in creating marine software products for windows based computers.

See our web site at <http://www.herbert.com> for more details and contact info.



**CargoMax**  
A DIVISION OF  
HERBERT ENGINEERING CORP.

A DIVISION OF

HERBERT ENGINEERING CORP.

### BOAT JOB LISTINGS UPDATING DAILY

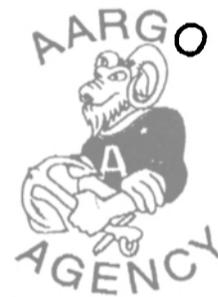
CALL 24 HOUR  
MARINE JOB HOTLINE  
504-889-JOBS (5627)



### Ocean Engineering - US Naval Academy

Applications are invited for a tenure-track faculty position in Ocean Engineering at the U. S. Naval Academy. The Ocean Engineering program is ABET-accredited and offers an undergraduate major with specialty tracks in civil and environmental aspects of ocean engineering, and in deep-ocean technology. We seek candidates who can contribute to teaching in civil/ocean engineering design, and in one or more of the following: ocean wave mechanics, environmental engineering in the oceans, and/or deep-ocean engineering. Candidates are expected to teach at the undergraduate level and to establish a program of sponsored research in ocean engineering. Applicants must have an earned doctorate in ocean engineering or a closely-related discipline. Preference will be given for appointment at the Assistant Professor level. The starting date is August 14, 2000. Application review will begin on February 15, 2000 and continue until the position is filled. Applicants should submit a resume, a statement of teaching/research interests, and names and addresses of three references to the search committee chair: Dr. David L. Kriebel, Dept of Naval Architecture and Ocean Engineering, United States Naval Academy, 590 Holloway Road - Stop 11D, Annapolis, MD 21402-5042. More information is at <http://web.usna.navy.mil/~naomeweb/>. U.S. citizenship or permanent residence status is required. The Naval Academy is an equal-opportunity affirmative-action employer.

THE RIGHT  
JOB  
FOR THE  
RIGHT  
PEOPLE



PROFESSIONAL  
MARINE  
RECRUITER

NEEDED NOW CAPTAIN MATES.  
ENGINEERS, COOKS  
ALL DECK RATINGS

25 YEARS MARINE EXPERIENCE  
1-800-442-7115

## Maritime Reporter's Website Classified Advertising

(Visit our website @ [www.marinelink.com](http://www.marinelink.com))

• *Take advantage of Maritime Reporter's Classified Web-stie* •

*For more details please contact Carrie Rivera @ 212-477-6700  
or e-mail [rivera@marinelink.com](mailto:rivera@marinelink.com).*

# PROFESSIONAL



**ANKER MARINE PAINTS**

STOCKS IN MAJOR U.S. PORTS  
ASSOCIATED COMPANIES IN MEXICO,  
EUROPE AND THE FAR EAST

21 CHARLES ST., WESTPORT, CT 06880  
Ph: 203-226-5200 Fax: 203-226-5246  
ANKERPAIN@aol.com



**CAPTAIN ASTAD COMPANY INC.**

- SHIPBROKERS & MARINE CONSULTANTS
- SALE & PURCHASE - ANY TYPE VESSELS
- NEW CONSTRUCTION - CONVERSIONS
- OWNERS REPRESENTATIVE

8600 Pontchartrain Blvd., #215 Phone: 504-522-3007  
New Orleans, LA 70124 Fax: 504-522-6008



**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: cdim-bla@cdicorp.com  
Web Site: www.access.digex.net/~bla



**Barnett & Casbarian, Inc.**  
Offshore Engineers • Naval Architects • Marine Surveyors

Houston: 9227 Westview #400 • Houston, TX 77024  
(713) 467-6713 • Fax: (713) 468-0613 • E-mail: bc-ba@bc-ba.com  
New Orleans: 3636 S. Jefferson Rd. W. #300 • Metairie, LA 70002  
(504) 838-0104 • Fax: 504-838-0197 • e-mail: ba@bc-ba.com

**BAY ENGINEERING, INC.**

- NAVAL ARCHITECTS • MARINE ENGINEERS • SHIP AND BARGE DESIGN
- SELF-UNLOADING TECHNOLOGY • CONCEPT AND CONTRACT DESIGN
- CONSTRUCTION DRAWINGS

253 N. First Avenue  
Sturgeon Bay, Wisconsin 54235  
Phone (920) 743-8282 • Fax (920) 743-9543 • e-mail: bei@itol.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. BAXTER, JR. & ASSOCIATES**  
NAVAL ARCHITECTS/ENGINEERS  
& SURVEYORS

