

February 2001

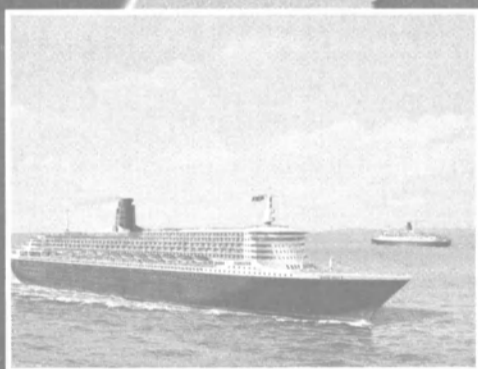
# MARITIME REPORTER

AND  
ENGINEERING NEWS

Cruise industry raising the bar &  
**Hitting New Heights**

## No Compromise

When it comes to safety, Demetrios Kaparis of Celebrity Cruises accepts nothing less than the best



## The biggest & the best?

Queen Mary 2 is coming in 2003, and it promises to be a cruise ship unlike any other

Legal Beat: The Argument for Increased Title XI Funding • New Generation Container Feeder Debuts  
E-Commerce • Ship's Store • Ship Repair & Conversion





# NOR- SHIPPING 2001

## *The shipping week you can't miss!*

The 18th international shipping exhibition  
and conference · 29 May - 1 June 2001  
Sjolyst Exhibition Centre, Oslo, Norway

The major shipping event in 2001 gives you access  
to most of the world's shipbuilding and repair yards  
and the whole spectrum of products and services

- 20 National Pavilions
  - More than 1200 participating companies
  - New compact conference format
- Conference information: [www.seatrade-global.com](http://www.seatrade-global.com)

*Visit our web-site for further information:  
[www.messe.no/nor-ship/](http://www.messe.no/nor-ship/)*

Circle 304 on Reader Service Card



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



**NOW, LARGE  
BORE BEARINGS  
ALSO SHIPPED  
SAME DAY**

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

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

Circle 214 on Reader Service Card

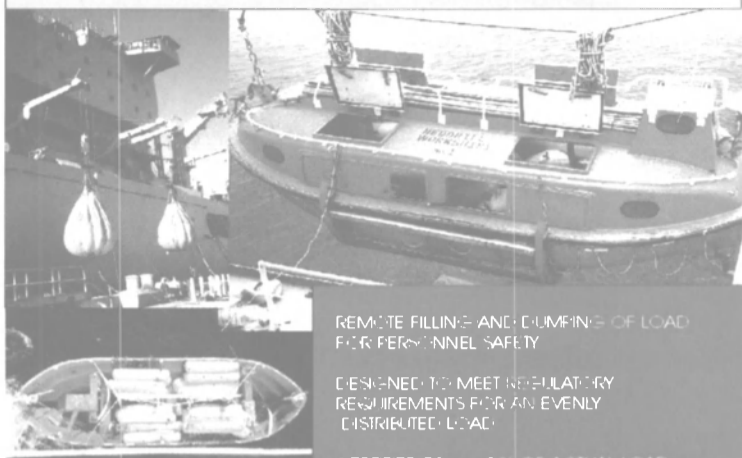
617 Regional Drive,  
Hampton, Virginia 23661  
Tel (757) 838-2987 Fax (757) 838-3860  
www.craftbearing.com email: info@craftbearing.com



**Bearing Company, Inc.**

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

# LIFEBOAT AND DAVIT TESTING



REMOTE FILLING AND DUMPING OF LOAD FOR PERSONNEL SAFETY  
 DESIGNED TO MEET REGULATORY REQUIREMENTS FOR AN EVENLY DISTRIBUTED LOAD  
 CERTIFIED TO +/- 1% OF ACTUAL LOAD

FOR SOLAS COMPLIANCE



for further details call:  
 USA toll free: 1-888-998-3787  
 tel: 1-909-626-8316  
 fax: 1-909-626-8326

**Water Weights Inc**

www.waterweights.com

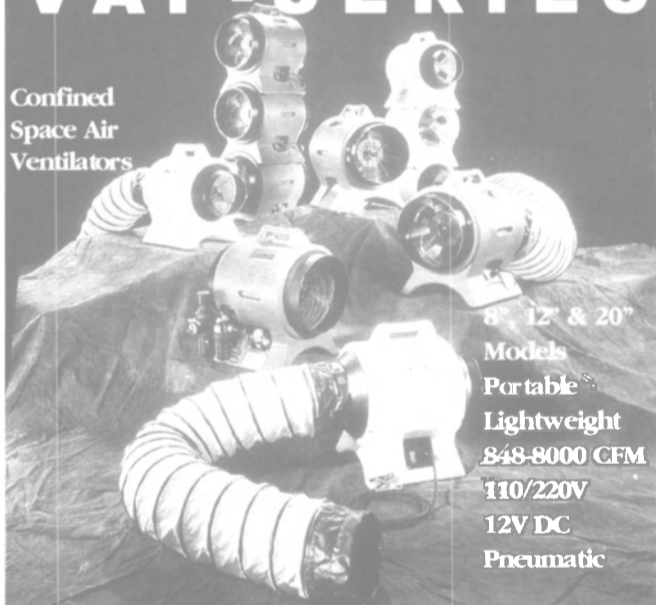
AN IMES GROUP COMPANY  
 www.imes-group.com



Circle 278 on Reader Service Card

## VAF-SERIES

Confined  
 Space Air  
 Ventilators



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



### Americ Corporation

1910 E. Devon Ave.  
 Elk Grove Village, IL 60007  
 For more information, call 800-364-4642  
 or Fax 847-364-4695

www.americ.com

Circle 204 on Reader Service Card

## MARITIME REPORTER

AND  
 ENGINEERING NEWS

ISSN-0025-3448  
 USPS-016-750

No. 2

Vol. 63

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

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

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

On the Cover: Although concerns of overcapacity have some predicting a slowdown of the cruise market's torrid 5+ year run, today's orderbook contains, arguably, the past decade's most exciting projects, with the building of the Cunard's Queen Mary 2 and United States Lines' inaugural newbuild. Cruise coverage starts on page 30.

### 8 Two Stroke Innovations

Diesel engine makers continue to innovate in attempts to continuously improve performance and emission standards.— by **David Tinsley**

### 27 Nowhere to Hide

As the stricken Castor waited patiently for a friendly port, the debate raged regarding Safe Haven for crippled, potentially dangerous ships. Expect change.

## 30 Cruise Shipping Annual

Associate Editor **Regina Ciardiello's** recent visit to Miami netted some unique insights from the industry's sharpest minds, regarding cruise's biggest projects.

**30 Big Is Beautiful:** Queen Mary 2 promises to exceed its spectacular build-up.

**32 Safety is First ... Always:** Celebrity's **Demetrios Kaparis** shares his views on running a safe, environmentally friendly cruise shipping company.

**34 The Dickinson Way:** Bob Dickinson has carved a reputation as radical thinker. Here's why.

**43A SOS:** When Sea Breeze I was caught and consumed in nature's wrath, Comsat and the U.S. Coast Guard were there to ensure there was no loss of life.

**51 Ship's Store: Cruise & Passenger Vessel Products**

**71 Great Cruise Ships of 2000:** Italian shipbuilders led the way in 2000.

**11 Legal Beat:**  
 The Reason More Title XI Funding is Needed

**14 E-Commerce:**  
 Real Time, On-Line Credit Services

**20 Ship Repair & Conversion: Cruise Ship Quick Fix Focus**

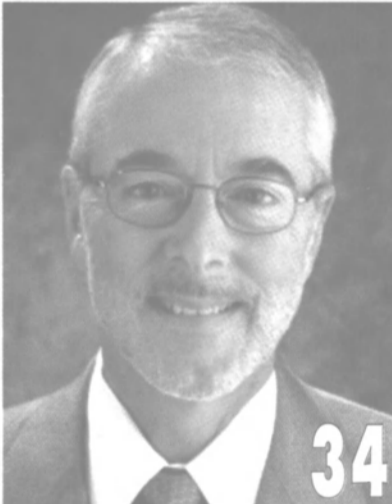
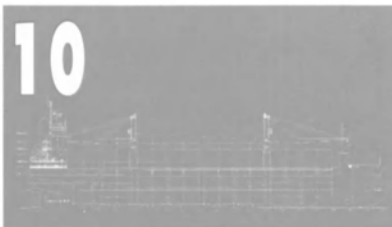
**36A Integrated Bridge Systems Report**

**62 Buyer's Directory**

**64 Advertising Index**

**65 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



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

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

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

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

Member



**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

## Coming in MR/EN

March 2001

**MARITIME TRAINING & EDUCATION** • AWO Annual: Issues driving the North American shallow draft market • **Ship Repair: Fix-It on the Fly** • **Marine On-Line: Directory of Internet Sites** • Country Focus: Spain

April 2001

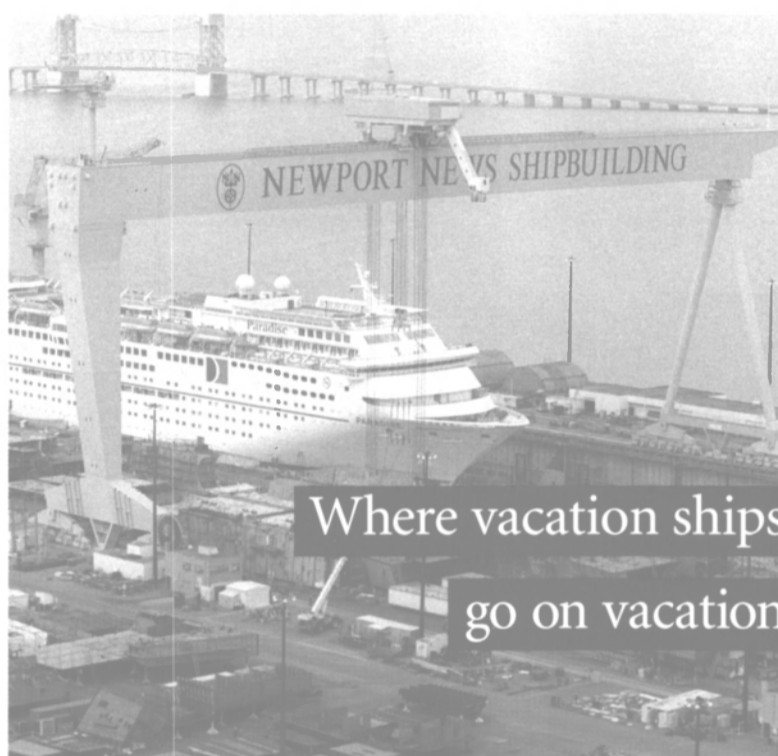
**OFFSHORE ANNUAL** • Marine Propulsion: Selecting &

Maintaining Your System • **Ship's Store: Safety Products & Systems** • Country Focus: Finland

May 2001

**ENGINEERED SOLUTIONS** • CAD/CAM Technology: The latest from the world's premier suppliers • **Naval Vessel Annual: Fleet profile & prospects** • **Ship's Store: Marine Fuels, Lubes & Additives** • **Country Focus: Norway**

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



Where vacation ships  
go on vacation

Newport News Shipbuilding is the premier yard to handle all of your ship repair needs. With 100% delivery—on time, every time—every customer sails home satisfied. To make plans for your cruise ship's next vacation, call us at 1-757-667-7447. We're available 24 hours a day.



**NEWPORT NEWS  
SHIPBUILDING**

*World's Most Advanced Shipbuilder*

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

## International Operations

**CHARLES E. KEIL**, Vice President

215 NW Third Street  
Boynton Beach, FL 33435

Tel: +561-732-0312; Fax: +561-732-8063

24-hr Tel/Fax: +561-998-0313;

Mobile Tel: +561-716-0338

e-mail: [bkeil@marinelink.com](mailto:bkeil@marinelink.com)

### **AustralAsia, United Kingdom**

**TONY STEIN**, International Sales Manager

12, Braehead, Bo'ness,

West Lothian EH51 0BZ, Scotland, U.K.

Tel: +44 (0) 1506 822240;

Fax: +44 (0) 1506 828085

### **Benelux**

**PAULA TACQ**

Maritime Media ML, Orweg 18 2771 VX Boskoop,  
Netherlands

Te: +31 172 230707; Fax: +31 172 230708

### **China**

**TED GREEN**

Zhejiang International Advertising Corp.

596 Tiyuchang Road, Hangzhou, Zhejiang 31007

Tel: +86 571 5150937; Fax: +86 571 5150444

### **Germany/Switzerland**

**HANSJORG BRANS**

Maritime Media

Freiherr v. Stein Str. 24, D-63303

Dreieich, Germany

Tel: +49 6103 697745; Fax: 49 6103 697743

### **Italy**

**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

### **Scandinavia**

**STEPHAN R.G. ORN/LEON SCHULZ**

AB Stephan R.G. Orn, Box 184

S-271 24 Ystad, Sweden

Tel: +46 411-184 00; Fax: +46 411 105 31

### **Spain**

**JOSE LUIS SEVA**

Via Exclusivas S.L., C/ Viriato, 69 SC

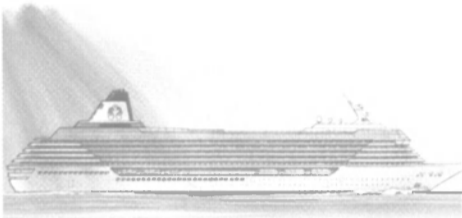
28010, Madrid, Spain

Tel: +34 91 448 76 22; Fax: +34 91 446 0214

## Cruise Contracts

### Crystal Cruises Signs Contract For New Ship

Crystal Cruises' parent company, NYK, signed a contract on December 12, 2000 with French shipyard Chantiers de l'Atlantique for the construction of a new luxury ship. The contract signing comes just five weeks after the formal Letter of Intent and establishes a June 2003 delivery date, almost six months ahead of original plans enabling the vessel to be operational for the summer season.



At its current capacity of 1,880 berths (940 each on Crystal Harmony and Crystal Symphony), Crystal Cruises is one of the largest luxury cruise operators in the industry. The yet-unnamed 68,000-ton, 1,080-guest ship will increase the line's capacity by almost 60 percent.

Crystal's newbuild will feature an even greater space-per-guest ratio than its sister ships. Like Crystal Harmony and Crystal Symphony, the newbuild will boast a full outside promenade, a grand observation lounge, a variation of the ships' popular Palm Court lounge, multiple dining venues, and a variety of entertainment lounges — including a state-of-the-art theater.

Environmentally friendly diesel engines will power the ship and an azimuthal pod propulsion system will be incorporated for greater maneuverability. The lead architect will be **Robert Tillberg** of Tillberg Design, supported by a number of internationally renowned designers who will be involved with various aspects of the ship's interiors.

### Mediterranean Shipping Orders New Cruise Ship

Mediterranean Shipping Company (MSC) has announced that its cruise division, Mediterranean Shipping Cruises has confirmed an order for a new \$250 million, 1,600-passenger capacity cruise ship to be built by the French shipyard, Chantiers de l'Atlantique. Negotiations are also in progress for a second ship of the same capacity.

Backed by a network of MSC owned offices and affiliated agents worldwide, Mediterranean Shipping Cruises is the only cruise company totally capitalized in Italy. It is part of the MSC Group of

Companies, one of the world's largest shipping groups with \$2.5 billion in assets.

Ranked as the fourth largest container operator in the world, MSC also operates 140 container ships in direct and relay services around the world, serving 166 ports on five continents. Ten new 6,700-TEU containerships were ordered

last year, and the first of these will be delivered in 2001.

With this new cruise ship order, Mediterranean Shipping Cruises increases its cruise cabin capacity by 60 percent, from 2,400 to 4,000 berths per night. The new 60,000-ton cruise liner will have 800 cabins; the total capacity, all berths, will be 2,200 passengers.

To increase comfort levels and reduce engine noise aboard the ship, MSC has ordered the installation of a technically advanced Azipod propulsion system.

MSC will take delivery of the new cruise liner in the spring of 2003, bringing its fleet total to four ships. If an order for a second ship is confirmed, delivery would take place in 2004.



**You'd Be  
Hard-  
Pressed  
To Find  
A Better  
Fender.  
Really  
Hard-  
Pressed.**

Large or small, floating or fixed, Seaward SEA GUARD® fenders cover you from the tropics to the arctic. Seaward International brings to fender technology the same rigorous quality control and attention to detail we put into all our marine products. From the 2'x4' to the tanker-scaled 12'x24', all our fenders meet the most stringent quality and performance standards.

The SEA GUARD fender combines quality assurance standards with new elastomer technologies such as a reinforced skin, making it the answer to most fender system requirements.

The first of its kind 20 years ago, the Seaward foam-filled fender maintains its record of reliability. And we continue to develop and supply the protective marine technologies that keep you on course.

All our products tell the same story: Seaward is committed to safeguarding your peace of mind.

Structures, ships, environments, budgets: We protect it all.



3470 Martinsburg Pike, P.O. Box 98,  
Clearbrook, VA 22624-0098 USA  
1-800-828-5360 • 540-667-5191  
Fax: 540-667-7987 [www.seaward.com](http://www.seaward.com)

SEA GUARD® is a registered trademark of the Chem Ray-SEAGUARD Corporation. Used under license by SEAWARD International, Inc.

## Editor's Note

“Mind boggling” is the only phrase to describe recent events in the marine market. Last month the industry was front-page material for most major consumer press publications, which is rarely a positive sign.

At press time, salvage operations were underway aboard Castor to prevent the vessel from splitting open and spilling thousands of tons of gasoline into the western Mediterranean. The ship, which developed a 60-ft. crack in its deck during a voyage through rough weather in late December 2000, has become a lightning rod for the debate on safe haven for damaged ships carrying volatile cargo. Attempts to bring the ship into Spain, Gibraltar and Morocco were repeatedly thwarted (see story, page 27).

In another incident, the 835-ton Jessica ran aground just off of Ecuador's famed Galapagos islands — islands famed for housing some of the world's rarest species and serving as inspiration for British naturalist Charles Darwin's theory of natural selection. While Mother Nature and quick action helped to mitigate the effects of the 160,000 gallon spill — and it appears that the environment will make a full and rather rapid recovery — the wreck will not soon be forgotten and will surely serve as fuel for activists' fire. Jessica's 58-year-old captain has claimed sole responsibility for the accident, claiming he misjudged his entrance into the aptly named “Shipwreck Bay.”

In times of crisis, the fact is lost that more than 99 percent of the world's petrol products are moved safely, without incident. But it is these incidents, combined with other recent and historical accidents, that cumulatively help to shape the industry's future. While it is impossible to gauge the exact impact on future vessel design, equipment, training and support functions, it is a sure bet that regulators on the international, national and regional fronts will seek new measures designed to financially penalize rule-breakers while ensuring “safer” shipping. Perhaps it is time for the marine industry to adopt the philosophy depicted above Celebrity's Demetrios Kaparis on page 32: “Eternal Vigilance is the Price of Safety.”

*Gregory R. Trauthwein*

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

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



# MARITIME REPORTER AND ENGINEERING NEWS

## ASSOCIATE PUBLISHER

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

**NEW YORK**  
118 E. 25th St., New York, NY 10010  
Tel: (212) 477-6700; Fax: (212) 254-6271  
e-mail: [mren@marinelink.com](mailto:mren@marinelink.com)  
Internet: [www.marinelink.com](http://www.marinelink.com)

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

### EDITORIAL

#### Associate Editor

Regina P. Ciardiello • [ciardiello@marinelink.com](mailto:ciardiello@marinelink.com)

#### Technical Editor

David Tinsley

#### Editorial Consultant

James R. McCaul, president, International Maritime Associates

#### Manager of Information Systems

Susan Cosme • [cosme@marinelink.com](mailto:cosme@marinelink.com)

### MARKETING

#### Marketing Assistant

Angelita Rivera • [arivera@marinelink.com](mailto:arivera@marinelink.com)

### PRODUCTION

#### Production Manager

Sharon Griffin • [griffin@marinelink.com](mailto:griffin@marinelink.com)

#### Asst. Production Manager

Oksana Martemy • [martemy@marinelink.com](mailto:martemy@marinelink.com)

### CIRCULATION

#### Circulation Manager

Dale L. Barnett • [barnett@marinelink.com](mailto:barnett@marinelink.com)

### ADVERTISING SALES

#### Vice President of Sales

Lucia M. Annunziata • [annunziata@marinelink.com](mailto:annunziata@marinelink.com)

#### National Sales Manager

Robert C. Howard • [howard@marinelink.com](mailto:howard@marinelink.com)

Tel: (561) 732-3001; Fax: (561) 732-6984

#### Regional Sales Manager

Jennifer Truman • [jtruman@marinelink.com](mailto:jtruman@marinelink.com)

#### Regional Sales Manager

Brett W. Keil • [bkeil@marinelink.com](mailto:bkeil@marinelink.com)

Tel: (561) 732-1185; Fax: (561) 732-6984

#### Regional Sales Manager/Electronic Product Sales

Joe Trubinsky • [trubinsky@marinelink.com](mailto:trubinsky@marinelink.com)

Tel: (561) 732-4368; Fax: (208) 575-3217

#### Assistant to the Vice President of Sales

Tina Angelino • [angelino@marinelink.com](mailto:angelino@marinelink.com)

#### Classified Sales

Tel: (212) 477-6700

### PUBLISHER

John E. O'Malley

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

### Chief Financial Officer

Al Adinolfi

## Other Printed, Internet & Electronic Products

### Publications

#### MarineNews MarineNews



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

#### Maritime Week

Published weekly, Maritime Week provides unequalled financial insights, reports, news and statistical analysis on the trends driving the international maritime business.

### Electronic Products & Services



#### www.maritimetoday.com

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



#### www.maritimejobs.com

The marine industry's recruiting & employment resource.



#### www.marinelink.com

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

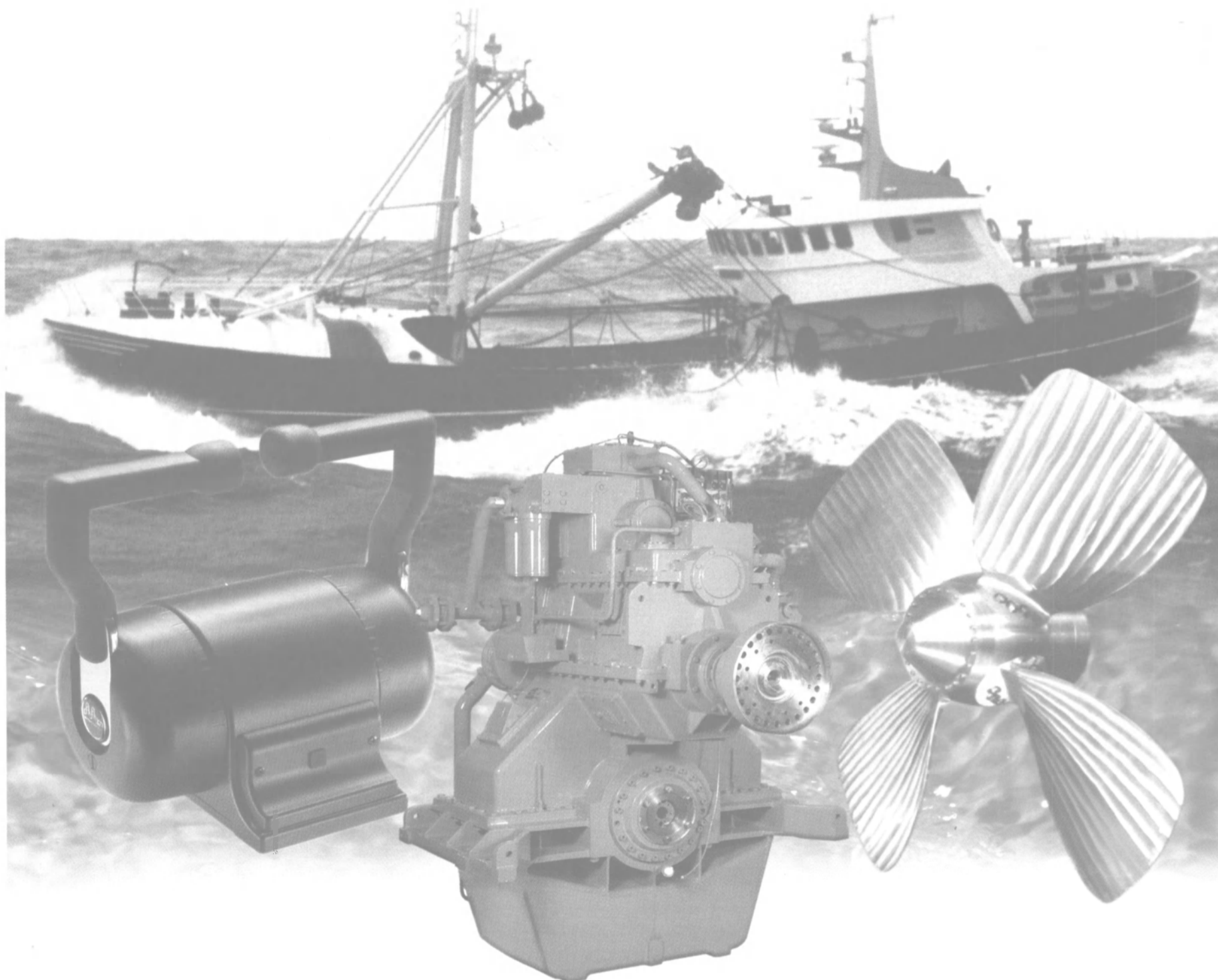
Looking for *service* reliability, we deliver it.  
ABB Turbochargers

**ABB**

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

Circle 201 on Reader Service Card





# Perfect propulsion partners.

## Correct Combination

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

## Transmission Leader

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

## Propulsion Partnerships

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

## Perfect Packages

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



For further information, please contact :

### ZFI Marine U.S. Headquarters

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

### ZFI Marine Gulf Coast

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

### ZFI Marine West Coast

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

### ZFI Marine North East Coast

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

Visit our website - [www.ZF-Marine.com](http://www.ZF-Marine.com)

# Two-Stroke Milestones

by David Tinsley,  
technical editor



Eastern seaboard operator Gypsum Transportation provided a beacon for the industry when it nominated a camshaft-less, electronically controlled Sulzer diesel engine for its 50,000-dwt-bulker newbuild project. Now, the interests behind a Mediterranean reefership scheme have also endorsed the concept, which represents a milestone in two-stroke technology, and signals a step change in large diesel engine operating flexibility.

In one sense, MAN B&W stole a march on arch-rival Wartsila through the recent conversion at sea of a low-speed,

MC-series propulsion engine to full electronic control. However, Wartsila's latest success in sealing contracts for two Sulzer engines configured from the outset for operation in electronic mode gives new commercial succour to the group's technological drive.

As with Gypsum Transportation's self-unloader, due to be commissioned in July, a newly-booked pair of reefer vessels for the Israeli export trade will provide an operating platform for the innovative Sulzer RT-flex system.

Just as the results from the extended, 10,000-hour test of the 6L60MC elec-

tronic engine in the chemtanker Bow Cecil will influence the future MAN B&W two-stroke program, the RT-flex contracts have potentially enormous, long-term significance for Wartsila's low-speed engine business and future technological endeavors.

If shipowners can realize the gains in reliability, economy and flexibility across the complete engine operating profile promised by the advocates of the electronic mode, demand for such plant will surely accelerate. The capital cost of low-speed machinery employing computerized fuel injection and valve

actuation, relative to the conventional, camshaft-fitted product, would not appear to be an issue. Rather, and in time-honored fashion, the shipping industry will be looking to a fair spread of operating and performance results from such a fundamental change in engine design before it unreservedly embraces the technology. The Sulzer RT-flex system applies common-rail fuel injection to the low-speed sector. Common-rail systems, first used on smaller types of four-stroke machinery, are also being introduced to the large medium-speed diesel category, as

**VIKING**  
LIFE-SAVING EQUIPMENT

**VIKING Davit-Launched Liferaft**

Available in 12, 16, 20, 25 & 35 person capacities  
Automatically self-righting liferafts in 25 & 37/39 person capacities

**VIKING Marine Evacuation Chute**

The high-capacity single-chute system evacuates 353 persons in 30 minutes and the high-capacity side-by-side chute system evacuates 706 persons in 30 minutes.

- Viking liferafts are U.S.C.G. approved
- SOLAS '96 amendments to SOLAS '74 regulations
- LSA Code

VIKING LIFE-SAVING EQUIPMENT (AMERICA) INC.  
1625 N Miami Avenue · Miami FL 33136 · Tel (305) 374-5115 · Fax (305) 374-1535  
http://www.viking-life.com · e-mail: us@viking-life.com

Circle 275 on Reader Service Card

**AMOS**  
Computer

The **AMOS A310M** Maritime Computer was designed by SpecTec focusing on the safety and reliability required in critical applications on ships and offshore installations.

The **AMOS A310M** Maritime Computer has passed all tests required by the classification societies, including the IEC-945 specifications.

Please contact us at:  
**SpecTec**

6961 Hanging Moss RD  
Orlando, Florida 32807  
Tel: +1 407 671 4019  
Fax: +1 407 671 6606  
E-mail: allen.amos@disctec.com

Main Office Oslo:  
Tel: +47-67 52 55 50

AMOS SOLUTIONS BY **SpecTec**

**AMOS SOLUTIONS:**  
 AMOS Computer  
 AMOS Express  
 AMOS Mail  
 AMOS Maintenance  
 AMOS Personnel  
 AMOS Purchase  
 AMOS Infomanager  
 AMOS RAST  
 AMOS SAMA  
 AMOS Satcom  
 SFI Group System

Circle 270 on Reader Service Card

## Investment in Design

demonstrated by Wärtsilä's unfolding EnviroEngine program. Extensive tests on the group's full-sized research engine at Winterthur, Switzerland, show that the RT-flex layout is conducive to operation on the same grades of high viscosity, heavy fuel oil as ingested by standard RTA-series engines.

The electronic two-stroke Sulzer engines specified for two 13,200-dwt reeferships ordered from a Portuguese yard will have the same cylinder diameter, albeit with a longer stroke and a seven-cylinder rather than six-cylinder arrangement, as MAN B&W's first electronic 6L60MC power unit in Bow Cecil. Each Sulzer 7RT-flex60C engine will deliver 22,470-bhp (16,520-kW) to ensure the 21.3-knot service speed required by Israel's Agricultural Export Co. (Agrexco) for its new, combined pallet and container-carrying new vessels.

Ordered from Estaleiros Navais de Viana do Castelo, the ships are destined for the fresh produce traffic from the eastern Mediterranean to France and Spain. German technical, design and finance-raising influence in the new-build project is substantial. Wärtsilä said that the owner's expectations with regard to operational economy and environmental standards led to the adoption of RT-flex technology. The first Sulzer RT-flex production engine has been manufactured by Hyundai Heavy Industries for transfer across the Ulsan peninsula to Hyundai Mipo Dockyard, where the recipient, self-unloading bulkship for Gypsum Transportation is taking shape. Also described as the first "smokeless" engine in the two-stroke category, the 6RT-flex58T-B was chosen for its favorable exhaust emission characteristics and overall fuel efficiency, including performance at non-optimum speeds.

The conversion of the 6L60MC main engine in Odfjell's stainless steel chem-tanker Bow Cecil has made the much-vaunted Intelligent Engine concept a seagoing reality. With the two-stroke unit in the 1998-built vessel already prepared for switchover, the adaptation from standard camshaft operation to fully-computerized fuel injection and valve actuation was accomplished in just an hour and a half, with the ship lying off Borneo.

"This event is the climax of 10 years of dedicated development efforts to pave the way for a future generation of extremely reliable engines with comprehensive flexibility in terms of operating modes," stated MAN B&W. Another milestone is in sight: Concordia Maritime's two V-max crude carriers, due for delivery by Hyundai in the spring, will each be powered by twin MAN B&W two-stroke engines arranged for

conversion to electronic control at each ship's first scheduled drydocking. Getting the measure of pods. The industry's uptake of podded, azimuthing electric drives has proved to be one of the most pronounced technical trends of recent years, most especially as regards the cruise ship and specialized vessel categories. New and upcoming applications

in the crude carrier, products tanker and RoRo passenger ferry sectors attest to an ever-widening appreciation of the design and operational merits of podded electric propulsors.

As with any area of innovation, though, it is important that the ongoing design process is attuned to actual operating experience in the field. Hydrome-

chanical and structural performance have been thoroughly investigated numerically and by means of model testing. However, since the preponderance of seagoing systems date from as recently as 1998, the basis for demonstrating the long-term integrity and reliability of the concept remains theoretical. A three-year, pan-industry study



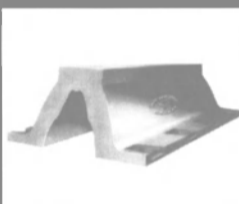
## DOLPHIN RUBBER FENDERS

ALL TYPES / ALL APPLICATIONS

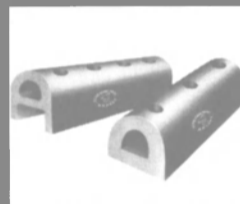
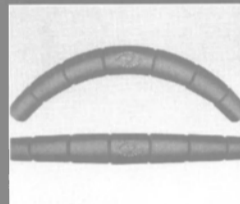
### Pneumatic Fenders



### DockFenders



### Ship Fenders



Engineered & Manufactured by:

Distributed in the Americas by:

### KUMNAM CHEMICAL, INC.

348-3, Chung Chun-Ri, Chillye- Myun  
Kimhae, Kyungnam, Korea  
Tel: 82 (55) 346-3313  
Fax: 82 ( 55) 346-3137

### DOLPHIN INTERNATIONAL, CO.

881 SW 59th Avenue  
Ft. Lauderdale, Florida 33317  
Tel: (954) 581-4858 Fax: (954) 581-9892  
E-mail: Shipshore@att.net

[www.dolphinfenders.net](http://www.dolphinfenders.net)

Circle 218 on Reader Service Card

## Reduce Your Engineering, Solve Your Sanitation Needs

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

#### EVAC systems:

- Use only 3 pints/flush of fresh water
- Clean with a 5 nozzle flush ring
- Use small, 1.5" - 2" diameter piping
- Piping can be flexible with vertical lifts
- Reduce sewage volume by 90%
- Reduce holding tank size by 80%
- Eliminate toilet vents
- Reduce material and labor costs
- Cut topside piping weight



EVAC 90 TOILET

#### EVAC ORCA® II A Marine Sanitation Devices:

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



ORCA II A (165-500 PEOPLE)



ORCA II A (12-70 PEOPLE)

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

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

—Serving the marine industry for 20 years



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

Circle 224 on Reader Service Card

## Investment in Design

program drawing in extensive European and U.S. participation will provide an important conduit for service results with pod systems. Called Pods in Service, and coordinated by the Dutch Maritime Research Institute MARIN, the project is intended to assess and evaluate the reliability and integrity of podded propulsors under operational conditions.

In measuring performance, loads encountered by pods and the dynamic response of the pods and the vessel hull throughout the ship's service pattern, including extreme conditions, a key objective is to provide a method for determining and reflecting such loads at the design stage. The breadth of ascription by shipowners, yards, pod manufac-

turers and classification societies and other bodies to the joint industry project militates in favor of a productive exchange of knowledge and experience. There are 24 partners in total. The pragmatic nature of the endeavor is underscored by the fact that measurement campaigns will be conducted aboard four vessels equipped with three differ-

ent pod systems. The first ship to provide an operational focus is the Finnish combined icebreaker and supply vessel Botnica. Three newbuildings will enter the program on delivery, namely Royal Caribbean's Radiance of the Seas, Celebrity Cruises' Millennium-class Summit, and one of two diesel-electric RoPax ferries under construction for Germany's TT-Line.



### Get state of the art firefighter training without getting burned

Receive U.S. Coast Guard approved marine firefighting certification from America's leading state-of-the-art firefighter training facility. You'll receive the best training available in a realistic ship environment:

- Low tuition fees due to non-profit status
- Experienced, fully certified instructors
- Small class sizes—just 20 students
- Located between Kennedy Space Center and Cocoa Beach
- 45 minutes from Orlando and its famous attractions

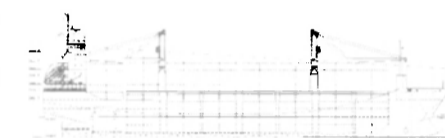
Five-day combined Basic & Advanced Marine Fire Fighting courses begin May 7, Sept. 10 and Nov. 26, 2001

**PORT CANAVERAL MARITIME ACADEMY**  
8970 Columbia Road • Cape Canaveral, FL 32920  
Fax: 321-783-4887 • Ph: 321-783-4251 • [www.portcanaveral.org](http://www.portcanaveral.org)  
Circle 287 on Reader Service Card

On Florida's Atlantic coast—minutes from Orlando

## New Generation Container Feeder Design Debuts

Knud E. Hansen-developed KEH MARK 1200 & KEH MARK 1500 Container vessels offer compact size, big




capacity and super efficiency

Knud E. Hansen, Copenhagen has developed the next generation of container feeder vessels. The new generation was inspired by inquiries from major clients for these size feeder vessels. The efficiencies of the KEH MARK 1200 and 1500 have been achieved by making extremely compact vessels by using the experience gained from the KEH Mark V, Mark VI S, Mark VI, Mark VII and Mark X all designed by KEH, numerous ships of these designs have been built over the years. KEH has managed to design the vessels one FEU shorter, but one box wider, with lines requiring less horsepower for the same capacity and speed, but also resulting in improved stability and a lower GT versus the container capacities. The ratio between container intakes and positions are 71 percent and 72 percent, respectively. The total container capacities of Mark 1200 and 1500 respectively are 1,212/1,536 TEU or 860/1,110 TEU homogeneously loaded 14 tons/TEU. The KEH MARK 1200 is fitted with 250 reefer plugs and Mark 1500 is fitted with 400 reefer plugs.

Circle 25 on Reader Service Card

	KEH Mark 1200	KEH Mark 1500
Length o.a.	153 ft.	545 ft.
Breath molded	83 ft.	91 ft.
Draft design scantling	25/33 ft.	28/34 ft.
DW1	10,800/18,300 t	15,000/21,500 t
Total container capacity	1,212 TEU	1,536 TEU
Homogeneous loading at 14t TEU (Intake)	860 TEU	1,110 TEU
Reefer container capacity	250 FEU	400 FEU
Max. Reefers in holds.		
Separate ventilation.	Yes	Yes
Container cranes (optional)	2 x 40 t	2 x 40 t
Speed	19.5 knots	20.5 knots
Main engine output (MCR)	1 x 11,440 kW	1 x 14,800 kW
Diesel generator capacity	3 x 900 kW	3 x 1,200 kW
Shaft generator	1 x 1,250 kW	1 x 1,800 kW



Each redFox unit is custom-designed to meet the toughest space-saving needs for the marine industry. With no moving parts and an extended aeration process, units provide many years of worry-free operation and eliminate the need for sludge drain off and disposal.

Since 1969, redFox has provided the marine industry with more than 4,000 hassle-free wastewater treatment units. The fact that most of these units are more than 10 years old stands as a testament to the innovative concepts which make redFox the unparalleled leader and experienced choice for the marine industries waste treatment needs.

**redFox**  
ENVIRONMENTAL SERVICES, INC.  
YOUR WASTEWATER TREATMENT SPECIALIST

714 E. Kaliste Saloom Road, Suite B-6 • Lafayette, Louisiana 70508  
Telephone: 337-235-2499 • Facsimile: 337-235-2999  
e-mail: [info@redfoxenviro.com](mailto:info@redfoxenviro.com) • [www.redfoxenviro.com](http://www.redfoxenviro.com)

TAKING CARE OF BUSINESS

Circle 263 on Reader Service Card

## Legal Beat

# Dear President Bush ... Reasons for More Title XI Funding

By: **Duncan C. Smith III** and  
**James S.W. Drewry**

One of the first important official acts of new U.S. President **George W. Bush** will be to submit to Congress a budget request for the entire U.S. Government for fiscal year 2002. For Americans with a stake in shipbuilding, a key budgetary concern is the amount of funding that will be requested for the Federal Ship Financing Program administered by the Maritime Administration ("MarAd"). The Program is commonly known as the "Title XI Program" because its statutory authority is spelled out under Title XI of the Merchant Marine Act, 1936.

Well over \$5 billion in these loan guarantees have been provided since 1993 by MarAd for a wide range of construction projects, ranging from large cruise ships and double-hulled tankers to fast ferries and a variety of cargo vessels. Further, the six U.S. shipyards that take the lead in ship construction for the U.S. Department of Defense point to the Title XI Program as important to the maintenance of the American national security industrial base. In addition, MarAd's conscientious effort to ensure that only the most meritorious projects receive funding has led to minimal defaults and a net gain to the U.S. Treasury of over \$150 million from fees and interest since FY 1993.

Until the last few years, the Program's funding levels have been close to the \$50 million per year average contemplated in 1993 when the National Shipbuilding Initiative was enacted. However, budgetary pressures related in part to the cost of the 2000 census led to a precipitous drop in appropriations for Title XI for FY 1999 and FY 2000. Together with further underfunding in the FY 2001 appropriations Act, these meager appropriations have resulted in a \$108 million shortfall. The \$40 million available at the beginning of FY 2001 is historically the lowest amount of available funding since 1993, only enough to cover about \$800 million in new project loans, with almost \$5 billion worth of applications for new loans pending.

To make up for three years of drastic underfunding and to ensure that funding will be sufficient to finance the projects likely to be approved by October 1 of this year, some shipbuilding advocates are pressing for \$60 million in supplemental appropriations. They argue that this should be followed by at least \$75 million for FY 2002 to further close the shortfall and to maintain the Title XI Program at the \$50 million per year annual appropriation level.

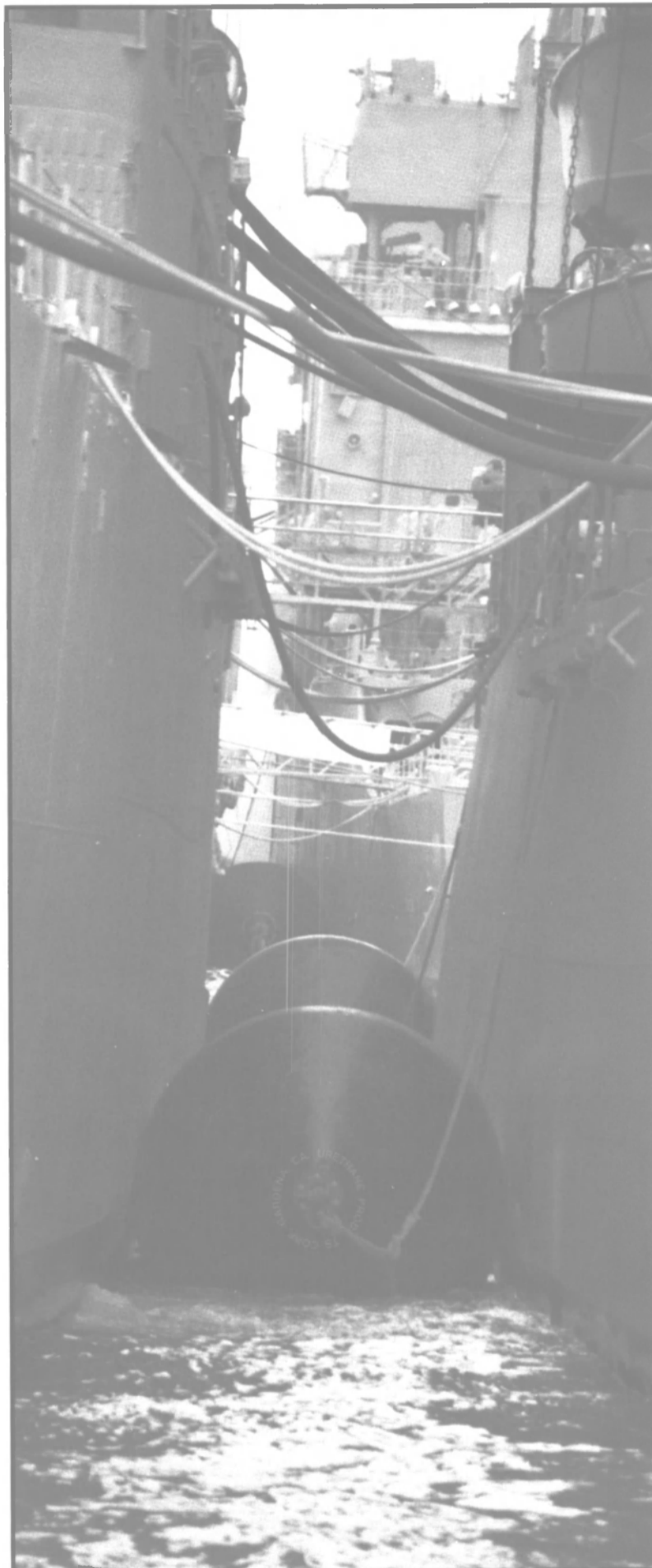
### Background

Prior to the implementation of the Federal Credit Reform Act ("FCRA") in the early 1990s, appropriations were not required for the issuance of a federal loan guarantee. However, thanks to the

passage of the FCRA, the risk of default for every loan to be guaranteed by the U.S. Government must now be covered by appropriated dollars. Therefore, funds have been appropriated annually to provide risk reserves for Title XI loan

guarantees from fiscal year 1993 to the present. In recognition of the long-term nature of shipbuilding projects, appropriations Acts do not require Title XI appropriations to be spent in a particular fiscal year but permit them to be carried forward from year to year until spent (so-called "no-year money").