3113 Cottage Hill Road Tel (334) 476-1998  
Mobile, AL 36606 (800) 398-6691



**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



CDI Marine Group

CDI Marine Company 904-805-0700  
The M&T Company 732-657-5600

Band, Lavis & Associates  
410-544-2800

Naval Architects • Marine Engineers  
Naval Aviation Support

JACKSONVILLE, FL • BREMERTON, WA  
ISLANDIA, NY • KING OF PRUSSIA, PA  
LAKEHURST, NJ • NEWPORT NEWS, VA  
PASCAGOULA, MS • PATUXENT RIVER, MD  
PORTSMOUTH, VA • SEVERNA PARK, MD

Email: marine@cdicorp.com Visit us at our web site at:  
http://www.cdicorp.com/marine.asp



**CHILDS ENGINEERING CORPORATION**

WATERFRONT ENGINEERING • DIVING • INSPECTION

BOX 333 MEDFIELD, MA 02052 (508) 358 8945

Serving the marine industry for over 140 years



**CRANDALL DRY DOCK ENGINEERS, INC.**

Consulting • Design • Inspection  
Railway and Floating Dry Docks  
Dry Dock Hardware and Equipment

Box 505804, Chelsea, MA 02150 (617) 884-8420 Fax (617) 884-8466

**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

**GHS** Visit WWW.GHSport.com

General HydroStatics

Computer software for Naval Architects

hydrostatics, stability, strength, modeling  
salvage simulations  
onboard trim/stability/strength

**CREATIVE SYSTEMS INC.** sales@ghsport.com  
CREATORS OF GHS Phone: 360 385-6212  
P.O. Box 1910 Port Townsend, WA 98368 USA Fax: 360 385-6213

**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

**DESIGNERS & PLANNERS, INC.**

Naval Architects & Marine Engineers  
Environment & Safety • Information Systems

2120 - Washington Boulevard, Suite 200,  
Sequoia Plaza, Arlington, VA 22204-5717

**BMT** PHONE: (703) 920-7070  
FAX: (703) 920-7177  
WEBSITE: www.dandp.com  
Member of the BMT Group of Companies



**ARTHUR D. DARDEN INCORPORATED**  
NAVAL ARCHITECTS & MARINE ENGINEERS

3200 RIDGELAKE DRIVE, SUITE 403  
METAIRIE, LOUISIANA 70002  
(504) 832-3952 FAX (504) 832-3953

**DeJONG & LEBET, Inc.**  
Naval Architects Marine Engineers



Tel: (904) 399-3673 / Fax: (904) 399-1522  
E-mail: info@dejongandlebet.com  
www.dejongandlebet.com  
1734 Emerson Street, Jacksonville, Florida 32207

**ENCON Management Incorporated**

Marine Structures • Engineering Analysis • Marine Survey  
Project Management • Loss Prevention • Naval Architecture

P.O. Box 7760 • Beaumont, Texas 77726  
(409) 547-2562 Fax (409) 547-2763

1311 Legget Drive  
Kanata, Ontario, Canada  
Phone: (613) 592 2830  
Fax: (613) 592 4950

**FTL FLEET TECHNOLOGY**

Trials and Instrumentation  
Structural Assessment  
Fatigue/Fracture Experts  
Shafting/Vibration Analysis  
Performance Prediction  
Model Testing

**Fleetway Inc.**

- Marine Engineering • Naval Architecture
- Life Cycle Support

Suite 200, 155 Chain Lake Drive, Halifax, Nova Scotia, Canada B3S 1B3  
Phone: (902) 494-5700 Fax: (902) 494-5792

**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 (609) 772-0888  
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

# PROFESSIONAL

**JOHN W. GILBERT ASSOCIATES, INC.**  
*Naval Architects*  *Marine Engineers*

(617) 523-8370  
 FAX (617) 523-2178

199 STATE STREET  
 BOSTON, MASS 02109

**GLOSTEN**  
 The Glosten Associates, Incorporated

Naval Architecture Marine Engineering Ocean Engineering Hydrodynamics Transportation Analysis Contract Administration

605 First Avenue, No. 600 Seattle, WA 98104-2224 Phone: (206) 624-7850 Fax: (206) 682-9117

CONSULTING ENGINEERS SERVING THE MARINE COMMUNITY

*Ideas Engineered Into Reality*  
**GUIDO PERLA & ASSOCIATES, INC.**  
*Naval Architects*  
*Marine, Mechanical & Electrical Engineers*

Pacific Bldg., 720 3rd Ave. #1200 Seattle, Washington 98104-1825 Phone: (206) 382-3949 Fax: (206) 382-2090