Before a Title XI loan guarantee may



## 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**

9076 Rosecrans Avenue  
Bellflower, CA 90706  
Phone (562) 630-4982 • Fax (562) 630-6974

Circle 283 on Reader Service Card

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

## Legal Beat

be issued. MarAd evaluates the loan's default risk under guidelines from the Office of Management and Budget and in light of a number of statutorily prescribed risk factors. This evaluation results in a determination of the amount of risk reserve required. For budgetary projection purposes, the most common risk reserve for Title XI guarantees is

five percent of the amount of the guarantee. Depending on the economic evaluation, the reserve may range from 1.5 percent to 15 percent. However, the risk reserve of most approved projects is close to five percent.

When the new Title XI Program was authorized in the early 1990s, Congress committed to an annual funding level of

\$50 million. Yet over the past three years, the funding for the Program fell approximately \$108 million short of the level that would have resulted from implementing the \$50 million annual commitment. For example, the annual appropriation was only \$6 million for FY 1999 and again for FY 2000. This underfunding was exacerbated last sum-

mer by the rapid draw down in the balance carried over from year to year, at a rate faster than anticipated in the Congressional estimates used to determine the annual amount needed in FY 2001.

### Title XI Guarantees Benefit the Defense Industrial Base

The United States defense industrial base for naval ship production has diminished to six shipyards. These yards and the many smaller facilities that act as suppliers and subcontractors for major ship construction projects by the U.S. Department of Defense rely on commercial shipbuilding to maintain their skilled workforce during fluctuations in naval construction. Historically, markets for commercial and U.S. Navy shipbuilding have been cyclical, and both types of construction have thus been needed to sustain the core defense shipbuilding industry. The six national defense shipyards, for example, have delivered almost 1,000 large oceangoing commercial ships and 1,150 naval ships.

The Title XI Program has been a key element in revitalizing commercial shipbuilding in the United States. This point was emphasized in a May 2000 statement by the late Rep. **Herbert Bateman** (R-Va.), then Chairman of the House Armed Services Committee's Merchant Marine Panel:

"Commercial ships will not be built in the United States without access to affordable financing. The Title XI ship loan guarantee program makes that financing available and saves the taxpayer hundreds of millions of dollars in the cost of naval ships while sustaining a skilled workforce essential to building the warships that keep America free and prosperous. This program provides an enormous return to the American taxpayer."

National defense shipyards are multi-billion dollar enterprises, and commercial construction allows these yards to spread their large overhead over more ships, thereby reducing the cost to the taxpayer for naval vessels. Commercial work also facilitates the ability of these shipbuilders to introduce commercial building processes and technologies into naval shipbuilding, thus further reducing the U.S. Navy's ship prices. For instance, some commercial off-the-shelf systems work better and cost less than military-specified systems. Likewise the introduction of commercial manufacturing processes has resulted in fewer man-hours for naval ship construction.

Over the last five fiscal years, the average annual obligation of funding for Title XI projects exceeded \$50 million. These guarantees helped finance more than \$4.8 billion in shipbuilding projects.

There is about \$40 million available



### Enhanced Safety and Operating Efficiency

IBS is a comprehensive bridge system developed by JRC with three aims: energy conservation, reduced labor demands, and greater safety. A host of unique electronics technologies — in fields ranging from radar, ECDIS and navigation data display to IRCS and INMARSAT — contribute to enhanced safety at sea with significantly lighter demands on the steersman.

#### 1 SJD-1206 IRCS Workstation

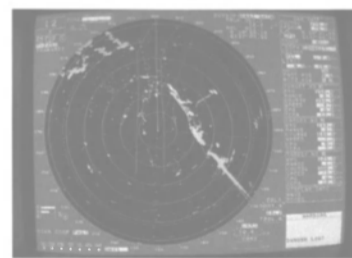
With this one workstation it is possible to operate a multitude of radio communication facilities. A user-friendly design ensures easy operation by all operators.

#### 2 JMA-9800 Color ARPA Radar

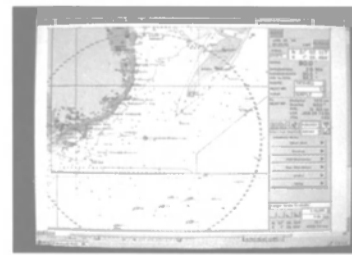
This futuristically designed radar unit features a large 29-inch high-definition color CRT display. It enables quick detection of small targets.

#### 3 JAN-3598 ECDIS Total Navigator

This advanced ECDIS system permits fully automatic navigation. It features a large color LCD and abundant functions unique to JRC, including radar video overlay, grounding prevention, NAVTEX data, route safety check, alarm displays and engine data display. The result is greater safety and economy.



Color Radar



ECDIS

ISO9001, ISO14001 Certified

## JRC Japan Radio Co., Ltd.

Since 1915

#### Main Office:

Akasaka Twin Tower, 17-22, Akasaka 2-chome, Minato-ku, Tokyo 107-8432, Japan  
Telephone: 81-3-3584-8788  
Telefax: 81-3-3584-8795  
<http://www.jrc.co.jp/>

#### JRC (UK) Ltd.:

136, 1st Floor, Friars House, 157/168 Blackfriars Road, London SE18EZ, UK  
Telephone: 44-20-7261-1188  
Telefax: 44-20-7803-0996

#### Seattle Branch Office:

1011 SW Klickitat Way Bldg. B, Suite 100 Seattle, WA 98134, USA  
Telephone: 1-206-654-5644  
Telefax: 1-206-654-7030

#### New York Sales Office:

Suite 208, 2125 Center Avenue, Fort Lee, NJ 07024, USA  
Telephone: 1-201-242-1882  
Telefax: 1-201-242-1885

#### JRC do Brasil Empreendimentos Electronicos Ltda.

Av. Almirante Barroso, 63-S/309, CEP20031-003 Rio de Janeiro, RJ, Brasil  
Telephone: 55-21-220-8121  
Telefax: 55-21-240-6324

Circle 240 on Reader Service Card

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

## Legal Beat

for Title XI loan guarantees during FY 2001. Assuming an average risk reserve of 5 percent, these funds will provide financing for about \$800 million in shipbuilding guarantees. In contrast, applications for guarantees totaling nearly \$5 billion await MarAd approval. The existing funds will be adequate to guarantee only 17 percent of the currently pending projects. While all of these projects will not be approved in FY 2001, Title XI funds may be fully expended by May 2001 if MarAd approves all the projects expected to be approved in the next several months. In addition, several of the largest projects awaiting action require more than the existing \$40 million.

Title XI guarantees provide financing every year for a steady stream of small and medium-size projects and periodically for very large shipbuilding projects. Major shipbuilding projects, which provide supplemental commercial work to national defense shipyards, are a central objective of both the National Shipbuilding Initiative and the Title XI Program, and require from two to four years to put together.

Investors in these larger projects will not proceed unless they can depend on the necessary funds being available once they raise the millions of dollars in equity required before MarAd will consider a loan guarantee application. During FY 1994-1999 the available level of funding averaged \$110.2 million annually, ranging from a low of \$94.3 million to a high of \$126.8 million. With this level of funds available, an investor interested in a very large project can be confident that Title XI funds will be in the account when needed for the project, even if \$35-40 million every year goes to smaller projects.

*Dyer Ellis & Joseph, P.C. is a Washington, DC-based law firm with a domestic and international practice involving transportation, shipping, finance, corporate, securities, legislative, environmental, and trade matters.*



At Cascade General, our dedication to craftsmanship is matched only by our dedication to efficiency. Everything hinges on teamwork. When your vessel enters our shipyard, you're met by specialized teams, some three generations strong, that quickly and flawlessly tackle every issue at hand with the passion of a world-class pit crew.

The teams at Cascade General have been honing this kind of precision planning to a science over the last 50 years. It's what allows us to complete repairs in record time—even accomplish projects previously considered impossible. It's why when you think of the most capable shipyard in the western hemisphere that consistently delivers pit stop performance, you'll think Cascade General.

Call Suren Menon  
or Terri Deskins for  
reservations.

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

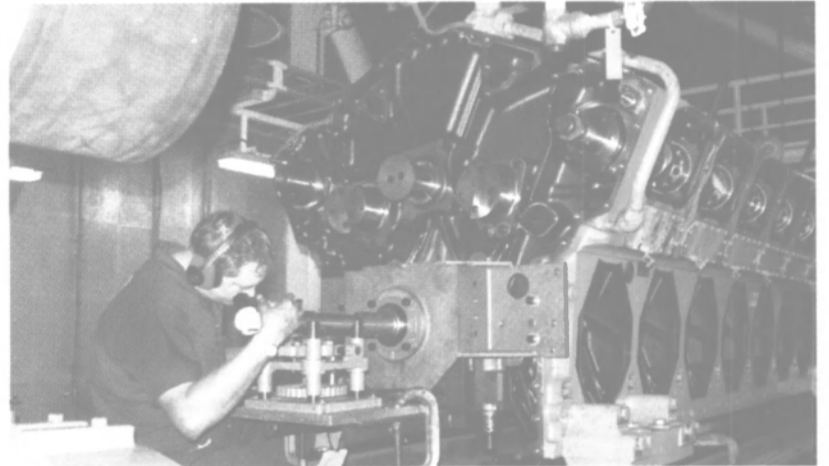
5555 North Channel Ave.  
Portland, OR USA 97217  
Phone: 503-285-1111  
Fax: 503-285-0361  
[info@casgen.com](mailto:info@casgen.com)

 **CASCADE GENERAL**  
PORTLAND SHIPYARD

Circle 210 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](mailto:help@inplace.com) Website: [www.inplace.com](http://www.inplace.com)

Circle 238 on Reader Service Card

## Steer your career in the right direction.



The Port of Los Angeles is currently seeking qualified applicants for Port Pilots. As the premiere port in the U. S., we offer excellent compensation and benefits:

- 18-24 month training program with no buy-in requirement
- Pilot trainee starting salary of \$113,000
- Full Pilot average annual compensation of \$178,000
- 12-hour work shift
- Four days on/four days off; Three days on/three days off work schedule
- Up to five weeks vacation a year
- Generous retirement package
- Employer provided medical, dental and disability benefits

Come join this exciting, progressive team. Call Rocki Walker, Human Resources Director, The Port of Los Angeles, at (310) 732-3480.



[www.portoflosangeles.org](http://www.portoflosangeles.org)

AN AFFIRMATIVE ACTION/EQUAL OPPORTUNITY EMPLOYER

Circle 261 on Reader Service Card

## E-Commerce

### Real Time, On-line Credit Services Offered

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

As credit has long been an issue in bunker transactions in the marine industry, one of the industry's leading e-commerce providers has created a proposed solution. Over the past four months, OceanConnect.com's customers repeatedly asked if OceanConnect.com could provide real-time, online credit services. Real-time, global credit insurance never existed before. It had to be invented. It is the advent of the Internet that makes it possible. OceanConnect.com Credit Solutions is a revolutionary product for the marine industry, mar-

rying the technology of the Internet to the needs of users.

OceanConnect.com Credit Solutions acts as a revolving insurance policy for the OceanConnect.com site. Every transaction conducted on OceanConnect.com has the potential to be insured under the policy limits. This real-time credit product will allow buyers and sellers to take advantage of market opportunities by enabling suppliers to respond to buyers' inquiries unimpeded by



credit considerations. By offering credit protection for bunker transactions closed on-site, OceanConnect.com offers its customers more value on-line than off-line, according to the company. OceanConnect.com offers actual credit protection. It is important to note, however, that OceanConnect.com is not 'offering' credit insurance to its users, rather, it has created a product that has made this insurance available to its customers.

OceanConnect.com Credit Solutions takes the form of a blanket policy (rated "A+XV" by A.M. Best Company), covering all suppliers transacting business on the OceanConnect.com site. OceanConnect.com is the policyholder and the suppliers are the insured parties. Each vessel owner can use \$1 million of transaction protection, which is insured by the third party policy. OceanConnect.com is dedicated to developing information services and e-business instruments to increase transparency and reduce inefficiencies in the marine industry. OceanConnect.com Credit Solutions is a testament to its continuing commitment to be the Marine Industry Resource, created for the industry and by the industry.



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

*Are you paying too much for U.S. medical bills?*

Circle 273 on Reader Service Card

### ShipServ Forms Key Alliances

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

ShipServ formed two alliances with eCredibile an Infospectrum designed to address ShipServ's customer payment and credit needs, and to improve confidence of those who use ShipServ's web-based procurement application. eCredibile will provide online B2B credit management and its Payment Guarantee Solutions. Infospectrum will provide credit reporting on buyers,



**VingCard**  
Marine

TrioVing locks at factory prices

Distributed thru:

VingCard Marine  
Dania, FL-33004  
Phone: (954) 920 0772  
Fax: (954) 920 2446  
E-mail: [marine.usa@vingcard.com](mailto:marine.usa@vingcard.com)

Mobella, Inc  
Clearwater, FL-33762  
Phone: (727) 531 7779  
Fax: (727) 531 5585  
E-mail: [info@mobella.com](mailto:info@mobella.com)

Circle 276 on Reader Service Card



# 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

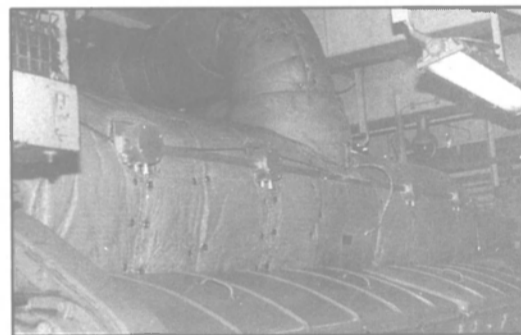
P.O. BOX 58645  
HOUSTON, TX 77258

[www.anchormarinehouston.com](http://www.anchormarinehouston.com)  
[gabriel@anchormarinehouston.com](mailto:gabriel@anchormarinehouston.com)

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

Circle 205 on Reader Service Card

**SEI**  
**SUPERIOR ENERGIES INC.**



**TEMP-SET® INSULATION COVERS MANUFACTURING AND CONTRACTING**

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

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

ACOUSTICAL INSULATION  
ASBESTOS ABATEMENT  
TURN-KEY JOBS

*Let us take care of all your insulation and abatement needs*  
We accept MasterCard, Visa and Amex  
WANT SUPERIOR QUALITY  
WANT SUPERIOR SERVICE  
CALL SUPERIOR ENERGIES INC.

**1-800-BUY-SEI-1**

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

Circle 271 on Reader Service Card



## E-Commerce

available on all registered vessel owners and managers in the ShipServ system.

### Free Daily News Service Debuts

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

MaritimeToday.com, the latest electronic information product available

from the Maritime Group, publishers of *Maritime Reporter & Engineering News*, is designed to deliver, twice per business day, full text stories on breaking marine news from around the globe. The information service is currently read by thousands of registered members from around the globe.

### Level Seas Gets New Round Of Investors

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

LevelSeas.com recently announced its second round of investors. A total of 26 companies, representing a wide-spec-

trum of the bulk ocean transportation industry, have agreed in principle to invest and become participants.

The 26 new companies in Levelseas.com include the likes of Armada shipping, Fednav Ltd., Lauritzen Bulk, and A.P. Moller, join BP, Cargill, Clarksons and Shell.

### PUT YOUR MARINE BUSINESS ON THE MAP

with

MARINE ADMINISTRATION & PLANNING [MAP]

from:

**VESSEL-NET.COM**

The MAP solution by VESSEL-NET.COM can deliver competitive advantages operational efficiency and ROI to marine organizations worldwide.

Marine Log • Maintenance • Interfacing Procurement • Human Resources • Scheduling Health & Safety • Replication • Point-of-Sales



[www.vessel-net.com](http://www.vessel-net.com)

866-4VESSEL

Seatrade Booth #1701

Circle 274 on Reader Service Card

### ZoHaku Web Set For March Launch

The Japanese shipbuilders and ship machinery suppliers are still on target to deliver its Internet presence, ZoHaku Web Ltd., beginning in March. The new company is planned as an information exchange service, designed to improve the efficiency of equipment procurement in the shipbuilding industry. The research project behind the product has been in operation since 1998, coordinated by the Ship & Ocean Foundation with support of the Nippon Foundation.

More than 50 companies are current shareholders in the company, including shipbuilders and ship machinery suppliers.

### Major Ocean Carriers Partner To Launch E-Commerce Solution

Nine of the world's leading ocean carriers are joining forces with Tradiant in a partnership that is designed to enable importers and exporters to greatly simplify the process of containerized transportation at a significant cost and time savings.

The carriers have collaborated with Tradiant in a multi-million dollar partnership to launch a new initiative in the first quarter of 2001. This is a completely neutral technology platform that will facilitate transactions between the various parties involved in international trade.

Carriers involved in the project include: APL; CP Ships — the container shipping business of Canadian Pacific Limited — which includes ANZDL, Canada Maritime, Cast, Contship Containerlines, Lykes Lines and TMM Lines; Hanjin; Hyundai; K Line; Mitsui OSK Lines; Senator Lines; Yang Ming; and Zim Israel Navigation Co.

Negotiations are currently underway with other transportation providers that also may join as founding partners.

"This will fundamentally challenge the process of getting goods around the world," the carriers said. "Our common objective is to leverage this Internet platform and drive superior customer service and lower transactions costs for both customers and providers. This is truly realizing the promise of the Internet."

# Capstan Winches



- Meets the Toughest Standards.
- High Starting Loads.
- Electric, air or hydraulic.
- Mountings to configure to existing foundations.
- Extensive range of sizes.

Send for a complete catalogue of Jeamar products.



**JeamarWinches**

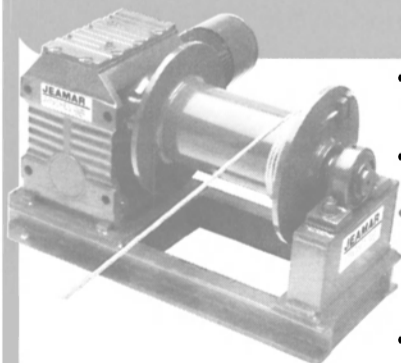
1051 Clinton Street, Buffalo, New York, U.S.A. 14206  
Tel: (716) 854-3211 • Fax: (716) 854-4141

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

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

Circle 242 on Reader Service Card

# Electric Winches



- Tough, rugged, continuous Heavy Duty Winches.
- Conforms to International Standards.
- Extensive range of options. Grooved drums, free spooling, controls, limit switches and many more.
- Line pulls from 400 lbs to 75,000 lbs single line pull.

Send for a complete catalogue of Jeamar products.



**JeamarWinches**

1051 Clinton Street, Buffalo, New York, U.S.A. 14206  
Tel: (716) 854-3211 • Fax: (716) 854-4141

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

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

Circle 241 on Reader Service Card

### MARINE TRAINING THAT LEAVES NOTHING TO CHANCE



- OSV Training and Proficiency Assessment Program
- Exam Prep Courses
- STCW-95 Compliant Courses:
  - Basic Safety Training
  - Bridge Teamwork Procedures
  - GMDSS Training
- Computer & Book-Based Exam Prep and Home Study
- New Hire Orientation & Record of Training Assessment (RTA)
- Web-Based Training

Call Today!  
1-800-947-7737



**HOUSTON MARINE TRAINING SERVICES**  
The Complete Training Source

5728 Jefferson Highway • New Orleans, Louisiana 70123  
Fax: 504-729-4450 • [www.houstonmarine.com](http://www.houstonmarine.com)

Circle 236 on Reader Service Card

## San Francisco Bay Area Company Leads in NOx Reduction

When the State of California, long a leader in reducing air-pollution, announced the Carl Moyer Program to reduce NOx emissions, towboat owner Aaron Lind and his family decided to

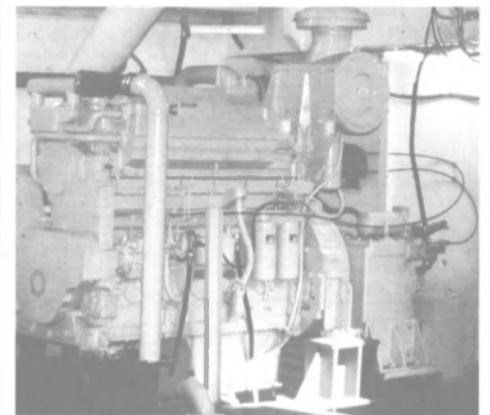
get on board. The program is supported by a one-time appropriation of \$50 million dollars for the 2000/2001 fiscal year. A significant portion of this amount was allotted for Carl Moyer Pro-

gram incentive grants, as a means to reduce emissions from heavy-duty engines.

These grants cover the incremental cost of cleaner on-road, off-road,



Jerico Spirit



A new Cummins engine onboard Jerico Spirit.

marine, locomotive and stationary agricultural pump engines, as well as forklifts and airport ground support equipment. Beginning in summer 1999, grants became available through participating air pollution control and air quality management districts grants. "The incentive program focuses on reducing emissions of smog-forming oxides of nitrogen (NOx), but will also reduce particulate emissions. In recognition of his work in the air quality field and his efforts in bringing about this program, the incentive program is named after the late Dr. Carl Moyer," said a State of California press release.

Aaron Lind, who operates Jerico Products with his father and older brother, decided that their boat, the Jerico Spirit, was a perfect candidate for the program. His father, Mike Lind, had purchased the boat in Tennessee 20 years ago and barged it around to the company's property at Petaluma, 17 miles up the river of the same name from San Pablo Bay on the north side of San Francisco Bay. He then cut the boat, originally built in 1948, in half lengthwise and added 10 ft. (3 m) of beam to bring it to 76 x 32 ft. (23.1 x 9.7 m)

At the same time, he repowered the boat with a pair of 600 hp two-cycle opposed piston Fairbanks Morse engines. Even as new engines, the two-cycle technology of the era didn't give much thought to emissions. The 20-year-old engines had been rebuilt earlier and still ran well enough but they certainly weren't efficient.

Aaron had some experience with

CCTV improves safety and efficiency

See us at  
Seatrade Miami,  
Norwegian Pavilion  
stand no. 985

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

**HERNIS**  
Scan Systems AS

Hernis Scan Systems A/S  
Box 74 • NO-4817 HIS • Norway  
Tel: +47-370-11210 • Fax: +47-370-10228

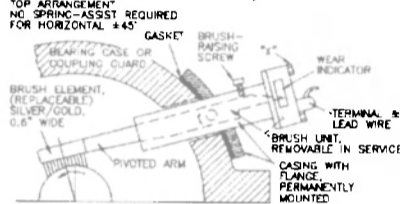
Circle 234 on Reader Service Card

### Are Stray Electrical Currents Destroying Your Machinery?

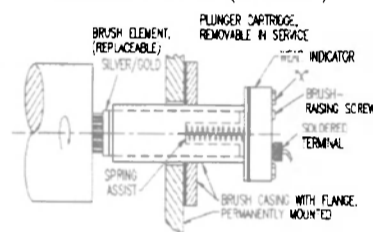
-Used on propeller shafts, turbines, generators, electric motors, gears, pumps, and other rotating equipment. Failure to properly ground rotating shafts can result in expensive damage, such as bearing failures.

- Operates dry or with oil spray. Self-cleaning.
- Working parts are removable during operation.
- Remove screws at "X" to pull entire brush assembly out of brush casing.
- Brush voltage is insulated from casing, allowing voltage and current monitoring.
- Provision to raise brush from shaft during operation and to inactivate if contact is not desired.

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



#### "PLUNGER" TYPE "A" (SCHEMATIC)



© 2001  
SOHRE TURBOMACHINERY INC.

### SOHRE TURBOMACHINERY INC.

132 Gilbertville Road, P.O. Box 889 TEL: (413) 967-6908  
Ware, Massachusetts 01082-0889 FAX: (413) 967-6846  
(800) 207-2195 [schrei@sohre.turbo.com](mailto:schrei@sohre.turbo.com) [www.sohreturbo.com](http://www.sohreturbo.com)

Circle 269 on Reader Service Card

## Kahlenberg USCG/IMO CERTIFIED SOUND SIGNALS

SINCE 1895

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

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



T-3A "Chimstone" Air Horn



M-511 Signal Controller



KPH-130  
Piston Horn



KB-20  
Electric Horn

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

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

Circle 243 on Reader Service Card

## News

Cummins and learned of the company's commitment to lowered emissions under the year 2000 IMO regulations. He met with Cummins West's territory sales manager **Tom O'Conner** and decided to replace the exiting 600 hp engines with a pair of Cummins KTA19 M3 with continuous duty ratings of 600 hp. Doing all of the work at their own dock, the eight month project saw the engine room completely stripped of plumbing and wiring, sandblasted and repainted. The old engines and gear came out to be replaced with the new Cummins coupled to Twin Disc 5202 deep case gears with 5:1 ratios and turning Sound Propeller's 60 x 47-in. work wheels. At the same time, gensets and steering were replaced, although the original four flanking and two steering rudders were retained. The galley and wheel house were completely redone. Even the lazarette got sandblasted and coated with 90 gallons of new paint. "People can't believe the difference when they see the engine room, they want to know what we are going to do with all the space," says Aaron, "The old engines, which we will destroy under the program, weighed 12,000 lbs. each. The new engines weigh only 4,000 lbs. each. We gained 10 in. of freeboard which helps coming up the river as we have to work the tides."

Aaron is equally enthused by the performance of the virtually new boat. "The old engines took 85 gallons of lube oil in the crank case and burned 10 gallons on a 24 hour round trip to the south bay with 14 hours at max and the rest idling and jockeying.

The new engines have 10 gallons of lube oil in the base and burn no oil on the same trip. The old engines each burned 35 gallons per hour while the new ones burn only about 29 gallons per hour."

The people who oversee the Carl Moyer Program are equally impressed and have declared the boat to be the most successful project in the Bay Area Air Quality District. While the program didn't cover all of the costs of the refit, their grant contribution equaled the cost of the engines excluding the gears. Aaron, who at 28 years of age and has had his masters ticket for eight years, explains that he took a special and personal interest in the project to honor his younger brother Trig, who died in an automobile accident just over a year ago.

In a further recognition the boat, formerly named Jerico Spirit will be renamed the Trig Lind at a rededication ceremony, once the boat has completed all of the sea trials.

**Circle 41 on Reader Service Card**

### Bender Shipbuilding To Construct Oil Barge

Bender Shipbuilding & Repair of Mobile, Ala., has been selected to build a 150 x 60 ft. (45.7 x 18.2 m), 10,000 BBL capacity Well Test Barge for The Hanover Company of Houston, Texas.

The barge, which will be built according to ABS class standards for international service, is scheduled to be complete in four months.

It will be equipped with pumping, generator and separation systems to perform its well test mission.

**Circle 26 on Reader Service Card**

### Alabama Shipyard Signs Another Tug/Barge Contract

Alabama Shipyard has signed a contract to build an articulated tug and barge (ATB) vessel for Allied Transportation Company of Norfolk, Va. Both vessels will be designed and built to

P L A T E ▲ H E A T ▲ E X C H A N G E R S

## Got Any Ideas For Better Heat Transfer Efficiency?

# WE DO!

If you haven't been asked this question lately, it's a certainty you will be, and soon.

On virtually every marine vessel, there are opportunities to improve efficiency through more effective heat transfer, if you know how and where to look. Tranter's application engineers have looked for over 20 years, and have engineered a variety of solutions which have enabled ship owners, builders and operators to lower costs and to increase the productivity of their vessels. They've done it with plate-type heat exchangers.

Our SUPERCHANGER® plate and frame heat exchangers operate at a 1-2°F temperature approach, compared with a shell and tube's 8-10°, and with 3 to 5 times greater U values!

Our PLATECOIL® prime surface units can be engineered and designed in any way, shape or form to improve heat transfer efficiency, while our MAX-CHANGER® all-welded plate heat exchangers are especially effective where space is at a premium or gasket limitations prevent the use of a SUPERCHANGER.

From heating main engine jacket water to cooling water/glycol solutions for electronic gear cooling, to plastic waste disposal and numerous other successful heating and cooling applications, Tranter heat exchangers are providing optimum efficiency in heat transfer.

Need better ideas for efficiency in your on board heat transfer? We've got 'em!

Contact us. We'll send you our latest Marine Applications Bulletin chock full of heating and cooling details, along with our company CD. Next time someone asks if you have any ideas for greater efficiency, you'll be able to say, "I certainly do!"



A **DOVER** DIVERSIFIED COMPANY

Tranter PHE, Inc. ▲ P.O. Box 2289 ▲ Wichita Falls, TX 76307 ▲ (940) 723-7125 ▲ Fax: (940) 723-5131  
http://www.tranter.com/m ▲ E-mail: sales@tranter.com

650437

© 2001 Tranter, inc.

P L A T E ▲ H E A T ▲ E X C H A N G E R S

## News

ABS classification standards.

"This is our third major contract award during the last four months of 2000," said Dick Wells, the yard's president. "The total value of these contracts is greater than \$65 million. Our employment will grow to over 600 an increase of 300 new jobs from today."

Alabama Shipyard designed the 129,000-barrel, 450-ft. (137.1 m) barge in compliance with the Oil Pollution Act of 1990 ("OPA 90"), which requires vessels to have a "double-hull" in order to provide greater safeguards to the marine environment. OPA 90 requires most large coastal barges operating in the

petroleum and chemical trade to have double hulls by 2005.

Measuring 124 ft. (37.7 m), the 8,000 hp twin-screw ocean-going tug, designed by Ocean Tug and Barge of Milford, Mass., will feature the patented Intercon tug/barge coupler system designed and built by Intercontinental

Engineering and Manufacturing Corp. of Kansas City, Miss. The system consists of two independently mounted gear drive ram assemblies, which connect the tug and barge. The tug is able to push a loaded barge at approximately 11 knots, up to 35 percent faster than traditionally towed barges.

Additional benefits of this ATB unit include the ability to operate in the widest range of sea states; the complete elimination of tug/barge hull contact; fail-safe mechanical connection with redundant controls, and elimination of the expense and hazards of towing lines and related gear. The tug/barge can be engaged and disengaged without crew on deck.

Circle 30 on Reader Service Card

### FGH Reports New Projects Totaling More Than \$65 Million

Friede Goldman Halter (FGH) will be taking on projects that total a combined value of more than \$65 million. The company has received orders in excess of \$587 million since October 31, 2000.

Vessel Management Services has exercised the first of five options on its current agreement with Halter Marine for the construction of an additional 150,000 barrel, Oceangoing, double-hulled articulated tug-barge (ATB). The barge will be built at Halter's Gulfport, Miss. shipyard, the tug at its Moss Point, Miss. shipyard.

Halter has also agreed with Bouchard Coastwise Management of Hicksville, L.I. for the construction of a 110,000-barrel ATB. Measuring 424 ft. (129.2 m), this barge and tug will be constructed at the Gulf Port and Moss Point yards, respectively.

Foss Maritime has decided to exercise the first of two options on a current contract it has with Halter for the construction of an additional 6,000 hp, 98-ft. (29.8 m) Z-drive harbor tug, which will be built at Halter's Lockport, La. yard.

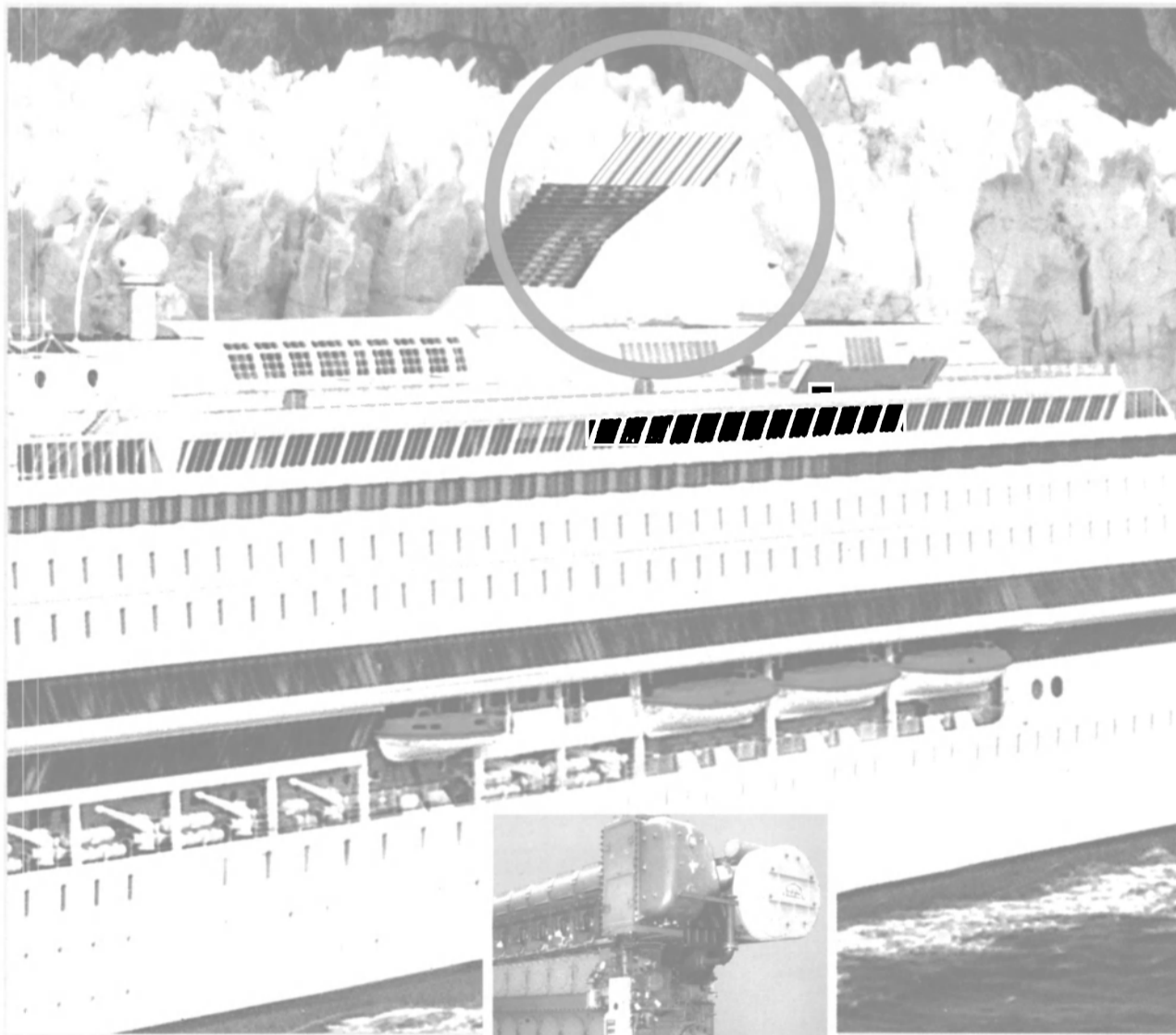
In addition, FGH Engineered Products Group has been granted a variety of contracts for offshore exploration and production equipment in the Gulf of Mexico.

### ABB Wins Contract With British Ministry of Defence

ABB has signed a contract with Appledore Shipbuilders, U.K. to supply the electric power plants and Compact Azipod propulsion systems for two survey vessels for the Royal Navy. The vessels, which are scheduled for delivery in 2002 and 2003, will be supplied under a contract with Vosper Thornycroft (U.K.) acting as prime contractor for the U.K. Ministry of Defence, which includes provision of support for 20 years.



MAN B&W Diesel engines **IS** (*Invisible Smoke*) not only in cruise ships



The most stringent environmental protection regulations are now in effect in Alaska. To support cruise vessels slow-steaming in sensitive glacial waters, MAN B&W Diesel already introduced **IS** (*Invisible Smoke*) engines in 1998. These engines provide smokeless performance at even the lowest load levels.

MAN B&W's modern **IS** engines use fuel-water emulsification with only moderate water content to perform with invisible smoke and clean exhaust at any load - with NOx emissions far below the IMO limit.

MAN B&W offers the outstanding performance of the proven **IS** engines for cruiseships and other applications today. To find out how to enjoy the benefit of a non-smoking engine, please contact us.

### Worldwide Service

MAN B&W Diesel AG, Stadtbachstr. 1, 86224 Augsburg, Germany, Phone +49-821 3220  
MAN B&W Diesel Inc., 17 State Street, 18th Floor, New York, NY 10004, Tel. (212) 269-0980

Circle 311 on Reader Service Card

See you in Miami!



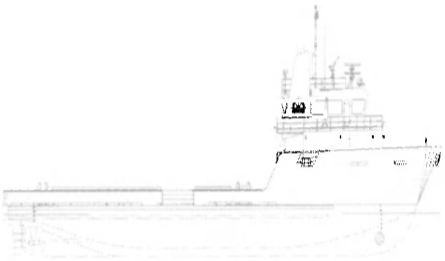
## News

The ABB package for the vessel pair will include generators for the main power plant and two PWM DTC-controlled Compact Azipod units rated at 1,700 kW each. The new system, which has never before been featured on a Royal Navy vessel, boasts a power range from 400 kW up to 3 MW, is designed to meet the growing demand for enhanced maneuverability and operational economy that exists for smaller vessels.

Circle 31 on Reader Service Card

### Bollinger To Construct Supply Boat Trio

Bollinger Shipyards has commenced construction of three 145 ft. (44.1 m)



supply/utility boats for Bordelon Marine — doubling the number of OSV's for the Lockport-based operator.

The new vessels, all of which will hold the namesake of a Bordelon family member, will be known as Wes Bordelon, Terry Bordelon and Bunny Bordelon.

**Scott Theriot**, executive vice president New Construction of Bollinger said, "These new 145's are truly all-purpose and continue to meet and exceed industry requirements. We have already delivered 19, eight are under construction and we have options for more."

The 145 footers will each have a beam of 36 ft. (10.9 m) and a maximum draft of 12 ft. (3.6 m) — normal operating draft will be eight ft. (2.4 m) They will be powered by a pair of Cummins KTA-38MO diesel engines rated at 750-bhp at 1,600 rpm, driving Bollinger four-blade propellers through Twin Disc reverse/reduction gears with a ratio of 4.96:1. Hydraulic steering will be installed at two pilothouse stations and a 272-hp Schottel STT-110 bowthruster will assist steering.

Boasting a package that complies with IMO emission standards, the Cummins engine package features direct drive liquid mud pumps off of the main engines thereby eliminating belt systems. Cummins was also selected to provide electrical power; oil free bilge systems and dirty collection tanks will be present on each vessel.

The OSV's will come equipped with four liquid mud tanks with a total capacity of 49,332 gallons. They will be built to hold 28,675 gallons of fuel, 400 gallons of oil, 250 gallons of hydraulic flu-

ids and 23,776 gallons of potable water. The vessels' 95 x 32 ft. aft decks will be able to transport up to 390 long tons of cargo.

Navigation equipment onboard includes Furuno radars; a Furuno GPS unit with plotter; an autopilot; two Furuno VHF radios; Nautex antennas and Motorola cell phones.

### Aker Constructs Vessel Trio For Scottish Northlink

Aker Finnyards and Northlink, a joint venture of Caledonian MacBrayne and Royal Bank of Scotland, have agreed to build two passenger RoRo vessels for the ferry service from the Scottish mainland to Orkney and Shetland for \$87

million.

A letter of intent was also signed on a third, slightly smaller vessel worth \$39.5 million.

Measuring 410 ft. (125 m) with a beam of 64 ft. (19.5 m) and 12,000 gt, each vessel will have the capacity for 600 passengers in time for summer 2002.

**FINCANTIERI**  
**CHARTING A COURSE**  
**FOR THE THIRD**  
**MILLENNIUM**

History, maritime culture, technology: these are the strongpoints of Fincantieri, a Company designing and building ships which are different but at the same time similar. Different in that they range from cruise ships to merchant ships and naval vessels; similar in stemming from a design and construction philosophy focused on quality, safety, respect for the environment and ever higher performances.

Our goal is to satisfy all the needs of those engaged with the sea.

**FINCANTIERI**  
ships, projects, IDEAS

Head Office:  
Via Genova, 1  
34121 Trieste (Italy)  
Tel. +39 040 3193111  
Fax +39 040 3192305  
Telex 461136 FINCTS I  
www.fincantieri.com

Circle 225 on Reader Service Card

## Curacao Carves A Cruise Niche

*Riding the often tumultuous waves of freight rate boom and bust, Curacao Drydock has carved a unique niche of business in this Caribbean paradise.*

Since August 2000 the Curacao Dry-

dock Company started to feel the effect of an improving cargo market. The amount of inquiries doubled since the first six months and the amount of bookings followed soon. Instead of patching of the ships, the owner decided to stop

his ship for a few days to make sure the vessel is in good shape, ready to enter the better paid charter.

Times, though, have been different.

In 1998 and 1999, the cargo market was so depressed that owners could not afford to carry out many repairs. The school of thought at this time was to keep the vessel trading as long as possi-



After a technical research done at the end of October 1999, Curacao Drydock's production office came with a possibility to modify the dock blocks.

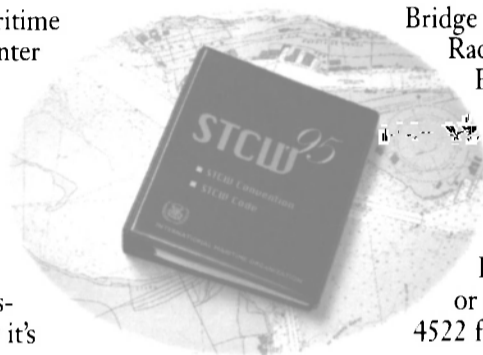


Curacao Drydock decided to invest in a new set of blocks, which we have later called after **Harri Kulovaraa**, senior vice president marine operations at RCCL. During an inspection on the grounded vessel *Monarch of the Seas* in St. Maarten in 1998, Kulovaraa mentioned to Curacao's technical inspection team onboard to return to Curacao and modify the dock.

## So Many STCW Regulations, So Little Time!

RTM STAR Center is the maritime industry's STCW '95 Training Center of Excellence. Over the last four years we have trained more mariners in more courses for STCW compliance than anyone.

When it comes to your training, our job is to solve STCW problems. If you have questions about STCW, our maritime professionals have the answers. Whether it's



Bridge Team Management, GMDSS, Radar/ARPA, Basic Safety Training, Fast Rescue Boat or any other STCW course, you can be assured it's offered at the right price. We'll even customize a course for you.

Train at our centers in Fort Lauderdale, Florida, Toledo, Ohio or at your location. Call (800) 445-4522 for STCW course information.

### STAR Center

SIMULATION, TRAINING, ASSESSMENT & RESEARCH

Ft. Lauderdale: 2 West Dixie Highway, Dania Beach, FL 33004 • 1-800-445-4522 • Fax: 1-800-431-4815 • E-mail: email@star-center.com  
Toledo: One Maritime Plaza, Toledo, OH 43604 • 1-800-221-9395 • Fax: (419) 255-8833 • E-mail: rtmstar@aol.com

Visit our website: [www.star-center.com](http://www.star-center.com)

RTM STAR Center admits students of any race, color, national and ethnic origin or sex.

Circle 266 on Reader Service Card



ble. As the amount of work was not enough for the yard to survive, yard management decided to explore new markets. During the initial phase of investigation, it became apparent that there was a limited amount of capacity able to dry-dock the newer generation of cruise vessels.

Curacao's A-dock was built especially for the larger tankers calling on the local refinery during the 1970s and for economical reasons was built on a slope of 1:100. Cruise vessels of the newer generation, however, cannot make this condition, and this was one of the primary reasons the yard never pursued the cruise market. In addition, the yard was bustling with activity in the tanker, bulk carrier and container vessel segments.

On March 23, 2000, *Vision of the Seas* entered Curacao Drydock for a repair period of 17 days. The major focus of the job was the replacement of a 40 tons stator of the propulsion motor. The job was completed within the allotted time frame, and the staff of Royal Caribbean left satisfied. From this repair, the yard learned much about the cruise market and its needs, and summarily plotted a course of investment to ensure it was prepared to meet these needs in the future. To adjust to the requirements of the larger cruise companies, management of the yard approved an investment plan that included four new generator sets, a fully automated switch board and a sewage plant. On this ship a fully automated Hammelmann Dockmaster was used for water blasting.

Circle 39 on Reader Service Card

## A GENERATION OF RELIABLE COMMUNICATIONS AT SEA

Nera has led maritime communications since 1919 and is the world's leading satellite equipment manufacturer. Nera WorldPhone Marine and Nera Saturn Bm provide secure satellite communications at sea.

### Nera WorldPhone Marine

- Cost effective telephone service
- Telephony, fax and data (2400 bits)
- Easily installed below deck unit
- Small Gyrostabilized antenna to secure stability in all weather conditions
- Flexible and self-explanatory menu

### Nera Saturn Bm

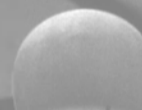
- Bi-directional fixed global communications system
- Telephony, fax, telex and data (9.6 and 64 kbps)
- Auto-polling for real-time information
- Navigational, safety and meteorological features

The sea does not accept compromise and neither should you.

Just one call to Nera — that's all you need.  
Tel: +47 67 24 47 00 Fax: +47 67 24 46 21  
e-mail: saturn@satcom.nera.no  
[www.satcom.nera.no](http://www.satcom.nera.no)



Nera WorldPhone Marine antenna



Nera Saturn Bm antenna

VIA INMARSAT

CHANGING THE WAY WE COMMUNICATE

NERA TELECOMMUNICATIONS

## U.S. Lines' MS Patriot Challenges Cascade General

Since 1999, when American Classic Voyages (AMCV) first announced its intention to construct two U.S.-flagged cruise ships that would be staffed by American officers and crew, the U.S. shipbuilding industry received a boost back into an area that it had not participated for almost 30 years — the cruise shipping market. Prior to the construction of the two vessels by Litton Ingalls Shipbuilding, AMCV wanted to start making money right away — it purchased the 17-year-old ms Nieuw Amsterdam for \$114.5 million from Holland America. AMCV then received an official notice from Congress that provided exemption from the Jones Act, thus allowing the U.S. Coast Guard to re-flag the foreign registered vessel.

Before being repositioned to its new itinerary in the Hawaiian Islands, Patriot required a new look — a look that would exemplify its stature as the line's premiere vessel. Performing this daunting task in just five weeks was Portland shipyard, Cascade General, which provided all drydock and conversion work on the 704 ft. (214.6 m) vessel in time for its inaugural cruise on December 6, 2000.



The Cascade team preps for the vessel's refit.

Advanced planning and intense precision by Cascade General ensured that all work would commence in four specific areas the minute the ship arrived in Portland: new bow and stern thrusters, conversion of three public spaces to suit the Hawaiian market, complete refit with Coast Guard-approved safety equipment and identity change.

During its 17-day stay at the yard's 982 ft. (299.3 m) drydock number four, Patriot's two C.P. propellers were dismantled. The hubs were overhauled and the blades polished and its starboard shaft was pulled for inspection by Lloyd's officials. Line-shaft bearings were also inspected. Pintle bearing clearances were measured, the steering gear serviced and more than 100 anodes replaced. All of Patriot's sea valves were examined. The vessel's 20-ton anchor was replaced and its chain ranged and marked.

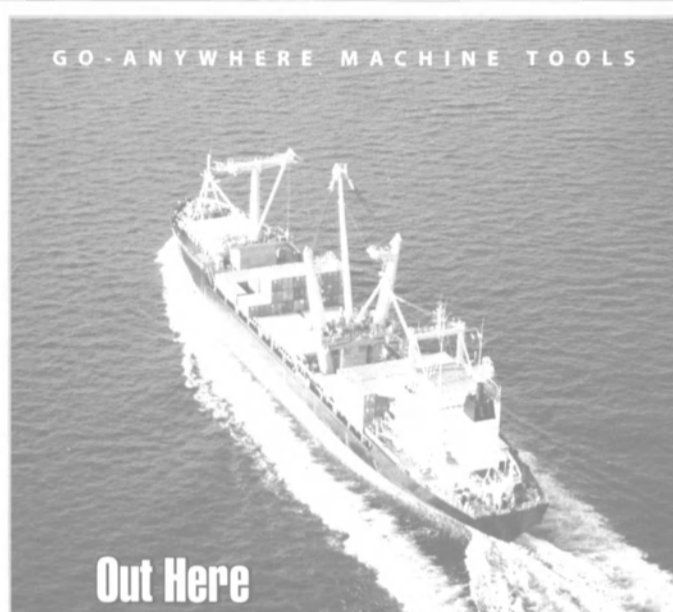
Computer simulations tested the suit-

ability of the 33,800 gt ship's existing pair of 750 kW thrusters for potential conditions in the Hawaiian Islands. The tests showed that additional thruster power would significantly improve

maneuverability and safety, especially in outlying ports or when trade winds picked up. Any addition that was made in this area had proven to be troublesome because of the small presence of



MS Patriot underwent a five-week conversion at Cascade General.  
(All photos are © Cascade General, Inc.)



There's  
No Good  
Time  
For  
Downtime

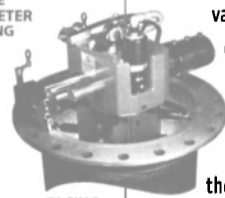
When equipment must be repaired now, Climax Portable Machine Tools give your crews the power to get the job done fast, any time, anywhere. Our compact, easy-to-use tools attach directly to the work piece — wherever it may be — so there's little time lost for dismantling. Boring, borewelding, milling, turning, weld prep, beveling,



facing and many other operations can be performed easily with precision. Climax's line of over 25 machine tools provide effective solutions for repairs at sea and valuable alternatives to costly off-site machining in ship repair or refurbishing operations. Call us today for complete information on these tools and an unlimited range of custom tool designs for unique repair applications.



LARGE DIAMETER BORING



FACING, BEVELING & MORE



Learn More.  
Send for **FREE**  
Literature Today.

**CLIMAX**

Portable Machine Tools, Inc.

2712 E. Second St., Newberg, OR 97132-8210 USA  
Phone: 800-333-8311 • Fax: 503-538-7600

See us on the Internet at [www.cpmt.com](http://www.cpmt.com)

2788

## For Sale

Exclusively In Our Hands  
Retained by the Bankruptcy Court

**TransCoastal Marine Services, Inc.**  
**Pipelay / Bury Barges,**  
**Vessels & Misc. Marine Assets**

Assets include ocean-going vessels, river barges, drag-line & jetting equipment, amphibious tracked vehicles, drydock and other related equipment. Some major floating assets include:

~~# 175' construction / bury vessel-~~

"Sea Level No. 21" Sale Pending

# 270' dp multiservice, construction / bury vessel "Discovery"

# 350' x 60' pipelay / bury barge "Vermillion Bay"

# 256' x 72' bury barge "Atchafalaya Bay"

# 3,400 ton capacity drydock

~~# Over 20 other smaller barges and vessels~~  
Sold

Full list of equipment, price ideas, technical details, surveys and photographs available on the internet or by contacting our office. Equipment located in the U.S. Gulf Coast. Inspection by arrangement through this office.

**Marcon International, Inc.**

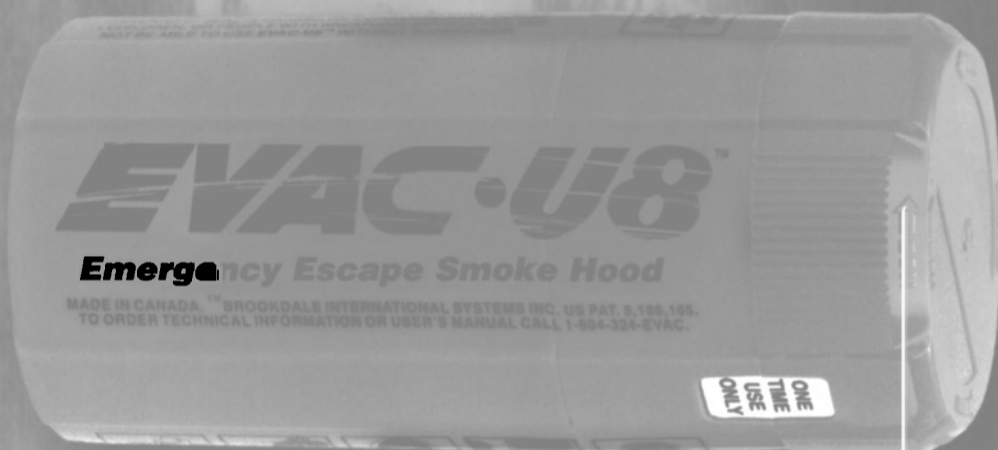
**Tel: 360-678-8880**

**Fax: 360-678-8890**

**e-mail: [info@marcon.com](mailto:info@marcon.com)**

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

# *The World's Most Advanced Smoke Hood*



Filters toxic gases including Carbon Monoxide. DuPont® hood material heat resistant to 800°F.

Fire aboard ship is a uniquely dangerous situation. As increasing numbers of marine operators equip their vessels with EVAC-U8®, issues of liability become more urgent for those who are slow to take advantage of this state-of-the-art technology to protect their crew, their passengers, their property and reputations.

  
**Seatrade  
AWARDS**  
1996



**BROOKDALE**  
International Systems Inc.

1-800-459-3822 [www.evac-u8.com](http://www.evac-u8.com)

Vancouver, Canada Tel: 604-324-3822 Fax: 604-324-3821

e-mail: [info@evac-u8.com](mailto:info@evac-u8.com)

Find us at **Seatrade Booth 998A**



usable space below the waterline at both ends of the vessel. Under the leadership of **Suren Menon**, executive vice president in charge of cruise ship operations, Cascade's team was able to make the most of the limited space available. In the bow, Cascade's electricians prepped the route for the power and control cables for the thruster while the ship was still dockside. Menon's engineering team worked on the drydock floor, using

its proven method of mounting a cutting torch on a radius arm rotating on the bow thruster centerline. Known as a Cascade innovation, this process automatically ensures a perfect fit for the flared thruster mouth on the convex curve of the bow plating.

The only available position for the vessel's additional stern thruster, weighing 4.5 tons, was



Patriot's funnel is "Stars and Stripes Forever."

## SIEMENS



Intelligent automation systems from Siemens help to ensure a most safe and comfortable operation of shipboard systems. Process control is being delegated to small, intelligent units which operate on a decentralized basis and are linked with local networks. This result enhances safety and reduces cabling.

Future oriented ideas also stand behind the Siemens diesel-electric propulsion systems. For example the economical operation through optimal utilization of fuel for diesel engines to generate electrical power, even in partial load ranges. Or the high availability through modular design with small probability of total loss of propulsion power.

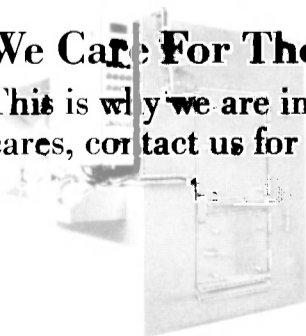
Call for further information:  
**Siemens**  
**Energy & Automation, Inc.**  
 Marine Division  
 29000 Highway 98  
 Bldg. A, Suite 305  
 Daphne, Alabama 36526  
 Tel. (334) 626-7824  
 Fax (334) 626-0984  
 E-mail: marineinfo@sea.siemens.com  
 www.marine-solutions.de  
 Industrial Solutions and Services Your Success is our Goal.

Circle 308 on Reader Service Card

# DELTA

**MARINE  
WASTE  
MANAGEMENT  
SOLUTIONS**

**We Care For The Future Of Our Children**  
 This is why we are in this business, if your company also cares, contact us for information on:



- Marine Incinerators
- Sewage Treatment Plants
- Inert Gas Systems
- Oily Water Separators

**DETEGASA**

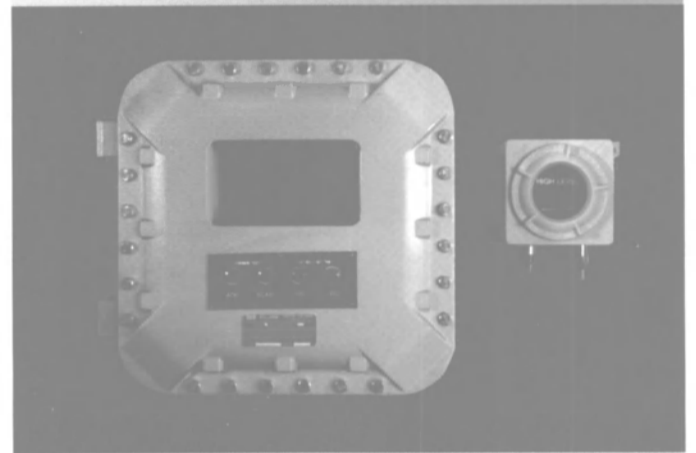
**Desarrollo Técnicas Industriales de Galicia**

Ctra. Castro-Meirás, Tuimil/Sequeiro, Valdavino, 15550 A Coruña, Spain  
 Tel: +34 981486351 Fax: +34 981486352 E-mail: detegasa@jet.es Web: www.detegasa.com

Circle 217 on Reader Service Card

"Now with  
leak detection"

# BIG BLUE



## View Your Entire Loading Operation In One Glance!

The on-deck cargo loading display is designed for use by shipboard personnel on board tank ships and barges to view the complete loading operation in one glance. It is built for the harshest environments of temperature, water, salt, and vibration. It is approved by both ABS and USCG in full compliance for on-deck cargo loading operations.

- Tank ullages in feet, inches or meters.
- Individual tanks rate-of-fill or empty in BBLS/Tons/GAL or metric.
- Individual tanks time-to-full or empty in HR/Minutes.
- Individual tank temperatures.
- Header pressure.
- Individual pump status ON/OFF.
- Two alarm set points for ullage, temperatures and pressures.

**EMS**

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

**Call today  
for more  
information!**

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

Circle 220 on Reader Service Card

**BOAT**

**ALL AMERICAN MARINE**



**JOBS**

## Paid Upgrades & Training

**CAPTAINS & MATES (any tonnage)  
ENGINEERS (licensed & unlicensed)  
A/B's, O/S's, DECKHANDS**

Casios, Inland & I.C.W. Pushboats, Ships  
Ocean-going tugs  
Offshore oil industry  
Overseas & coastal

**Phone: (334) 666-0053**

**Fax: (334) 666-4417**

Circle 310 on Reader Service Card

in a supplementary fuel tank located two ft. below the bottom of an elevator shaft. To direct the thruster's flow under the propeller shaft housing, the mouth of the tunnel was to have been flared out and angled down 20 degrees to within 6-in. of the keel. However, because of the limited lead time, both thrusters arrived from Kamewa's Swedish headquarters without the necessary tunnel extensions.

"We weren't made aware of this situation until the thrusters actually arrived here," Menon said. "There was absolutely no time to spare." Cascade's metal shop met the challenge to extend the nozzles — forming and fabricating two pairs of flared tunnel extensions — using 26,000 lbs. of Lloyd's-approved one in. steel.

Since Patriot will remain in U.S. territorial waters on its seven-day, four-island cruises, the spaces occupied by the duty-free shop and casino were now available for other uses. Alterations to the interior was designed by Yran & Storbraaten and carried out by James P. Colie of Florida.

Cascade's welders removed internal walls and cut openings for view windows on the starboard wall of the former casino on the Promenade Deck. The Colie team then moved on to create a "destination learning center" in the cleared space. The essence of Hawaiian style is clearly presented in the room's dividers, hardwood paneling and louvers, and wicker furnish-

ings. Taking the place of the vessel's Dutch-themed library will be an Internet café. Managed by Digital Seas, the nine workstations will operate at 128 kbps via MTN satellite.

The vessel's 12 lifeboats and four tenders did not release simultaneously at the bow and stern as mandated by U.S. Coast Guard regulations. All 16 boats were lowered and transported to a building bay where a production line was set up. The wires were replaced and davits serviced while each hull underwent structural alterations and reinforcement to accept the new Norwegian Durapart releases.

Under the Coast Guard's Alternative Compliance Program, Lloyd's, which has classified the vessel since its launch, will continue as certifying authority on everything except safety issues. Patriot received its final Certificate of Inspection from the Coast Guard and Lloyd's on December 23, at which time it departed for San Francisco.

*For more information on the companies listed in this story, circle the accompanying Reader Service Card number:*

<b>Cascade General</b>	<b>17</b>
<b>Yran &amp; Storbraaten</b>	<b>20</b>
<b>James P. Colie</b>	<b>21</b>
<b>MTN</b>	<b>22</b>
<b>Lloyd's Register</b>	<b>23</b>
<b>Rolls Royce</b>	<b>24</b>



## Global electronic chart service

C-MAP has the world's largest commercial digital chart database backed by a comprehensive, on-line updating service. In addition C-MAP distributes official Electronic Navigation Chart data issued by Hydrographic Offices.

Most navigation systems can display C-MAP digital chart data, check our website to see if your system can make use of the unique C-MAP Electronic Chart Service.

**C-MAP**

**NORWAY**

THE ELECTRONIC CHART STANDARD

C-MAP Norway A/S

P.O. Box 212 4379 Egersund, Tel: +47 51 46 47 00 Fax: +47 51 46 01

[www.c-map.no](http://www.c-map.no)



Circle 294 on Reader Service Card

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

## Cammell Laird Loses \$74 Million Contract

The finale of a long-standing saga is not good news for Britain's Cammell Laird, which announced that it lost a crucial \$74.7 million contract, which is likely to put hundreds of jobs at risk. The company is considering its legal options. The shipbuilder and repairer said the owner of cruise ship Costa Classica, Costa Crociere of Italy — a unit of Carnival Corp — had terminated a contract for the ship's conversion. The deal was effectively scuttled late last year, and the two parties had been involved in an arbitration process to resolve the matter. Cammell Laird maintains its position that it has complied with its contractual obligations.

## Royal Caribbean Stock Downgraded

Moody's Investors Service downgraded Royal Caribbean's senior unsecured debt ratings reflecting higher than anticipated debt levels associated with the company's shipbuilding program, and a weaker price environment that may continue given the capacity expansion projected for the industry overall, as well as the weakening economic outlook. The outlook is stable.

In 2000 the industry including Royal Caribbean experienced flat to declining net yields as a result of competitive conditions. Moody's expects this pricing pressure is likely to continue given the industry capacity expansion, and the weakening economic outlook that may result in slower demand growth relative to supply. Additionally, margins may also be negatively impacted by rising fuel costs resulting in lower than expected cash flow to support the company's ship building program.

Royal Caribbean will spend in excess of \$5 billion over the next four years to build 10 ships,

six of which will be delivered over the next two years. The company currently has 10 ships on order through the year 2004. Moody's notes, that despite the competitive pricing environment, the company was nevertheless able to increase retained cash flow in 2000 from the addition of two new ships to its fleet

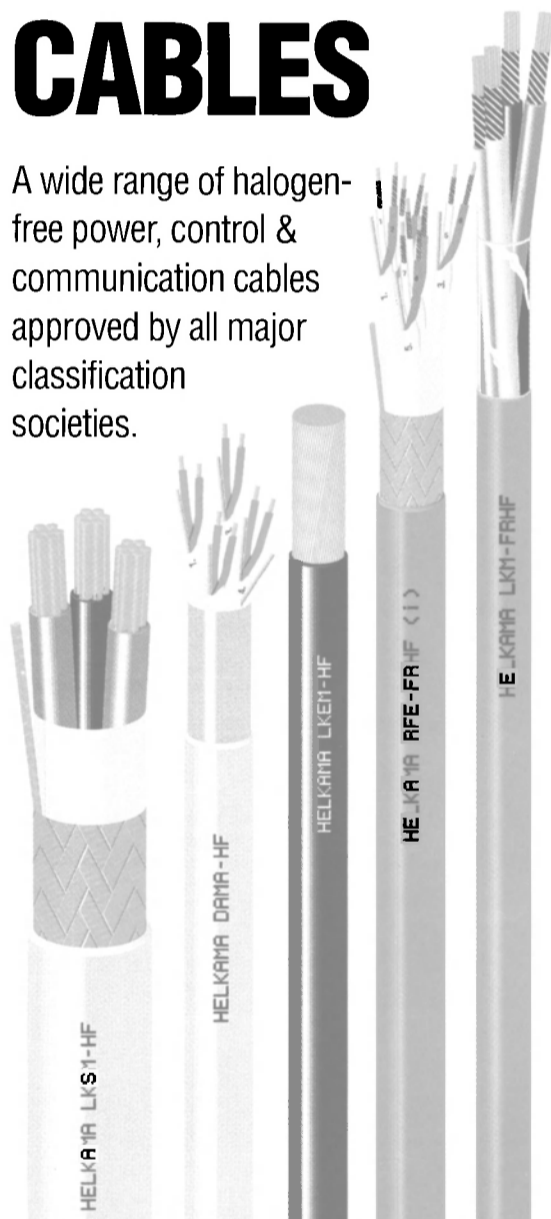
during the year. The ratings continue to reflect the company's strong market position, brand equity, as well as the company's conservative financial policies which are expected to continue. The ratings also incorporate the quality and age of Royal Caribbean's fleet as well as its experienced management team. Royal

Caribbean is the second largest cruise line company. Moody's expect cruise passenger growth will generally kept up with net supply additions as has occurred in the past. However, Moody's believes it is likely that the pricing environment may be more difficult than that experienced during previous periods of

THE BRAND  
OF  
RELIABILITY

# HELKAMA SHIPBOARD CABLES

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



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

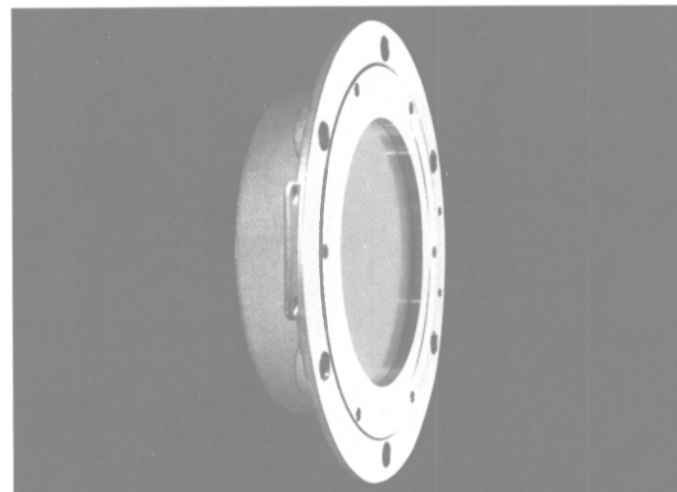
## HELKAMA

Helkama Bica  
Lakimiehenkatu 4, FIN-20780 KAARINA, FINLAND  
Tel. +358 2 410 8700, fax +358 2 410 8750  
[www.helkamabica.fi](http://www.helkamabica.fi)  
[marinecables@helkamabica.fi](mailto:marinecables@helkamabica.fi)

Circle 236 on Reader Service Card

“Now with  
leak detection”

# THE RADAR



## Smart Radar Level Sensor with Generic RS485 Output

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

### Options:

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

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

Circle 221 on Reader Service Card

# Pound For Pound, Ballast-Crete Is Better.

**For All Marine Fixed Ballast Operations  
Densities Up To 400 pcf (S.G. 6.4)**

Inorganic, removable, and available in a wide range of densities, Ballast-Crete is the ballast of choice for naval architects and engineers around the world. For more information, call Redland Genstar at **(410) 683-9254**.



**BALLAST-CRETE**

**Redland**  
GENSTAR

Circle 264 on Reader Service Card

**Why Paint and Insulate?**  
Seal, Insulate and Protect all with

## Delta T Marine Insulating Coating



**Replaces thermal insulation!**

- A 40 mil layer achieves an R11-R15 factor!
- Non toxic and contains no harmful VOCs!
- USCG, Lloyds, ABS and DNV Approved
- Cost Effective!

**Mascoat Products** Ph: (713) 688-9099  
**Houston, TX** Fax: (713) 688-9169  
**www.deltacoat.com** Sales@deltacoat.com

Circle 255 on Reader Service Card

capacity expansion given that the competitive price environment occurred during the more robust economic climate of 2000 and at the early stage of the industry capacity expansion. Moody's expects older ships will continue to be retired, as about 15 percent of the industry capacity is more than 20 years old which will aid the supply and demand balance. Furthermore, the industry has been consolidating with the top three cruise companies comprising more than 70 percent of capacity up from about 45 percent in 1991. Additionally, demo-

graphics are favorable to the industry since the average age (50) of the typical cruiser is within one of the fastest growing segments of the population. Also, the company continues to attract new first time cruisers, that indicates continued penetration of the cruise product. Royal Caribbean, headquartered in Miami, Fla., operates a cruise line under the brand names, Royal Caribbean International and Celebrity Cruises. During the year ended December 31, 1999, the company's revenues were \$2.5 billion.

## No 1 in World wide trading in new and second-hand maritime/offshore equipment

- Lifeboats—totally enclosed / partially enclosed / open
- Tenders • Mob.-Boats
- Work Boats • Rescue Boats
- Fast Rescue Boats
- Davits - ships and rig davits / single arm / liferaft davits
- Liferafes • Immersion Suits
- Deck Cranes • Rig Cranes
- Helicopter Decks
- Winches -diesel/hydr./electric/air
- Capstans • Hydraulic Power Packs
- Anchors • Chains
- Reverse Osmosis Plants
- Sewage Treatment Plants
- Generator Sets • Air compressors
- Azimuthing and tunnel thrusters
- Accommodation Modules
- Firefighting systems
- Pumps • Purifiers • Grabs • Fenders
- Various Maritime / Offshore Equipment

Norwegian Maritime Equipment AS sells, buys and negotiates new and second-hand maritime/ offshore equipment. Delivered with documentation, and ISO 9002 certificates.

Upon request we will send you an offer with technical specifications and prices

**NORWEGIAN**  
MARITIME EQUIPMENT

P.O. BOX 244, 5480 HUSNES, NORWAY  
Tlf +47 53 47 95 00 Fax +47 53 47 34 99  
Internet: <http://www.nme.no>  
E-mail: [nme@nme.no](mailto:nme@nme.no)

Circle 258 on Reader Service Card

PASSENGER FERRIES  
CONTAINER VESSELS  
CHEMICAL CARRIERS  
CRUISE VESSELS  
LUXURY YACHTS  
RO-RO VESSELS  
TANKERS

**KNUD E. HANSEN A/S**  
NAVAL ARCHITECTS • DESIGNERS • MARINE ENGINEERS

ISLANDS BRYGGE 41  
DK-2300 COPENHAGEN S • DENMARK  
PHONE: +45 32 83 13 91 • FAX: +45 32 83 13 94  
E-MAIL: [KEH@KNUDEHANSEN.COM](mailto:KEH@KNUDEHANSEN.COM)  
[WWW.KNUDEHANSEN.COM](http://WWW.KNUDEHANSEN.COM)

MEMBER OF THE SEMCON GROUP

Circle 313 on Reader Service Card

## 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](mailto:sales@aurand.net) • web: [www.aurand.net](http://www.aurand.net) • (800) 860-2872

Circle 207 on Reader Service Card

## Politics

# 'Safe Haven' Debate Could Have Resounding Effects

A situation ongoing at press time half way around the world promises to affect the way in which ship emergencies are handled in the U.S. and abroad. Last month, debates were raging and political fur was flying as the stricken tanker, *Castor*, carrying 29,000 tons of gasoline, was held in limbo as authorities on many levels debated the best course of action. The ship, which was damaged but still afloat and operational, was turned away from three countries — Morocco, Spain and Gibraltar — as it went to for assistance.

Greek operator Athenian Sea Carriers said that the Moroccan Coast Guard instructed the vessel to move 40 miles offshore, while a decision was made on the final destination for the carrier, which was damaged during heavy weather between December 26 and December 31 on a voyage from Constanza in Romania to Lagos. A surveyor reported that the crack occurred along a transverse butt-weld next to number four hold, with some reports saying that crack was 66 ft. (20 m) long. Apparently the tanker was not yet leaking any cargo. The main concern, beyond any potential environmental disaster in the case of the ship breaking up, was that the deck plates would rub, spark, and ignite the cargo. As the saga continued, tensions obviously grew increasingly high, with the captain and crew at one point threatening to abandon the ship in the event of continued indecision.

### Nowhere to Hide

The *Castor* saga succinctly illustrates gaps in protocol in the handling of damaged, but seaworthy ships. All of Europe - much as the U.S. is - is particularly sensitive to potential ship sinking and ensuing environmental disaster, in the wake of the break up of the *Erika* off the coast of France just one year before.

As a resolution to the *Castor* situation dragged on, the International Maritime Organization (IMO) called for measures to ensure refuge for troubled ships like the Greek tanker *Castor*. "The time has come for the organization ... to adopt any measures required to ensure that... coastal states review their contingency arrangements so that disabled ships are provided with assistance," Secretary General **Bill O'Neil** told an IMO committee meeting in London. "That incident brought to light once again the question of ports of refuge," said O'Neil.

**Nicolas Hondos**, CEO of Athenian Sea Carriers said during the ordeal: "The *Castor* has now been seeking a

Port of Refuge for more than one week. Every day that passes, increases the risk of further deterioration in the weather and risk to lives and of pollution." Hon-

dos said there was a large team of experts on the scene, fully supported by tugs and equipment. The ship is in the tow of the world's most powerful sal-

vage tugboat, *Nikolay Chiker*, with all crew off the ship.

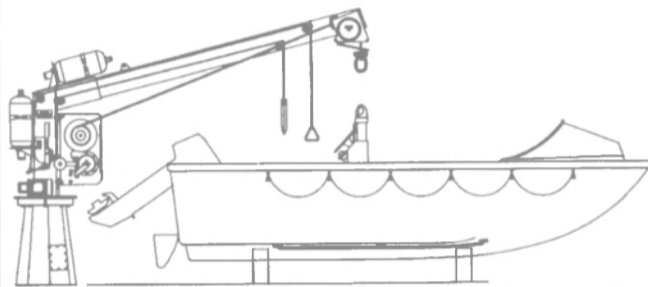
There are currently no legal obligations on coastal states to provide "ports

## EDGEWATER

MACHINE & FABRICATORS Inc.

### Specializing in Deck Equipment

- CAPSTANS
- MOORING WINCHES
- WINDLASS'S
- CRANES
- LIFEBOAT SYSTEMS
- RESCUE BOAT SYSTEMS
- DAVITS AND WINCHES

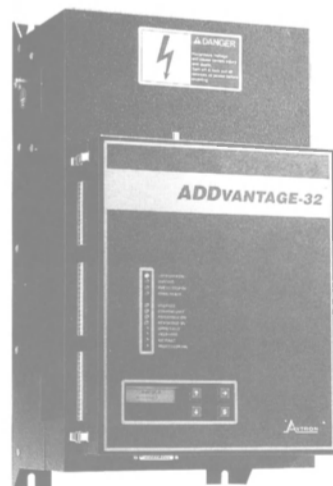


USCG / ABS / SOLAS  
APPROVED

Ph: (904) 428-3215 Fax: (904) 423-9480  
202 N. Flagler Ave. / P.O. Box 358  
Edgewater, Florida 32132  
E-Mail: edgemach@aol.com

Circle 306 on Reader Service Card

## Reliable Drive Performance



- Digital SCR Propulsion Drives
- Bow/Stern Thruster Drives
- Upgrade Rotating Generator & Motor Field Supplies
- Rugged Pulse Generators

- Easy Interface to Control Systems and PLCs
- Complete System Engineering, Service, and Manufacturing Capability
- Installations Include Ferries, Buoy Tenders, Dredgers, Research Vessels, and U.S. Coast Guard



7900 E. Pleasant Valley Road • Independence, Ohio 44131  
Tel. (216) 642-1230 • Fax (216) 642-6037 • www.avtron.com/marine.htm  
E-mail: mduskey@avtron.com

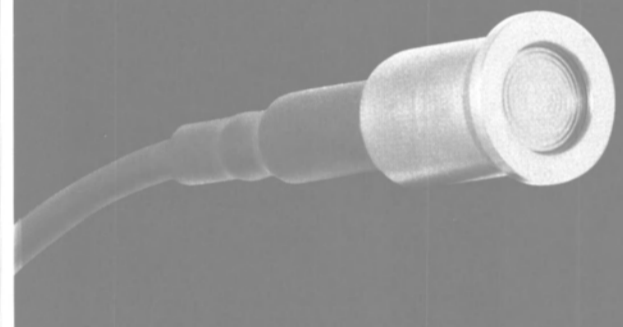
ISO9001  
QUALITY SYSTEM CERTIFIED

Circle 307 on Reader Service Card

www.maritimetoday.com

"Now with  
leak detection"

# THE BALLAST



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

Use one sensor for all shipboard  
liquid levels

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

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

Many Options

EMS

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

Call today  
for more  
information!

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

Circle 222 on Reader Service Card

# WHERE SHOULD YOU GO FOR A TOTAL SOLUTION MARINE COMMUNICATIONS PACKAGE? HOSE-McCANN, OF COURSE!

**Hose-McCann Telephone Co., Inc.**,  
the leader in manufacturing superior marine  
communications equipment, is proud to  
announce its on-site turn key installation  
and service division.

*Let Us Work  
For You!*

*No Installation Too Big Or Too Small*

**Seatrade  
Booth #1123**

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



**Celebrating 65 years**

**Hose-McCann Telephone Co., Inc. 954 429 1110**

Circle 301 on Reader Service Card

## Politics

of refuge" nor is there a definition of what constitutes a "ship in distress," an IMO spokesman said.

On December 8, the damaged VLCC Eastern Power, carrying 250,000 tons of Iraqi crude, was refused entry to Canadian waters after it reported a minor leak

during heavy storms. It eventually continued through heavy seas to St. Eustatius in the Caribbean for the cargo to be offloaded. The tanker Erika was also refused refuge in December 1999 before it broke apart in a storm, leading to a major spill of fuel oil across the coast-

line of Brittany.

### ABS Under Fire, Fights Back

As was the case when the Erika went down off the coast of France in late 1999, much (unwanted) attention has been focused on the classification soci-

ety for the damaged product tanker Castor, in this case American Bureau of Shipping. Unlike the aforementioned example, however, ABS has been aggressively addressing the matter in the

*(Continued on page 60)*

## Communication at Sea



The TT-3064A Capsat® Maritime Telephone has the world's smallest automatic 2-way maritime satellite tracking antenna.



It is the ultimate choice for your vessel, whether it is a private yacht, a large coaster, or a fishing vessel. The TT-3064A is operated like a standard cellular phone, however, with trans-ocean coverage.



The TT-3064A is a 3-in-1 communication tool providing telephone calls, fax transmission, and e-mail/Internet messaging.

[www.tt.dk](http://www.tt.dk)

Are you looking for high-quality, fast and reliable satellite communication? Visit our Shop On-line on [www.tt.dk](http://www.tt.dk)

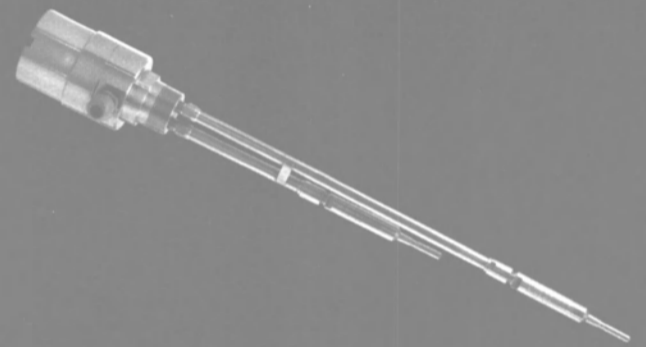
Thrane & Thrane

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

We bring satellite communication down to earth

Circle 305 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!**

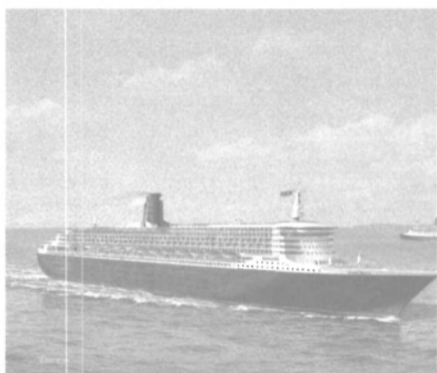
**EMS**

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 223 on Reader Service Card

## Queen Mary 2: Cunard's Answer to Royalty on the Seas



The world's largest ocean liner is scheduled to debut during the last quarter of 2003. It will be constructed at the French shipyard Chantiers de l'Atlantique.

Despite the threat of overcapacity in the cruise shipping industry, newbuilding contracts have remained on a constant high — specifically in the mega ship sector. This new trend, which seems to have taken on a life of its own in the industry, beginning with Royal Caribbean's *Voyager of the Seas*, has carried over to Cunard, which has hired Chantiers de l'Atlantique to construct what is set to be the world's largest ocean liner. Measuring 1,131 ft. (345 m) with a 131 ft. (40 m) beam, the \$780 million vessel, according to its designers at Tillberg Design, will exemplify the classic British style that is representative of Cunard.

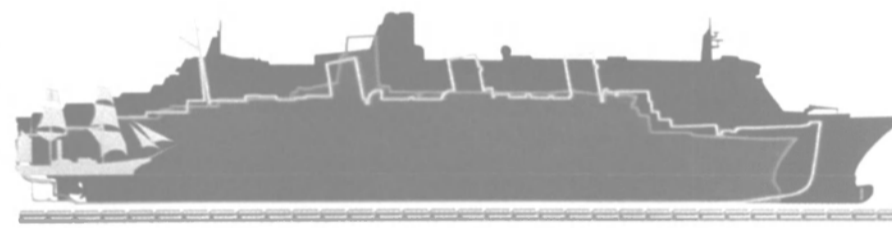
By **Regina P. Ciardiello**,  
associate editor

Building upon its reputation of classic ocean liners with an aristocratic motif, Cunard has (figuratively speaking) come full circle from the position it was in just a few years ago. The Line, which had experienced its heyday during post-WWII with its Queen Mary and Queen Elizabeth liners, was considered the only way to cross the Atlantic. For those who could afford to travel on the high seas, the Cunard ships exemplified a status of wealth and elegance. It was a different time as the era of airplane transportation was in its infancy. In those days, a trans-Atlantic crossing was simply taken for what it was — a way of getting from point A to point B. It was a way for individuals to travel comfortably and stylishly across the Atlantic.

Times have changed though, and Cunard has rolled along with those changes in terms of re-establishing itself as the classic company it once was — beginning with the re-assessment of its

financials. The company made a clever move in May 1998 when it decided to sell 68 percent of its interests to **Micky Arison's** powerhouse — Carnival Corp. Arison, who saw a great potential in the Cunard brand, went a step further to uphold the company's signature blend of elegance and high style when he merged Cunard with Seabourn Cruise Line. In October 1999, Carnival exercised its option to purchase the remainder of the company, and did so for \$205 million.

Subsequent to the Carnival purchase, Cunard was poised to recapture the healthy, solid balance sheet that it once held. In fact, Arison decided from the very beginning of the venture that his intentions included plans to construct a new ship for Cunard. His ideas became a reality just one month after purchasing



CUNARD

A depiction of how large QM2 will be. At 1,131 ft. (345 m), the vessel is five times longer than Cunard's premiere ship, *Britannia*, which measured just 230 ft. (70.1 m).

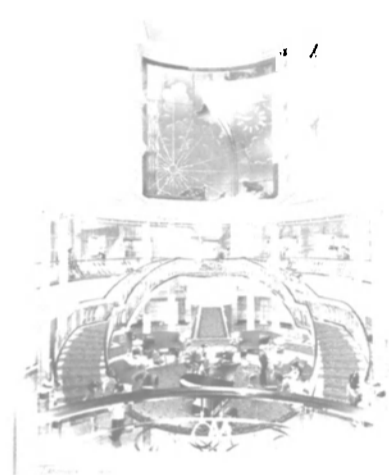
the company. In June 1998, Cunard went public with its plans for a new mega ocean liner that would grace the Atlantic sometime in 2003.

While plans were very preliminary, Cunard began the process by calling upon senior naval architect **Stephen Payne**, of Carnival Corp.'s London office as lead designer; **Gerry Ellis**, a former chief officer of QEII to serve as project coordinator; and **Andrew Collier** of Tillberg Design as project manager of the vessel's interior designs. Ellis, who now serves as Cunard's manager, New Builds & Special Projects, brings a wealth of knowledge to the company in a variety of aspects. In fact, he originally joined Cunard to assist with itinerary planning for their vessels. Remaining landside for the last five years, he was able to shed light on this area from a navigator's, as well as a captain's point of view. Citing safety as his number one priority, Ellis had been focusing on itinerary planning, in addi-

tion to port operations for the line when he was approached about what was then known as "Project Queen Mary."

Melding Payne's naval architecture skills with Ellis' navigational experience, the pair embarked on the project that would differ from a conventional cruise vessel in many ways.

Aside from its grand size equivalent to approximately four football fields in length, QM2 is not your average cruise vessel making stops throughout the Eastern and Western Caribbean. Since it will be performing trans-Atlantic crossings, possibly in harsh weather conditions, some adjustments needed to be made. Since the perils of the North Atlantic (especially in wintertime) are numerous, Payne designed the vessel with its lifeboats 88 ft. (27 m) above the



The Grand Lobby and Atrium onboard Queen Mary 2 allows guest to make their grand entrance onboard what is being touted as the world's most prolific ocean liner.

Steadfast on ensuring that QM2 exceeds all safety requirements, the technical team opted to use 37 lifeboats instead of the escape chutes that some operators are now choosing to implement — citing that they are easier to operate and maintain on a daily basis. Manufacturers being considered to supply the vessel with the lifeboats are Schat-Harding, Greben, Fast Marine, and Mulder and Ruke.

### Best Laid Plans

Both Ellis and Payne, along with Carnival Corp.'s design team worked on QM2's technical specifications for more than nine months before announcing their vision to the world. The next step was to choose the shipyard that would be able to handle a construction of this magnitude. In November 1999, Cunard announced that it had narrowed down its choices to Masa Yards, HDW Kiel, Fincantieri, Chantiers de l'Atlantique and Harland & Wolff. Best known for its construction of the ill-fated Titanic, many speculated that Harland & Wolff would be chosen because of its historical connection and knowledge of ocean liner construction. Cunard however looked beyond sentimental reasoning and on March 9, 2000 announced its decision to sign a letter of intent with the French-based Chantiers de l'Atlantique. According to Ellis, (who was in charge of negotiating the contract), while both yards were strongly considered for the job, he felt that Chantiers offered Cunard a more cost-effective financial package. Approximately eight months

(Continued on page 37)



# Choose LR and lower your risk

**When you choose Lloyd's Register, you will benefit from our vast wealth of experience and knowledge to help lower the risks associated with building and operating cruise ships. We provide solutions – you enjoy the benefits:**

- **at the design stage**, our design appraisal teams, supported by state-of-the-art analysis tools, help ensure your design is right – over half of the tonnage on the global orderbook will be built to LR class
- **during construction**, dedicated teams of surveyors, supported by our project-management approach to newbuildings, help ensure your ship is built to the necessary standards for safety and through-life reliability
- **in operation**, our surveyors support your business with an intelligent approach to maintenance management, passenger safety certification and environmental protection. And if technical problems arise, our unrivalled technical expertise will help find a safe and efficient solution.