**HEGER DRY DOCK, INC.**  
 13 Water Street, Holliston, Massachusetts 01746

*Specialists in all types of dry docks*

- Design
- Certifications
- Dockmaster Training Classes
- U.S. Navy 1625C Facility Certification Reports
- Inspections
- Docking Calculations
- Engineer Diver

Phone: (508) 429-1800 Fax: (508) 429-1811  
<http://www.hegerdrydock.com>

**HERBERT ENGINEERING CORP.**  
 98 Battery Street, Suite 500 San Francisco, CA 94111

*Naval Architects • Marine Transportation Consultants*  
*Marine Software Specialists*

Tel: (415) 296-9700 Fax: (415) 296-9763  
 E-mail: [info@herbert.com](mailto:info@herbert.com)  
<http://www.herbert.com>

**MARINE & MARITIME INVESTIGATIONS**  
 INSURANCE • CIVIL • CRIMINAL  
 FOREIGN • DOMESTIC

HOLLIDAY INTERNATIONAL, INC. P.O. BOX 5522  
 301-890-5422/703-631-4220 LAUREL, MD 20726

**LEADERS IN MARINE DESIGN SOFTWARE**

- FASTSHIP** from Proteus Engineering  
Used by the US Navy and leading ship-designers and builders for hull design, from concept to final fairing.
- GENERAL HYDROSTATICS(GHS)** from Creative Systems, Inc.  
Widely recognized as the most advanced and productive trim/stability/strength software.
- NAVCAD** from HydroComp, Inc.  
NAVCAD offers an integrated platform to predict resistance and power, and to determine optimum propeller parameters.
- SHIPCAM & NC-PYROS** from Alhacore Research, Ltd.  
SHIPCAM: Proven fairing, lofting and shell expansion for ship construction and repair. NC-PYROS: NC-code generation for burning with automatic path optimization.
- MAESTRO** from Proteus Engineering  
MAESTRO is a structural design tool which combines finite element analysis, failure mode evaluation and multiobjective structural optimization.
- PERCEPTION** from SPAR Associates, Inc.  
Provides planning, scheduling, estimating, purchasing, material inventory control and labor work order management for the integrated shipyard.

**IMCA** INTERNATIONAL MARINE SOFTWARE ASSOCIATES  
 13 Jenkins Court, Suite 200, Durham, NH 03824  
 T: 603 / 868.3344 • F: 603 / 868.3366

**NAVAL ARCHITECTS & SALVAGE ENGINEERS**  
 ▶ Design / Analysis ▶ Salvage Response ▶ Cargo Software  
 ▶ Vessel Inspection for Owner/Operators ▶ Owner Representation

860 • 448 • 4850 [www.jmsnet.com](http://www.jmsnet.com)

**John J. McMullen Associates, Inc.**  
 An Employee Owned Company

**JJMA** 

**Naval Architects • Marine Engineers**  
**Program Support Specialists**

*'Alexandria, VA • Arlington, VA • New York, NY*  
*Newport News, VA • Pascagoula, MS • Pittsburgh, PA*  
*Bath, ME • Port Hueneme, CA • Seattle, WA*

Corporate Headquarters:  
**4300 King Street • Suite 400 • Alexandria, VA 22302**  
 Business Development: (703) 933-6690 • Fax: (703) 933-6777  
 E-Mail: [Marketing@JJMA.com](mailto:Marketing@JJMA.com) • Web Site: [www.JJMA.com](http://www.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 21st Year, Providing Executive Search & Technical Recruitment Services to the Maritime Community and Supporting Industries.*

**M.A.C.E.**  
**FT. LAUDERDALE - USA - WORLDWIDE**  
**PHONE: (954) 493-8913 • FAX: (954) 493-9559**

- N.D.T. Services
- Vibration - noise - structural/modal analysis
- Field balancing, Laser Alignment
- Torque - torsional vibration analysis
- IR - Thermography inspection
- Emmission tests, Engine Performance tests

P.O. Box 18098  
 Beverly Hills, CA 90209  
 (310) 550-1980  
**Murray D. Black**  
 President  
**MARINE DRILLING & BLASTING, INC.**  
 Marine Contractors • Underwater Drilling & Blasting  
 Contract Consulting

**MSC MARINE SYSTEMS CORPORATION**  
 MARINE ENGINEERS / NAVAL ARCHITECTS

**HM&E Design** **Drawings** **Logistic Support**  
**Inspection** **Vibration** **Testing Programs**

68 FARGO STREET, BOSTON, MA 02210 (617) 542-3345  
 E-MAIL: [MSCORP@worldnet.att.net](mailto:MSCORP@worldnet.att.net) FAX (617) 542-2461

**INTERIORS**  
 QUICK CONSCIENTIOUS COMPETITIVE QUALITY

**MSC MARITIME SERVICES CORP.** **QUALITY INTERIORS WORLDWIDE**  
 3457 Guignord Drive • Hood River, OR 97031 USA  
 phone **541-386-1010** fax **541-386-2269**

**MARITECH, LLC** Ph 978-897-9379  
 100 Powdermill Road PMB No 341 Acton MA 01720 Fax 978-246-2411  
[www.maritech-llc.com](http://www.maritech-llc.com)

- Vibration Analysis
- Torque/Horsepower Measurements
- Shaft Alignment
- Non Destructive Testing
- Full Scale Trials and Testing

**MARITECH**  
 Marine Service, Inc.  
 Lennart Rosen

*Specialty: Technical Services of*  
**BERG CP PROPELLERS** since 1981

200 Leslie Dr. Suite # 1128 Hallandale, FL 33009 U.S.A. Sweden office  
 Phone: +1 954 454 7990 Phone: +46 304 374 78  
 Fax: +1 954 454 7702 Fax: +46 304 377 49  
 Mobile: +1 954 646 2058 Mobile: +46 70 581 35 55

**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](mailto:info@mcaengineers.com)  
 web-site: [www.mcaengineers.com](http://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@idt.net.com](mailto:rmellusi@idt.net.com)

**MIL Systems**   
 Naval Architects & Marine System Engineers

1150 Morrison Drive, Ottawa, Ontario K2H 8S9 Tel.: (613) 726-0500 Fax: (613) 726-0252  
[www.milsystems.com](http://www.milsystems.com) [quality@milsystems.com](mailto:quality@milsystems.com)

**Alan C. McClure Associates, Inc.**  
 NAVAL ARCHITECTS • ENGINEERS

2600 South Gessner • Suite 504 • Houston, Texas 77063  
 (713) 789-1840 • (713) 789-1347 Fax

PHONES: (973) 984-2295 1-800-762-9383  
 NIGHT: (973) 538-1789  
 FAX: (973) 984-5181

**MOWBRAY MARINE SALES INC.**  
 2 BROOKFIELD WAY MORRISTOWN, N. J. 07960

SPECIALISTS IN BUYING, SELLING AND RENTING TUGBOATS • BARGES CONTRACTORS FLOATING EQUIPMENT

YOUR MARINE CONSULTANTS

**MSCL INC**  
**ENGINEERING • CONSULTING • VENTURES**  
 1452 Duke Street • PO Box 9910 Alexandria, VA 22304  
 (703) 370-7333 • (703) 370-7363 (FAX)

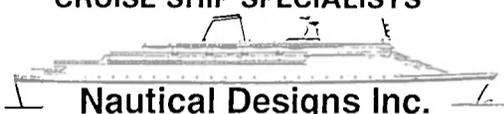
John A.C. Cartner, Ph.D. Master Mariner, (U.S.) [jacartner@compuserve.com](mailto:jacartner@compuserve.com)  
 Malcolm MacKinnon III RADM U.S.N. (Ret.) [mmacm@aol.com](mailto:mmacm@aol.com)

# PROFESSIONAL

**M.S.I. Inc.**  
**MARINE & INDUSTRIAL EQUIPMENT: SALES  
 ENGINES & GENERATORS—RATED HP. & KW**  
 Ph: (206)-321-2354 .. Fax: (425)-313-1615  
 (206)-767-5224 @: msi4152@aol.com

**RODNEY E. LAY & ASSOCIATES**  
**NAVAL ARCHITECTS**  
 13891 Atlantic Boulevard, Jacksonville Florida 32225  
 (904) 221-7447 □ Fax (904) 221-1363  
 e-mail: rela@rodneylay.com  
 Web Site: www.rodneylay.com

**sms** Naval Architects, Instrumentation Engineers, Ocean Engineers  
 Mechanical Engineers, Software Engineers, Coastal Engineers  
 Scientific Marine Services, Inc. Member of The BMT Group of Companies  
**MARINE INSTRUMENTATION  
 TRIALS and TESTING  
 HULL MONITORING SYSTEMS**  
 Houston, Texas Tel: (281) 468-9900 Fax: (281) 468-9900  
 Escondido, California Tel: (760) 437-6800 Fax: (760) 737-6802 Web: www.smsmar.com

**CRUISE SHIP SPECIALISTS**  
  
**Nautical Designs Inc.**  
 NAVAL ARCHITECTS / MARINE ENGINEERS  
 2101 S. ANDREWS AVE. FT. LAUDERDALE, FL. 33316 PH. (954) 463-2033