It all adds up to lower risk to your operations and enhanced business performance. The largest share of the world's cruise ship fleet is built to LR class, and with surveyors located at the major cruise ports, our help and support are never very far away. For more information, come and visit us at Seatrade Cruise Shipping Convention, Miami, stand number 615, or contact your local LR office.

**Lloyd's Register Americas, Inc.**  
15810 Park Ten Place, Suite 295  
Houston, Texas, 77084, USA  
Tel: +1 281 599 8450  
Fax: +1 281 599 8455  
Email: [jack.polderman@lr.org](mailto:jack.polderman@lr.org)

[www.lr.org](http://www.lr.org)

Lloyd's Register of Shipping,  
registered office:  
71 Fenchurch Street  
London EC3M 4BS, UK

**Lloyd's  
Register**

The **BUSINESS** of **SAFETY**

## Kaparis Defines Safety on Cruise Ships

A leader in the use of technology to enhance cruise shipping safety, Celebrity Cruise Lines' Demetrios Kaparis broke ground last year with his decision to implement gas turbine power on Celebrity's Millennium — a technology that he cites is "the future of marine power plants." The vessel class, which consists of Infinity (scheduled to debut this month) and Millennium III and IV, debuting in April 2001 and 2002, respectively are touted by Kaparis as "The most environmentally sensitive cruise ships in the world."

Kaparis met recently with MR/EN to discuss what he considers are the most important safety issues in cruise shipping today.

By Regina P. Ciardiello,  
associate editor

Among the sketches of general arrangement drawings, and IMO and technical specifications, Celebrity's Demetrios Kaparis sums up his vision for a safe cruise ship fleet. He firmly holds the belief that that all of Celebrity's newbuilds, "will be built with the latest SOLAS 1974 Regulations in compliance also of the 1992, 1995 and 1996 amendments ensuring a great improvement of passenger ship safety by incorporating the latest fire safety and technology equipment."

Kaparis has expressed that mandatory safety training for all officers and crew with firefighting and medical responsibilities must be also be reinforced. He feels that these individuals must be certified in these areas according to IMO recommendations and flag administrations and he will strive to ensure that special training rooms and facilities will be available onboard all Celebrity newbuilds - steadfast in his quest for eternal vigilance.

**MR/EN:** How would you improve upon the current evacuation procedures on cruise ships?

**Demetrios Kaparis:** I would add at least eight separate evacuation towers ensuring correct integrity of main bulkheads, escape routes, enclosures and sizing of stairways. Including also a life raft chute evacuation system to provide special means of quick and effective

evacuation of handicapped and elderly passengers. In regards to the presence of smoke onboard if a fire occurs, I would work to improve this by installing smoke control extraction systems that would be activated during an emergency situation. Specifically designed for evacuation on stairways, the ventilation systems would limit the spread of fire and smoke.

**MR/EN:** Do you plan to restrict the volume of combustibile materials?

**DK:** We will insist that our architects, sub-contractors and shipyards that work with us to introduce materials of higher fire-resistance and non-combustible low flame spreading materials, for all bulkheads, doors, decks, as well as furniture and fittings. I would like to attempt to re-implement a fire construction method as per SOLAS 1960 stating that only non-combustible materials be used on furniture and fittings when possible. I would also like to instill toxicity IMO resolutions in all combustibile materials.

**MR/EN:** Do you plan to implement a new type of sprinkler system onboard all of Celebrity's newbuilds?

**DK:** There needs to be an adequacy of sprinklers in all fire zones onboard, with the overall fire load per each zone. Respective drainage systems for protecting open area equipment such as mooring decks and embarkation areas or by using the Hi-Fog system that I have developed, which was recently approved by IMO and most flag administration and classification societies.

*Note: Furthering his mission for enhanced fire safety, Kaparis has already implemented the Hi-Fog sprinkler system onboard all Millennium class ships. The innovative system, which produces a light mist rather than the shower spray that is given off by a sprinkler system, is designed to cool down the fire quicker and is touted as being less damaging to interiors.*

**MR/EN:** What needs to be done to ensure that all passengers (including infants) receive life jackets in case of an emergency situation?

**DK:** I would recommend the placement of additional life jackets (above and



**Demetrios Kaparis**, Celebrity Cruise Lines' senior vice president and director of Corporate-Safety Environmental Developments and New Buildings designs all of the line's ships with his own personal "safety slogan" in mind: "Eternal Vigilance is the Price of Safety."

beyond SOLAS requirements) in the muster stations or on the embarkation deck, as well as adequate number of "infant survival cots."

*Note: Kaparis developed the "infant survival cots" in response to the increase of infants onboard with their parents.*

**MR/EN:** What will be done to allow for easy detection of fire when there is limited visibility?

**DK:** Thermal imaging devices will be installed in each fire zone to enhance the ability to locate fires when dense smoke or an obstruction is present due to ship compartmentalization.

**MR/EN:** Where else onboard a ship would you recommend additional fire safety measures?

**DK:** I would recommend special fire safety measures be taken in the galley area, such as the installation of individual means of fire extinguishing systems. I have developed a new technology called a Steam-Smoothing system for cleaning air tanks in case of fire transmission with the fire exhaust air tanks. The system, which can be used in galleys, dining rooms and buffet areas, gives off a mist of steam that creates an

automatic fog mist above cooking equipment that catches fire.

I will also ensure a higher degree of insulation fitted in terms of emergency generators, control rooms, switchboards and battery rooms, which should be in excess of the present fire integrity of A-O as per current SOLAS requirements - to A-GS plus. Similarly, all emergency cables should be insulated accordingly to withstand excessive fire heat for at least three hours.

**MR/EN:** What would happen if a power failure occurred onboard a Celebrity ship?

**DK:** We have already introduced additional capacity of emergency power over and above current regulations, and we will ensure that emergency lights will be installed on every fire locker, storeroom and any additional spaces containing safety equipment. In addition, it is imperative that all passenger cabins and locker where lifejackets and life saving equipment are located should house emergency lighting. Adequate emergency power must also be provided for potable water/sewage systems and some galley equipment — specifically refrigerators, ranges and all accommodation pantries.

# HOPEMAN™

*Providing Marine Interior Accommodations For Over 85 Years*



Photo courtesy of The Delta Queen Steamship Co.

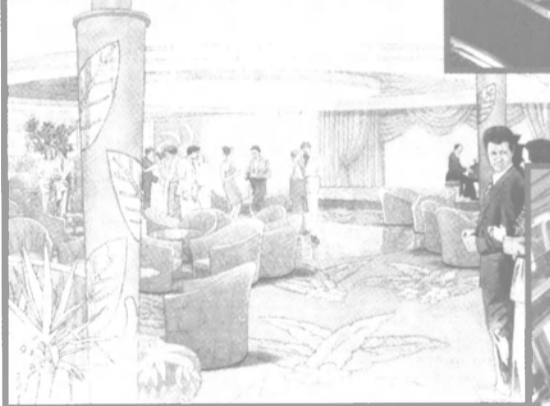


Photo courtesy of The Delta Queen Steamship Co.



Caesars Casino

AMCV Cabaret Lounge Drawing Courtesy of American Classic Voyages Co.



Seatrade  
March 6-8, 2001  
Visit HBMI at  
Booth #715

## Hopeman Brothers Marine Interiors LLC

435 Essex Avenue Waynesboro, VA 22980 USA

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

e-mail: [hopeman@hopemanbrothers.com](mailto:hopeman@hopemanbrothers.com) [www.hopemanbrothers.com](http://www.hopemanbrothers.com)

*Cruise Ships,  
Coastal Vessels,*

*Casinos,*

*Riverboats...*

*whatever your  
program needs,  
Hopeman has*

*Program  
Management*

*Engineering*

*Materials*

*Installation*

*Service After  
The Sale*

*and the*

*Financial Stability to  
Ensure Performance*

---

*from start  
to finish...*

*we can do  
it all*

# The Dickinson Way

*Walking into Bob Dickinson's spacious office at Carnival Corp.'s Miami, Fla. headquarters, one would be shocked to hear that he isn't in the cruise business to make money. Many executives would be eager to find out how the president of the world's largest cruise line can live by this philosophy. Dickinson, who has served as president of Carnival since May 1993, met recently*

*with MR/EN to shed some light on how his strategies and ideas have kept his company at the top of the cruise industry funnel.*

By **Regina P. Ciardiello**,  
associate editor

Sitting down for a chat with **Bob Dickinson** is like mixing business with pleasure — you get the job done with a little humor added into the fray. But ask Dickinson what angers him about the cruise industry, and the smile that is usually present, quickly disappears. He's



**Bob Dickinson**, president, Carnival Cruise Lines was recently profiled in Success Magazine as a radical thinker of the cruise industry.

not really interested in building ships for the money, as some cruise lines are — he would rather build ships to make money on their utilization instead.

"I'm not terribly interested if the line makes money," Dickinson deadpanned. "Unlike many companies, we build ships to make money on their utilization — that's why we're the most profitable. It's annoying that most are in this business just to make money for the company."

Dickinson follows a philosophy that is simple and makes good business sense — providing more capaci-



[www.volmar.it](http://www.volmar.it)



Since 1973, Moletron Ultrasonic Eq. has dissolved asphaltene of low grade fuels enabling better burnability in Diesel Engines and Boilers (WITHOUT ADDITIVES)

MOLETRON eliminates slag build-up, restrains maintenance costs, produces less pollutants and less CO<sub>2</sub> at stacks, and pays back investment within a few months while the life span of the asset investment is prolonged.

from Italy

**VOLMAR** -Brugherio Milan ☎ +39 039 883195 - Fax +39 039 878283 - e-mail: info@volmar.it

from U.S.A.

**COMCOR** Tech (NJ) ☎ 908 9798193 - Fax 908 9791815 - e-mail BrM746@aol.com

Circle 277 on Reader Service Card

## ENVIRONMENTAL PROTECTION



NO<sub>x</sub> MEASUREMENT



InfraRed Inspection



MEASURING AND CONTROL ENGINEERING, INC.

Phone: (954) 493 8913 \* Fax: (954) 493 8914

Web site: [www.mace-inc.com](http://www.mace-inc.com)

Quality Assured Inspection Services

Electrical Insulations

Audio / Video Techniques

Sales and Service

Approved by : ABS, BV, RINA, LRoS, RINA

- Vibration-Noise-Structural/Modal Analysis • Field Balancing • Laser Alignment • Torque-Torsional Vibration Analysis •
- InfraRed Thermography • Thickness-Hardness-Crack Determination • Ultrasonic Flaw Detection •
- Ultrasonic Leak Detection • Electrical Motor Inspection • Engine Health Analysis • Emission Measurements •
- Strain Measurements • Electrical Installation

Seatrade Cruise Shipping - Booth #935



For your predictive Maintenance

## Cruise Shipping Annual

ty when demand is up. He stresses that the line is not building ships irresponsibly, in other words, every ship in the Carnival fleet is purpose-built. "We don't build ships just for the sake of building them," Dickinson stresses. "We want a solid return on our investment - capacity should be in proportion to demand."

Contrary to popular belief, the cruise industry only captures two percent of the travel industry. Even more surprising is that only 13 percent of Americans have ever taken a cruise. While some would see these numbers as a reflection of an industry in trouble, Dickinson strongly disagrees, he cites that the remaining 87 percent are just "not sure if cruising is for them." Steadfastly trying to change this notion since assuming the top position at Carnival, Dickinson and the company's sales and marketing team has marketed the line's ships to the specific wants of the customer. In fact, he cites that he strives to raise that two percent figure to 10 by the time he retires. "Customers have needs," Dickinson said. "They dictate vacation trends, therefore the product must change itself to meet these needs. The expression of the product 10 years ago was different than it is today." He's referring to how the line has evolved with today's constantly changing technological arena, beginning with its newest "fun ship," Carnival Spirit, which will be fitted with Wartsila's smokeless engine technology. The new EnviroEngine power system is the culmination of a yearlong project between the Finnish engine manufacturer and the line's parent company Carnival Corp. The package — developed in response to demand from the many scenic and environmentally sensitive areas of the world in which ships cruise - is designed to be the most environmentally friendly power plant available in cruise ship engine technology.

Spirit, which is scheduled for an April 29, 2001 debut, will also house an Internet cafe. Provided by Marine Telecommunications Network (MTN) and Digital Seas International (DSI). The new service allows passengers to check e-mail, get news from around the world and surf the Web — all from the confines of a Carnival ship. It was reported that five of the line's operating ships have been refitted with the innovative workstations that feature "flat-panel" computer terminals.

In order to appeal more to the younger set, Dickinson said the line is strategizing a way of getting kids into cruising with their families so that they will literally become a legacy within the Carnival brand. "We want to expose them to the product as kids, which they will hopefully carry into their adult life." And Dickinson has most definitely hit the ball out of the park with the new "Camp

Carnival" program, which features a variety of planned activities to keep children occupied while their parents can enjoy some time alone. "Parents are literally pulling their kids out of school, to take a Carnival cruise," he said.

### Top of the Heap

In 1996, Dickinson established Carni-

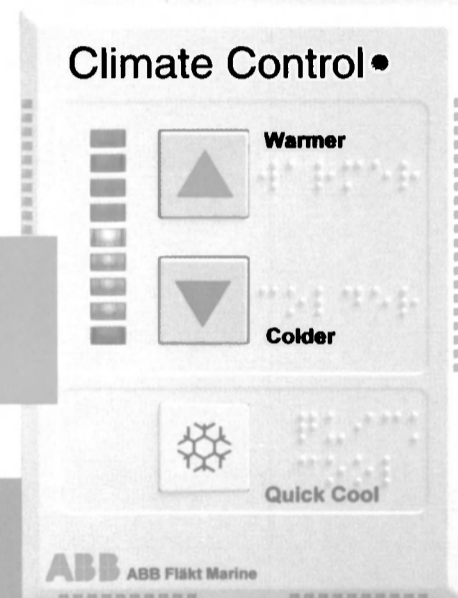
val's vacation guarantee policy, which is self-explanatory — if you don't like the cruise, you'll get your money back.

Since establishing this idea five years ago, Dickinson is surprised, as well as annoyed, that none of his competitors have followed suit — probably because they are not confident about their product — something that Carnival could

never fathom, as confidence is the core of its operation.

Dickinson has even heard of an anonymous operator that offers a bonus incentive to those who raise its operating level that comes within close reach of the Carnival brand — a brand that is undoubtedly the jewel in the Carnival Corp. crown.

Latest news in "Cruise Control"  
MONOVENT now ordered for a total of  
eight "top of the line" cruise vessels -  
simplicity, reliability and perfect climate.



Theory is one thing. But in real life, many ship air conditioning systems provide passengers and crew with a choice of two extremes, Icy Blast or Blast Furnace.

The MONOVENT changes all this. The MONOVENT supplies fresh, conditioned air silently and smoothly. Its easy-to-see LED temperature indicator dims automatically when the cabin lights are turned off. The time-based Quick Cool booster translates into improved comfort for passengers and crew and reduced operating costs for you.

The MONOVENT is a single-duct electric reheat system with precise and automatic climate control and pressure compensation that eliminates the need for tedious commissioning work and tuning. So you can install the air terminal at the very last moment in a new vessel, or carry out fast installation when refurbishing. The MONOVENT safely meets the EMC (Electromagnetic Compatibility) directive and carries the CE mark.

If you are tired of blow hot, blow cold, hissing air conditioning, take a closer look at the MONOVENT.

## There's air conditioning

## And there's MONOVENT®

ISO 14001  
Certified

### ABB Flakt Marine

ABB Flakt Marine AB, Box 1043, SE-436 21 Askim, Sweden  
Tel: +46 31 3392200, Fax: +46 31 284289  
E-mail: Nils-Erik.Nerman@se.abb.com

Circle 292 on Reader Service Card

# ABB



Curaçao Drydock Co., Inc.



## Docking possibilities for the **New Generation Cruise Ships**

### **Antillia Graving Dock**



#### **Dimensions:**

Between dockwalls: 280 x 48.00 meters  
Between fenders: 280 x 47.35 meters



#### **Depth of water over the keelblocks:**

**At the entrance:** 8.00 meters with a slope of 1:200

Keelblock arrangement specially designed and adapted to dry-dock Large Cruise Vessels with a trim of 1:200 (angle of heel  $\text{tg.}\alpha = 0.005$ )

Efficient modern hauling system with semi-automatic winches and trolleys moving along rails at both sides of the dry-dock, allowing complete control during the repairs.



Curaçao Drydock Co., Inc.



Curacao Drydock Company, Inc.  
Dokweg 1, Koningsplein  
P.O.Box 3012  
Curacao, Netherlands Antilles  
Phone: (599)9-733-0000  
Fax: (599)9-737-9950

Circle 305 on Reader Service Card

### Kvaerner Conducts Sea Trials; Docks Out New Cruise Vessels

Carnival Spirit, which is currently under construction at Kvaerner Masa-Yards' Helsinki shipyard for Carnival Cruise Lines, underwent sea trials in the Gulf of Finland during the second week of January. The sea trials, which encompassed close to 100 different tests, were completed successfully — one half day earlier than planned. Following this, Kvaerner proclaimed that the 960 ft. (292.5 m) Spirit superceded the specified requirements. It was also proven that the vessel demonstrated excellent sea characteristics.

Scheduled for an April 2001 delivery, Spirit has since returned to the yard for final outfitting. The second part of a Panamax-Max size cruise ship series for Carnival, the vessel will hold 2,680 passengers in a total of 1,057 staterooms.

Kvaerner's Turku New Shipyard docked out Adventure of the Seas — the third member of five Voyager — class ships for Royal Caribbean — on January 5.

The 1,020 ft. (311 m) vessel's outfitting and interior work is ongoing as the outfitting pier of the yard. Scheduled for delivery in October 2001, the vessel is sister to Voyager and Explorer of the Seas, which are being touted as the world's largest in the cruise industry. The vessel class will also boast the latest technological and design features, such as the Royal Promenade — a four deck-high horizontal promenade taking up almost half the ship's length.

### Schat-Harding Enjoys Cruise Order Success

Safety specialist Schat-Harding has reported that an order from Carnival Cruise Line for 23 x MPC 36 lifeboats, one CTL1200 cruise tender and two MCB28C rescue/lifeboats for its three newbuildings at Fincantieri have capped an orders boom over the last six months. Schat-Harding estimates that orders worth more than \$22 million have been logged for the period May - November, 2000.

### Launch Of Passenger Check-In Desk Speeds-up Boarding

Manpower SoftWare (MSW) has launched a rapid check-in process that will provide the vital first impression to cruise passengers. The MAPS Check-in Desk solution, part of the MAPS Maritime suite, streamlines the boarding process; reduces passenger waiting time; and enables collection of passenger manifest, immigration and SOLAS/MSN 1729(M) details at a single event.


MAPS is the first system to make photograph capture viable at check-in, without significantly impacting passenger throughput. The image is then printed onto the cruise card and linked to the access control system, providing exceptional security and fraud prevention at gangways and point-of-sale (PoS) areas.

Circle 51 on Reader Service Card

### Solar Solve Launches 2001 With New Website

The beginning of 2001 marked the official launch of Solar Solve Marine's new website: [www.solasolv.com](http://www.solasolv.com). The new website will help to maintain the South Shields based company's presence as a leader in the manufacture of

anti-glare sunscreens for ships wheelhouse windows. The company also celebrated the success of attaining and fulfilling a significant order — six Solasafe screens for a Greek ferry. Ordered by Solar Solve's Athens distributor, the screens were manufactured and dispatched by airfreight — arriving at the dispatcher's office just 24 hours later.




# DETYENS

## Your choice when budget counts.

Efficiency, Productivity, and Competitive Price have served as our hallmark for 40 years.

When your ship repair and conversion needs require quality, professionalism and personal service at a competitive price contact Detyens Shipyards.

- Graving Docks for Ships up to 750 ft in Length
- Over 7,000 ft of Pier Space with Services
- Finest Machine Shop and Mechanical Capability
- 7 years Experience with UHP Water Blasting
- 24 Hour a Day Service - 7 Days a Week
- Flexible Cross-Craft Training



**DETYENS SHIPYARDS, INC.**  
1670 Drydock Avenue  
North Charleston, SC 29405-2121 USA  
fax 843.308.8059

**JERRY MOSHER** Vice President - Chief Estimator  
tel 843.308.8031 email [GMosher@Detyenshipyards.com](mailto:GMosher@Detyenshipyards.com)  
**DAVID ENMAN** Marketing - Sales  
tel 904.443.6233 email [dave@davidenman.com](mailto:dave@davidenman.com)

Main Yard Cooper River, Charleston, SC · Wando Yard Mt Pleasant, SC · Jacksonville Yard St Johns River, Jacksonville, FL

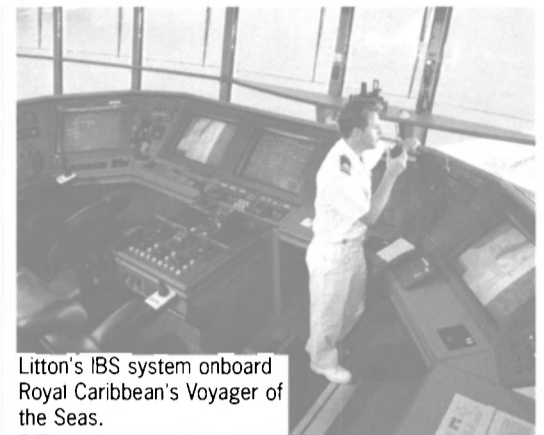
# Plug & Play

Cruise lines, perhaps more than any other segment of the shipping market, have eagerly adopted advanced integrated bridge systems to help protect not only passenger, crews and reputations, but also the more than half-billion dollar homes within which they reside.

## Furuno

Furuno's Integrated Bridge System, dubbed Voyager has been designed to achieve total integration of bridge equipment and information in accordance with the One Man Bridge Operation (OMBO). All components come from a single source, Furuno. Complying with the latest performance standards of IMO and IEC, the ECDIS displays and ENC

vector charts make for easy route planning and route monitoring. The turn radius can be specified for each waypoint along the planned route, which is checked against the electronic chart to produce a grounding prevention warning of where dangerous shallow waters exist. Voyager also incorporates an adaptive steering control in the automatic track control system, which automatically steers the ship from point to point along a planned route in narrow waters of across the ocean. The centralized system represents on the conning display, the ship's heading, course-made-good, speed, rate-of-turn, planned route and waypoint data, wind, drift, depth and more. Utilizing a modular design, Voy-



Litton's IBS system onboard Royal Caribbean's Voyager of the Seas.

ager is designed to be customized to any bridge environment.

## Kelvin Hughes

Smiths Group expertise in aircraft display technology has helped Kelvin Hughes produce their range of integrated bridge systems. The ninas 9000 is designed as a highly flexible range of integrated bridge systems designed to utilize the Kelvin Hughes range of nucleus radars and navigation systems. Created around the nucleus2 range of displays, which have been developed over the last five years, include the well-established nucleus2 6000 radar display and the Multi-Feature Display.

All displays use the patented tracker ball and three button control system to operate all of the on-screen functions. Kelvin Hughes has worked closely with the world's leading classification societies including ABS, BV, DNV, GL and LR in designing the ninas 9000 bridge systems. Kelvin Hughes' modular layout allows for ultimate flexibility in design, as many different consoles and angular units are offered to fit the varied demands of ship owners and operators. The ninas 8000 has the same visibility as the ninas 9000, but displays are smaller and thus ideally suited to high-speed craft and coastal vessels. MANTA, or Management Automation Navigation Telecommunications Array, served as a "raising of the bar" in the IBS field, as the futuristic looking unit utilizes flat-screen technology to pro-



STN Atlas Marine Electronics' new Ship Control Center (SCC), developed for coastal shipping applications and incorporating NACOS navigation command system.

Marine Electronics Solutions, Inc.

me

Let M.E.S. be your  
Solution  
Before You have a  
MESS

901 Edwards Avenue, Suite 500, New Orleans, LA 70123  
www.mes-solutions.net

Circle 251 on Reader Service Card

Worldwide Experience

INTERIOR OUTFITTER

Cruise Ship Specialists



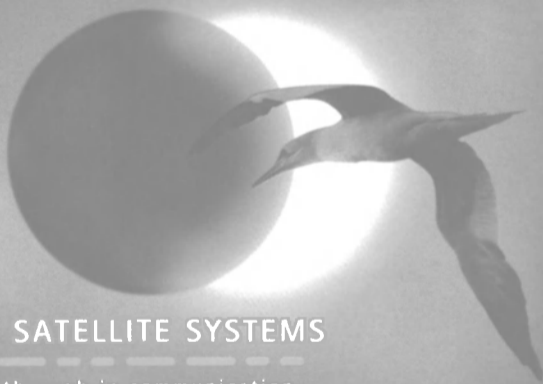
Custom Ship Interiors, Inc.

P.O. Box 882 Solomons, MD 20688-0882  
Fax: 410-326-9125  
410-326-9122

www.customship.com

Circle 215 on Reader Service Card

A wide horizon is a privilege, not a right



SAILOR SATELLITE SYSTEMS

A breakthrough in communication



SAILOR  
When safety counts

Porsvej 2 · DK-9200 Aalborg SV · Denmark · Phone: +45 9634 6100 ·  
Fax: +45 9634 6101 · Telex: 69 789 SPRAD DK  
E-mail: sailor@sailor.dk · Web: www.sailor.dk

Sailor has a long history as a leading manufacturer and supplier of satellite communication systems. Our products are sold as both stand alone products and as integrated units in our highly regarded GMDSS solutions.

With the latest SAILOR SP4100 SAT B MK II, Sailor has untangled the Gordian knot of satellite technology.

It is a flagship among digital

Ship Earth Stations (SES) and a breakthrough in maritime aerial technology, transmission speed, quality and reliability.

SAILOR SP4100 MK II is the result of this highly visionary development strategy. Today, nearly 10% of our annual turnover is invested in product research and development and more than one out of ten of our employees are involved in projects facing the challenges of



# Uniservice: Innovative Product Keeps Cruise Ships Running

The development of URICLEAN Concentrate was partly due to the shipowners' continual problem of line blockages in Vacuum sanitation systems where uric acid deposits crystallize. When Crystallization occurs in these lines the acceleration of line blockage becomes increasingly difficult to control. The result is a snowball effect and 4" lines can become 80-90 percent blocked and in some cases completely blocked in as little as 90-120 days.

Although Vacuum systems are the best form of waste management on board a vessel, the problem of uric acid deposits continues to plague an industry that continues to expand ship size and passenger numbers. As this continues to grow the obvious result will be more line blockages and costly downtime in repairing these serious problems that ultimately reflect on the vessel and shipowner. The crystallized deposits formed in Vacuum lines can be simply described as rock-like deposits, with pitted and scarred surfaces, which then allow other types of deposits to attach themselves. Vessels are particularly subject to problems in areas where there are 45-90 degree turns and lines that run horizontally.

In years past, marine chemical companies presented to the shipowners the idea that if a vessel uses bacteria type products in its sanitation lines, the problem of uric acid deposits would be greatly reduced and/or eliminated.

Through extensive studies and research, including those at leading Biological Institutes, it was determined that bacteria products have virtually no effect on uric acid deposits that exists within a vacuum system. Bacteria can only be effective in biodegradation when retention time is great and the environment is stable. The reality of a vacuum type system is that the vessel has neither! The introduction of bacteria to a sanitation system is of course excellent for a vessel's CHT (Collection Holding Tank), but it has nil effect in cleaning and maintaining a



Uniservice's reference list includes clean, hassle-free piping on many of the industry's top ships, including Nordic Empress.

vessel's vacuum sanitation lines.

The first major step Uniservice was able to accomplish in combating uric acid deposits was the development of a unique product called URICLEAN concentrate. This product combines a very unique blend of concentrated cleaning agents that are chemically effective in removal of the crystallized hardened deposits caused by uric acid. As uric acid

deposits crystallize within the internals of a sanitation piping system, URICLEAN concentrate effectively starts the softening process of these hard-crystallized deposits, and, in a

controlled time frame, begins the removal process. Each vessel has a unique system either by piping configuration and/or type of vacuum system used. Keeping this in mind, Uniservice utilizes a management approach in cleaning these systems online. It is extremely critical that the removal of the crystallized

deposits be accomplished in a controlled time frame in order to avoid greater blockages at

lower levels as the crystallized begin to fall off. To clean an existing problem that could reflect 80-90 percent blockage, the vessel and ship owner should allow a 90-day clean-up peri-

od. If this were allowed to occur within a much shorter period of time, the blockages in lower cabins could increase dramatically as deposits begin to fall away from upper level lines. After the 90-day clean-up period, the vessel then can reduce its dosage level greatly and only use a preventive maintenance dosage in order to preclude this serious problem from reoccurring.

Through much trial testing onboard various cruise vessels and with the assistance of shipboard engineers, Uniservice has been able to understand the proper dosage amounts required to effectively remove uric acid deposits, while maintaining an efficient and effective waste management system.

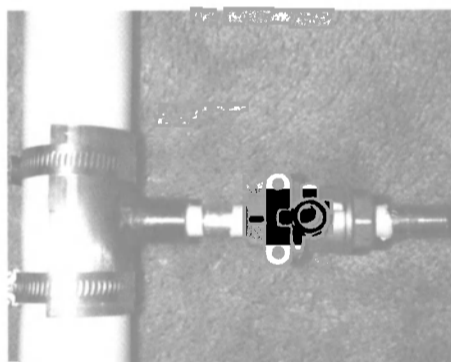
Initially we recommended that the vessel introduce the product into the heads each time the cabin was cleaned by the hotel staff. This was of course an inexpensive approach to introducing this unique product into the system. However, Uniservice was determined to develop something more accountable and reliable, while trying to avoid adding more work to the ship staff.

With the help and advice of NCL's vessel the m/v Seaward, Uniservice was able to introduce a simple inexpensive dosing unit that is fitted in strategic locations throughout the vessel.

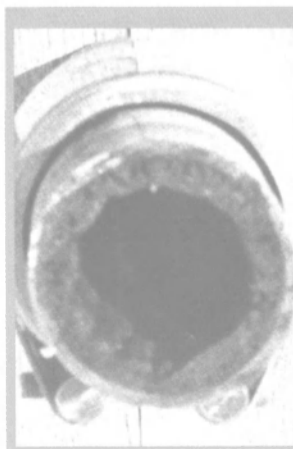
The units are simple, reliable, require easy installation and can be retrofitted on all existing tonnage. Our Uriclean dosing unit utilizes the ship's vacuum as a way of introducing the product into strategic locations throughout the vessel.

With new tonnage Uniservice can design a dosing system that can be fed throughout the vessel utilizing 2-3 dosing locations from the ship's engine room. This will allow for little requirement from the ship's staff and can be easily monitored and controlled. For more information about URICLEAN concentrate and our dosing systems, please contact our U.S. headquarters in Slidell, La.

Circle 43 on Reader Service Card

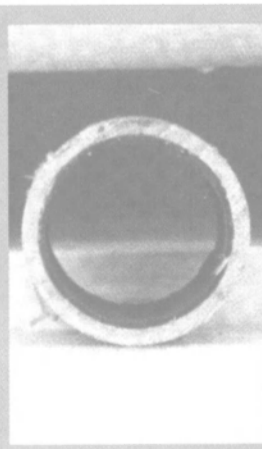


URICLEAN injection is penetrated into the vessel's vacuum piping system at strategic locations.



Now you see it...  
...Now you don't!

The development of URICLEAN Concentrate was partly due to the shipowner's continual problem of line blockages in Vacuum sanitation systems where Uric acid deposits crystallize. Pictured left is piping before treatment; to the right is piping after treatment.



## Cruise Shipping Annual: Integrated Bridge Systems

vide a space-saving, ergonomic design. The unit operates in two modes, "At Sea" and "Harbor."

### Litton Marine Systems

Litton Marine Systems (LMS) has been a dominate player in placing Integrated Bridge Systems in many markets, including the cruise market, with its

biggest mark being the contract to place redundant IBS on Royal Caribbean's Eagle Class ships, with the first being the world's largest cruise ship, Voyager of the Seas. LMS' sophisticated IBS is also specified aboard two vessels currently under construction at Meyer Werft Shipyard in Papenburg. Radiance of the Seas, will be delivered in early

2001, with the second vessel scheduled to arrive during the second half of 2002. In accordance with Royal Caribbean's two-bridge concept, each vessel will house a completely redundant package comprised of two independent Vision 2100 integrated bridge systems. The total package will include interswitched BridgeMaster E S-band and X-band

radars, a Sperry Marine Voyage Management System (VMS) with ECDIS and a docking system.

### Raytheon Marine Company

Raytheon Marine Company (RMC) early last year entered into a cooperative agreement with Samsung Heavy Industries (SHI) to integrate key components of Raytheon's Integrated Bridge System into Samsung's Naru 2000, an ECDIS (Electronic Charting Display and Information System) based Integrated Navigation System. This agreement marks the beginning of a new strategy underway at Raytheon Marine to capture more business in Asian markets where a large portion of the industry's shipbuilding occurs. As a result of the agreement with Samsung, Raytheon Marine expects to bring in up to \$10 million per year in new sales revenue.

"Samsung has chosen Raytheon Marine as part of the NARU 2000 team because their products represent the very best in state-of-the-art technology," said H.K. Lee, President of Samsung Heavy Industries. "Raytheon is well recognized for its high levels of reliability and service, offering the industry's most extensive global service network."

Samsung's Naru 2000, a fully integrated navigation system designed for commercial vessels, features ground breaking safety oriented technologies, such as a Weather Information System and a Collision Avoidance System. The Weather Information System enables navigators to maximize route planning around changing weather conditions. The Collision Avoidance System enhances ship safety by utilizing sophisticated computer simulation to identify and avoid potential hazards far in advance. Raytheon Marine products to be integrated into the NARU 2000 include the Standard 20 Gyro Compass, the Pathfinder/ST MK2 radar and the NautoPilot 2000. The Standard 20 Gyro Compass offers a self-adjusting, serial heading transmission system with the highest heading accuracy in the maritime business. The Pathfinder/ST MK2, the first radar system to pass type approval based on most recent IMO standards, provides rain de-blurring through the patented Raytheon "Rain Rate Control" technology. Raytheon Marine's Nautopilot 2000 is a versatile, digital autopilot, intended for sea and river going vessels of all sizes.

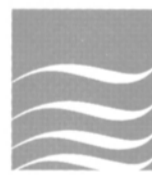
### STN ATLAS

Latest integrated bridge developments from Hamburg-based STN ATLAS Marine Electronics include a new Series 4 range of its established NACOS series of navigation command systems, which presently account for around 35 percent of world cargo newbuilding INS



It's no longer enough to remove coatings and rust. You must contain and collect everything, and that's expensive and time consuming. It's time you take a closer look at FLOW's latest generation of waterblast equipment—NEW FORCE™. Our new automated system is the fastest removal and containment system you can buy. It removes, contains and collects everything in one step using only water—no grit, no tarps, no masking,

no dust. The entire system is controlled by a single operator. Powered by proven HUSKY pumps, FLOW NEW FORCE is a full line of waterblasting equipment for any application. To stay competitive tomorrow, call for a NEW FORCE waterblast demonstration today. Flow International Corporation  
**800-446-FLOW.**



**F | o | w**

## NOTHING REMOVES & CONTAINS COATINGS BETTER THAN



Diesel HUSKY™



Electric HUSKY™



HydroCat™ Svsstem



DeckHog™



A-3000

# Open for Business



Washington North Tongue Point, managed by Cresmont Capitol Projects, is looking for manufacturers, processors, fabricators, transportation or other related companies interested in leasing all or part of this well-positioned property.

- Privately owned facility with a local supply of skilled, quality workers.
- Strategically situated with road, rail and shipping access.
- Located in the fresh waters of the Columbia River, 18 miles from sea. Accessed by a 36-foot deep shipping channel.
- 40 acres of usable concrete uplands and 75 acres of submerged lands, including 5 concrete and steel finger piers.
- Recently renovated 105,600 square foot warehouse, storage or fabrication building.
- Municipal utilities (electric, gas, sewer, water) on site.
- Will build to suit all customer requests.
- Attractive financing options available.



**WASHINGTON**  
NORTH TONGUE POINT

*For further information contact Bill Wolfe or Bill Kelley at:*

*Phone: (206) 281-0080*

*Fax: (206) 283-7068*

*1300 Dexter Avenue, Suite 205, Seattle, Washington, 98109*

## Cruise Shipping Annual: Integrated Bridge Systems

requirements and nearly 60 percent of those for new-generation cruise liners.

The Series incorporates latest Radarpilot Atlas 1000 radars featuring improved clutter suppression, a switchable antenna revolution for high-speed applications and enhanced monitoring of targets at close range. Other main features include new Multipilot consoles based on PC-compatible hardware for

improved interchange of radar and ECDIS data while other refinements include an option for a remote diagnostic unit with which it will be possible to not only access a system's status via the Internet or Inmarsat-B or C.

NACOS systems additionally form an integral part of proprietary Atlas Ship Control Centres (SCC's) that combine and automate all main bridge equipment

control operations inclusive of navigation, communications, engine control and alarm monitoring. A new SCC development is a purpose-designed version for small vessels. It features Atlas 12-in. 1000 series radars and a Gearmar integrated monitoring and control system supported by a series of flat-screen displays. The radars form part of a NACOS integrated navigation command

sub-assembly based on a radar-controlled trackpilot with other key constituents including a Chartpilot ECDIS module for processing and editing of electronic chart data.

To date, nearly 40 of the new Series 4 configurations have already been sold worldwide, with total sales of all NACOS systems now exceeding 650 systems. Latest commissionings include 65-4 systems for all four

Cruise liners being built by Meyer Werft for delivery to Star Cruises and Norwegian Cruise Line between 2001-2004. Similar configurations have also been chosen for P&O Princess Cruises' two 113,000-gt liners under construction at Mitsubishi Heavy Industries in Japan while another is currently being installed as part of an Atlas Ship Control Center (SCC) on Irish Ferries' Finnish-built 50,000 gt RoPax Ulysses due to enter service this year; scheduled for service routes between Holyhead and Dublin, the vessel is the world's largest of its type.

For additional information on the companies listed in this report, circle the corresponding number on the Reader Service Card.

Furuno	44
Kelvin Hughes	45
Litton Marine Systems	46
Raytheon	47
STN Atlas	48

**Control Units**

**STORK-KWANT**

Voltastraat 3, P.O. Box 23  
8600 AA Sneek Holland  
Phone: +31 (0)515 413745  
Fax: +31 (0)515 422478  
Email: kwant@stork-kwant.nl  
Website: www.stork-kwant.com

*Quality in Command*

Circle 316 on Reader Service Card

**QUALITY FIBERGLASS PRODUCTS**

*Molded to Your Needs*

**FIRE HOSE BOX**  
Hanging fire hose box features stainless steel hardware, nylon webbing, decals included. Two standard sizes (21"x24"x7" pictured, and 25"x28"x7"). Fire suit boxes also available.

**PORT HOLE CASING**  
Fiberglass hull insert for ready-made application. Available in any size (24" x 24" x 7" pictured).

**PERSONAL EFFECTS TRAY**  
Molded tray for crews quarters, heads and showers. Available in any size (11" x 5-1/4" x 4-1/2" pictured).

**ACMY**  
AMERICAN CUSTOM YACHTS  
MARINE PRODUCTS DIVISION  
—Innovators in Marine Technology—  
6800 S.W. Jack James Drive, Stuart, FL 34997  
www.americancustomyachts.com  
Call (561) 221-9100 For Pricing

Circle 315 on Reader Service Card

**You Have A Lot Riding on Your Roller Fairlead**

*Why Settle for Less Than Skookum?*

- Heat-Treated Alloy Steel Rollers
- Typically Bronze Bushed Bearings
- "Stressproof" Steel Pins
- High Capacity to Weight Design
- Precision Manufactured Components

**Engineered for Extremes**

**SKOOKUM**  
ULVEN COMPANY

PO Box 280, Hubbard, Oregon 97032  
**800/547-8211**

www.ulvencompanies.com

Circle 268 on Reader Service Card

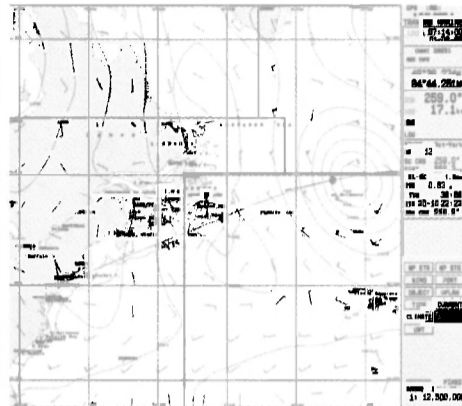
## Norshipco Gets Prestigious Disney Job

Norshipco recently welcomed the Disney Magic at its Titan Drydock. The Disney Magic is a two-year-old cruise ship that weighs 83,000 tons and is 964 ft. (293.8 m). The cruise ship's first scheduled docking was with Norshipco and has since been delivered. While at Norshipco the ship underwent inspection and maintenance of its underwater hull and related engine room systems. The short break in service allowed Norshipco and Disney's subcontractor to refurbish the ship's clubs, theaters and staterooms. **Don Everton**, Director of Commercial Sales, stated that, "for quite some time now we have worked as a team with Disney on the docking of this vessel and by working together we made it happen on time and within budget." A second Disney vessel, Disney Wonder, is booked for docking at Norshipco in September of 2001.

Circle 75 on Reader Service Card

# Transas Expands Capabilities

Relying on experience from more than 4,000 Navi-Sailor installations around the world, Transas Marine has added a number of features to further enhance the functionality of its Navi-Sailor marine navigation systems. Transas' ongoing R&D efforts are primarily focused on expanded integration with other systems, in providing a wider range of data which can be displayed on the electronic chart screen; and development and improvement of chart plotting features and presentation. Current efforts include:



## Integration with VDR

Seamless integration between navigational software and VDR provides for instantaneous display of all vessel parameters during the entire sailing duration. After the voyage, the information can provide exhaustive data. Such data is proving increasingly valuable for accident investigations, or for analysis by ship operators, who are able to assess the behavior of their ships with greater confidence than ever before.

## Integration with AIS (Automated Information System)

As of 2002, all ships of 300 gt and over will be required to carry a transponder. ECS and ECDIS are certainly the most effective platforms to display the transponder information, to be viewed by the navigator. The use of transponder information in combination with radar and ARPA information is especially efficient on an electronic chart background, when all functions and advantages of this equipment can be properly implemented. For ships, which are for example engaged in patrol or surveillance operations, the use of transponders provides a highly effective method of target identification. An automated comparison with the database available on board allows instantaneous discrimination between a friendly or hostile target, between ships holding a fishing license and those without for instance.

## Radar Overlay

Transas has designed a new version of the dedicated Radar Integrator Board. Interfaced with any existing radar, the Radar Integrator converts the radar's video signal to digital form, which allows a radar picture to be overlaid onto an electronic chart. The Radar Integrator Board starts processing and tracking the target, as well as recording its parameters onto a computer hard disk from the moment the target appears within the radar operating

range. Even if the target is beyond the reach of the screen display, the related information is gathered and processed in the same way as when a target is displayed on screen. If the target should become dangerous, CPA and TCPA alarms are generated. Whenever the operator needs data on any of the targets, it is immediately available without the several minutes delay required for the data processing, which is currently the case with ARPA's.