**M. ROSENBLATT  
 & SON, INC.**  
  
**NAVAL ARCHITECTS ♦ MARINE ENGINEERS**  
*Advisors and Consultants on  
 Marine Matters of All Types*  
 SAN FRANCISCO ♦ BREMERTON ♦ NEW YORK ♦ SAN DIEGO ♦ WASHINGTON, DC  
 NEW ORLEANS ♦ NEWPORT NEWS ♦ NORFOLK ♦ CHARLESTON ♦ PHILADELPHIA  
 Corporate Headquarters: 350 Broadway, New York, NY 10013  
 Tel: (212) 431-6900 ♦ Fax: (212) 334-0837  
 E-Mail: info@mrosenblatt.com ♦ Web Site: www.mrosenblatt.com

**Ship Motion Associates**  
 10 Danforth Street  
 Portland, ME 04101  
 • Tank and Model Testing Programs  
 • Speed /Power, Seakeeping, and Maneuvering  
 Analyses  
 Phone: 207-774-9616 dakers@shipmotion.com  
 Fax: 207-774-9646 http://www.shipmotion.com

**NDI ENGINEERING COMPANY**  
 Alteration Engineering • Plan Development  
 Optical Shaft Alignment • Bearing Reaction Testing  
 Inclining Experiments • COSAL and PTD • Vibration Analysis  
  
 Thorofare, NJ (609) 848-0033 ISO 9001 CERTIFIED  
 internet: jsanial@ndieng.com

  
**SAFETY  
 MANAGEMENT  
 SYSTEMS, LLC**  
*Management Systems Documentation  
 and Implementation Experts*  
 ↓ Safety and Quality Programs  
 ↓ Regulatory Compliance  
 ↓ Shipboard Training, Auditing, and Implementation  
 11 Webhannet Pl, Kennebunk, ME 04043  
 207-985-0002 ↓ fax 207-985-0003  
 WWW.SMSLLC.COM

**STUYVESANT MARINE SERVICES, INC.**  
**DRY DOCK SPECIALISTS**  
 Designs • Certifications • Inspections • Consulting  
 Hardware & Equipment for Marine Railways & Dry Docks  
 400 BORDER STREET • EAST BOSTON, MA 02128  
 TEL: 617-567-5050 FAX: 617-567-5151

**Noise Control Engineering, Inc.**  
 Shipboard Noise & Vibration Control  
 Design, Analysis, FEA, Treatment Selection,  
 Diagnostics, Testing & Underwater Noise  
 799 Middlesex Turnpike 978-670-5339  
 Billerica, MA 01821 978-667-7047 (fax)  
 www.noise-control.com noise@tiac.net

  
**A. Fr. Suda, Inc.**  
**NAVAL ARCHITECTS & MARINE ENGINEERS**  
 • Concept & Contract Design  
 • Construction Drawings  
 • Transportation Analysis  
 • Owner Representation  
 • Computer Applications  
 3004 19th Street Phone (504) 835 - 1500  
 Metairie, LA 70002 Fax (504) 831 - 1925

John E. Zuehlke—Sales & Service  
**North American Cutting Systems**  
 CNC Cutting Systems / Fabrication Machinery  
  
 190 Mesa Dr. PHONE: 1-831-338-8250  
 Boulder Creek, CA 95006 USA FAX: 1-831-338-8024

**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 - SANDHINC@AOL.COM

**OCEAN ENERGY SYSTEMS**  
 Naval Architects & Marine Engineers  
 505 N. Belt East, Suite 320  
 Houston, TX 77060  
 Phone: 281-820-4200 Fax: 281-820-2440  
 Web Site - http://www.oceaneng.com

*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

**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

## Maritime Reporter's Professional Section

(Visit our website @ [www.marinelink.com](http://www.marinelink.com))

WE HAVE IT ALL IN OUR PROFESSIONAL SECTION OF MARITIME REPORTER  
 • Naval Architects • Marine Engineers • Consultants • Surveyors • And More •

DEPTH	YEARLY RATES	COLUMN WIDTH	COLUMN DEPTH
1"	\$ 588.00	1 Column - 3"	Minimum - 1"
1 1/2"	\$ 882.00	2 Column - 6 1/4"	Maximum - 12"
2"	\$1,176.00	3 Column - 9 1/2"	
2 1/2"	\$1,470.00		
3"	\$1,764.00		

MARITIME REPORTER OFFERS YOUR COMPANY THE #1 MARINE INDUSTRY CIRCULATION WITH THE LOWEST ADVERTISING RATES !  
 FOR MORE DETAILS PLEASE CALL CARRIE RIVERA AT 212-477-6700 OR E-MAIL RIVERA@MARINELINK.COM.

### Deutz Augments Lower Power Range With New Engines

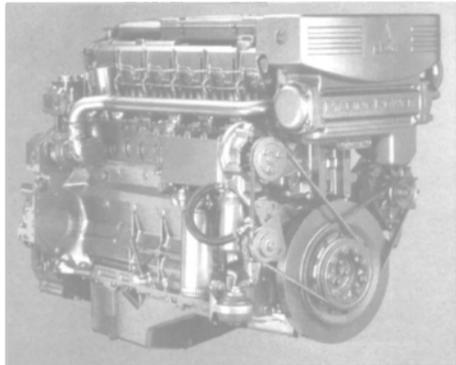
Deutz AG now offers its industrial 1013 and 1015 series engines to serve as main propulsion and to power on-board generating sets. These engines complement the marine engine range in the power class between 80 and 560 kW.

The 1013 series will cover with turbocharged and charge air-cooled four- and six-cylinder in-line engines the power range from around 80-300 kW at a speed of 2,300 min<sup>-1</sup>. Presently, the company has released, for workboat application, a power output up to 195 kW.

For on-board generating sets, there are available 80 to 155 kW (speeds 1,500 or 1,800 min<sup>-1</sup>). The four-cylinder engines have a displacement of 4,761 and the six-cylinder engines, 7,151. They operate with high-pressure injection and are equipped with single injection pumps, directly driven by the camshaft.

Exhaust manifold and turbocharger is watercooled. Raw water is used for charge air cooling. The 1015 series engines are short, extremely compact V-engines with six and eight cylinders. They deliver power outputs between 194-560 kW. Presently, the company has released for workboat application a power output up to 440 kW. The relevant speed range extends from 2,100-2,300 min<sup>-1</sup>. These engines also feature high-pressure injection. The standard version is equipped with mechanical governor. For driving on-board generating sets with power outputs between 210-413 kW at synchronous speeds of 1,500-1,800 min<sup>-1</sup>, an electronic governor is available as an option. Exhaust manifold and turbocharger are watercooled. The charge air is either cooled in the engine cooling circuit or by raw water. All auxiliaries are gear-driven.

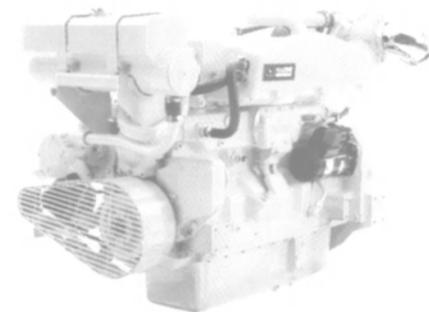
Circle 181 on Reader Service Card



For workboat main propulsion, the new Deutz engines of the 1013 series are available with a power output up to 195 kW.

### Deere adds 8.1 L Engine to Line

Building upon its commitment to the marine industry, Deere Power Systems Group introduced the Powertech 8.1 L marine engine at Fish Expo in Seattle. Replacing John Deere's popular 7.6 L marine engine, the Powertech 8.1 L (6081AFM) marine engine joins the other models in the Powertech line — the 4.5 L, 6.8 L, and 12.5 L engines. The six-cylinder, turbocharged and aftercooled Powertech 8.1 L engine, more specifically referred to as the 6081AFM, offers 235 hp at 2,100 rpm, 300 hp at 2,200 rpm, 330 hp at 2,300 rpm, and 375 hp at 2,400 rpm. Keel-cooled and heat-exchanged versions are also available.



The in-line engine is electronically controlled, provides performance information, and features self-diagnostics that allow the engine to protect itself against anomalies, such as overheating and low oil pressure. The heavy-duty engine offers full authority and proven electronics which optimize performance and fuel usage for given operating conditions. Typical applications for the Powertech 6081AFM engine include fishing boats, lobster boats, cabin cruisers, motor yachts, dive boats, charter/sport fishing boats, passenger ferry boats, whale-watching and other tourist boats, and fast-fishing boats. The Powertech 6081AFM generator set engine is available for base load ship power. The propulsion engine is ideal for boats ranging from 30- to 50-ft. (9.1 - 15.2 m) hull length, in semi-displacement or semi-planing hulls. The Powertech 6081AFM engine's improvements over its predecessor include more displacement and increased power, while still being able to fit in the same location as the 6076AFM engine. The Powertech 6081AFM engine can meet all needs of vessels normally powered with 8- to 10- liter engines. In addition, the 2,400-rpm-rated Powertech 6081AFM engine is able to compete against other engines in its class that have higher rpms.