## Display of Weather Information

The facility for automated display of weather information on the Navi-Sailor screen, is another significant development on the way to the establishment of a one-man bridge. Unlike other existing weather forecast packages, five-day animated forecasts sourced from the U.K. Meteorological Office can be displayed over the electronic chart, which is an extremely useful tool for proper passage planning. The integration of weather information on the electronic chart helps determine the weather effect on vessel voyage times and fuel consumption, and allows the navigator to avoid dangerous weather conditions. Monitored parameters include pressure, wind speed and direction, as well as a variety of sea state conditions. Delivery of forecasts is completely under control of the user, who can receive the data via e-mail from ship or shore.

## Incorporation of Navtex Information

Transas has been able to connect a Navtex receiver to an ECDIS. The dedicated software which is automatically connected, reads off messages arriving via Navtex, extracts the co-ordinates, area, transmission station, topic and other parameters, saves the message onto the hard disk and displays the message mark on the electronic chart. Implementation of the Navtex interface with a navigational system is a further significant step towards automated chart updating service.

Circle 199 on Reader Service Card

Cable Transit Problems...



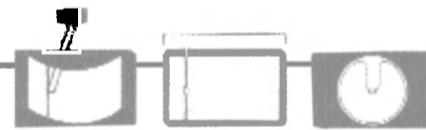
Rapid Transit® Sealing System

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

For a full catalog, software and informational video contact:

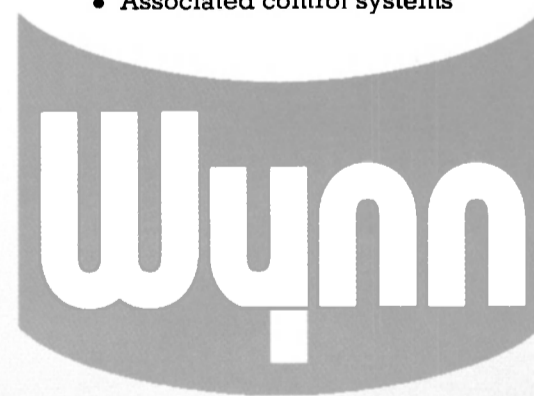
CSD Sealing Systems-North America  
Tel. 603-641-3914 E-mail: sales@csdsealingsystems.com  
www.csdsealingsystems.com

Circle 285 on Reader Service Card



Marine Window Wiping Systems

- Straight line window wipers
- Pantograph window wipers
- Pendulum window wipers
  - Clear view screens
- Associated control systems



Wynn Marine Ltd,  
Wynn House, Lansdown Estate,  
Cheltenham, GL51 8PL, United Kingdom  
Tel: + 44 (0)1242 232266, Fax + 44 (0)1242 231131,  
Email: sales@wynn.co.uk, website www.wynn.co.uk

Circle 326 on Reader Service Card

## Drew Offers Electronic Steam System Monitoring

A new PC-based software from the Drew Marine Division of Ashland Specialty Chemical Company, monitors steam generating water treatment tests

and recommends action for out-of-range results. The software, called Drew Watch Electronic Services, is the first electronic steam system monitoring

software in the marine industry. It eliminates hand compilation of paper logs by automatically generating color histograms, and allows data to be sent elec-



tronically from the ship to Drew technical centers, as well as to ship management, for in-depth review and further recommendations. Drew Watch Electronic Services can be used on motor vessel steam systems (low pressure) that include exhaust gas and auxiliary heat steam systems for fuel, cargo and comfort, as well as medium- to high-pressure steam propulsion systems up to 900 psig. Cruise ships using small steam generating systems, comprising feed water, boiler water and condensate can use Drew Watch to obtain the maximum effectiveness from chemical treatments which extend the life and efficiency of the system. In addition to providing test result recommendations, the software can act as a virtual Drew Marine service engineer, training new users how to run tests, interpret them and what action to take. The easy-to-install software is leased in conjunction with the sale of Drew Marine water treatment products. Minimum PC requirements are at least 8 MB of memory, 7 MB of free disk space, a 486 processor, 256-color SVGA screen with 800 x 600 resolution and Windows 95.

Circle 50 on Reader Service Card

### Detyens Shipyard Saves Christmas Cruise

Cunard's Seaborn Sun underwent an emergency dry-docking to repair internal damage to the port controllable pitch propeller. Detyens disassembled the blades and hub internals as well as installed new parts supplied by the manufacturer and machined by the shipyard. Detyens employees worked 24-hour shifts in order to expedite the return of the Seaborn Sun to Ft. Lauderdale in time for the start of their Christmas cruise. Detyens also completed steel and pipe renewals, cleaning and coating of the hull and the performance of an inclining experiment while the ship was at Detyens facility.

Circle 52 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 325 on Reader Service Card

## E-OPPORTUNITIES @ MARINELINK.COM

Reach Your Customers Online  
With Maritime Reporter's Website  
with More New Features  
and a New Look . . . COMING SOON!

## WWW.MARINELINK.COM

(Continued from page 30)



As QM2's project manager working out of Tillberg's London office, **Andrew Collier**, (pictured right), researched the ocean liners of yesteryear with Carnival's **Stephen Payne**, (pictured left), to capture Cunard's classic style.

after Cunard announced that it had chosen Chantiers for the project, the company penned a final contract with the yard on November 6, 2000. Subsequent to the contract's signing, it was announced that QM2 would be constructed to Lloyd's Register classification standards, which will ensure that the vessel is the safest afloat on the high seas.

"We are delighted to have been awarded this contract", said LR's London-based classification and regional support passenger ship manager **John Rugg**. "This achievement clearly demonstrates the confidence that Cunard has in our passenger ship expertise. We have been working hard on this prestigious project for some 20 months now, and are confident we are on target to deliver the necessary solutions to help enhance Cunard's quality, safety, environmental and business performance."

Although the first steel for the vessel is not expected to be cut until January 2002, the yard already has the electrical production lists in its hands and is ready to negotiate with potential suppliers. While many of QM2's manufacturers have not been chosen, it has been noted that the vessel will boast a power supply of four Wartsila common rail diesel engines — supplemented by two gas turbines. All six engines will produce electricity through two switchboards as needed for propulsion — enabling the ship to move at a top speed of approximately 30.5 knots. While Cunard confirmed that the Wartsila smokeless engines would be implemented onto the vessel (Carnival Corp. recently partnered with Wartsila on this effort), it has not yet chosen a supplier for the gas turbines. While, according to Ellis, the gas turbine decision basically comes down to Rolls-Royce or General Electric Packaged Power (S&S Energy Products), both have formidable reputations in the marine industry. Rolls-Royce's turbines are known for their high power, despite small size; GE for tremendous reliability in naval application. Ellis however would say that if Rolls-Royce

was chosen for the job, then the vessel would more than likely house Rolls-Royce-owned Brown Brothers stabilizers and Kamewa thrusters.

Typically taking up small amounts of space in a vessel's engine room, the turbines designed for QM2 posed a bit of a problem during the planning process. The general arrangement drawings

showed that the area in which they were placed was blocking off a stairway for top access to the ship. Not wanting to scrap the stairway altogether, while still being able to install the gas turbine power, the design team reconfigured the stairway — free from the gas turbine's reach.

### Specialized Designs For A Special Ship

It is estimated that QM2 will be 10 percent larger than Royal Caribbean's Voyager of the Seas, which currently holds the cruise industry's distinction as the largest operating vessel.

Contributing to the vessel's unique and innovative ability to steam along at such

## Kvaerner Masa-Yards Inc. – the experienced builder of successful ships

### LUXURY CRUISE LINERS

## value through quality

More than thirty successful cruise vessels in operation on the worldwide cruise market have a very special thing in common. Their birthplace is in Finland at the highly modern shipyards in Helsinki and Turku with their state-of-the-art design and production technology.



The order book of Kvaerner Masa-Yards includes three 137,300 GT Voyager-class cruise liners for Royal Caribbean Cruise Line, four 86,000 GT cruise liners for Carnival Cruise Lines and one 86,000 GT cruise liner for Costa Crociere S.p.A.

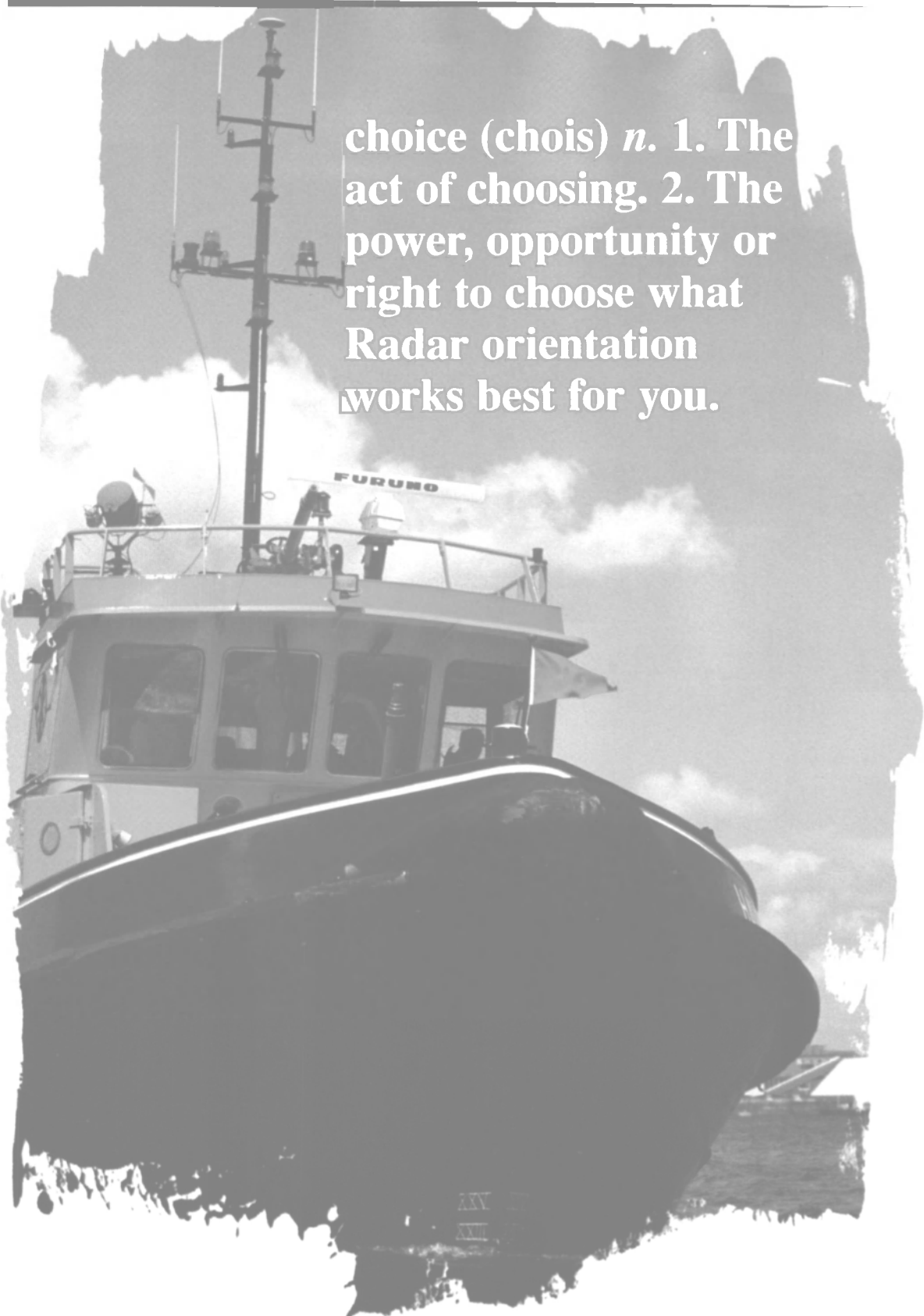
For more information on our products and services, please visit [www.masa-yards.fi](http://www.masa-yards.fi)

#### Kvaerner Masa-Yards Inc.

Marketing and sales  
P.O. Box 132  
FIN-00151 HELSINKI, Finland  
Tel. +358 9 1941.  
Fax +358 9 650 051  
Email: [marketing-sales.helsinki@masa-yards.fi](mailto:marketing-sales.helsinki@masa-yards.fi)

## Kvaerner Masa-Yards

Circle 245 on Reader Service Card



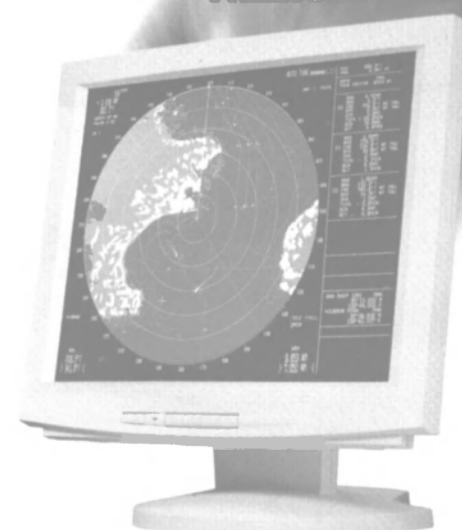
choice (chois) *n.* 1. The act of choosing. 2. The power, opportunity or right to choose what Radar orientation works best for you.



FR2105 Radar Series



FR2125V Radar



FR2105BB Radars

## Explore the Freedom of Choice!

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

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



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

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

Circle 226 on Reader Service Card





The design firm of Tillberg Design, led by **Robert**, (pictured at top), and **Tomas Tillberg**, (pictured at bottom), will be taking QM2 from paper to reality.

high speeds, despite its large size and strength is its specialized hull. This streamlined, speedboat-like hull was an expensive undertaking, but well worth the cost to Cunard, as it is longer, thinner, deeper and hydrodynamically smooth — providing the vessel with the utmost strength and speed. This innovative hull, which bears much similarity to QEII's, also requires thicker steel that weighs more than most. The vessel also boasts a sharp bow and a hybrid stern. This specialized stern, will literally round out the conventional square shaped stern for better hydrodynamic efficiency. Mixing the rounded with the square-shape stern was developed in response to the rough seas that QM2 may experience throughout its travels.

The vessel's interior will boast creations of the renowned firm of Tillberg Design. Best known for its innovations onboard both Crystal Harmony and Symphony, and current involvement on the two new U.S. Lines ships, the Tillbergs have architects from all three of their offices (U.K., Sweden and U.S.) involved in making QM2's classic British style a reality. Heading up the QM2 interior design team is **Andrew Collier** of Tillberg's London office, who reaffirmed his desire to re-create the designs from old ocean liners, such as the original Queen Mary. He was also inspired by French ocean liners, which are indicative of many of his designs. Collier, along with **Fredrik Johansson** of Tillberg's Sweden office, discussed

with *MR/EN* the many challenges and ideas that went into the development of QM2's character.

Collier cites that the QM2 project is similar to the concept of the new Volkswagen Beetle or new Jaguar in that its focus is to blend a classic design with modern technology. In visualizing his

concept for QM2's confines, Collier cites Carnival Corp.'s Payne as an inspiration. Not only the lead naval architect on the project — Payne also happens to be a great fan of historical ocean liners. This, coupled with Payne's optimal placement of various rooms on the vessel, allowed Collier and the Tillberg

team to experiment with a wide variety of ideas. For instance, Collier cites that since the ship's dining room was placed in an area where a minimal amount of movement is felt, he was able to add a solid column structure without worrying that it would come apart.

While some may compare the vessel's

Contractors • Manufacturers • Engineers • Quality Interiors • Turnkey Deck Houses & Crew Modules • Steel Fabrication and Erection • HVAC • Electrical • Mechanical/Piping • Joiner Materials

Galley & Mechanical Equipment • Dressers & Lockers • Food Prep Equip. • Refrigerated Spaces • Deck Covering • Flooring • Bulkheads • Ceilings • Doors & Frames • Prebuilt Modular Toilets • Plumbing Fixtures • Sheathing • Stairs & Railings • Stateroom Furniture

Bulkheads • Ceilings • Doors & Frames • Prebuilt Modular Toilets • Plumbing Fixtures • Sheathing • Stairs & Railings • Stateroom Furniture

## Quality • Integrity • Reliability

Providing Marine Interiors Since 1962

# JAMESTOWN



Contractors • Manufacturers • Engineers

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



• Dining Room Furnishings • Lounge & Bar Furnishings • Work Spaces • Laundry Equipment • Storeroom Shelving & Equipment • Laboratory Outfitting • Workshop Equipment

Circle 239 on Reader Service Card

Safety and reliability are in the details.

A RoxSystem module can be adjusted to fit a variety of cable and pipe diameters thanks to the MultiDiameter technology simply by peeling sheets away from its center.

With creativity and an eye for design, RoxSystem® provides customers with complete sealing solutions that enhance quality, safety and flexibility in living and working environments. RoxSystem's cable and pipe penetration seals with MultiDiameter technology, have set the industry standard worldwide.

It truly is the sum of all the individual parts that determines how safe and reliable a vessel is. This is why many of the world's leading shipbuilders and operators have chosen to install RoxSystem® cable and pipe penetration seals on board their passenger vessels,

tankers and ferries. Hazards from fire, water pressure, explosions, gas pressure, electrical disturbance and vibrations can threaten safety. RoxSystem helps to protect seafaring vessels from all of these threats and to maintain the integrity of decks and bulkheads.

**Roxtec International AB**  
Box 540  
S-371 23 Karlskrona, Sweden

phone +46-455 366700 • fax +46-455 82012  
info@roxsystem.com • www.roxsystem.com

**ROXSYSTEM**  
Penetration seals with MultiDiameter technology

design to one that is quite similar to the Titanic, passengers will not feel this vibe, as Collier and Johansson designed most of the staterooms to exude a "shelved, safe feel," with rounded corners and warm timbers. More challenging though, according to Collier, was the confines of space that he was working with. He's referring to the vessel's

unusually high decks that tower 200-ft. above the waterline (equivalent to a 23-story building) and large chunks of steel that were present due to the vessel's specialized hull.

In terms of dining options, the vessel will feature a Cunard tradition — the classic "Grill Room" — a three-deck high main dining room spanning the full

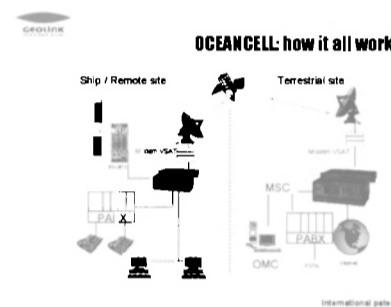
width of the vessel. A sweeping central staircase will be the ship's apex — emulating the grand days of a stately dining experience onboard a classic ocean liner.

Stepping outside onto the deck, it's difficult not to hear QM2's whistle, which is audible from 10 miles away — no doubt announcing that Cunard's past lies in its future once again.

## Oceancell by GEOLINK: The First GSM Solution Via Satellite Aboard Ships

Geolink, a forerunner in the satellite communication sector, has successfully developed Oceancell, the first GSM solution aboard ships. With Oceancell, passengers on cruise liners or car ferries, can transmit and receive calls on their GSM, when the vessel is outside the local network coverage zone.

The use of GSM with the Oceancell system will be totally transparent for passengers, the only requirement is the



option "Europe or International" activated with their normal operator. Communications will be invoiced exactly in the same way as when the telephone is used abroad (international roaming).

Simultaneously, Oceancell can offer the ship owner fixed telephones, which would be distributed through the ship - for passenger and crew calls, as well as Internet access for the crew and passengers, should it be from their cabin or from a "Cyber café." Oceancell allows extension of the owners Intranet on shore aboard the ship. According to **Claude Barraud**, Geolink's CEO, "Oceancell is in perfect synergy with the strategy of Geolink, which is to guarantee, through different world satellite networks, a world wide telecommunications service that is 100 percent reliable on land and sea, regardless of the working or living conditions."

Oceancell is a telecommunications solution that extends the connection capacity of GSM users, guaranteeing a continual and reliable coverage, including the seas and oceans (70 percent of the planet). Oceancell is a satellite service in which the development is centered around the individual, allowing permanent access to the information highway. Oceancell will be commercialized worldwide by Geolink to ship and cruise liner owners. This market has known dynamic growth (plus eight percent per year in the USA, plus 10 percent in Europe) representing 150 ships world-wide with 6.5 million passengers (1999 figures).

Circle 40 on Reader Service Card

**PALL** Rochem Marine

positioned **globally** to support you **locally**

### Pall Rochem Marine

- Croatia
- Finland
- France
- Greece
- India
- Italy
- Korea
- Malaysia
- Netherlands
- Pakistan
- Portugal
- Poland
- Saudi Arabia
- Spain
- Sri Lanka
- South Africa
- Thailand
- Vietnam

When the world is your port, you need the confidence of knowing that reliable service and logistic support awaits you, wherever your location.

**Pall Rochem Marine** support services are positioned globally, where the shipping and cruise industry need them. In addition to established locations in Europe and Australia, new service facilities are available in ports in the USA and Asia. A world-wide network ensures continuity of supply on spares and consumables.

With **Pall**, your operations are supported by a company with 15 years experience, the commitment, R & D and people you deserve.

Be sure to contact **Pall Rochem Marine** for all your onboard water management requirements.

desalination systems  
greywater treatment  
disc tube module technology  
worldwide service and support

**Europe**  
Germany, Pall Wassertechnik  
49-40-7527940 tel  
49-40-75279434 fax  
Pall GmbH, Frankfurt  
49-6103-3070 tel  
49-6103-307198 fax  
England, Pall Europe Ltd.  
44 (0)23 9230 3303 tel  
44 (0)23 9230 2498 fax

Filtration. Separation. Solution.

**USA**  
Pall Anropower Corporation  
1-727-539-8448 tel  
1-727-533-0401 fax

**Asia**  
Pall Rochem Marine Singapore  
65-7448255 tel  
65-7434938 fax

www.pall.com

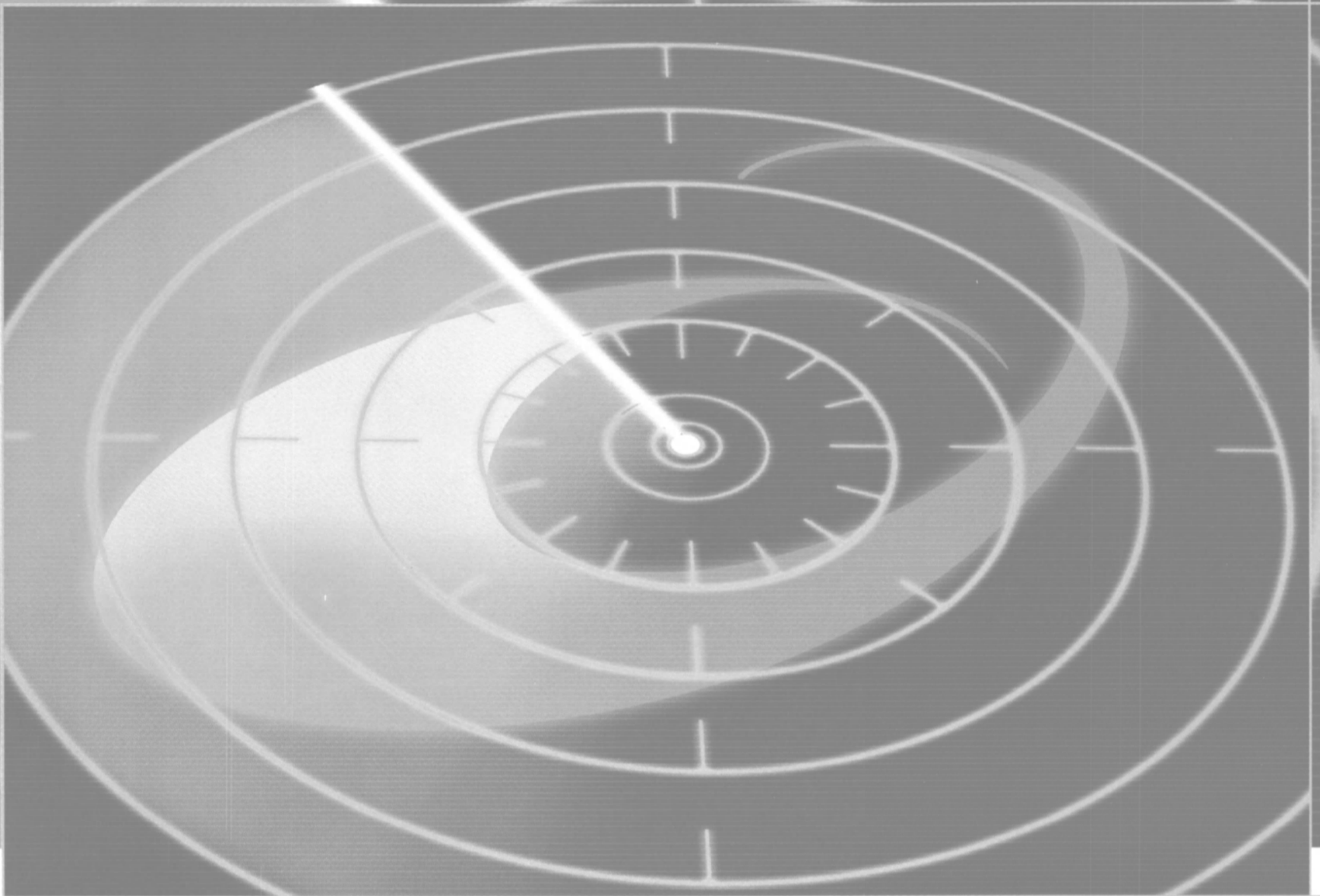
Visit us at



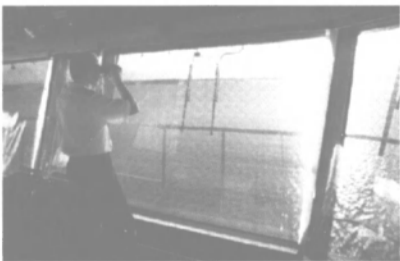
6-8 March 2001  
Miami, USA Stand No. 795

Circle 299 on Reader Service Card

# The sign of *The Ship Power Supplier*



*The*  
Ship Power  
Supplier



Buying and successfully operating marine power systems based on many suppliers and diverse components is normal – but it puts a lot of responsibility on your shoulders. Turn to Wartsila as your source. What you'll get is reliability, functionality and global availability for your power system on a unique one supplier–one responsibility basis. In brief, a total marine power solution, tailored to your particular needs and to optimize the life cycle costs of your investment.

Wartsila & Sulzer engines 520 - 65,880 kW | Gears | Wartsila-Lips propulsion power systems | Control systems  
Generating sets | Ancillary systems | Design | Engineering | Procurement | Project management | Commissioning  
Operational support | Maintenance | Spare parts | Financing | **For information please visit: [www.wartsila.com](http://www.wartsila.com)**

  
**WÄRTSILÄ**

Circle 300 on Reader Service Card

# All roads lead to ABB Turbocharger Service.



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

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

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

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

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

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

## ABB Turbocharger Co.

### U.S. Headquarters

1460 Livingston Ave., North Brunswick, NJ 08902

24 Hour Service: (732) 932-6103

Telefax: (732) 932-6378

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

All Facilities ISO 9002 Certified

### ABB Turbocharger U.S. Service Centers:

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

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

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

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

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



Circle 200 on Reader Service Card

# Heroes on the High Seas

On Sunday, December 17, 2000 a raging storm was brewing off the coast of Virginia. Record-breaking waves were measuring anywhere from 30-40 ft. and the wind was gusting at about 70 knots. In the middle of the Atlantic, (220 miles off the coast of Norfolk, Va. to be exact), a 600 ft. (182.8 m), 21,000-ton cruise ship was in trouble, its crewmembers ready to abandon ship into the cold ocean. With only seconds to decide the fate of his vessel, the captain of the Sea Breeze I, placed a mayday call via the vessel's Inmarsat Standard-C distress feature, indicating that the now-defunct Premier Cruise Lines' vessel might sink.

By **Regina P. Ciardiello**,  
associate editor

The dramatic rescue of SeaBreeze's 34 crewmembers began on that Sunday morning, when **Eileen Joyce** received an alert at COMSAT Mobile's Southbury, Conn. land earth station. Joyce described the message that came through as one that signaled the vessel's inability to navigate due to a loss of power. As the lead operator on duty, Joyce fastidiously alerted the U.S. Coast Guard station in Portsmouth, Va. via a faxed message. Upon receiving the message that a 600-ft. (182.8 m) cruise ship was in distress and its crew was ready to abandon ship, the Coast Guard knew that this was not your average rescue mission.

Through the power of SeaBreeze's Inmarsat terminals, which up until then had been "barred" for commercial traffic due to Premier's entrance into bankruptcy this past September, Joyce overrode the "bar" and activated the Mini-M voice terminal onboard the vessel, thus establishing voice satellite communications between the distressed vessel's captain and the USCG Station in Portsmouth.

The conversation that transpired would be one that allowed the Coast Guard to assess the situation at hand — the ship's engine room was flooded, had no power and could sink in a matter of seconds.

SeaBreeze I, which was en route from Halifax, Nova Scotia to Charleston, S.C. for lay-up work, first experienced signs of doubt off the coast of Virginia. A product of the recently bankrupt Premier Cruise Lines' "Big Red Boat" fleet, the vessel, which was now in the possession of Cruise Ventures 3, was headed south to be prepped for a possible sale. Mother Nature, however had other plans for the ill-fated vessel.

On duty that night at the Coast Guard

air base in Elizabeth City, N.C. was helicopter pilot Lt. **Randy Watson** and his Co-Pilot Lt. **Steve Bonn**, who were waiting to see how the day's events would transpire. Bonn, who only began

his tour with the Coast Guard in August, called the SeaBreeze I rescue, something that "you wait your whole life for." For Bonn, however, his moment came early in his career as he had only carried his second mission that morning. Bonn, who previously flew Black Hawks for

The USCG helicopter approaches the distressed vessel. (photo courtesy of USCG).



# ScanDisplay™

INFORMATION SYSTEMS AT SEA

MAGELLAN'S discoveries created a new image of the world — completely new

## scandinavian micro systems™

P.O. Box 155.N-1411 Kolbotn, Norway  
Phone: +47 6681.2740 Fax +47 6680.8095  
E-mail: sales@scansys.no

1001 South Andrews Ave., Suite 120  
Ft. Lauderdale, FL 33316 USA  
Phone: (954) 523-8878 Fax: (954) 523-7157  
E-mail: scansys@worldnet.att.net

Circle 291 on Reader Service Card

the U.S. Army, readied for the flight out to sea.

Taking off about 30 minutes prior to Bonn's and Watson's HH-60 Jay Hawk helicopter was Lt. **Dan Molthen**; his copilot, Lt. j.g. **Craig Neubecker**; and rescue swimmer, Class Petty Officer **Darren Reeves**. Molthen and his crew arrived on the scene and spotted the

SeaBreeze listing among the high winds and waves. Amidst the brewing storm, Molthen steadied his helicopter only five feet above the vessel, due to the severity of the weather conditions. Hoisted down into the basket was diver Reeves who was greeted by a swarm of crewmembers, most of whom did not speak English. He motioned to them to

form a line, trying to explain as best he could that he would get everyone off the stricken vessel — no one would be left behind.

Despite his efforts to get the crew up to Molthen's helicopter in an orderly fashion, Reeves experienced a scenario that was anything but. According to Molthen, the crew would rush the bas-

## Touch-and-Go Rescue at Sea

*Coast Guard Faced Gale, Panicky Crew*

By CAROL MORIELLO and CHRISTINA A. SAMUELS  
*Washington Post Staff Writers*

The winds blew harder and the waves soared higher as the Coast Guard helicopter crew flew toward a ship in trouble off the Virginia coast. When they neared the pitching deck of the cruise ship SeaBreeze I, they peered through driving rain to find dozens of crew members soaked and terrified, huddling on the stern deck as waves as high as a four-story building pounded the

noon in a situation that verged on chaos. The Coast Guard's orderly plan to ferry 17 crewmen in each of two helicopters soon collapsed as panicked sailors wrestled each other to get into a rescue basket dangling over the deck.

In the end, the Coast Guard jammed 26 crew members inside a single helicopter designed to carry six. Things were so cramped that some survivors screamed in pain on the way to shore, rescuers said. Eight other survivors, including the ship's

An article that appeared in the *Washington Post* described the grueling 45-minute rescue that the USCG performed to bring SeaBreeze's crew to safety.



Sea Breeze's Captain, **Solon Papadopoulos**, praises Lt. **Dan Molthen** for helping to successfully rescue the vessel's crew. (photo courtesy of USCG).

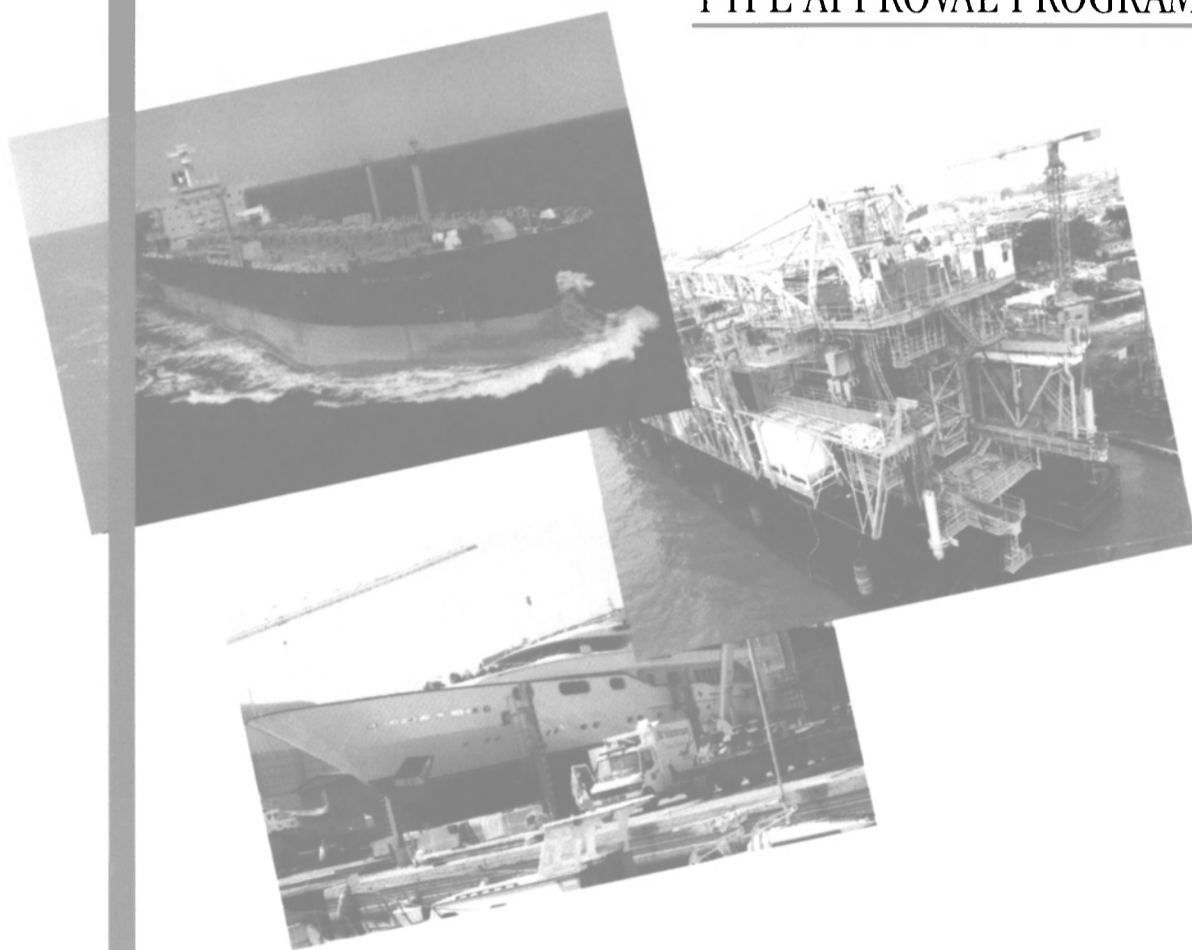
ket, sometimes 10 at a time as soon as it was lowered. One crewmember even had a knife discreetly wrapped in a bandana, which he inevitably thought would allow a quicker escape route. Reeves, demonstrating his authority, restrained the irate crewmember and confiscated his knife — tossing it into the vessel's pool.

Since most of the crewmembers were not of large build, Reeves was able to load two of them into the basket at a time, allowing Molthen and his crew to reach their goal of rescuing half of the 34-member crew while still having 4,000-lbs. of reserve fuel left in the helicopter's tank. Noticing his reserves were running low, he radioed to Watson and Bonn in the second helicopter, alerting them that he was ready to turn back to the base. The second helicopter, which was accompanied by a C-130 search plane, took over the helm above SeaBreeze by lowering its rescue swimmer, **Bob Florisi**, down to the vessel's deck. Florisi assisted the remaining passengers, which unbeknownst to him and his crew, only amounted to eight. Figuring that the first helicopter had only taken 17, the C-130 and the helicopter did one more thorough search around the vessel to make sure no one was left behind — not realizing that Molthen and his crew had lost count in the frenzy of the rescue and inevitably loaded 26 crewmembers onto the helicopter. This coupled with the captain's assurance that all of his crew were lifted off the ship's bow, enabled the Coast Guard to pro-



# ABS

## TYPE APPROVAL PROGRAM



From the CE Mark to USCG Regulations...  
ABS Type Approval is your Pathway  
to the Global Marketplace

**ABS World Headquarters**

Houston, TX USA  
Tel: 1-281-877-5800  
Fax: 1-281-877-5803  
Email: abs-worldhq@eagle.org

**ABS Europe Division**

London, England  
Tel: 44-207-247-3255  
Fax: 44-207-377-2453  
Email: abs-eur@eagle.org

**ABS Pacific Division**

Singapore  
Tel: 65-276-8700  
Fax: 65-276-8711  
Email: abs-pac@eagle.org

**ABS Americas Division**

Houston, TX USA  
Tel: 1-281-877-6000  
Fax: 1-281-877-6001  
Email: abs-amer@eagle.org

Website: <http://www.eagle.org>

TX 01/00 025

Circle 202 on Reader Service Card

IT'S CLEANER, QUIETER AND MORE RELIABLE...

# INFINITY

JOINING THE GROWING FLEET OF  
GAS TURBINE POWERED CRUISE SHIPS



**C**ONGRATULATIONS TO CELEBRITY CRUISES ON THE DELIVERY OF *INFINITY*, THE SECOND GAS TURBINE SHIP OF ITS FLEET. THE FIRST CRUISE SHIPS TO FEATURE GAS TURBINES, THESE NEW VESSELS INCORPORATE THE SAME TECHNOLOGY AS THE WORLD'S MOST RELIABLE AIRCRAFT AND MILITARY SHIPS. GE LM2500+ GAS TURBINE ENGINES ARE CLEANER, QUIETER AND MORE RELIABLE THAN THEIR DIESEL ENGINE COUNTERPARTS. THEY ALSO REQUIRE LESS SPACE, RESULTING IN SIGNIFICANTLY MORE ROOM FOR PASSENGER AND CREW ACCOMMODATIONS. ENVIRONMENTAL ADVANTAGES INCLUDE THE ELIMINATION OF SLUDGE DISPOSAL AND LOWER SOX, NOX AND PARTICULATE LEVELS. IMAGINE A WORLD WHERE ALL CRUISE SHIPS USED GE GAS TURBINES. NOW YOU'RE SAILING.



**S&S Energy Products**  
**GE Marine Engines**

(281) 457-7819 • [WWW.GEPOWER.COM](http://WWW.GEPOWER.COM) • [WWW.GEAE.COM](http://WWW.GEAE.COM)

Circle 297 on Reader Service Card

claim that their mission was finished — or so they thought.

According to Bonn, who acted as lead pilot on the second helicopter on the return trip, the flight path back to Oceana Jet Base in Norfolk, Va. was laden with a massive storm. Fighting

zero visibility, wind shears and the threat of lightning at stake, Bonn carefully guided the team home with help from the helicopter's advanced navigational equipment. Touching down at Oceana, Pilots Molthen, Watson and their crews were greeted by a frenzy of

emergency services, INS and official authorities who would examine the crew, which amazingly sustained nothing more than slight hypothermia. Only one crewmember, who already had a pre-existing cardiac condition had to be hospitalized for chest pains.

### Comsat Lands Contract With Radisson Seven Seas Cruises

COMSAT Mobile Communications (CMC), a business unit of Lockheed Martin Global Telecommunications (LMGT), has won a four-year contract — worth more than \$1 million — to provide high-speed (128 kbps) data and voice satellite communications to the Radisson Seven Seas Cruises (RSSC) Seven Seas Mariner.

COMSAT has furthered its presence onboard cruise ships with a three-year agreement to provide global Internet access systems to six Cunard Line and Seabourn Line ships. The ships include the Cunard liners Queen Elizabeth 2 and Caronia, and the Seabourn ships Seabourn Sun, Seabourn Pride, Seabourn Spirit and Seabourn Legend.

Circle 35 on Reader Service Card

### Festival Cruises, Signs Five-Year Lease with MTN

Maritime Telecommunications Network, Inc. (MTN), has signed a five-year agreement with Festival Cruises. The line's next two newbuilds, European Vision and European Dream, scheduled to be delivered from Chantiers de l'Atlantique in 2001 and 2002, will be equipped with MTN's telecommunications technology.

Circle 13 on Reader Service Card

### P&O Cruises Gets Connected With Harris MCS

Harris Maritime Communication Services (MCS) signed a three-year contract to provide P&O Princess Cruises with satellite based shipboard global voice and data communications services.

Harris/MCS has installed a system onboard P&O Princess' British flagship Aurora, integrating both Local and Wide Area Networks using Broadband technology.

Circle 36 on Reader Service Card

### Carnival Finalizes Plans For Fleetwide Internet Cafes

Carnival Cruise Lines has finalized plans for the installation of Internet cafes throughout its fleet, offering guests an opportunity to check e-mail and stock prices, obtain news updates and surf the Web while onboard its ships.

Providing the satellite connection and Internet services for Carnival's Internet cafes are Maritime Telecommunications Network, (MTN), which is a subsidiary of American Tower's Verestar, Inc., and Digital Seas International (DSI).

Circle 38 on Reader Service Card

**PHOTOLUMINESCENT SAFETY SIGNS & ESCAPE ROUTING SYSTEMS**

**ALL PHOTOLUMINESCENT PRODUCTS ARE EXCLUSIVELY MADE WITH STRONTIUM ALUMINATE PIGMENT**




**MEETS IMO RESOLUTION A752(18)**

**TYPE APPROVALS ABS, DNV, AND LLOYDS**

ISO 9002 Certified

**DATREX**  
Marine Safety Equipment  
P.O. Box 1150 Kinder, LA. 70648  
1-800-828-1131 Fax: 337-738-5675  
www.datrex.com

Circle 216 on Reader Service Card



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

Available in three material grades to perfectly match application requirements.

Classification society approvals.  
24 hour service, worldwide.

## Orkot® Marine Bearings

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

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

**TLM MARINE**  
**TXM MARINE**  
**SLM MARINE**

**TI Group**  
Specialty Polymer Products

For immediate contact, call the Orkot information centre: Europe/Middle & Far East Tel: +44(0)1709 376044 Fax: +44(0)1709 374819  
North/South America Tel: +1(541) 688-5529 Fax: +1(541) 688-2079 within USA: 1(800) 546-7568  
**24hr service (worldwide): +44(0)1709 789840**

Circle 329 on Reader Service Card



IT'S CLEANER, QUIETER AND MORE RELIABLE...