Circle 9 on Reader Service Card

#### Technomarine Enhances Global Market Share

Technomarine, a subsidiary of the Canadian organization Technomarine International Management, completed the acquisition of Aquatech Marine Ltd., based in Holywell Wales, U.K., providing this manufacturer of aluminum floating pontoons — a significantly greater market reach — through the addition of advanced-composite concrete deck pontoon systems to its product line.

#### DNV Grants Royal Navy Classification



The Royal Navy is seeking greater operational efficiency and cost effectiveness through achieving a Certificate of Class from Det Norske Veritas (DNV)

for one of its vessels.

The achievement of a recognized standard in compliance with DNV class rules by ice patrol ship HMS Endurance follows a performance initiative taken by the U.K. Ministry of Defence's Ships Support Agency.

#### Abu Dhabi Forms Joint Fast Containership Line

Abu Dhabi Investment Company has established Abu Dhabi Container Lines Limited (ADCL) with Norasia Shipping Limited, Switzerland. The new venture will acquire and operate a fleet of 10 fast containership vessels servicing Asian ports and the Pacific Northwest of the U.S. and Canada. The 10 technologically driven vessels, seven of which have already been delivered, move at speeds of 25 knots. The remaining three ships will be sent off between January and July 2000. Commercial and technical operations of the fleet are contracted with subsidiaries of

Norasia for the vessels, which will provide weekly services from Asian ports to the Pacific Northwest and the Pacific Southwest.

#### SeaArk Promotes McClendon

Robin McClendon, former marketing director for SeaArk Marine and SeaArk Boats, has been promoted to vice president of marketing and communications for both companies.



In her position, McClendon will head all internal and external communications, and will be responsible for overseeing the year-long strategic plans of both companies.

#### Heger Dry Dock To Offer Seminar

Heger Dry Dock will present its four-day Dockmaster's Training Seminar during May 2000 in Seattle, Wash.

Held from May 2-5, the

course will provide the latest information on dry docks, and drydocking techniques to dockmasters, marine engineers, naval architects and others involved in the docking vessels.

Topics for discussion throughout the course will include dry dock accidents, types of docks, ship characteristics important to drydocking and docking procedures.

Circle 29 on Reader Service Card

#### Yantai And Friede Goldman Secure Contract

Yantai Raffles Shipyard, in conjunction with prime contractor Friede Goldman Halter, has garnered a \$109 million order from China National Offshore Oil Corp. (CNOOC) to construct a 515 ft. (157 m), 3,800-ton heavy derrick/pipelay vessel.

The two companies, who signed the contract on December 21, 1999 in Beijing, China, beat out competitors from Singapore, South Korea and Japan to secure the largest contract

ever awarded by CNOOC.

Scheduled for a March 31, 2001 delivery, the vessel will be built at Yantai's yard in Shandong Province, China.