# *Radiance of the Seas*

JOINING THE GROWING FLEET OF  
GAS TURBINE POWERED CRUISE SHIPS



**C**ONGRATULATIONS TO ROYAL CARIBBEAN INTERNATIONAL ON ITS FIRST GAS TURBINE POWERED SHIP. RCI JOINS ITS SISTER COMPANY, CELEBRITY CRUISES, IN FEATURING GAS TURBINES. THESE NEW VESSELS INCORPORATE THE SAME TECHNOLOGY AS THE WORLD'S MOST RELIABLE AIRCRAFT AND MILITARY SHIPS. GE LM2500+ GAS TURBINE ENGINES ARE CLEANER, QUIETER AND MORE RELIABLE THAN THEIR DIESEL ENGINE COUNTERPARTS. THEY ALSO REQUIRE LESS SPACE, RESULTING IN SIGNIFICANTLY MORE ROOM FOR PASSENGER AND CREW ACCOMMODATIONS. ENVIRONMENTAL ADVANTAGES INCLUDE THE ELIMINATION OF SLUDGE DISPOSAL AND LOWER SOX, NOX AND PARTICULATE LEVELS. IMAGINE A WORLD WHERE ALL CRUISE SHIPS USED GE GAS TURBINES. NOW YOU'RE SAILING.

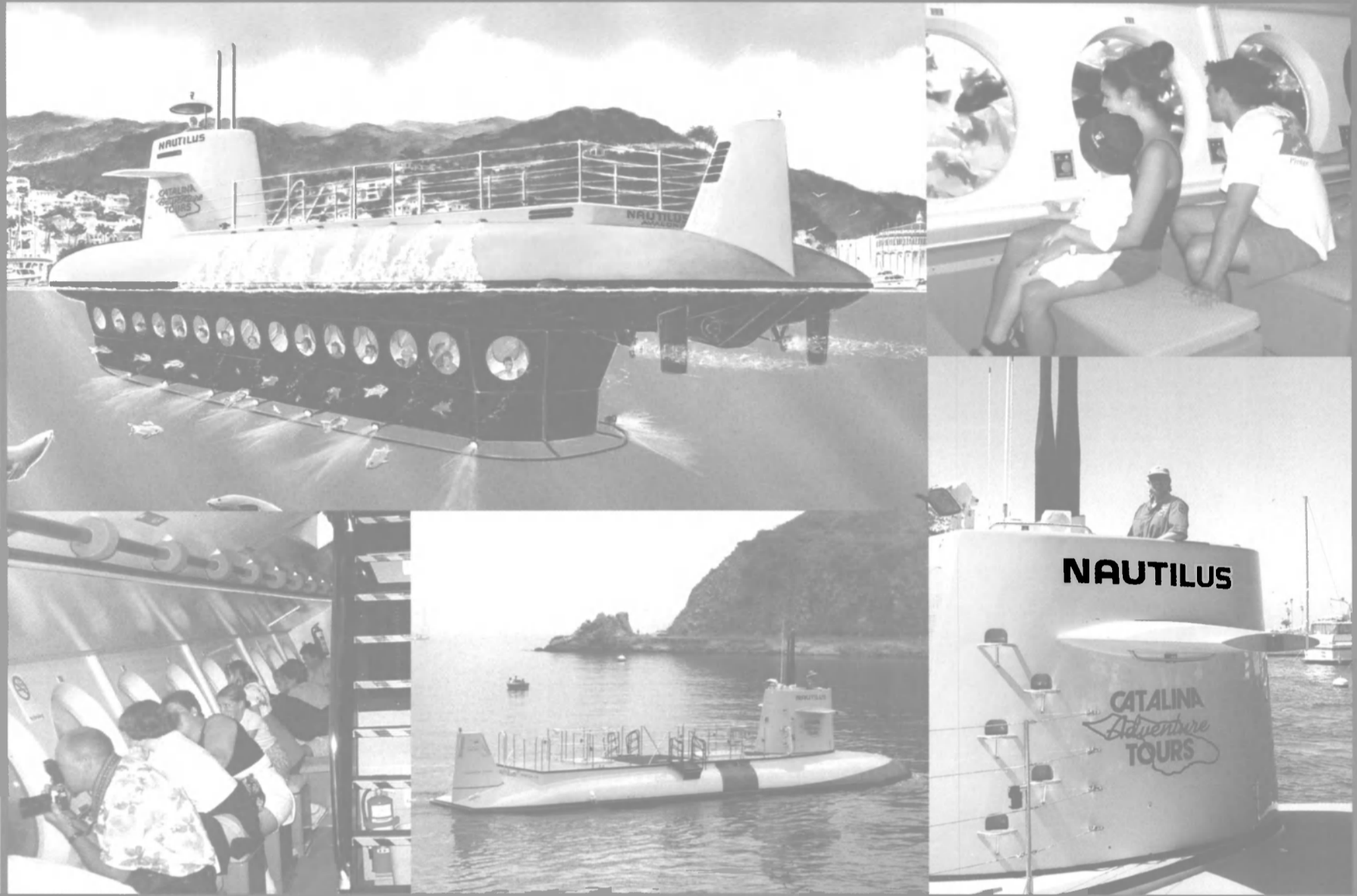


**S&S Energy Products**  
**GE Marine Engines**

(281) 457-7819 • [WWW.GEPOWER.COM](http://WWW.GEPOWER.COM) • [WWW.GEAE.COM](http://WWW.GEAE.COM)

Circle 298 on Reader Service Card

# NAUTILUS CLASS VIEWING VESSELS



**SEE US AT SEATRADE CRUISE SHIPPING CONVENTION, MIAMI, MARCH 5-9, 2001**

The perfect destination activity for cruise ship passengers and tourist trade.

New generation of semi-submersible viewing vessels constructed of molded fiberglass for the lowest of maintenance and operating costs.

65' in length and U.S.C.G. approved for 49 passengers.

Unique "Torpedo" fish-feeder concession option may pay the crew cost!

*Contact us for complete information*



AQUABUS Water Taxis



FOUNDED 1957



SEAVIEW Viewing Vessels

## WILLARD MARINE, INC.

**BUILDERS OF REVENUE-PRODUCING VESSELS TO SERVICE THE TOURIST TRADE**

1250 N. Grove Street, Anaheim, CA 92806 U.S.A. • 714-666-2150 x 211 • fax 714-632-8136

Web Site: [willardmarine.com](http://willardmarine.com) E-mail: [webmaster@willardmarine.com](mailto:webmaster@willardmarine.com)

### Non-Chemical Solution to Ship's Waste Discharge

Environmental regulatory agencies, armed with subpoenas, lawsuits, and criminal indictments are changing the way owners and captains must think about waste disposal. MEP (Marine Environmental Partners, Inc.) has taken notice and is providing technology solutions to meet environmental regulation both today and tomorrow. MEP is a joint venture between a South Florida company, Boatside Services, and Alpha-Omega Environmental, Inc. of Colorado Springs, Colorado. Boatside Services is a provider of fluid services to the yachting industry, utilizing a fleet of U.S. Coast Guard certified tank service vessels. Expanding on this concept and joining forces with Alpha-Omega — which has pioneered an innovative water treatment process technology to industry — has facilitated the introduction of the patented EIMS technology to the marine market.

Circle 198 on Reader Service Card

### Resolve Fire & Hazard Receives NMD Approval

Resolve Fire & Hazard Response Inc. announced the approval of their Advanced Fire Fighting Course by the Norwegian Maritime Directorate (NMD). Following an inspection of the fire fighting facilities, an audit of quality management programs and training programs at the Resolve School, Mr. Reidar Norheim of the NMD granted the approval. This new approval will predominately affect the cruise ship community. Many of the officers in command of cruise ships sailing from U.S. ports hold licenses that are issued by the Norwegian Maritime Directorate.

The new NMD approval comes after the United Kingdom Maritime and Coast Guard Agency (MCA) and the quality standards organization, Det Norske Veritas (DNV), approved Resolve Fire & Hazard Response, Inc.

Circle 193 on Reader Service Card

### MAVCO Onboard Explorer Of The Seas

Explorer of the Seas — the latest addition to Royal Caribbean's Voyager class cruise ships — and the second in the Voyager class now offers the largest Conference Center at sea, which was designed and installed by MAVCO. The ship's large size allows for the highest degree of flexibility in the design features and interior solutions of the Conference Center, which encompasses four conference rooms, a reception area, a multi-media screening room and boardroom. These can be tailored to suit a

variety of needs, used individually or in numerous combinations.

MAVCO has equipped all the rooms with a dedicated multi-system VHS video player, to which additional A/V sources, such as CD players, overheads and slide projectors, can be connected via a wall mounted connection panel.

With much of the equipment supplied

being portable, control is via a switching matrix, which allows the signal to be sent to any destination within the complex. This facilitates the various combinations of the conference rooms, since it can be used to send signals to equipment in several rooms simultaneously.


The various user functions in the conference rooms can be controlled by a


touch-screen wireless remote control, with duplicate control panels on the walls.

There is also a tie-line system installed from one end of the Conference Center to the other, facilitating the connection of a 24 channel mixing console for large meeting functions.

Circle 42 on Reader Service Card

# The LEADER in Maritime Communications






**Maritime Telecommunications Network (MTN) introduces THE ONLY ANTENNA YOUR VESSELS WILL EVER NEED. MTN's newest technology---the Multi-Frequency Antenna (MFA) can send and receive in either C- or Ku-Band.**

**MTN Now Offers A Choice Of:**

<p>The Multi-Frequency Antenna System</p> <ul style="list-style-type: none"> <li>• Global Communications using C- or KuBand</li> <li>• Full Time dedicated network</li> </ul>	<p>Inmarsat Services -A, -B, -M, Mini-M &amp; C</p> <ul style="list-style-type: none"> <li>• Internet access &amp; e-mail capability</li> <li>• Highly competitive pricing</li> </ul>
---	---

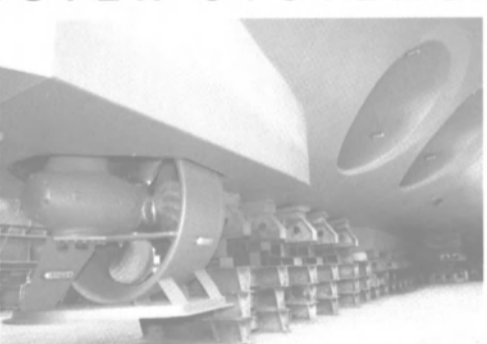
**Optimize Your Communications Systems with MTN, The Communications Experts**




954.538.4000 • Toll Free: 877.464.4MTN(4686) • Fax: 954.431.4077 • mtn\_info@mtnsat.com • www.mtnsat.com

Circle 254 on Reader Service Card

## BRUNVOLL THRUSTER SYSTEMS



**THRUSTERS FOR MANOUEVRING AND PROPULSION OF SHIPS**



**3600 THRUSTERS delivered and more than 2000 Ships equipped with BRUNVOLL THRUSTERS**

BRUNVOLL ARE PRODUCERS OF  
Tunnel Thrusters  
Azimuth Thrusters  
Control Systems  
Low noise Thrusters

[www.brunvoll.no](http://www.brunvoll.no)



**BRUNVOLL**  
BRUNVOLL A.S. 6415 MOLDE NORWAY  
TELEPHONE +47 71 21 96 00 FAX +47 71 21 96 90

REPRESENTATIVE IN USA:  
**SMI**  
SHIPS MACHINERY INTERNATIONAL, INC.  
HEAVY DUTY MARINE EQUIPMENT  
8375 N.W. 56 STREET, MIAMI, FL.33166 TELEPHONE (305) 592-7350, FAX (305) 591-8223

Circle 294 on Reader Service Card

**ALSTOM**

**Silent (electrical propulsion)**

**Smooth (reduced vibration)**

**Carefree (dependable power)**

**A honeymoon dreamboat  
for Jake and Maria.**



France (Belfort) · USA (Philadelphia)  
[www.powerconv.alstom.com](http://www.powerconv.alstom.com)

**MORE AND MORE PEOPLE NEED ALSTOM**

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

©-ALSTOM-2000

Circle 203 on Reader Service Card

## Ship's Store: Cruise & Passenger Vessel Products



The SSP Propulsor Consortium (SSRP) offers the SSP marine propulsion. The propulsor, a "pod type" propulsion system, offers both technological and economic advantages via an electronic motor housed in a pod or nacelle suspended beneath the hull of a vessel — providing direct drive to a propeller. The unit outputs a power of 7 MW, corresponding to 9,510-hp. **Circle 150**

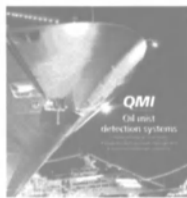
### Siemens

The Siemens-Schottel Propulsor Consortium (SSRP) offers the SSP marine propulsion. The propulsor, a "pod type" propulsion system, offers both technological and economic advantages via an electronic motor housed in a pod or nacelle suspended beneath the hull of a vessel — providing direct drive to a propeller. The unit outputs a power of 7 MW, corresponding to 9,510-hp. **Circle 150**

certification from classification societies. **Circle 106**

### QMI

QMI is a manufacturer of oil mist detection systems. The



Multiplex Atmospheric Detection System is a unit with a remote measurement of oil mist. It detects oil mist escaping through fractured or loose joints in fuel, lubricating, and hydraulic oil lines, injectors, etc. The monitor incorporates a self-diagnostic system to avoid false alarms. **Circle 107**

### Setfair.com

Setfair.com provides an e-business procurement solution that streamlines the global buying and selling of maritime supplies from straight orders to detailed



### Glass Renovation Ltd.

Glass Renovation Ltd., (GRL) is a leader in glass renovation. The company designs portable systems that remove scratches, stains and salt-water damage as well as reduce time. Repairs to glass and plastics are designed not to weaken or effect the inherent properties of the windows. **Circle 101**



### Durastic Ltd.

Durastic Limited is a leading supplier and installer of marine deck covering systems. The company is part of the Aberdeen based Rig-blast Group with representation in over 30 countries. Its products are manufactured at its ISO 9002 factory in the U.K., and carry most of the major classification societies' approval. **Circle 102**



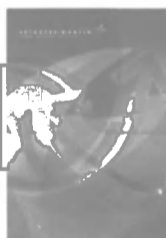
### STN Atlas Marine Electronics (SAM)

SAM Electronics' product and services include equipment and systems for communication, navigation, hydrographic survey, automation, and electrical power and drive technology. The company also specializes in retrofit and conversion works in connection with ship extensions and modernization. **Circle 103**



### Solar Solve

Solar Solve is a leader in the design development and manufacture of high performance roller screens for the maritime industry. Solasolv screens replaces the solid plastic screens at wheelhouse windows and is designed to create a safer, more comfortable working environment at sea. They are also designed to be instantly retractable, ensuring that full visibility through clear glass can be regained. **Circle 104**



### Lockheed Martin Global Telecommunications (LMGT)

LMGT leverages the resources and expertise of both Lockheed Martin and COMSAT. LMGT offers advanced telecommunications and information technologies together, helping to enhance your shipping company's bottom line. LMGT offers myriad of products and services including: Network Services; Satellite Services; and Systems and Technology. **Circle 105**



### Machine Support

Machine Support is a service organization in the marine field for the erection, alignment and mounting of both main propulsion units and auxiliary equipment. The company offers an all-around engineering service and can obtain the necessary

# OCEANIC

CONSULTING CORPORATION

200m Towing Tank  
58m Towing Tank  
Offshore Engineering Basin  
90m Ice Tank  
22m Flume Tank  
Cavitation Tunnel  
Bridge Simulator  
Numerical Simulation

40m Expedition Yacht Stern Design

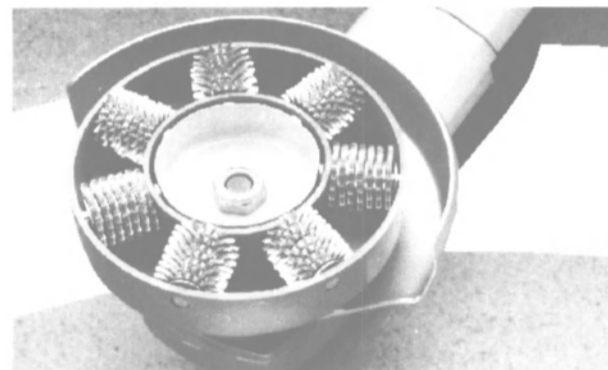
Seatrade CRUISE SHIPPING CONNECTION

**Meet us at booth 1133**

P.O. Box 28009, St. John's, NF, Canada A1B 4J8 [www.oceaniccorp.com](http://www.oceaniccorp.com)  
Email: [oceanic@oceaniccorp.com](mailto:oceanic@oceaniccorp.com) Tel: (709) 722 9060 Fax: (709) 722 9064

Circle 259 on Reader Service Card

## Barnacle, Paint, and Rust Remover



Rapidly remove paint, rust, scale, barnacles, and other hard coatings from metal and concrete surfaces without heavy pressure. New Swirl-Off scarifier attaches to your grinder, sander, drill, or polisher. Rotary tool scours tough deposits. Using pneumatic tools, it removes marine growths underwater. Easier, faster, and safer than scraping, sandblasting, or chemicals. There's nothing else like it! Ask for Bulletin MAR-1 showing many models and styles.

## DESMOND

The Desmond-Stephan Mfg. Co., P.O. Box 30, Urbana, Ohio 43078  
Phone 937-653-7181, Fax 937-653-5511

\*Trademark of The Desmond-Stephan Mfg. Co.

Circle 303 on Reader Service Card



## TWO-STROKE SERVICE SPECIALISTS

### Motor-Service Hugo Stamp, Inc.

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

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



## MOTOR-SERVICES HUGO STAMP, INC.

AUTHORIZED DISTRIBUTORS & SERVICE CENTER

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

Circle 230 on Reader Service Card

## Ship's Store: Cruise & Passenger Vessel Products

request for orders. Users of Setfair.com can identify the items they require using specialist product category codes and product attributes as well as purchase a variety of products and services from leading industry suppliers on-line. **Circle 108**

### Schenker

Schenker is a leading international provider of integrated logistics services. The company offers a special-



ized service for ship owners and ship management companies, manufactures of ship spares, shipbuilding and ship repair industries as well as metal parts to highly sensitive electronics. **Circle 109**

### Saab Marine Group

Saab Marine Group — recently sold to Emerson Electric — provides a complete one-stop solution for tank level gauging, tank cleaning and integrated ship automation (ISA). The company has over 2,000 installa-



tions in all kinds of ship, its own sales and service companies in strategic areas, and a global network of representatives, to ensure fast and easy-access service. **Circle 110**

### ALSTOM

ALSTOM is a global specialist in energy and transport infrastructure. The "A" Series is designed to combine attributes of previous generations of DP systems with the benefits of continuous technological advancements as well as increased processing power and speed. **Circle 111**



### Rolls-Royce

Rolls-Royce provides a vast range of products and services to the marine industry. The company delivers fully integrated systems and products customized to the individual ship and its specific operation to ensure an optimum solution for any application. Cruise and passenger vessels use Rolls-Royce systems. The range includes C.P. propellers, prodded propellers, water jets, thrusters, reduction gears, motion control, bridge control systems, rotary vane steering gear and rudders. **Circle 112**



### WebTec

Webster Instruments new MC104 Portable Hydraulic Data Logger is designed with input from major mobile equipment manufacturers and field service engineers to fault-find machinery in the field and tune systems for maximum efficiency and performance. **Circle 113**



### KVH

KVH is a leading manufacturer of marine-in-motion satellite television antennas. The new TracVision C3 onboard entertainment brings hundreds of channels of premium satellite TV services, digital-quality music, and broadcast Internet services to vessels. The unit uses a combination of antenna-mounted rate gyros, CONSCAN signal strength tracking, and KVH's proprietary integrated DVB technology to provide the fastest satellite acquisition. **Circle 114**



### Delta Descalers

Delta's line of chemical formulations are designed to safely remove water scale, rust and lime deposits formed in any water operated equipment. Delta provides specific requirements to remove stubborn deposits while maintaining the integrity of machinery. **Circle 115**



### MAN B&W

To support cruise vessels slow-steaming in sensitive glacial waters, MAN B&W diesel developed Invisible Smoke (IS). These engines provide smokeless performance at the lowest load levels. MAN B&W modern IS engines use fuel-water emulsification with only moderate water content to perform with invisible smoke and clean exhaust at any load-with NOx emissions far below the IMO limit. **Circle 116**



# 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.

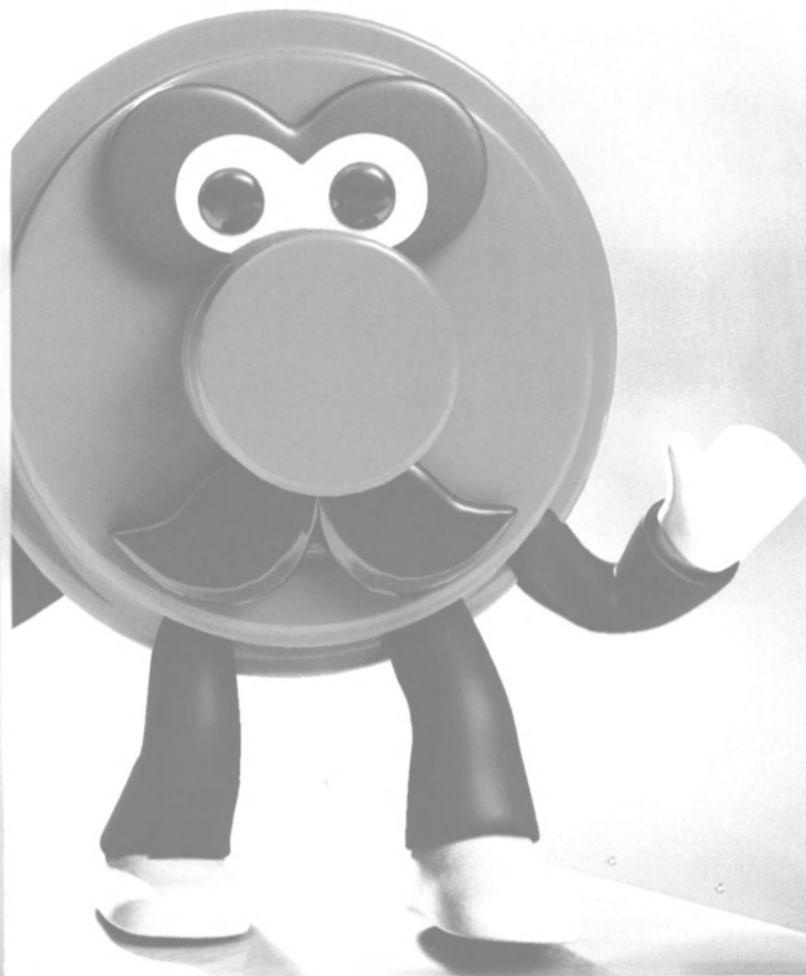
We call it the Lang Combi. But you'll call it incredible.

# Lang

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

Circle 246 on Reader Service Card

**Hi, I'm Max**



Looking for performance?

Then you have a true friend in me. I'm not just a motor. (Many say I'm the best in the world). The way I see it, my job is to maximise your output. That's why they named me Max.

Of course, you can buy me separately. But if you're smart, you'll choose me as part of one of our complete drive systems. Press the button, and you're in production! So, true to my name, I deliver max performance. What more can you ask for from a friend?

By the way... my last name is Hägglunds. Visit me and my family at [www.hagglunds.com](http://www.hagglunds.com)

Hägglunds Drives Inc.  
2275 International Street  
Columbus, OH 43228, USA  
Telephone: +1 (614) 527 7400  
Telefax: +1 (614) 527 7401  
E-mail: [info@us.hagglunds.com](mailto:info@us.hagglunds.com)

**Our Drive is your Performance.**

**HÄGGLUNDS**

Circle 231 on Reader Service Card

# Ship's Store: Cruise & Passenger Vessel Products

## Wynn

The Type "C" is a heavy-duty internally mounted motor straight-line wiper from Wynn's Ocean Range. It offers an advanced design of linear action window wiping systems for marine and other specialist applications.

Circle 117



## S.I.T. GmbH

Developed by S.I.T. GmbH, the CD92™ is a technical solution designed to improve the operation of marine engines and stationary plants running on heavy fuel oil with regard to higher reliability and increased fuel efficiency.

Circle 118



## Interphase Technologies

Interphase Technologies, Inc., a leading manufacturer of scanning sonar, depth-sounders and navigation electronics, has introduced the new Chart Master 7MX and the Chart Master 7CV.

Circle 119



## Lowrance Electronics

Lowrance Electronics, Inc., is a designer and manufacturer of sonar, GPS, mapping and aviation instruments, used as navigational and safety devices.

Circle 120



## Lintern

Lintern is a leader in the design and manufacturing of specialty air conditioning and filtration equipment for severe environments. The criteria for Lintern air conditioning are extreme temperature, heavy dirt loading, corrosion resistance and vibration.

Circle 121



## Drew Marine

The second edition of Drew Marine's Welding Handbook incorporates new technologies such as plasma cutting and arc welding enhancements. The handbook contains more than 300 pages of detailed how-to instructions with extensive illustrations as well as guidelines for determining the process and operating parameters suited for specific applications.

Circle 122



## Philadelphia Gear

Philadelphia Gear manufactures marine gear products ranging from 500 to 36,000 hp. The company provides complete reduction gears, factory maintenance, service support, and replacement parts for the naval and commercial marine gear product lines formerly manufactured by Western Gear and WesTech Gear.

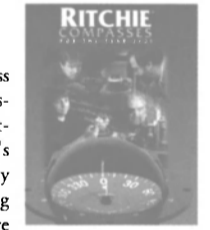
Circle 123



## Ritchie Compasses

Ritchie is a leader in marine compass manufacturing. All Ritchie compasses are designed with ultra light-weight dial assemblies. Ritchie's compasses are filled with a highly refined, very low-viscosity damping fluid that allows the dial to move smoothly.

Circle 124



## Deerberg Systems

Deerberg Systems in Oldenburg, Germany, a supplier for complete waste handling systems onboard cruise vessels, has developed together with Safetec GmbH a flue gas cleaning system.

Circle 125



## Vericor

Vericor Power Systems markets, sells and supports gas turbines packages and complete turnkey solutions for worldwide cogeneration, mechanical drive and marine propulsion applications in the range from 0.5 to 50 MW.

Circle 128



## Reson A/S

Maritime Surveys Ltd., Shoreham, Sussex, U.K., recently took delivery of the first SeaBar 8160 multibeam echosounder system from RESON A/S. The SeaBar 8160 was installed on one of Maritime's survey vessels, the Scotian Shore. The SeaBar 8160 is the newest addition to RESON's 8100 series of multi-beam echosounders.

Circle 129



## 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 1/8" - New and Used  
Stud Link - Cast Steel - Grades 2 and 3 - Oil Rig Quality for Moorings, Towing, Barge Handling, Ship's Replacement
- ◆ **WINCHES - WINDLASSES - CAPSTANS** ◆  
Vertical or Horizontal Hand, Electric, Diesel, Hydraulic or Repowered to your specs
- ◆ **HATCHES - WATERTIGHT DOORS** ◆  
**MANHOLE COVERS - SCUTLES - PORTHOLES** ◆  
All Sizes - New or Reconditioned
- ◆ **PANAMA CHOCKS - DOUBLE BITTS** ◆  
**SINGLE BITTS - CAST STEEL CLEATS AND KEELS** ◆  
All Sizes Available, New & Used
- ◆ **FENDERS FOAM FILLED and PNEUMATIC** ◆  
For Rent or Sale  
All Sizes, New & Used

**GIGANTIC INVENTORY**  
NEW & USED

Call Toll-Free (800) 322-3131

**IN STOCK NOW**  
in the West Coast  
East Coast and The Gulf

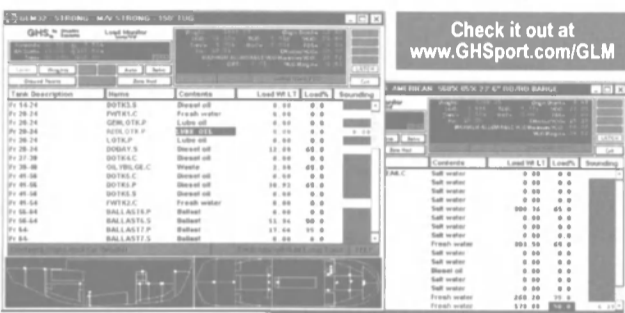
SERVING THE MARINE & OIL INDUSTRIES FOR OVER 50 YEARS  
WE ARE DIRECT FACTORY DISTRIBUTORS & IMPORTERS

P.O. BOX 596  
WILMINGTON, CA 90748  
PH: (310) 522-9698  
FAX: (310) 522-1043



Circle 279 on Reader Service Card

## The GHS electronic T & S book has a new look!



Handles multi-vessel interactions too!

# GHS

## General HydroStatics

### Ship Stability and Strength Software:

- GHS.....Full-featured naval architect's system
- GHS LOAD MONITOR.....Onboard system
- GHS/SALVAGE.....Salvor's system
- BHS.....Economy system
- BHS/YACHT.....Yacht designer's system



**CREATIVE SYSTEMS, INC.**  
CREATORS OF GHS

P.O. Box 1910 Port Townsend, WA 98368 USA  
TEL (360) 385-6212 FAX (360) 385-6213  
E-MAIL: sales@GHSPort.com - Website: www.GHSPort.com  
Producing Advanced Hydrostatics Software since 1972

Circle 286 on Reader Service Card

## GAYLORD - The Premier Name In Galley Exhaust Hoods

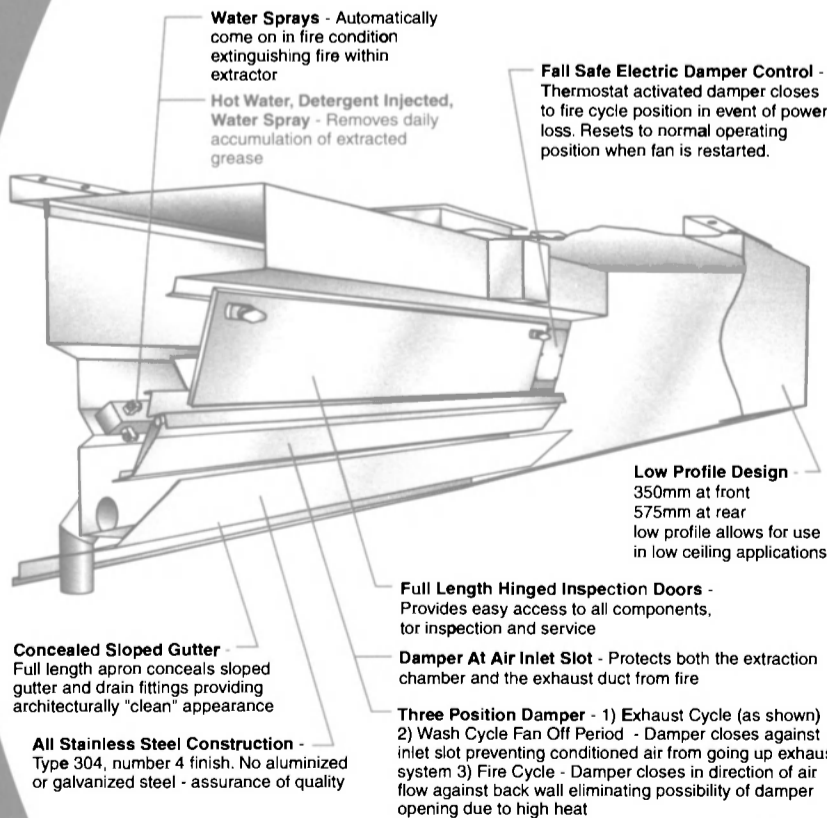
Over 50 years of experience of providing exhaust hoods and canopies to the Navy and Marine Industries.

The MCG3, water-wash exhaust hood offers many features and benefits:

- Meets all the requirements of USPH
- 95% grease extraction efficiency reducing grease build-up in the exhaust system
- Wash system that automatically washes the extracted grease away
- Low air volume design - 270 L/s/m
- Optional CO<sub>2</sub>/Fire Solas fire damper mounted at duct collar

## Gaylord Industries, Inc.

Tualatin, Oregon U.S.A.  
Fax: 503-692-6048 • email: info@gaylordusa.com



Circle 227 on Reader Service Card





### ComNav

Using suggestions from professional captains and marine technicians, ComNav has included a specialized "work mode" function in its new 1201 autopilot system designed for fast and accurate course corrections at slow speeds. **Circle 130**



### Reverso

The FP-301 fuel priming system from Reverso received special mention at a product awards competition during the Marine Equipment Trade Show (METS) in Amsterdam, Netherlands. The system utilizes a gear pump to move diesel fuel into the line, purging trapped air from primary and secondary filters, as well as the engine itself. **Circle 131**



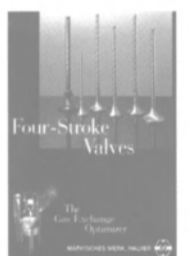
### SOSPENDERS

Lightweight, compact and easy-to-wear, SOSPENDERS is designed to provide maximum safety while not confining sailors or workers. The slim-line life vest is available in manual or auto-inflate models, both which are U.S. Coast Guard Approved. Premium quality construction from super strong 420 Denier nylon outer shroud, the vests are also designed as easy to re-arm after use. **Circle 132**



### Americ Corporation

The VAF Series combines dependable power with practical design. From the stackable design that saves you valuable floor or storage space, to the centrally located handles for balanced maneuverability, to the anti-skid rubber feet for steadfast operation, Americ covers all the practical details for you. **Circle 133**



### MWH

For decades, MWH has been one of the most important manufacturers of valve systems in the world. Our reputation for excellence is based on a wide product range produced to superior quality standards. Engine manufacturers and operators constantly praise MWH products for their outstanding performance. **Circle 134**



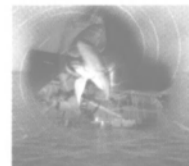
### Geislinger

Geislinger GmbH is located in Salzburg, Austria and produces torsional vibration dampers as well as elastic damping couplings for diesel and gas engines. Geislinger products are used for the propulsion of ships, powerplants, trains and hydraulic excavators. They are reducing torsional vibrations and protect the shafts, camshafts and crankshafts as well as the gears. **Circle 135**



### Seaward Intl.

Seaward International, Inc. provides marine fenders, mooring buoys and composite piling and camels to the cruise industry. The company's SEA GUARD® marine fenders are in widespread use since they have a high energy absorption and are also non-marking to cruise vessel hulls. Seaward's SEAFLOAT® mooring buoys are ideal for mooring cruise vessels in remote locations. (photo credit: Dan Cowan, Port of Miami). **Circle No. 136**



### ALSTOM

The Mermaid brochure introduces the new podded electric propulsion concept jointly developed by ALSTOM and Rolls-Royce (former

Kamewa). The principle and the main advantages of Mermaid are broadly presented as well as relevant pictures and diagrams. Quite a number of new cruise ships are now being equipped with Mermaid. **Circle 137**

### REDD Team Mfg.

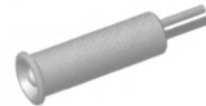
For over a decade, REDD Team has been the leading provider of



pre-fabricated aluminum accessibility ramp systems. Experienced fabricators and extensive quality control have ensured safety and customer satisfaction. **Circle 138**

### Suncor MicroStar

For indoor, outdoor, submersible and emergency uses, this 12 or 24 volt DC Super Bright White LED offers efficient, high quality lighting. Power source can be solar, battery,



generator, or 110 AC via a transformer, making them an ideal emergency light source for rooms and as guidance through passageways and stairs. Its moon-like lighting can be used for atmosphere in lounges. As a waterproof LED, it can be mounted within fountains and lagoons for underwater highlights. Patent pending. **Circle 139**

### Rebis: AutoPLANT Plant Design

Rebis' Plant Design Workgroup (PDW) offers integrated software tools for design and modeling of

# Marine Communications Are Changing Forever!

The Towers Are Going Up

The Fiber Is Lit

**Capabilities**  
Send and receive private voice, fax and e-mail with your VHF radiotelephone over the MariTEL Network.

**Range**  
MariTEL provides 50 to 100 mile coverage versus as little as 5 miles with a cellphone.


**Convenience**  
The MariTEL Network works with DSC VHF marine radiotelephones. No additional hardware is necessary to purchase or install.

**Reliability**  
MariTEL has partnered with giants American Tower, Williams Communications and Ericsson to deliver a superior level of service.

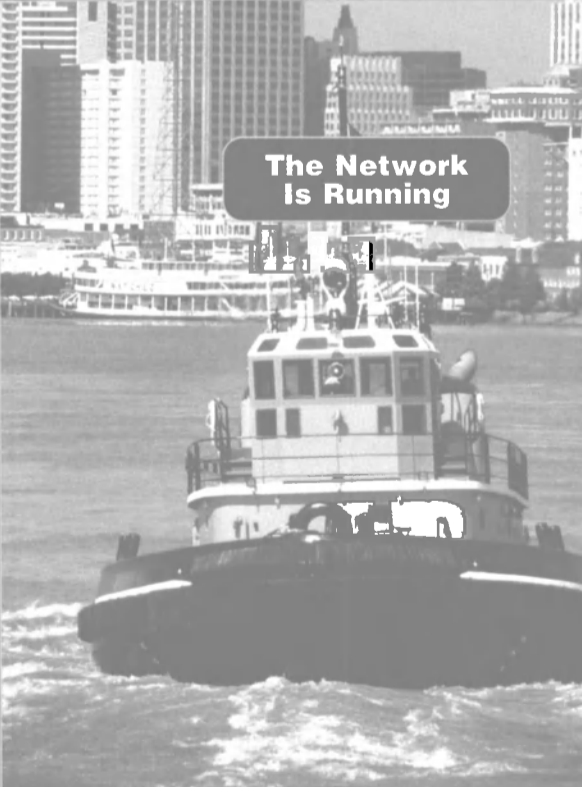
**Vessel Tracking**  
Remotely monitor the location and movement of vessels from virtually anywhere in the world.


**Safety**  
The U.S. Coast Guard monitors and communicates on VHF channels, not cellphones.

**Economy**  
Never a long distance fee, roaming charge or connection cost in the US. Far less expensive to use than satellite communication systems.



**The Network Is Running**





16 East 41st Street, New York, NY 10017  
[www.maritelusa.com](http://www.maritelusa.com)

Circle 252 on Reader Service Card

## Ship's Store: Cruise & Passenger Vessel Products

process, power, industrial, and manufacturing facilities. Auto-PLANT PDW provides 3-D piping, structural, and equipment design and modeling; automatic isometrics generation; and 3-D visualization and interference detection. **Circle 140**

### Washburn & Doughty

Founded in 1977, Washburn & Doughty developed a reputation for excellence by building seaworthy and hardworking fishing vessels for the demanding off-

shore New England waters. Find out what makes a boat built by Washburn & Doughty the choice for the most successful and innovative operators in their field. **Circle 141**

### Diesel Injection

Diesel Injection is an authorized fuel injection repair facility serving the marine industry for over 41 years. Diesel injection provides diesel fuel injection service, turbocharger repair & a complete stock of racor fuel water filtration systems for the marine industry. Call 1-800-777-9889 or visit our website: [www.dieselinjection.com](http://www.dieselinjection.com) **Circle 142**



### Brookdale

Winner of the 1996 Seatrade Award for Safety at Sea, the EVAC-U8@ Emergency Escape Smoke Hood provides 20 minutes of protection from lethal smoke and fumes in the event of a shipboard fire. **Circle 143**



### Microphor

Microphor marine heads and sewage treatment systems are in use worldwide on both commercial and

pleasure vessels. Our new one quart flush toilet is available for water savings, and we offer selected sanitation devices in plastic for weight savings. **Circle 144**



### Omega Thrusters

Jan Verharr builds reliable, long-life Omega bow and stern thrusters. With a thrust direction that's adjustable over 360°, Omega thrusters will keep any ship on the right course. They're the ideal complement to a DF system with a Bollard Pull of 24.9 LBF/kW. The complete construction is placed inside the ship, so no vulnerable parts under the bottom plate. The state-of-the-art Omega thrusters are available with power ratings from 150 to 1,500 kW. **Circle 146**



### Brad J. Wilkus

Crew Vision 2001 is a personnel logistics management database system. The system is a secure Web-based application accessible via the Internet. Using your Microsoft Internet Browser, Version 5.5, you can access the site from anywhere in the world via your Internet Service Provider (ISP) and view the crew rotations and data for your fleet of ships. The system is designed to provide you with all the data you need to efficiently add rotations to each ship in your fleet and avoid double booking crew members. **Circle 147**



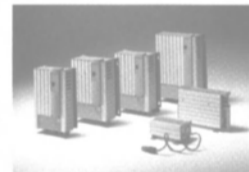
### Sunnex

Sunnex spotlights and maplights are high-intensity work lamps ideal for several onboard locations: map room, engine room, state room, and pilot house. The lamps are engineered to withstand years of operation and can be fitted on a flexible, anti-vibration gooseneck that withstands the roughest of seas. **Circle 148**



### MASS Sine Wave Inverters

Mastervolt's new MASS Sine Wave Inverters can provide clean 230VAC/50HZ or 117VAC/60HZ electricity to power a wide range of appliances from a 12, 24 or 48 VDC power supply. Compact and lightweight, yet ultra reliable in a marine environment, these new inverters can be coupled with a DC battery bank to provide a reliable standby or emergency power supply on larger yachts and cruise ships. For more information contact Jan Joosten, sales director, Mastervolt, Sniijdersbergweg 93, 1105 AN Amsterdam, The Netherlands, Tel: int+31 (0)20 342 21 00, <http://www.mastervolt.com> **Circle 149**



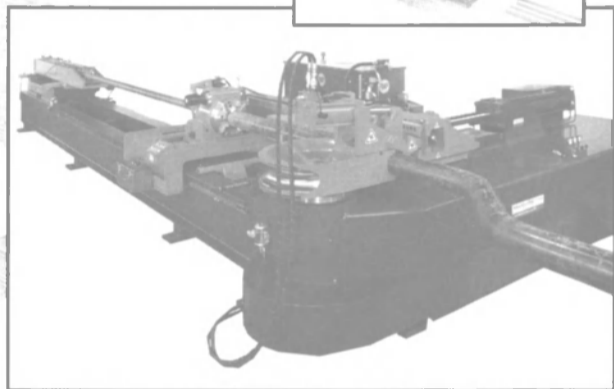
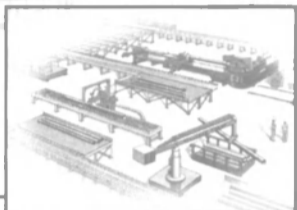
### MTN

Maritime Telecommunications Network (MTN), a leader in maritime communications, provides C-Band voice, fax, data, Internet communications, and Inmarsat services to the cruise and offshore industries, and the U.S. Navy throughout the world. MTN also provides ship-to-shore live video and radio broadcast capabilities in C-or Ku-Band. **Circle 145**



## Jesse Engineering is shaping the world around you.

- Pipe Benders
- Tube Benders
- NC PC CNC



+01-253-922-7433 [tmorgan@jesse-wallace.com](mailto:tmorgan@jesse-wallace.com) [www.jesse-wallace.com](http://www.jesse-wallace.com)  
Jesse Engineering manufactures Wallace Coast pipe benders, pipe shop equipment and PipeShop® software.  
See us at Fabtech, booth #13095

Circle 295 on Reader Service Card

## The crewmember you always wanted



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

### 2001 Autopilot

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

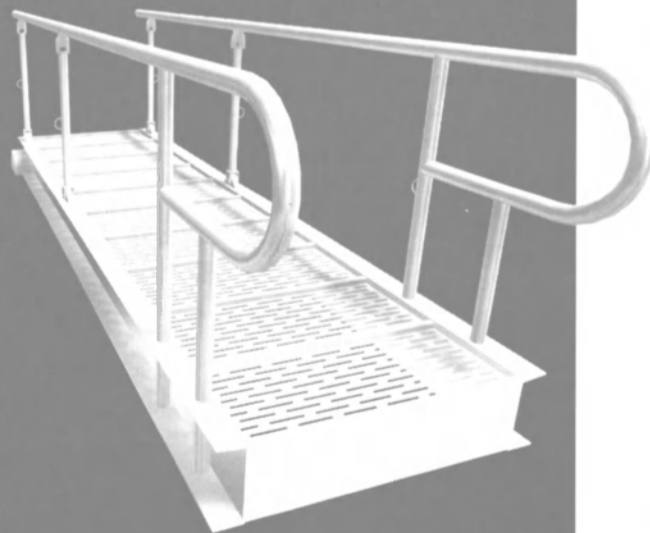


ComNav Marine Ltd.  
#15-13511 Crestwood Place, Richmond, BC, Canada V6V 2G1  
(604) 207-1600 [www.comnavmarine.com](http://www.comnavmarine.com)

Circle 213 on Reader Service Card

## WASHINGTON ALUMINUM COMPANY

Your Complete Marine Product Supplier For:  
Gangways, Accommodation, Inclined, Vertical and Slide Ladders, Treads, Grating, Battens, Replacement Parts and More.



Washington Aluminum Company  
1330 Knecht Avenue - Baltimore, MD 21229  
Phone: 410-242-1000 • Fax: 410-247-4890  
E-mail: [marine@washalum.com](mailto:marine@washalum.com) • [www.washalum.com/marine](http://www.washalum.com/marine)

Circle 327 on Reader Service Card

## STOP MARINE RUST & CORROSION PERMANENTLY!!!



### EVEN SALT WATER WON'T EAT THROUGH POR-15®!

Stop rust PERMANENTLY with POR-15® MARINE, a rock-hard yet flexible coating that won't crack, chip, or peel. NOTHING ON EARTH compares to POR-15® MARINE for durability. We guarantee it unconditionally!

...and it's "Hammer Tough"!

CALL TODAY FOR FREE CATALOG  
1-800-457-6715

Shop our on-line catalog:



[www.por15-marine.com](http://www.por15-marine.com)



P.O. Box 1235 • Morristown, NJ 07962-1235  
In NJ: (973) 887-1999 • FAX: (973) 887-8007

Circle 330 on Reader Service Card

## Demaso Appointed LMS President

Litton Industries announced the promotion of **John V. DeMaso** to the position of president of its Litton Marine Systems (LMS) subsidiary. He replaces Dr. **Clark "Corky" Graham** who was appointed vice president of resource utilization and productivity improvement for Litton Ship Systems. Mr. DeMaso will report to **Harry Halamandaris**, Litton senior vice president and group executive, Litton Advanced Electronics. "John DeMaso has served the LMS organization for over 28 years in positions of increasing responsibility and brings to this position extensive experience in all facets of Litton Marine System's business including program management, engineering, operations, production control, manufacturing and marketing," Mr. Halamandaris said.

## Heindenreich Marine Develops Product Tanker Pool

Heindenreich Marine has created a new global clean petroleum product tanker pool — Dorado Tankers — to be managed from Heidmar's new office in Darien, Conn. The focus of the new company will be to operate product tankers under a common umbrella — similar to the Star Tankers' Panamax pool. Heidmar also reported that it has elected **David G. Palmer** as Vice President of the company, as well as managing director of Dorado Tankers. Palmer previously served as CEO of the International Product Carriers Pool and as senior executive with Stolt-Nielsen.

## Sait-Stento To Divest Sait Communications

Sait-Stento has signed a Memorandum of Understanding with Telenor Broadband Services, a subsidiary of Telenor with plans to sell all of its shares in Sait Communications to Telenor for approximately \$28.2 million. The transaction and consideration is subject to due diligence and board approval from the above-mentioned parties. It is estimated that final negotiations are to be completed by the end of February 2001.

## MMA Educates On Importance Of At-Sea Medical Care

Massachusetts Maritime Academy (MMA) is focusing on the significance of medical care onboard ships with its new USCG/STCW-approved Medical Care at Sea — Person in Charge (PIC) course. Offered in conjunction with Emergency & Safety Programs (ESP) of Philadelphia, Pa., the six-day training course will be held at the Academy's Buzzards Bay campus with courses

Circle 229 on Reader Service Card

scheduled throughout the year. The program's base is to provide licensed maritime officers the opportunity to develop or refresh the knowledge and skills that are necessary to administer appropriate care in the event of illness or injury at sea. For additional details, contact: George Gillis, MMA, at (508) 830-5097 or visit MMA's Web site at [www.mma.mass.edu](http://www.mma.mass.edu).

## Thermal Imagers For Marine Applications Introduced

D&B Technology Group, Inc. recently introduced a line of new infrared (IR) thermal imaging cameras, called HOTEYE, that mariners can use to better navigate in total darkness and other low-visibility situations. The units are manufactured by EMX, Inc., a Winter Springs, Fla.-based systems integrator, and incorporate Raytheon Commercial Infrared IR detector technology.

Available in four models: HOTEYE 3x, HOTEYE PT8, HOTEYE 5 and HOTEYE 5c, infrared thermal imaging cameras — also called Forward Looking Infrared (FLIR) cameras — measure the invisible thermal energy emitted by all objects and convert them into visible images the eyes can see. Thermal imag-

# ANCHORS CHAINS

# WORTELBOER

ing cameras require no light and can be used in compete darkness or to see through sea haze, moderate fog, or light rain. Thermal imaging cameras provide heightened situational awareness and improved security on and around a vessel whether navigating through a channel or in open water. "Infrared thermal imaging cameras are a mariner's night eyes," said **Bob Gravely**, president, D&B Technology Group. "They are superior detection devices — particularly when there's absolutely zero light - and dramatically improve the safety for the captain and crew." Radar can help you know there's something out there, but with thermal imaging, you can actually see what it is — from up to a mile away," Gravely explained. Retail pricing for the HOTEYE line of infrared thermal imaging cameras start at \$12,899.

Tel.: +31 (0)10 429 2222  
Fax: +31 (0)10 429 6459  
[gjw@wortelboer.nl](mailto:gjw@wortelboer.nl)  
[www.wortelboer.nl](http://www.wortelboer.nl)

## MAN B&W Diesel Canada Elects Noseworthy

MAN B&W Diesel Canada has appointed **Roger Noseworthy** as director of Sales & Marketing. A sales and marketing professional with previous experience in the automotive after-market and industrial power tool industry, Noseworthy holds an MBA from Wilfrid Laurier University.

Circle 195 on Reader Service Card

## Introducing Crew Vision 2001©

<http://www.crewvision.com>

Crew Vision 2001© is a secure, Web-based, personnel logistics management database system accessed via an Internet Browser

### Feature List

- Graphical Rotations make it easy, simply click and add a crew member to the next open rotation
- View the new rotation schedule in a graphed timeline and identify crew members with expired certifications
- Select crewmembers for duty based on requirements and qualifications
- Scan/attach documents to each crew member profile for review in PDF format
- Manage crew member licenses, certifications, passports, medicals, resumes
- Online reports provide cost data, gap analysis of rotation pairings, active crew, etc.
- Use security levels for allowing only updates and views by authorized personnel



Telephone: 954-752-6701 or Email: [sales@crewvision.com](mailto:sales@crewvision.com)  
Copyright © 2000-2001 NETWORK PIPELINE, INC.

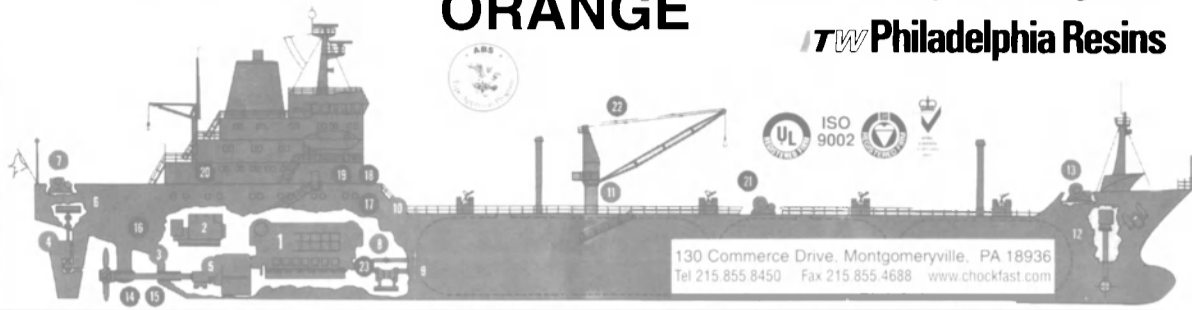
Circle 290 on Reader Service Card

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

## Chockfast ORANGE

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

TW Philadelphia Resins



Circle 260 on Reader Service Card

## New Cat-Powered Tugboat Ordered As Gdansk Gears Up For Port Growth



A new Caterpillar-powered tugboat ordered by the Port and Maritime Services Co. Ltd. in Gdansk, is set to play a key role in the ambitious expansion plans of the port authority. Improving the facilities available to customers using the port of Gdansk, including ship owners visiting the massive Remontowa ship repair yard or trading goods into or out of the country, the new vessel is part of an initiative designed to allow Poland to capitalize on its location as one of the major gateways between Russia and the West. Scheduled for an April 2001 delivery, it will also operate in conjunction with another Cat powered tugboat, allow the Port and Maritime Services company to offer a two-vessel, combined 90 ton bollard pull performance capability for Panamax tankers in line with the worldwide tanker safety recommendations of Clyde Consultants.

Measuring 98 ft. (30 m) with a 35 ft. (10.8 m) beam, the new vessel, being built at the Stocznia Polnocna SA (Northern) Shipyard in Gdansk, is a single deck escort tractor tug with two azimuth thrusters located under the forepart of the hull. It is designed to work within ports and shipping lanes.

Two main propulsion Cat 3512B electronically controlled marine diesel engines each provide 1230 bkW (1,650 bhp) at 1,600 rpm and two azimuth thrusters feature a controllable pitch 2,150 mm diameter propeller. The vessel has a bollard pull of 420 kN (42 tons) and a cruising speed of 12 knots.

Auxiliary power is provided by two Caterpillar 3304B generator sets each producing 106 kVA (50 hertz) at 1,500 rpm. The new vessel, likely to be called Taurus, accommodates a crew of five and features a 6.3 ton (at 5.5 m) deck crane, a hydraulically driven windlass, a hydraulically driven double drum towing winch, two radars, an echo sounder, a GPS receiver and two VHF radio telephones.

The Cat engines have been supplied by Enertek, the Caterpillar power systems dealer organization for Poland, with offices in the Port of Gdynia

Circle 8 on Reader Service Card

## NovAtel Awarded Galileo Contract

NovAtel has been granted a contract by the European Space Agency (ESA) for definition work on Galileo, the proposed European satellite navigation system. The \$126,700 contract calls for NovAtel to provide input to ESA on signal validation and receiver development requirements. The company will also review draft Galileo signal specifications and provide feedback on receiver performance, development requirements and cost implications. Working directly with ESA technical management, NovAtel expects the the study will be complete during the next six to eight months.

Circle 6 on Reader Service Card

E-OPPORTUNITIES  
@MARINELINK.COM

Reach Your Customers Online  
With Maritime Reporter's Website  
with More New Features  
and a New Look... COMING SOON!

WWW.MARINELINK.COM

MARINE PROPULSION PARTS  
& PRODUCTS

**KAPLAN & ASSOCIATES, INC**

Seal Kits	New & Used
Gear Sets	Thrusters
Overhaul Kits	Prop Shafts
"Hard to find Parts"	Marine Equipment

TOLL FREE  
1.877.SEND SPARES (1.877.736.3772)

Parts Available 7 Days a Week- 24 Hours a Day- Visa/Mastercard  
Harbormaster-Murray & Tregurtha-Sykes-Schottel-Jastram-Others

24 Hour Hotline: 248.788.8989  
Tel: 248.788.8161 Fax: 248.788.8162  
Email: [alankaplan@aol.com](mailto:alankaplan@aol.com)  
Web Site: <http://www.alkaplan.com>

Circle 321 on Reader Service Card

KORT NOZZLES  
IN STANDARD  
AND CUSTOM  
CONFIGURATIONS

**HARRINGTON MARINE**  
6720 124TH AVE., FENNVILLE MI 49408  
PHONE 800-962-5000 FAX 616-543-4637  
VISIT OUR WEBSITE AT  
<http://www.harringtonmarine.com>

Circle 293 on Reader Service Card

(12) Used Alum. Crewboats  
29' - 32' \* \$15K - \$35K ea.

(8) 56i LCM-6is / HPI  
TS 8V-71 GMis  
\$39K ea. / obo

(4) New AW1500  
2D Anchor Winches  
6-71 GM, TDTC, Air, 75 ton  
3000i 1-1/2i \$225K/ea

25' Steel Pushboat TS  
\$55,000.00 / obo  
Loc. San Francisco, CA

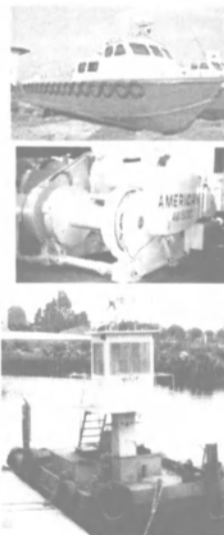
**RASMUSSEN  
EQUIPMENT COMPANY**

Seattle, WA  
Phone: 206-762-3700

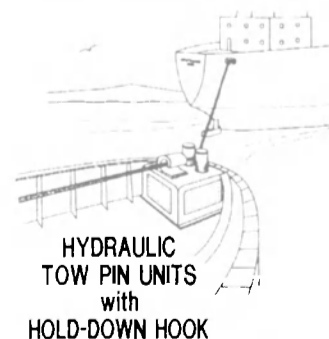
[www.rasmussenco.com](http://www.rasmussenco.com)

Email: [Equipmentsales@rasmussenco.com](mailto:Equipmentsales@rasmussenco.com)

Circle 262 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 280 on Reader Service Card

The BC Ferry Corporation proudly equips its ships with

**Hydroxyl  
CLEANSEA™**  
ONBOARD WASTEWATER TREATMENT SYSTEMS

The ultimate environmental system protecting people and the sea.

[www.hydroxylcleansesa.co](http://www.hydroxylcleansesa.co)

Circle 237 on Reader Service Card

## Vessel-Net.Com Establishes Global Headquarters in Miami

Vessel-Net.Com, Inc. has selected Miami as its global headquarters. Vessel-Net.Com develops and markets the leading Marine Administration and Planning software solution, MAP. This solution addresses the complete management, scheduling and reporting for all commercial marine organizations. The MAP solution is comprised of nine modules: Marine Logs; Maintenance; Interfacing; Inventory; Procurement; Human Resources; Scheduling; Health & Safety; and Replication.

"We are very excited to establish headquarters in Miami, since it is a leading marine center. Our MAP solution is designed to address the needs of all types of marine organizations by providing a comprehensive framework for marine administration and planning, said Benjamin Keeley, CEO of Vessel-Net.Com.

## MAN B&W Sets Sales Records With Four-Stroke Engines

MAN B&W Diesel and their licensees have received the 500th order for the 32/40 series of its four-stroke engine — bringing the total output of the engine sold to 2.6 million hp — 80 percent of which is used for ships' propulsion. Launched in September 1992, the 32/40 series was initially intended for use as an in-line engine with an output between 2,290 and 4,320 kW. Subsequently two years later, the company developed the Vee-version of the engine with an output between 5,760 and 8,640 kW — accumulating 2.4 million operating hours in different fields of application.

Circle 3 on Reader Service Card

## USCG To Revalidate Merchant Marine Licenses

The U.S. Coast Guard has mapped out a recall and verification program for merchant mariners' licenses and documents issued throughout the past several years from a branch licensing office in San Juan, Puerto Rico. Blank licenses, which were apparently sent to the San Juan office are unaccounted for and a machine that is capable of producing these documents has been reported as missing. It is now up to Coast Guard officials to find out if any licenses or documents were issued improperly, and if they are being used by mariners.

An investigation into the unaccounted for license blanks and document equipment has not yet been completed — so details are not readily available. These actions have therefore led the USCG to launch the verification program because of public safety concerns. Coast Guard field units in Puerto Rico and around the U.S. will be checking for suspect licenses and documents.

## Corpus Christi - Sept. 11<sup>th</sup>

The Lift Boat GULF ISLAND V, a 3-legged jack-up, sank off Corpus Christi, Texas. The vessel sank in 100 feet of water on to her port side with half her deckhouse beneath the sea bed.

### Response & Results:

After unsuccessful recovery attempts by others, Titan's salvage team removed the wreck and placed it on shore using the 500-ton sheerlegs Southern Hercules.

USA • P.O. Box 350465 • Ft. Lauderdale, FL 33335  
Tel: 954-929-5200 • Fax: 954-929-0102

UK • New Road, Newhaven • East Sussex • BN90HE  
Tel: +44 (0) 1273 515-555 • Fax: +44 (0) 1273 515-456

BR • Rua Gen. Mena Barreto 708 • Sao Paulo, Brasil  
Tel: +55 11 887 9217 • Fax: +55 11 887 2687

Circle 302 on Reader Service Card



# TITAN

MARITIME INDUSTRIES, INC.  
DAMAGE STABILITY • FIREFIGHTING • LIGHTERING • SALVAGE

## 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

(425) 861-8868 • Fax: (425) 861-8668 • email: arlarsenco@yahoo.com • P.O. Box 88 • Redmond, WA 98073-0088

HOBART MARKET FORGE COSPOLICH INSINGER & MORE!

Circle 206 on Reader Service Card

## STRONGER REPAIRS FASTER, EASIER

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

- Repairs everything from pinholes and ruptures to complete breaks in pipes, pumps, ducts, tanks, valves, flanges, joints, and machinery casings, including equipment carrying water, low-pressure steam, gases, gasoline, oil, alcohol, and caustics
- Bonds tenaciously to most surfaces including steel, plastic, fiberglass composites, ceramic and wood



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

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

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

SEALER for small holes and cracks

LEVELING COMPOUND for corroded surfaces

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

For detailed literature contact:

Ferro Corporation  
Liquid Coatings and Dispersions Division  
1301 N. Flora St., Plymouth, IN 46563  
Tel: 219-935-5131 • Fax: 219-935-5278



Circle 284 on Reader Service Card

Washburn Doughty  
Shipbuilders Architects Marine Engineers



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

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

Circle 288 on Reader Service Card

E-OPPORTUNITIES

@MARINELINK.COM

Reach Your Customers Online

With Marine News' Web site

with More New Features

and a New Look . . . COMING SOON!

WWW.MARINELINK.COM

## Politics

(continued from page 29)

public forum, releasing historical details as well as ongoing information regarding the status of the ship and its role in the ultimate resolution.

ABS almost immediately stepped up its assistance efforts in response to the continuing failure of any nation to offer the vessel a port of refuge. At press time, ABS president **Robert D.**

**Somerville** noted: "It has been 10 days since this ship arrived at a port seeking refuge. If that refuge had been granted the vessel would be heading to a repair yard by now. Since it has not, our concern for the safety of the vessel continues to escalate."

ABS suspended classification of the *Castor* on January 4, pending resolution of the casualty damage. "This is standard procedure when there has been sig-

nificant damage." ABS chief surveyor **Gus Bourneuf** explained. "We are continuing to work closely with the owner in its attempts to safeguard the vessel." The vessel underwent its last annual survey in August 2000. No outstanding recommendations were recorded. It underwent Intermediate Survey in November 1999 and was not due for the next special survey until June of 2002. The ABS surveyor attending the vessel after the

casualty also confirmed that it appeared to be well maintained.

ABS formed a crisis management team following the report of the casualty comprised of senior executives of both the classification society and the affiliated ABS Group Inc. That company has been providing Rapid Response Damage Assessment services to the owner from the outset including a detailed lightering sequence that would minimize any stresses placed on the damaged section of the deck.

The *Castor* is one of three vessels built to ABS class in 1976 and 1977 by Korea Shipbuilding & Engineering. The other two vessels were transferred out of ABS class in the mid-1980s.

Following apparently politically motivated statements from Spanish authorities that the ship was "substandard."

ABS initiated and completed an extensive review of the complete survey history of the troubled tanker *Castor* and categorically refuted the allegations. "This vessel is a damaged ship, not a substandard ship," said Somerville. "It is unfortunate that many of the good intentions that have flowed from the Erika disaster have led to this sort of political, rather than subjective assessment of a maritime casualty," he stressed. "Age is not the determinant of the condition of a ship. It is the manner in which that ship has been managed and maintained that defines its condition. Our records clearly show that this vessel has been conscientiously maintained by a responsible operator."

In proving the point, he said that since 1997 there has been more than 600 tons of new steel placed into the vessel to maintain full conformance with ABS Rule requirements. This has included extensive replacement of the underdeck longitudinals and main deck plating. "Product tankers, particularly those that operate extensively in the gasoline trades, are subject to corrosion in certain suspect areas of the cargo spaces," explained ABS' Bourneuf. "That is why our survey procedures particularly target these areas for close up inspection. Our survey records from the time of the *Castor's* second Special Survey in 1992 show a consistent pattern of inspection and steel renewal in these areas, in addition to regular scrutiny of the entire structure and safety equipment," said Bourneuf.

"That the vessel has survived in open water for almost two weeks following heavy weather damage is a testament to the residual strength of the hull and the condition of the undamaged structural components," he added. "Our opinion is backed up by the vessel's good Port State Control record which has seen no detentions and a very small number of minor deficiencies, none of them structurally related, over the last two years despite frequent inspections."



**Dutchess**  
Bakers' Machinery Co., Inc.  
Subsidiary of Superior-Lidgerwood-Mundy Corp.

**BAGEL & BUN SLICER**

for • Bagel Shops • Retail Bakeries  
• Restaurants • Hospitals  
• Schools • Delis • Etc.

NSF  

- Fast
- Adjustable
- Easy to Operate
- Low in Cost



**Model 260**

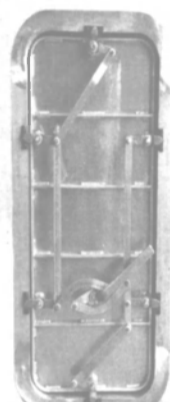
**Increase Sales with Sliced Products**  
For Slicing Bagels, Hamburger Buns, Hot Dog Rolls, Biscuits, Muffins, etc.  
Adjustable for product size up to 4 1/2" (114mm) wide x 2 3/4" (70mm) thick  
Will slice all the way through or part way.  
Production capacity is as fast as the operator can feed it

- Blade Re-Sharpener Service available for all makes

1101 JOHN AVENUE SUPERIOR, WI 54880-0039  
PH: 715-394-444 FAX: 715-394-2406  
1-800-777-4498

Circle 219 on Reader Service Card

## A tradition of quality

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

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

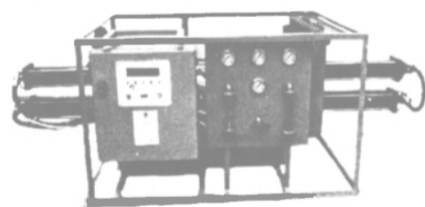
Bulkhead door (front view) Bulkhead door (back view)

**MANLY MARINE**

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

Phone: (604) 544-4635  
Fax: (604) 983-2713  
Email: info@manly.com  
www.manly.com

Circle 249 on Reader Service Card



**Water Problems? GET the Complete Solution!**

Distributor, Dealer & Rep. Inquiries Welcomed.

**Potable Water Production  
Water Recycling Equipment  
Glycol Recycling**

GET, Inc. is a leading manufacturer of reverse osmosis seawater desalinators, water recycling systems, glycol recycling systems, and many other types of water purification systems. Contact us today for expert, cost effective solutions to your water problems.

- Seawater Desalinators/ Watermakers
- Reverse Osmosis Systems
- Water Filtration & Sterilization Equipment
- Water Recycling Systems
- Standard & Custom Models



**GET, Inc.**  
Global EnviroScience Technologies, Inc.  
PO Box 90756  
Long Beach, CA 90809-0756, USA  
Tel: 1-562-989-5400; Fax: 1-562-989-5405  
Toll-Free Tel: 1-800-600-8482  
E-Mail: info@get-inc.com  
http://www.Get-Inc.com

Circle 228 on Reader Service Card

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

## SYNTHO-GLASS®

### WATER ACTIVATED

### Pipe Repair Tape

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

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

## APPLICATIONS

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

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

**Neptune Research, Inc.**  
Tel: 800-328-0090  
Fax: 561-683-8366  
Web: [www.NeptuneResearch.com](http://www.NeptuneResearch.com)

Circle 255 on Reader Service Card

**USS Cole Comes Home To Litton Ingalls**



The Aegis guided missile destroyer USS Cole was undocked from the heavy lift ship Blue Marlin, aboard which USS Cole rode from Yemen to Litton Ingalls Shipbuilding, Pascagoula, Miss., following a terrorist attack this past October. On Christmas Eve, Blue Marlin was ballasted down in Ingalls' launch/recovery pit at the company's west bank facility and floated free. Subsequent to its undocking, the vessel returned to Pier 4 at Ingalls' east bank facility.

Built in the mid-1990s, USS Cole arrived at Ingalls on December 13 and was then transferred to Naval Station Pascagoula for weapons offload in January before being placed onland at Ingalls for restoration work that was scheduled to commence during January.

**Kvichak To Construct And Design Barge Group**

Resulting from the recent developments in oil spill preparedness in the state of Alaska, various cruise ship operators have contracted Amak Towing of Ketchikan to construct oil recovery and storage barges for ports that hold cruise vessels. Completing this task will be Kvichak Marine Industries, who will design, construct and deliver a total of eight barges to Amak, while Seapro will bareboat charter, maintain and operate the barges.

Working in pairs to recover and store recovered oil, the all-aluminum barges, which will measure 40 ft. (12.1 m) with a beam of 14 ft. (4.2 m), will each have a barrel holding capacity of 249.

Circle 9 on Reader Service Card

**ARCOMS Appoints President For Subsidiary**

Advanced Remote Communication Solutions, Inc. (ARCOMS) has named **John R. Westgarth** as president of Enerdyne Technologies, one of its wholly owned subsidiaries. Westgarth will be responsible for all operations and administration for Enerdyne, and will report to **Michael Silverman**, ARCOMS' chairman and CEO.

Westgarth brings with him extensive experience developing and implement-

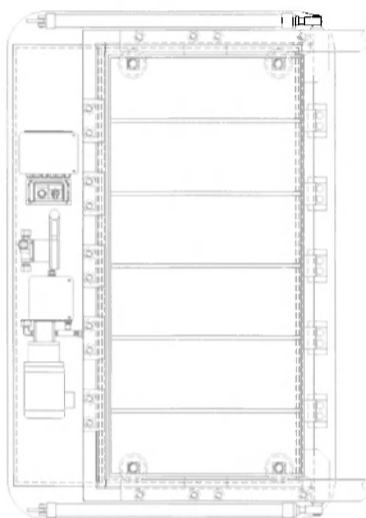
ing performance-improving business strategies. He has spearheaded migration strategies, which have refocused or transitioned a number of manufacturing-oriented companies to market-driven organizations through product and sales mix changes. Most recently, he has worked in a marketing and consulting capacity with a number of high-tech

companies. Previously, he was VP of Marketing for GYYR, Inc., a division of Odetics, Inc. He also served in a number of capacities while at CBS Corp. (formerly Westinghouse Electric Corporation) including VP of Marketing and Associate Director of Strategy.

ARCOMS has also appointed **David A. Brooks** as director of Government

Markets for Innovative Communications Technologies, Inc., one of its wholly owned subsidiaries. In this newly created position, Brooks will be responsible for identifying and cultivating business development and market opportunities for government markets, reporting directly to **Moe Ahutaleb**, President of ICTI.

**WALZ & KRENZER SLIDING ELECTRO-HYDRAULIC WATERTIGHT DOORS - EXPERIENCE AND A NAME YOU'VE TRUSTED FOR OVER 50 YEARS.**



Walz & Krenzer Inc. has supplied more sliding watertight doors in North America than any other single company.

Whether your requirements call for doors which comply with ASTM F-1196/1197 or the new alternate compliance program (SOLAS), go with the company that's been with you from the start.

All WK drawings are approved by on-staff P.E.'s and doors are fabricated in the USA.

**WALZ & KRENZER, INC.**

Phone: 203-267-5712 Fax: 203-267-5716

Email: sales@wk-mapeco.com



Circle 314 on Reader Service Card

**Let's talk Tribon!**



**www.tribon.com**

Circle 312 on Reader Service Card







# 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#
35	ABB Flakt Marine	marine equipment	292	58	Kaplan	propulsion products	321
6	ABB Turbo Systems AG	turbochargers	201	C4	Karl Senner	marine gears	244
42	ABB Turbo Systems AG	turbochargers	200	26	Knud E. Hansen	naval archite cts/engineers	313
44	ABS	classification society	202	37	Kvaerner-Masa Yards Oy	engineering & construction	245
24	All American Marine	marine employment	310	52	Lang Manufacturing	galley equipment	246
50	Alstom Power Conversion	propulsion	203	3	Leica	marine navigation	247
2	Americ Corp	portable ventilators	204	31	Lloyd's Register Marine Div.	classification society	289
36F	American Custom Yachts	fire hose boxes	315	34	MACE Inc	vibration spec/ultrasonic test.	248
14	Anchor Marine	marine equipment	205	18	Man B & W Diesel	diesel engines	311
59	AR Larsen Co.	refrigeration	206	60	Manly Marine	bulkhead doors	249
26	Aurand Manufacturing	surface prep tools	207	21	Marcon International Inc	brokers	250
27	Avatron	propulsion	307	36B	Marine Electronic Solutions	marine electronics	251
57	Brad J. Wilkus	crew mngmnt & logistics	290	55	Maritel Marine	communications	252
22	Brookdale International	survival equipment	208	26	Mascoat Products	insulation mfg & contractor	253
49	Brunvoll A/S	marine equipment & supplies	209	49	MTN	satellite communications	254
13	Cascade General	ship repair/shipyards	210	60	Neptune Research	water act. pipe repair tape	255
21	Climax Portable Mach. Tools	portable machine tools	212	20	Nera Satcom AS	communications	256
24	C-Map Commercial	electronic charts	294	4	Newport News	shipbuilder	257
56	Comnav Marine Ltd.	navigation	213	C2	Norges Varemese	exhibition	304
C3	Comsat Mobile	communications	328	26	Norwegian Maritime Equip	maritime equipment	258
1	Craft Bearing Company	bearings	214	51	Oceanic Consulting	engineering evaluation	259
54	Creative Systems	software	286	46	Orkott Inc	bearings	329
71	Cruise & Ferry	exhibition	317	49	Pall Rochem	filtration	299
16	CSD	pipe & cable sealing systems	285	58	Philadelphia Resins	coatings	260
36	Curacao Drydock Co. Inc	drydock company	309	13	Port Authority of LA	port pilot employment	261
36B	Custom Ship Interiors	interiors	215	10	Port Canaveral	marine firefighter academy	287
46	Datrex	photoluminescent products	216	58	Rasmussen Equipment Co.	marine equipment supplies	262
51	Desmond Stephan	swirl off scarifier	303	10	Red Fox	wastewater treatment	263
23	Detegasa	waste management	217	26	Redland Genstar	ballast crete	264
36A	Deytens Shipyards	shipbuilding	318	39	Roxtec International	safety equipment	265
9	Dolphin Internationa	ship fenders	218	20	RTM Star Center	training	266
60	Dutchess	galley equipment	219	56	RestoMotive Laboratories	coatings	330
27	Edgewater Machine	deck & cargo equipment	306	43	Scandinavian Micro Systems	navigation	291
23	Electronic Marine Systems	sensors	220	5	Seaward International	fenders	267
25	Electronic Marine Systems	sensors	221	23	Siemens AG	electrical motor drives	308
27	Electronic Marine Systems	sensors	222	36F	Skookum	deck machinery	268
29	Electronic Marine Systems	sensors	223	36H	Smith Berger	deck hardware	325
9	Envirovac	sanitation & vacuum systems	224	16	Sohre Turbomachinery Inc	grounding brushes	269
36B	EuroCom Industries	communications	320	8	Spec Tec	computer soft/hardware	270
59	Ferro Corporation	coatings & dispersions	284	36F	Stork Kwant	heat/air & ventilation systems	316
19	Fincantieri	shipbuilder	225	14	Superior Energies	insulation mfg & contractor	271
36D	Flow	waterjet cleaning	323	29	Thrane & Thrane	communications	305
38	Furuno	radar equipment	226	59	Titan Maritime Industries	salvage/lighting	302
45	G E Marine	engines	297	17	Tranter	heat exchangers	272
47	G E Marine	engines	298	61	Tribon Solutions	ship product market	312
54	Gaylord Industries	gallery equipment	227	36C	Uniservice	water treatment	43
60	Get Inc	filtration	228	11	Urethane Products	foam filled fenders & buoys	283
57	GJ Wortelboer Jr. B.V.	chains	229	14	Van Hall Health Inc	medical management	14
51	Gov. Control Systems	diesel eng spare parts & repair	230	15	Vessel-Net.com	information systems/software	274
53	Hagglunds Drives AB	drive systems	231	8	Viking Life Saving Equipment	life saving equipment	275
58	Harrington Marine	propulsion equipment	293	14	Ving Card	locks	276
25	Helkama Bica Oy	marine cables	233	34	Volmar	ultrasonic homogenizers	277
16	Hernis Scan Systems A/S	communications	234	61	Walz & Krenzer	doors & closures	314
33	Hopeman Brothers	interior design	235	41	Wartsila Corporation	communications	300
28	Hose McCann	communications	301	59	Washburn Doughty	boatbuilder	288
15	Houston Marine	marine training services	236	56	Washington Aluminum	cap treads	327
58	Hydroxi Systems	waste water treatment	237	36E	Washington Northtongue Point	moorage facility	319
13	In Place Machining	crankshaft repair	238	2	Water Weights	load testing equipment	278
39	Jamestown Metal	interiors	239	54	Waterman Supply	marine equipment	279
12	Japan Radio	communications	240	58	Western Machine Works	tractor pins	280
15	Jeamar Winches	winches & sheaves	241	48	Willard Marine Inc	shipbuilding	281
15	Jeamar Winches	winches & sheaves	242	36G	Wyninstruments Ltd	wind screens/window wipers	326
56	Jesse Engineering	flanges	295	7	ZF Padova	propulsion	282
16	Kahlenberg	air horns/signalling equip	243				

The listings above are an editorial service provided for the convenience of our readers.

# THE MARINE MART

The Classified  
and Employment Section



Single source vendor:  
Spare Parts + Equipment  
for foreign built ships

## SCARDANA

FAX: (1) - 450 - 671 - 3898

TEL: (1) - 450 - 465 - 6556

TOLL FREE FAX:

1 - 877 - 228 - 9879

E-mail: [service@scardana.ca](mailto:service@scardana.ca)

Web Site: [www.scardana.ca](http://www.scardana.ca)

Procurement Contractors  
+ Spare Parts Agents  
Since 1974

## 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

## 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](mailto:cmh-hydraulics@erols.com)

**TANKS**

### Custom Fuel Cell Bladder Tanks

Diesel or Gas

- Impact Resistant
- Non-Expanding
- Vibration Proof
- Lightweight
- Fully Baffled

MADE TO FIT  
WORK BOATS, PATROL  
BOATS, RACE BOATS

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

## SHIPPING & STORAGE CONTAINERS



NATIONWIDE AVAILABILITY  
SALES, RENTAL, BUYBACKS

TRS CONTAINERS  
NEW, USED & MODIFIED CONTAINERS

800 969 2174

Email: [trscontainers@att.net](mailto:trscontainers@att.net)  
Website: [www.trcontainers.com](http://www.trcontainers.com)

## 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](http://www.martifacts.com) / [maritifacts@aol.com](mailto:maritifacts@aol.com)

### MARTIFACTS, INC.

P.O. Box 350190 Jacksonville, FL 32235-0190  
Phone/Fax: (904) 645-0150

REPLACEMENT PARTS FOR:

SKL/DMR • Paxman • Sulzer  
Fairbanks • MTU  
Fuel Injection Parts • Superior • GMT  
Alco • Cooper • Delaval Enterprise

PHONE: 719-227-1821

FAX: 719-227-7498

APPLIED ENERGY CORP

EMAIL: [Applied@JTP.com](mailto:Applied@JTP.com)  
WEBSITE: [www.JTP.com/Applied](http://www.JTP.com/Applied)

2442 GUNNISON ST. • COLORADO SPRINGS, CO 80909

## SPARE PARTS FOR:

ABB/VTR • ALFA LAVAL • ATLAS COPCO  
• CATERPILLAR • CARRIER • CUMMINS  
• DAIHATSU • DETROIT • DEUTZ  
• DONALDSON FILTERS • HAMWORTHY  
• INGERSOLL RAND • MAN • MITSUBISHI • PAXMAN  
• SULZER • YANMAR • QUINCY ... AND MORE

### HP INTERNATIONAL, INC.

5506 56th Commerce Park Blvd.  
Tampa, FL 33610

Telephone: (813) 740-9333 • Fax (813) 740-9334  
E-Mail: [Parts@HPINTERNATIONAL.COM](mailto:Parts@HPINTERNATIONAL.COM)

## 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

Instruments, Computers & Controls, Corp.

603-628-3900

Fax: 603-628-2884



## JON M. LISS ASSOCIATES, INC.

411 BOREL AVENUE, SUITE 500 • San Mateo California 94402



NAVY STANDARD  
VANEAXIAL  
FANS  
Delivery  
From  
Stock

(650) 573-9191

Fax (650) 572-8458

[jon411@pacbell.net](mailto:jon411@pacbell.net)

# PRODUCTS & SERVICES

## NOW REQUIRED:

A Shipping Vessel Equipped with Fixed Pitch Propellers Must Have A Propeller Speed and Direction Indicator For each Shaft

U.S.C.G. 46 CFR113.37-5

## DIRECTIONAL SHAFT TACHOMETER



- Guaranteed Accurate To 1 RPM
- Withstands Severe Marine Use
- Economical & Reliable
- Other Applications For Engine & Shaft

"Call For Free Brochure"

**AETNA ENGINEERING**

Fireboy - Xintex, Inc.

800-776-7962 616-735-9380

616-735-9381 Fax

www.fireboy-xintex.com

e-mail: aetnaengineering@fireboy-xintex.com

## FACTORY SALE STEEL BUILDINGS



UP TO  
**40% OFF**

IDEAL FOR  
BOAT REPAIR  
OR WORKSHOP

- Super Heavy Solid Steel I-Beams
- 20 Year Warranty
- Immediate Delivery or Free Storage Until Fall

40 X 65 (3 LEFT) 60 X 160 (1 LEFT)  
40 X 90 (2 LEFT) 80 X 200 (1 LEFT)  
50 X 110 (1 LEFT) 100 X 150 (1 LEFT)

Some Other Models Available

PRIME STEEL BUILDINGS **800-291-6777 ext. 130**

## Vesconite Rudder and Stern Tube Bearings

Cut greasing. Lowest friction.  
Use dry or underwater. ABS etc approved.



For free Marine Design Manual  
[www.vesconite.com](http://www.vesconite.com)

Toll Free 1-866-635-7596 (8-5 EST)

## WARTSILA MARINE ENGINE/GENERATOR SETS NEW SURPLUS - DIESEL POWERED w/New Warranty

Eight 8L46B Eng. Ea. w/ABB 7.8MW Gen. 3/60/11,000  
Four 6L46B Eng. Ea. w/ABB 5.85MW Gen. 3/60/11,000

Delta Worldwide Services

Phone (713) 828-1006 Fax (281) 444-2065

Sales@aDeltaWorldwide.com [www.DeltaWorldwide.com](http://www.DeltaWorldwide.com)

## FOR SALE BOILERS

20,000 - 400,000 #/Hr.

TURBINE & DIESEL GENERATORS  
50 - 25,000 KW

GEARS & TURBINES  
25 - 4000 HP

WE STOCK LARGE INVENTORIES OF:  
Air Pre-Heaters • Economizers • Deaerators  
Pumps • Motors • Fuel Oil Heating & Pump Sets  
Valves • Tubes • Controls • Compressors  
Pulverizers • Rental Boilers & Generators

847-541-5600 FAX: 847-541-1279  
WEB SITE: [www.wabashpower.com](http://www.wabashpower.com)

**wabash** POWER EQUIPMENT CO.

444 Carpenter Avenue, Wheeling, IL 60090

## GMDSS

Global Marine Distress  
& Safety Systems  
IN MOBILE

STCW Compliant and USCG  
Approved 70 Hour Course

To Register Call:

1-800-247-3080

Limited to 12 students

\$950.00

**SEASCHOOL**  
Since 1977



## INDUSTRIAL DIESEL SERVICE AND FABRICATION

24 Hour Service

Service and sell all types of  
marine and industrial engines

-Offshore -Marine -Trailer -Truck

Kenny Fletcher 409-721-5252

Pager # 409-841-1089

Beaumont, TX



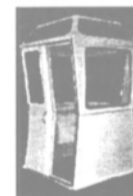
Barataria Lofting Company, Inc.

"Professional Lofting Services"

Phone/Fax: (504) 340-5859

1616 Barataria, Blvd. suite 4

Marrero, LA 70072



## 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

## EMPLOYMENT/RECRUITMENT

**HALTER**  
MARINE INC.

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

Visit our website for profile and current activities

## PROPOSAL PROJECT MANAGER

Following qualifications preferred:

- Minimum 7 years experience plus technical degree in Marine field or equivalent experience in industry
- Ability to win jobs and coordinate efforts of technical and support teams
- Technical writing skills and the ability to meet deadlines
- Good leadership, communication and marketing skills

Competitive Salary and Benefit Package

Attn: Recruiter-Projects

Friede Goldman Halter

P.O. Box 3029, Gulfport, MS 39505

Email: [hr@fgh.com](mailto:hr@fgh.com) Fax: 228-897-4949 EOE/AAP



Standard Calibrations Inc.

☆ Calibration Services

\*Physical/Dimensional Calibration and Repair

\*Electrical/Electronic Calibration and Repair

☆ Propulsion Automation and Control

\*Boilers\*Gas Turbine\*Diesel

☆ Fluid Level and Flow

\*GEMS SENSORS® Factory Service Center

\*Large Inventory \*Raychem Cable\*FSS-2 Cable

Chesapeake, VA. Dubai, U.A.E

800-500-0804 FAX 757-549-0666

ANSI Z540 ISO 9002 Certified

visit us at [www.standardcal.com](http://www.standardcal.com)



## ANTI GLARE SOLAR SHADES FOR SHIPS WHEELHOUSE WINDOWS

Established since 1988



See Us at  
Seatrade  
Miami Cruise  
Booth  
#1165/10

SOLAR SOLVE MARINE

South Shields, UK, NE33 1RA

Tel: +44 191 454 8595 Fax: +44 191 454 8692

E-mail: [sales@solarsolv.com](mailto:sales@solarsolv.com)

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

## ShipMan Preventive Maintenance Software

Written by experienced ship engineers and operators

Use for one vessel or for your entire fleet

Maintenance scheduling and reporting  
Integrated onboard/shoreside spares  
Stocking levels and reorder points  
Vessel configuration tracking

Technical manual and data tracking  
Manufacturer and vendor tracking  
Preventive maintenance history  
Spare parts usage history

Build your own PM program using our software, or  
let our experienced technicians develop it for you.

Box 9567 Panama City Beach, Fl. 32417

850-234-7933 FAX - 850-234-1032

E-Mail- [Quanticeng@AOL.COM](mailto:Quanticeng@AOL.COM)

**Quantic**

Engineering and Logistics Corporation

Windows 95, 98, NT and Macintosh

# EMPLOYMENT/RECRUITMENT

## MARINE ENGINEER

**Sabine Transportation** is currently seeking Marine Engineers for our U.S. Flag ships. Licensed Steam First and Second Assistant Unlimited Ocean Engineers are encouraged to contact Sabine Transportation for consideration. We offer excellent pay, health, dental and life insurance, 401 k plan with employer distributions, disability and many other benefits. To apply, contact:

**Sabine Transportation**  
**319-366-5854**  
 or email: [mhalpin@stickle.com](mailto:mhalpin@stickle.com)

BOAT JOB LISTINGS UPDATING  
 DAILY  
 CALL 24 HOUR  
 MARINE JOB HOTLINE  
 504-889-JOBS (5627)



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

### VESSEL DESIGN ENGINEERS: Sr. Naval Architect, Structural Engineer Sr. Marine/Mechanical Engineer

BS in Engineering related field. Minimum 8 yrs design engineering experience. Supervisory or management experience preferred. Knowledge of applied marine design a plus.