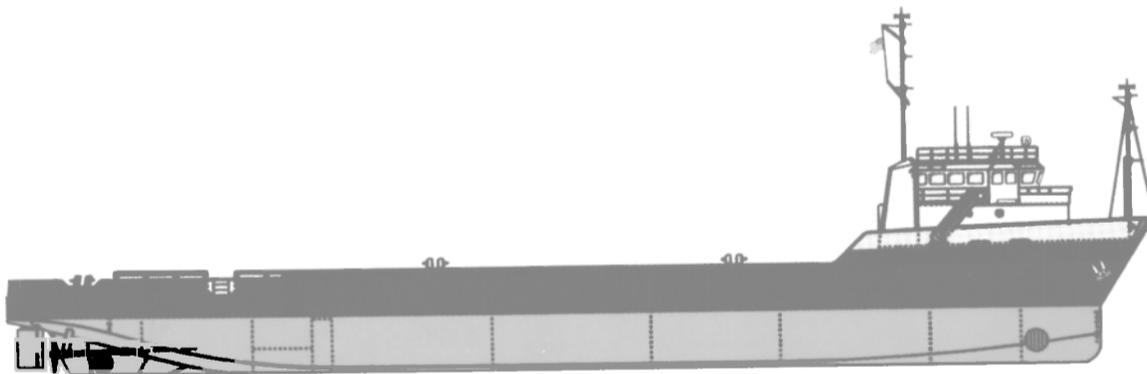
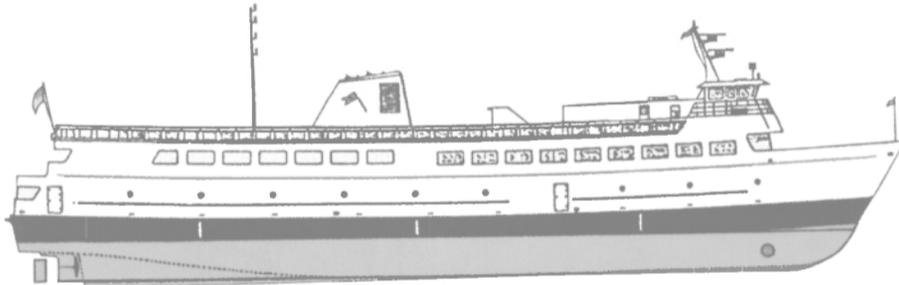
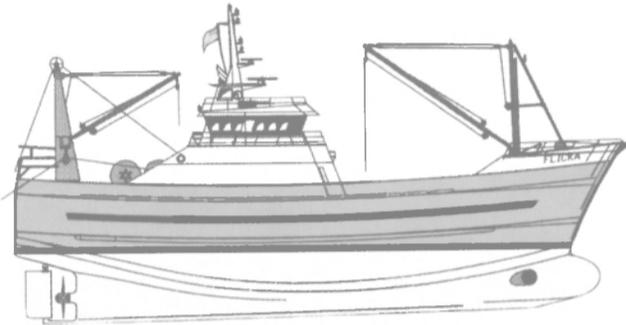
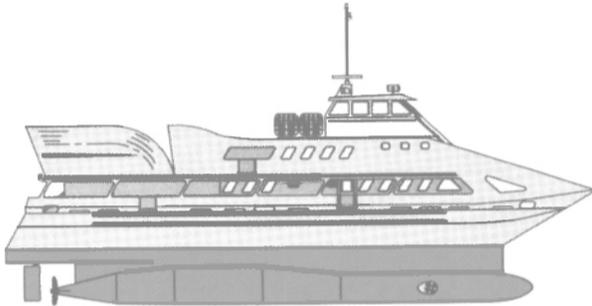
Circle 180 on Reader Service Card

#### Main Particulars

Classification	ABS
Length, (o.a.)	515 ft. (157 m)
Breadth	157 ft. (48 m)
Depth	41 ft. (12.5 m)
Draft	26 ft. (8 m)
Displacement	51,500 tons
DWT	26,000 tons
Complement	280

#### Carnival Takes Third From Kvaerner Masa Yards

Carnival Cruise Lines, a unit of Carnival Corporation has decided to exercise an option with Kvaerner Masa-Yards for the construction of a new 84,000-ton ship scheduled for a 2002 delivery. Able to carry 2,112 passengers, the vessel will be named Carnival Legend, and will cost approximately \$375 million. Legend is the sistership to Carnival Spirit and Carnival Pride, both of which are already under construction.



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  
email: [krm@easternshipbuilding.com](mailto:krm@easternshipbuilding.com)

Circle 273 on Reader Service Card



## M/V PAPU NORTE

**Karl Senner, Inc.** supplied two (2) **REINTJES WAF 772** horizontal offset, reverse reduction marine gears, reduction ratio 6.440:1

**Owner:** Crowley Maritime  
Seattle, Washington

**Shipyard:** A Joint Venture of  
Sanym Shipyard Buenos Aires, Argentina  
and  
Halter Marine Group, Gulfport, Mississippi

**REINTJES**  
MARINE GEARBOXES

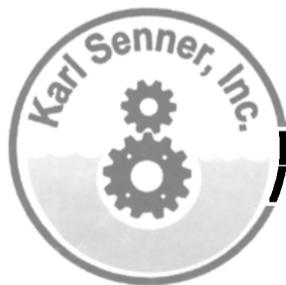
**REXROTH**  
MARINE CONTROLS

**BERG PROPULSION**  
CONTROLLABLE PITCH PROPELLERS AND BOWTHRUSTERS

**ABB**  
ASEA BROWN BOVERI  
TURBOCHARGER SERVICE

**SALES, PARTS, SERVICE • 500 H.P. TO 20,000 H.P.**

Visit our website: <http://www.karlsenner.com>    [sales@karlsenner.com](mailto:sales@karlsenner.com)    [service@karlsenner.com](mailto:service@karlsenner.com)    [parts@karlsenner.com](mailto:parts@karlsenner.com)



# Karl Senner, Inc.

**WEST COAST**  
**Karl Senner, Inc.**  
12302 42nd Drive S.E.  
Everett, WA 98208  
*Mr. Whitney Ducker*  
(206) 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*  
(516) 692-4548