### LOFTER Product Modeling

BS degree or equivalent. Plan to provide production work package to support ship manufacturing environment. Knowledge of CadLink and AutoPlant software and ship manufacture method planning a plus.

### DESIGNER Piping & Hull/Structural

10-15 yrs experience in marine design with minimum 5 years commercial marine. Knowledge of ABS, USCG & SOLAS rules a must.

### SCHEDULER

BS degree in ship production or equivalent experience of 5-10 years ship manufacturing experience. Must understand ship product breakdown and material kitting planning method.

### Competitive Salary and Benefit Package

Attn: Recruiter-MR  
 Friede Goldman Halter  
 P.O. Box 3029, Gulfport, MS 39505  
 Email: [hr@fgh.com](mailto:hr@fgh.com) or Fax: (228) 474-5840 EOE/AAP



American Shipyard

### Now Hiring !!!

**American Shipyard Company** has immediate openings for the following positions. As one of the oldest operating marine-industry firms in New England we deal with Military, Commercial, and Mega Yachts both Power and Sail.

#### Now Hiring:

- \*Awlgrip Painters
- \*Structural and Aluminum Welders/Fitters
- \*Sandblasters and Painters
- \*Joiners and Carpenters
- \*Marine Electricians

Fax resume to (401) 846-6001, or send to  
 1 Washington Street, Newport, RI 02840



is now hiring for the following positions:

### Dock Master/ Docking Officer

- 4 yr. Naval Architecture Degree or equivalent
- 5 yrs. shipyard experience
- Experience in both marine railways & floating dry dock a plus

### Project Managers Estimators Foreman & Supervisors (All Crafts) Sales & Marketing Crane/Rigging Foreman Planners & Schedulers

For more information, please send/fax resume to:

**8500 Heckscher Dr.**  
**Jacksonville, FL 32226**  
**Fax: 904-251-1579**

Equal Opportunity Employer

Visit Our Web site at  
**[www.atlanticmarine.com](http://www.atlanticmarine.com)**

## CHIEF EXECUTIVE OFFICER

- Austal USA, LLC -

**Austal USA**, the newly formed subsidiary of leading aluminum shipbuilder Austal Ships and Bender Shipbuilding and Repair, seeks a Chief Executive Officer for their operation in Mobile, Alabama. The successful candidate will report to Austal's Group Managing Director, who is based in Perth, Australia. The CEO will be responsible for all aspects of the group's U.S. activities, including administration, sales and manufacture of the full range of Austal's products.

The CEO will be supported by an experienced senior management team operating out of new facilities in downtown Mobile. It is expected that the successful candidate will provide dynamic leadership focused on fast tracking Austal's entry into the U.S. fast ferry market.

Austal has attained a leading position in the global aluminum fast ferry market through innovative design and manufacturing innovation. While shipbuilding experience will be highly regarded, it is not essential. Demonstrated performance in general management related to project-based manufacturing is critical.

A competitive salary and benefit package commensurate with the challenge of building a significant presence in the North American market, both commercial and military, will be offered.

Applications should be directed to:

**Human Resource Manager**  
 P.O. Box 454  
 Mobile, AL 36601  
 EOE



AMERICA

An Equal Opportunity Employer

**GULF OF MEXICO OPERATIONS**  
 NEW BUILD DYNAMICALLY  
 POSITIONED SEMI-SUBMERSIBLE MSV

### US FLAG

Initial applications are being accepted from suitably qualified personnel for all senior Marine related positions on this vessel.

Master, Chief Officer, Sr DPO, Jr DPO,  
 Crane Operators, E/Techs  
 Ch Engineers, 1st Asst Eng, 2nd Asst Eng,  
 Electricians, Hydraulic Technicians  
 Bosun/Cr.Ops, AB's, Oilers

Qualifications required include:-  
 Full up to date STCW certification;  
 Preferred Oceans Unlimited Licenses  
 Senior DP Operators to have minimum 3 years hands-on experience with Nautical Institute DP Certificates  
 Junior Operators to have minimum three months experience and recognized DP Induction course Certificate.

Elect/Techs to have degree level qualifications and knowledge of FMEAs and fibre-optic control systems.

Competitive pay scales - Benefits package with Medical, Life, 401K and on-going vocational training.

Serious applicants should apply in writing only at this stage. Forward resumes and copies of Certificates to:-

**C-MAR America Inc.**

**11231 Richmond Avenue #111D**  
**Houston, TX 77082**

**Fax: 281-556-1141**

**e-mail: [reception@c-mar.com](mailto:reception@c-mar.com)**

## Port Engineer-Diesel/Steam

Major shipping company has immediate opening for a Port Engineer with a B.S. in Marine Engineering or equivalent and 10 years of experience in the Marine field. Responsibilities include supervision of performance of diesel and steam propelled vessels worldwide, including application of theoretical and technical knowledge in the supervision of dry-docking and repairs of company's diversified fleet of large vessels of unlimited break horsepower. Must be willing to travel extensively in US and abroad. Individual must be physically able to board company vessels. Company provides competitive salary and excellent benefit package. Send resume and salary requirements to:

Recruiter PE  
 P.O. Box 53366  
 New Orleans, LA 70153  
 Email: [HRDepartment@intship.com](mailto:HRDepartment@intship.com)  
 EOE M/F/V/D



Administration - Construction  
 Crewing - Engineering  
 Finance - M & R  
 Operations - Sales

(Established 1969) P O Box 260 • Mercer Island, WA 98040 • 206-232-6041

# VESSELS FOR SALE OR CHARTER



## Specializing In Barges



- ◆ 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

## CENTRAL BOAT RENTALS, INC.



TUGS & BARGES  
INLAND & OFFSHORE  
OIL BARGES  
WATER BARGES  
SPUD BARGES  
LIQUID MUD BARGES  
DECK BARGES  
VESSEL DOCKAGE  
KEYWAY BARGE  
QUARTER BOATS

Morgan City, LA

Phone: (504) 384-8200 Fax: (504) 384-8455  
website: [www.centralboat.com](http://www.centralboat.com)

## PROFESSIONAL



A Subsidiary of The ESAB Group, Inc.

AlcoTec Wire Corporation  
Traverse City, Michigan 49686 / USA

- Premium Aluminum Weld Wire
- World Market leader
- Fully Integrated Manufacturing
- Welding Technology Leaders
- Design Consultation
- Trouble Shooting
- Customized Weld Schools

Phone (231) 941-4111 Fax (231) 941 9154  
E-mail: [sales@alcotec.com](mailto:sales@alcotec.com) [www.alcotec.com](http://www.alcotec.com)



TELEPHONE (604) 736-9466  
FACSIMILE (604) 736-9483  
E-MAIL [ral@ral.bc.ca](mailto:ral@ral.bc.ca)  
WEB [www.ral.bc.ca](http://www.ral.bc.ca)

## ROBERT ALLAN LTD.

NAVAL ARCHITECTS AND MARINE ENGINEERS

SUITE 230 - 1639 WEST 2nd AVENUE  
VANCOUVER, B.C. CANADA V6J 1H3



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  
[ANKERPAINT@aol.com](mailto:ANKERPAINT@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



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@edcorp.com](mailto:cdim-bla@edcorp.com)  
Web Site: [www.access.digex.net/~bla](http://www.access.digex.net/~bla)

## 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@tol.com](mailto:bei@tol.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

## BOLAND INDUSTRIAL CONSULTING SERVICES, INC.

Equipment Reliability • Vibration Analysis • Laser Alignment • Lubrication

"Vibration is a Symptom, Not the Problem"

Call John Boland to find out what we can do for your company

Office: (334) 666-7121 Fax: (334) 666-7126 Cell Phone: (334) 232-7163

622 Azalea Road, Mobile, AL 36609



CDI Marine Group

CDI Marine Company The M&T Company  
904-805-0700 732-657-5600

Band, Lavis & Associates, Inc.  
410-544-2800

Naval Architects • Marine Engineers  
Naval Aviation Support

JACKSONVILLE, FL • BREMERTON, WA  
ISLANDIA, NY • POTTSTOWN, PA  
LAKEHURST, NJ • PATUXENT RIVER, MD  
PASCAGOULA, MS • PORTSMOUTH, VA  
SEVERNA PARK, MD

Email: [marine@cdicorp.com](mailto:marine@cdicorp.com)

Visit us at our web site at:  
<http://www.cdicorp.com/marine.asp>

Serving the marine industry for over 140 years



## CRANDALL DRY DOCK ENGINEERS, INC.

- Consulting • Design • Inspection
- Railway and Floating Dry Docks
- Dry Dock Hardware and Equipment

Box 505804, Chelsea, MA 02150 (617) 884-8420 Fax: (617) 884-8466  
[www.crandalldrydock.com](http://www.crandalldrydock.com)

## 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](mailto:CRCUSHING@AOL.COM)



## General HydroStatics

Visit  
[WWW.GHSport.com](http://WWW.GHSport.com)

## Computer software for Naval Architects

hydrostatics, stability, strength, modeling  
salvage simulations  
onboard trim/stability/strength



CREATIVE SYSTEMS Inc.  
CREATORS OF GHS  
P.O. Box 1910 Port Townsend, WA 98368 USA

[sales@ghsport.com](mailto:sales@ghsport.com)  
Phone: 360 385-6212  
Fax: 360 385-6213



## CT MARINE

NAVAL ARCHITECTS • MARINE ENGINEERS

- VAPOR RECOVERY
- TUGS
- TOWBOATS
- BARGES

Tel. 203-831-0405

Fax. 203-831-0407

56 CROOKED TRAIL, ROWAYTON CT. 06853

## 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

## DANIEL SKIRA BOAT DESIGN

Design every type of round bilge hull with the:  
Single Frame - Curve Hull Design and Lofting Method  
(Patent pending)

P.O. Box 614

Rockport, Maine 04856

Telephone: (207) 596-7288

E-Mail: [fskira@mint.net](mailto:fskira@mint.net)

Website: [www.skirayachtdesign.com](http://www.skirayachtdesign.com)



## 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](mailto:info@dejongandlebet.com)

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

1734 Emerson Street, Jacksonville, Florida 32207

## DESIGNERS & PLANNERS, INC.

Naval Architects & Marine Engineers  
Environment & Safety • Information Systems

2120 - Washington Boulevard, Suite 200,  
Sequoia Plaza, Arlington, VA 22204-5717



PHONE: (703) 920-7070  
FAX: (703) 920-7177  
WEBSITE: [www.dandp.com](http://www.dandp.com)

Member of the BMT Group of Companies

# PROFESSIONAL

**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

311 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

**GEE & JENSON**  
 Engineers • Architects • Planners, Inc.

**Comprehensive Waterfront Development Services**

One Harvard Circle  
 West Palm Beach, FL 33409  
 Tel: (561) 515-6500 Fax: (561) 515-6502  
 www.geejenson.com

**GEORGE G. SHARP, INC.**

100 CHURCH STREET, NEW YORK, NY 10007  
 TEL (212) 732-2800 FAX (212) 732-2809

WASHINGTON (703) 548-4400  
 VIRGINIA BEACH (757) 499-4125  
 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 207-721-8200  
 Hampton, VA 757-896-0200

Arlington, VA 703-416-1240  
 Philadelphia, PA 215-952-0172

**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 Ocean Engineering Transportation Analysis  
 Marine Engineering Hydrodynamics Contract Administration

605 First Avenue, No. 600 Phone: (206) 624-7850  
 Seattle, WA 98104-2224 Fax: (206) 682-9117

CONSULTING ENGINEERS SERVING THE MARINE COMMUNITY

*Ideas Engineered Into Reality*  
**GUIDO PERLA & ASSOCIATES, INC.**  
 Naval Architects  
 Marine, Mechanical & Electrical Engineers

9010 East Marginal Way South #300 Phone: 206-768-1515  
 Seattle, WA 98108 Fax: 206-768-9700

**HEGER DRY DOCK, INC.**  
 13 Water Street, Holliston, MA 01746  
*Engineering for all types of dry docks*

- Design • Docking Calculations
- Certifications • Engineer/Diver
- Inspections • U.S. Navy 1625C FCR's
- Dockmaster Training Classes

Phone: (508) 429-1800 Fax: (508) 429-1811  
 www.hegerdrydock.com

**HERBERT ENGINEERING CORP.**  
 98 Battery Street, Suite 500  
 San Francisco, CA 94111

Naval Architects • Marine Transportation Consultants  
 Marine Software Specialists

Tel: (415) 296-9700 E-mail: info@herbert.com  
 Fax: (415) 296-9763 http://www.herbert.com

**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 Albacore 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.

**IMSA** INTERNATIONAL MARINE SOFTWARE ASSOCIATES  
 13 Jenkins Court, Suite 200, Durham, NH 03824  
 T: 603 / 868.3344 • F: 603 / 868.3366

CERTIFIED ISO 9002

**JMS**

**JMS NAVAL ARCHITECTS  
 SALVAGE ENGINEERS**  
 The sea-going naval architects.  
 860-448-4850 • jmsnet.com

**Marine Mediation, Arbitration & ADR Services**

John T. Jozwick, B.S.O.E., M.B.A., J.D.  
 Attorney At Law, Mediator and Arbitrator

7152 East Caron Drive, Paradise Valley, Arizona, 85253-1977  
 Ph: 480-596-0567 - Fax: 480-596-0568 - E-mail: JohnTJ@aol.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 • Bremerton, WA  
 Philadelphia, PA • San Diego, CA • Tacoma, WA  
 Charleston, SC • Quantico, VA • New Orleans, LA

Corporate Headquarters:  
 4300 King Street, Suite 400, Alexandria, VA 22304  
 Business Development: (703) 933-6690 Fax: (703) 933-6777  
 Web Site: www.JJMA.com Email: Marketmg@JJMA.com

Michael R. Keough, CPC  
**KEOUGH ASSOCIATES**  
 124 Garretson Avenue  
 Staten Island, NY 10304-2830  
 PH: (718) 979-8698 Fax: (718) 667-8347  
*Our 25th Year, Providing Executive Search & Technical Recruitment Services to the Maritime Community and Supporting Industries.*

**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
- Emmision 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

**MARINE INSPECTION & MAINTENANCE SERVICES, S.A.**

P.O. BOX 6-4815  
 EL DORADO, PANAMA, R.P.  
 TELS.: 612-0625 / 211-0117  
 FAX: 230-3151 / 211-2800  
 TELEX: 673-8002  
 ANSWERBACK: 673-8002 MIMSUW  
 e-mail: marine@sinfo.net  
 web-site: www.panamadiver.com  
 APPROVED BY:

UNDERWATER SERVICES:  
 HULL INSPECTION & CLEANING  
 VIDEO FILMATION & PHOTOGRAPHY  
 ZINC ANODES REPLACEMENT  
 GENERAL SHIP'S REPAIRS  
 GENERAL SUPPLIES

Isaac A. Arce  
 DIVE MASTER  
 GENERAL MANAGER

ABS AMERICAS

**MISC 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 FAX (617) 542-2461

**US/GLOBAL...WE DELIVER**

- ♦ Delivery of vessels from 50 feet, to 5000 gross tons.
- ♦ An Experienced Team of Expert Licensed Masters, Engineers, Certified Marine Surveyors/Consultants.
- ♦ 25+ years of No Accidents/No Incidents Operations.

**MARNAV INTERNATIONAL Ltd.**  
 800-217-5059 • mni@mar-nav.com • Fax 360-697-9450

**MCA ENGINEERS, INC.**

- \* Marine Structural Engineering (FEA, Fatigue...)
- \* Hull Monitoring System (Motions, Stress...)
- \* Ship Repair Analyses & New Designs
- \* Mooring Master (Analyses / Monitoring)
- \* Vessel Information Archive System (Multimedia)
- \* FracTrac Relational DataBase
- \* Ultrasonic Leak Detection

e-mail: info@mcaengineers.com  
 web-site: www.mcaengineers.com  
 Phone: (714) 662-0500 Fax: (714) 668-0300  
 2960 Airway Ave., A-103, Costa Mesa, CA 92626

**Coast Guard/State Pilotage License Insurance**

Worried about defending your license or yourself in a hearing conducted by the Coast Guard, National Transportation Safety Board or a State Pilotage Authority, which could result in license revocation, suspension or assessment of a fine/money damages against you personally?

Stop worrying. Insure yourself and your license with a Marine License Insurance Policy. For more information, contact R.J. Mellusi & Co., 71 Hudson Street, New York, N.Y. 10013, Tel. (212) 962-1590 Fax (212) 385-0920, E-mail rmellusi@tdt.net.com

**MIL Systems**  
 Naval Architects & Marine System Engineers

1150 Morrison Drive, Tel.: (613) 726-0500  
 Ottawa, Ontario K2H 8S9 Fax: (613) 726-0252  
 www.milsystems.com quality@milsystems.com

# PROFESSIONAL

**Alan C. McClure Associates, Inc.**  
**NAVAL ARCHITECTS • ENGINEERS**  
 2600 South Gessner • Suite 504 • Houston, Texas 77063  
 (713) 789-1840 • (713) 789-1347 Fax

**OCEAN ENERGY SYSTEMS**  
 Naval Architects & Marine Engineers  
 505 N. Sam Houston Pkwy, Suite 320  
 Houston, TX 77060  
 Phone: 281-820-4200 Fax: 281-820-2440  
 Web Site: <http://www.oceaneng.com>

**sms**  
 Scientific Marine Services, Inc.  
 Naval Architects, Instrumentation Engineers, Ocean Engineers  
 Mechanical Engineers, Software Engineers, Coastal Engineers  
 Member of The BMT Group of Companies

Houston, Texas  
 Tel: (281) 858-9090  
 Fax: (281) 858-9999  
 eMail: [sms@scimmar.com](mailto:sms@scimmar.com)

**MARINE INSTRUMENTATION  
 TRIALS and TESTING  
 HULL MONITORING SYSTEMS**

Escondido, California  
 Tel: (760) 737-3605  
 Fax: (760) 737-3232  
 Web: [www.scimmar.com](http://www.scimmar.com)

**MOSS MARINE USA, Inc.**  
 Ship & Equipment Repair  
 410-542-8775 fax 410-542-1115  
 Baltimore, MD 21209

**OCEANIC CONSULTING CORPORATION**

P.O. Box 28009 St. John's Conada A1B 4J8 <http://www.oceaniccorp.com>  
 Email: [oceanic@oceaniccorp.com](mailto:oceanic@oceaniccorp.com) Tel: (709) 722 9060 Fax: (709) 722 9064

**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>

**MOWBRAY MARINE SALES INC.**  
 2 BROOKFIELD WAY  
 MORRISTOWN, N.J. 07960

PHONES: (973) 984-2295  
 1-800-762-9383

NIGHT: (973) 538-1789

FAX: (973) 984-5181

SPECIALISTS IN BUYING, SELLING AND RENTING TUGBOATS • BARGES • CONTRACTORS FLOATING EQUIPMENT

YOUR MARINE CONSULTANTS

**T. W. SPAETGENS**  
**TORSIONAL VIBRATION SPECIALISTS**  
 Our 52nd year serving international clients  
 186 W. 8th Ave. Vancouver, Canada V5Y 1N2  
 Tel: (604) 879-2974 Fax: (604) 879-6588

**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.)  
[mackinnon@aol.com](mailto:mackinnon@aol.com)

**PROTOSAURUS studio**  
 Tank Test Models (15 yrs. exp.) Engineering Models  
 Prototypes Composite Tooling / Hybrids / Articles  
 Product Design / Development / Documentation  
 (760) 751-1523 Valley Center, CA *We Can Do It!* [www.protosaurus.com](http://www.protosaurus.com)  
[protopal@protosaurus.com](mailto:protopal@protosaurus.com)

**SPARTAN UNDERWATER TECHNOLOGIES, INC.**  
 Underwater Class Survey In Lieu of Drydocking  
 Underwater Repairs and Maintenance  
 Wet Welding AWS D3.6 Specification  
 Cofferdam Insert Dry Repair  
 1-800-655-8402 Fax: 850-872-9870

**NATIONAL ASSOCIATION OF MARINE SURVEYORS, INC.**  
 established 1962

WE ARE THE OLDEST U.S. ORGANIZATION for CARGO, HULL & MACHINERY and YACHT SURVEY.  
 For a NAMS surveyor in your area, call  
**1-800-822-6267**  
 fax: (757) 488-0584 e-mail: [office@Nams.cms.org](mailto:office@Nams.cms.org)  
[www.nams-cms.org](http://www.nams-cms.org)

**TURBOCHARGERS!!!**  
 ALL MAKES AND MODELS  
 • INDUSTRIAL • AUTO • MARINE

• Caterpillar	• Hoiset	• Toyota	• Mitsubishi	• Air Research
• Rajay	• Garrett	• Hitachi	• KKK	• Detroit Diesel
• Yanmar	• Roto-Master	• Schwitzer	• Warner (sh. Hi)	• Eliot
• Brown Boveri (ABB)	• AICC			

Phone: 321-868-2920 • Fax: 321-868-2921 (Quotes by Fax Only)  
 E-mail: [ramturbo@bellsouth.net](mailto:ramturbo@bellsouth.net) • website: [www.turbochargers.org](http://www.turbochargers.org)

**A. J. Suda, Inc.**  
 NAVAL ARCHITECTS & MARINE ENGINEERS

- Concept & Contract Design
- Construction Drawings
- Transportation Analysis
- Owner Representation

3004 19th Street • Metairie, LA 70002  
 Ph. (504) 835-1500 • Fax (504) 831-1925 • [info@aksuda.com](mailto:info@aksuda.com)

**CRUISE SHIP SPECIALISTS NAUTICAL DESIGN INC.**  
 NAVAL ARCHITECTS / MARINE ENGINEERS  
 2101 S ANDREWS AVE. PHONE: (954) 463 2033  
 FORT LAUDERDALE, FL 33316 E-MAIL: [naut\\_des@msn.com](mailto:naut_des@msn.com)

**M. ROSENBLATT & SON**  
 an AMSEC LLC Group

**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 • Virginia Beach • Charleston • Philadelphia  
 For information please contact Marketing at (703) 415-7800  
 E-Mail: [info@mrosenblatt.amsec.com](mailto:info@mrosenblatt.amsec.com)  
 Web Site: [www.mrosenblatt.com](http://www.mrosenblatt.com)

**SURVIVAL SYSTEMS INTERNATIONAL**  
 LIFEBOAT INSPECTION, REPAIRS, PARTS.  
 PHONE: (504) 469-4545, FAX: (504) 466-1884  
 E-mail: [lifboatserv@earthlink.net](mailto:lifboatserv@earthlink.net)

931 Industry Road Kenner LA, 70062

**NDI ENGINEERING COMPANY**  
 Marine Engineering • Alteration Engineering • Plan Development  
 Optical Shaft Alignment • Bearing Reaction Testing  
 Inclining Experiments - COSAL and PTD • Vibration Analysis

**ndi** Thorofare, NJ (856) 848-0033 **ISO 9001 CERTIFIED**  
 internet: [jsamial@ndieng.com](mailto:jsamial@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](http://WWW.SMSLLC.COM)

**VIBRANALYSIS ENGINEERING CORP**  
 • PREDICTIVE MAINTENANCE PROGRAMS  
 • VIBRATION ANALYSIS  
 • FIELD & SHOP BALANCE  
 • ACOUSTICAL CONSULTANTS  
 • COMPUTERIZED DATA COLLECTION  
 • MARINE APPLICATION -- IR/THERMAL IMAGING

**VIBRANALYSIS ENGINEERING CORP** 800-553-1614  
 9300 Gamebird 713-944-3633  
 Houston, TX 77034 Fax: 713-944-8797

**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](http://www.noise-control.com) [noise@tiac.net](mailto:noise@tiac.net)

**SARGENT & HERKES, INC.**  
 NAVAL ARCHITECTS • MARINE ENGINEERS  
 225 BARONNE ST., SUITE 1405  
 NEW ORLEANS, LA 70112  
 504-524-1612 • 504-523-2576 (Fax)  
 E-mail: [sahinc@bellsouth.net](mailto:sahinc@bellsouth.net)

**VIBTECH, INC.** NAVAL ARCHITECTURE  
 MARINE ENGINEERING  
 STRUCTURES  
 VIBRATION  
 SHOCK  
 NOISE

Box 435 North Kingstown Rhode Island 02852  
 TEL: 401-294-1590  
 FAX: 401-295-2592

**FAST SHIP DESIGN**  
 MAIN OFFICE: 125 STEAMBOAT AVENUE,  
 NORTH KINGSTOWN, R.I. 02852  
 E-mail: [Vibtech@ids.net](mailto:Vibtech@ids.net)

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

**Seaworthy Systems, Inc.**  
 ISO 9001  
 MARINE ENGINEERS AND NAVAL ARCHITECTS  
 Essex, CT 06426  
 (860) 767-9061 Fax: (860) 767-1263; [www.seaworthysys.com](http://www.seaworthysys.com)  
 SAN FRANCISCO • PHILADELPHIA • WASHINGTON, DC

**WALKE POINT**  
 Surveys: Damage Insurance Pre-Purchase  
 Regulatory Inspections on Panamanian and Belizian Flag Vessels  
 Procedures: Repair Stability Welding

(757) 426-1405 345 Princess Anne Road  
 (757) 426-6479 Fax Virginia Beach, VA 23457  
 Email: [walkept@erols.com](mailto:walkept@erols.com) <http://www.angelfire.com/biz/mrncnstin>



## Great Cruise Ships of 2000



Explorer of the Seas

**Vessel name** Explorer of the Seas  
**Shipyard** Kvaerner Masa-Yards  
**Owner** Royal Caribbean Cruises  
 Explorer of the Seas, the second cruise ship in the Voyager-class was delivered by Kvaerner Masa-Yards' Turku New



Millennium

Shipyard on September 28. Explorer of the Seas is the second in a series of five Voyager-class cruise ships for Royal Caribbean Cruises, which are reportedly the largest in the world. The first ship in



Aurora

the Project Eagle series, Voyager of the Seas, was delivered in October 1999, and has proven very successful in operation. Explorer of the Seas has a gt of 137,300, and a passenger capacity of



Olympic Voyager

3,840, and a crew capacity of 1,180. In addition to the vessel's length of 1,020 ft. (311.1 m), the most striking feature of its physical size is undoubtedly its breadth of 126 ft. (38.6 m) at waterline level and height of 237 ft. (72.3 m) from keel to the top of the funnel. This Post-Pamamax size has allowed for unique design features and interior solutions — specifically a four deck high horizontal promenade.

**Vessel name** Millennium  
**Shipyard** Chantiers de l'Atlantique  
**Owner** Celebrity Cruise Lines

Incorporating old-world style with new-world technology (the first application of gas turbine propulsion on cruise ships) Celebrity's newest vessel truly exemplifies a bridge between two centuries. Celebrity, owned by Royal Caribbean, made history in the cruise industry with its decision to install the gas turbine system on the 965-ft. (294 m), 91,000-ton Millennium. Comprised of 11 guest decks, the vessel can move at 24 knots holding 1,950 passengers and 999 crew. Celebrity opted to install a pair of GE LM2500+derivative gas turbines, using a combined gas and steam turbine integrated electric drive system (COGES) configuration — an extremely efficient use of energy: Energy that would otherwise be lost in the exhaust from the gas turbines is captured to produce steam from boilers for the steam turbines. The vessel also boasts the latest black and gray water treatment systems equipped with technologically advanced waste handling environmental equipment. While the turbines offer the environmentally friendly 80 to 90 percent reduction in exhaust emissions and noxious gases, Celebrity has gone a step further in its environmental safety precautions with a flue gas cleaning system and de-ashing incinerators.

**Vessel name** Aurora  
**Shipyard** Meyer Werft  
**Owner** P&O Cruises

In April 2000, Meyer Werft shipyard of Papenburg, Germany delivered the 76,000-gt Aurora to P&O Cruises at Eemshaven in the Netherlands. The second luxury liner to be built by Meyer Werft for P&O, Aurora melds British-style decor with state-of-the-art technology for voyages in the Mediterranean, the North Sea and the Baltic. Divided into seven main fire zones, the ship is compliant with the rules for a two-compartment vessel and is designed in accordance with the latest IMO Regulations. Aurora is equipped with two "Marine Evacuation Systems," which enable passengers to be evacuated via a

FERRY CRUISE FAST FERRY

Your Invitation  
to Visit

Cruise  
+Ferry 2001

Cruise  
+Ferry 2001

FOR ALL THAT IS NEW IN  
CRUISE SHIPS, FERRIES  
AND FAST FERRIES

Grand Hall Olympia,  
London 8-9-10 May, 2001

www.cruiseferryex.com

Cruise  
+Ferry 2001  
Gala Awards Dinner

Have you reserved your  
place at the Cruise+Ferry 2001  
Gala Awards Dinner?

www.cruiseferryex.com/awards

Please complete in block capitals

Yes, I would like to receive updates via e-mail  Yes, I would like to receive updates via Fax

Name \_\_\_\_\_

Position \_\_\_\_\_

Company \_\_\_\_\_

Business Type \_\_\_\_\_

Address \_\_\_\_\_

Postcode \_\_\_\_\_

Telephone \_\_\_\_\_

Fax \_\_\_\_\_

E-mail \_\_\_\_\_

#### DATA PROTECTION

The personal information shown on this brochure, or provided by you, will be held on a database and may be shared with companies in the Informa Group in the UK and internationally. Sometimes your details may be obtained from, or made available to, external companies for marketing purposes. If you do not wish your details to be used for this purpose, please write to the Database Manager, Informa Group PLC, Enterprise House, 45 Station Approach, West Byfleet, Surrey KT14 9NN. Telephone: +44 (0)1932 893800. Fax: +44 (0)1932 893812. e-mail: database@informa.com

Lloyd's is the trademark of the society incorporated by the Lloyd's act 1871 in the name of "Lloyd's"

LM1158/MREN

## Lloyd's List events

informa maritime & transport

Save £15 and gain **FREE** entry  
when you pre-register as a  
visitor and receive:

- Free entry
- Free catalogue
- Fast-track entry

To pre-register and gain **Free** entry for  
Cruise+Ferry 2001, saving £15, simply:

**Register on-line**  
www.cruiseferryex.com

**Call the Visitor Hotline**  
+44 (0)1923 690 640

**Fax this advert to**  
+44 (0)1923 690 680

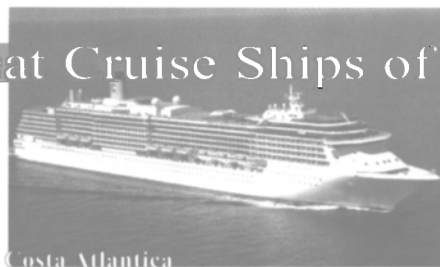
**Post this advert to**  
Cruise+Ferry 2001,  
c/o Expo Systems Limited,  
Park House, Greenhill Crescent,  
Watford Business Park,  
Watford,  
Herts, WD1 8QU, UK

- Please register me as a **visitor**
- Please send me a **conference brochure**
- Please send me **exhibiting/sponsorship** details
- Please send me details on attending the  
**Cruise + Ferry Gala Awards Dinner** (9th May 2001)
- Please send me details on nominating a company  
for a **Cruise + Ferry Award**



supported by

Lloyd's List **CRUISE**  
INTERNATIONAL



Costa Atlantica

chute onto the liferafts. The vessel also holds four tenders, 10 lifeboats and two rescue boats. An integrated navigation and command system, Atlas Nacos 65-3, is fitted onboard Aurora to ensure safe navigation — even in much travelled and narrow waters. With the system's main feature noted as the Multi Pilot II, all radar units have high-resolution color monitors that provide the navigator with advanced means of distinguishing between the different symbols used. An automation system is supplied by Siemens. Electrical power is supplied by four diesel generator sets by MAN B&W, each of which are developing an output of 14,700 kW at 514-rpm driving an ABB generator.

**Vessel name** Olympic Voyager  
**Shipyard** Blohm+Voss  
**Owner** Royal Olympic Cruises

Royal Olympic Cruises celebrated the U.S. arrival of its newest flagship, Olympic Voyager — dubbed the fastest cruise ship in the world. Able to travel comfortably at speeds of 28 knots, the 590 ft. (179.8 m) Olympic Voyager is the fastest ship of its class in the world. The ship's high speed, attributed to its proprietary Fast Monohull design, enables it to introduce unique destination focused itineraries in the Mediterranean and South America. Olympic Voyager will be the only ship to sail roundtrip cruises from Ft. Lauderdale to South America. Olympic Voyager is the first newbuild for Royal Olympic Cruises and the first new cruise vessel in a decade to fly the Greek flag. The 25,000-ton, 836-passenger ship was built by Blohm + Voss GmbH Shipyard in Hamburg.

**Vessel Name** Costa Atlantica  
**Shipyard** Kvaerner Masa-Yards  
**Owner** Costa Cruises

Costa Atlantica, a 85,700-ft cruise ship for Costa Crociere, was delivered from Kvaerner Masa-Yards Helsinki New Shipyard. Measuring 960 ft. (292.5 m) with a maximum breadth 127 ft. (38.8 m) and a draft of 25 ft. (7.8 m), the vessel is the first ship in a series of Panamax-Max size cruise ships of a completely new type for Costa Cruises and Carnival Cruise Lines. The largest ship in the Costa fleet, the vessel is the largest ever to be built for a European operator — and at Kvaerner's Helsinki yard. Compared to earlier cruise liners of Panamax-size, the relative number of outside passenger staterooms and staterooms with balcony are very high: 80 percent of all the 1,057 passenger staterooms face the sea and 70 percent are fitted with a balcony. This is achieved, compared to the Panamax-ships built in the 1990's, by adding one passenger cabin deck to a narrower superstructure.

The vessel left the yard in early July for Venice, Italy, where the naming ceremony took place. Subsequent to this, on July 16, Costa Atlantica began weekly cruises from Venice in the Eastern Mediterranean, to Greece and Turkey. In November, the vessel was repositioned to begin seven day cruises from Fort Lauderdale alternating to the western and eastern Caribbean. Able to move at 22 knots, Costa Atlantica has a diesel-electric machinery, consisting of six Wartsila NSD 9L46D diesel engines, with a total power of 62,370 kW, each connected to an alternator producing electricity to the ship's main electric network. The propulsion units consist of two azimuthing electric Azipod propulsion units, with a power of 17.6 MW each.

## Country Focus: Italy

# The Cradle of Cruising Creativity?

Italy proved to be the cruise shipping powerhouse of 2000, delivering a plethora of technically advanced, style-leading ships. While that lead will be surely challenged in 2001 and beyond, particularly by France's Chantiers de l'Atlantique which has garnered the lion's share of recent new contracts, there is little doubt that the cruise industry still calls Italy home.

**Ocean Princess** — fourth of a series of 77,000 GT vessels was delivered by Fincantieri Monfalcone Shipyard to P&O-Princess Cruises on January 29, 2000. Ocean Princess, which is the seventh ship built at Monfalcone for P&O-Princess Cruises, features engines supplied by Wartsila NSD Italia. Propulsion and power generation are provided by a diesel-electric power plant with six Sulzer engines — overall power of 46 MW.

**Carnival Victory**, which debuted August 18, is the third "Destiny-class" vessel and the 15th "Fun Ship" in Carnival's fleet. Measuring 893 ft. (272.1 m), the \$440 million ship features 13 passenger decks, 18 bars and lounges, and 1,379 staterooms — 62 percent of which offer an ocean view or private balcony. Registered in Panama, the vessel, which was constructed at Fincantieri's Monfalcone yard, can move at a speed of 22.5 knots. Carnival Victory began a year-round program of seven-day eastern and western Caribbean voyages from its homeport in Miami on October 15, 2000. Eastern Caribbean cruises visit San Juan, St. Croix and St. Thomas, while the western route features Playa del Carmen/Cozumel, Grand Cayman and Ocho Rios. Beginning June 2, 2001, Carnival will reposition Victory's homeport to New York.

**Silver Shadow**, the newest member of the Silversea fleet debuted in September 2000, following final outfitting at the T. Mariotti Shipyard in Genoa. The ship was given the go-ahead during the last week of August following successful testing for speed and agility in the waters off the Italian coast. Silver Shadow surpassed her expected speed by surpassing 21 knots and proved to be very stable during stabilizer and turn testing. According to director of Marine and Safety, **Stefano Pinna**, the ship's performance in the turning circles test was one of the best he had ever seen. "The ship can make a full turn even at full speed, and within a small area," said Pinna. "We were also impressed by how easily it made sharp turns, as well as its excellent speed and stability overall." Designed by Petter Yran and Bjorn Storbraaten Architects of Oslo, Silver Shadow showed great capabilities for acceleration and performed well in "crash stop" testing — going from full speed to a dead stop within 1,640 ft. (500 m) — with very little vibration through the ship. At 28,258 gt and accommodating only 382 passengers, Silver Shadow and sistership Silver Whisper, set to debut in July 2001, are the smallest ultra-luxury ships currently under construction. Silver Shadow commenced its maiden voyage from the Mediterranean from Civitavecchia on September 15, 2000 following its naming ceremony.

Built by Fincantieri's Venice-Marghera yard for Holland America Line, **Zaandam** measures 781 x 115 ft. (238 x 35 m), has a gt of 61,000 tons and can reach a speed of 23 knots. Maximum height from the waterline is 157 ft. (48 m) and there are 720 cabins on board. The vessel was designed to guarantee its 1,824 passengers maximum comfort and can accommodate up to 647 crewmembers. The seventh vessel built by Fincantieri for Holland America, Zaandam is a sister ship of the Volendam, which has been in operation since November 1999 and was the first in a new fleet of liners. This unique generation of ships is the result of a long-standing collaboration between Fincantieri and the Shipowner. The vessel constitutes a blend of the most advanced design and construction systems with select interior furniture and fittings.

On September 30, 2000 Fincantieri's Marghera Yard delivered the 781 x 157 ft. (238 x 48 m), 60,000 gt cruise ship **Amsterdam** to Holland America Line. The eighth cruise ship built for the company, Amsterdam can hold 1,380 passengers and is the premiere Holland America ship to boast an Azipod propulsion system — providing the ship with an operational speed of 22.5 knots — plus greater maneuverability and operating efficiencies. Following its naming ceremony, which took place on October 30, 2000, Amsterdam departed on a 10-day maiden voyage through the Panama Canal.



Ocean Princess



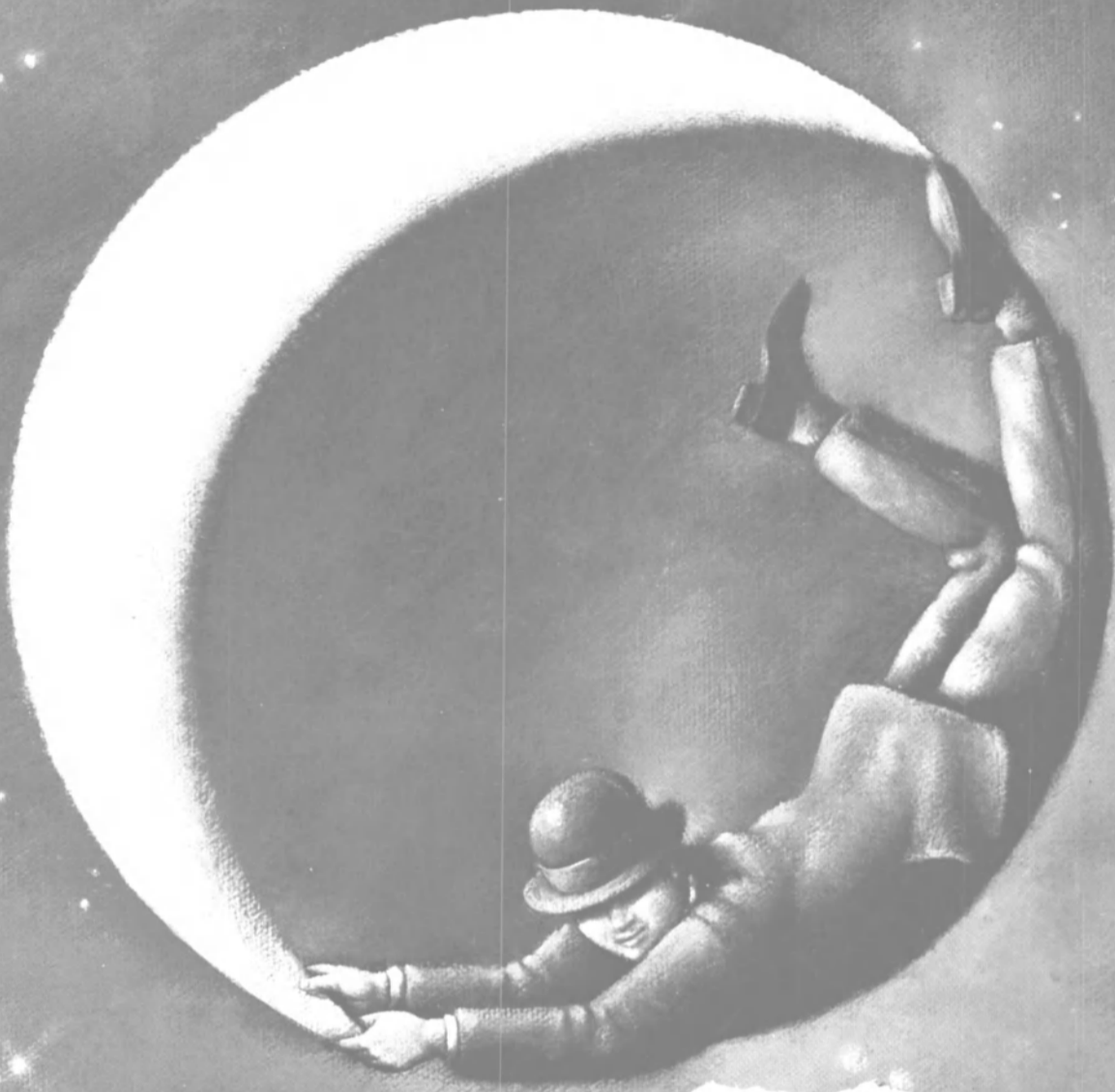
Carnival Victory



Silver Shadow



Zaandam



## Simply Prepaid CALLING™

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

With your new prepaid calling cards from COMSAT Mobile Communications, both you and your crew will benefit. No monthly bills, no sorting through call records, and no payment collections. Pay for cards only upon activation. So, inventory management is easy and risk free. To order your free supply of Simply Prepaid CALLING™ cards call +1 301-214-3100 (choose menu option # 1) today. For a limited time only, receive 250 free calling units for every pack of 10 cards you activate.

**COMSAT** Mobile Communications

Circle 328 on Reader Service Card

# KARL SENNER, INC...WHEN ONLY THE BEST WILL DO



## M/V PUGET SOUND

KARL SENNER, INC., supplied two (2) REINTJES WVS 334,  
vertical offset, reverse reduction marine gears,  
reduction ratio 2.037:1.

OWNER: Pudget Sound Pilots Association, Seattle, Washington

SHIPYARD: Nordlund Boat Company, Tacoma, Washington

REINTJES  
**MARINE GEARBOXES**

BERG PROPULSION  
**CONTROLLABLE PITCH PROPELLERS  
AND BOWTHRUSTERS**

**ABB**  
**TURBOCHARGER SERVICE**

REXROTH  
**MARINE CONTROLS**

**SALES, PARTS, SERVICE • 500 H.P. TO 20,000 H.P.**

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  
(425) 338-3344

**NEW ORLEANS**  
Karl Senner, Inc.  
25 W. Third St.  
Kenner, LA 70062  
(504) 469-4000  
Telefax: (504) 464-7528

**EAST COAST**  
Olof Wadehn Enterprises  
30 Sheppard Lane  
Huntington, Long Island  
New York 11743  
Mr. Olof Wadehn  
(631)692-4548

Visit our website at <http://www.karlsenner.com>

Circle 24 on Reader Service Card