

AUGUST 1991 ISSUE

# MARITIME REPORTER AND ENGINEERING NEWS

## **SPECIAL:**

U.S. SHALLOW DRAFT MARKET.  
PASSENGER and SMALL FERRIES.

# *the American Waterways*



**ODYSSEY** Built by: Service Marine Industries, Inc.



**DUBUQUE CASINO BELLE** Built by: Patti Shipyard, Inc.



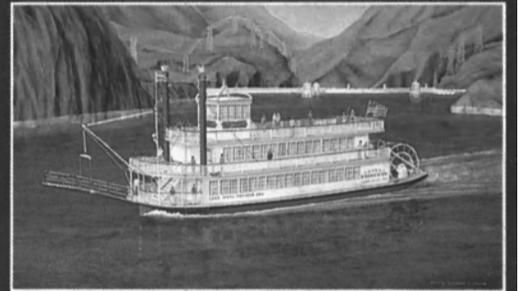
**CHICAGO'S FIRST LADY** Built by: Steiner Shipyard, Inc.



**THE DIAMOND LADY** Built by: Atlantic Marine, Inc.

### **"SPECIAL GAMBLING VESSEL / RIVERBOAT REVIEW"**

An in-depth examination of the hottest sector in the passenger vessel market today. A look at the latest legislation, newest boats and future construction.



**DESERT PRINCESS** Built by: Skipperliner Shipyard, Inc.

## **NATIONAL WATERWAYS CONFERENCE**

HOUSTON, TEXAS - SEPTEMBER 18-20

Marks the 31<sup>st</sup> anniversary—  
examining today's issues of importance  
to the U.S. inland and coastal waterways...

...SEE INSIDE

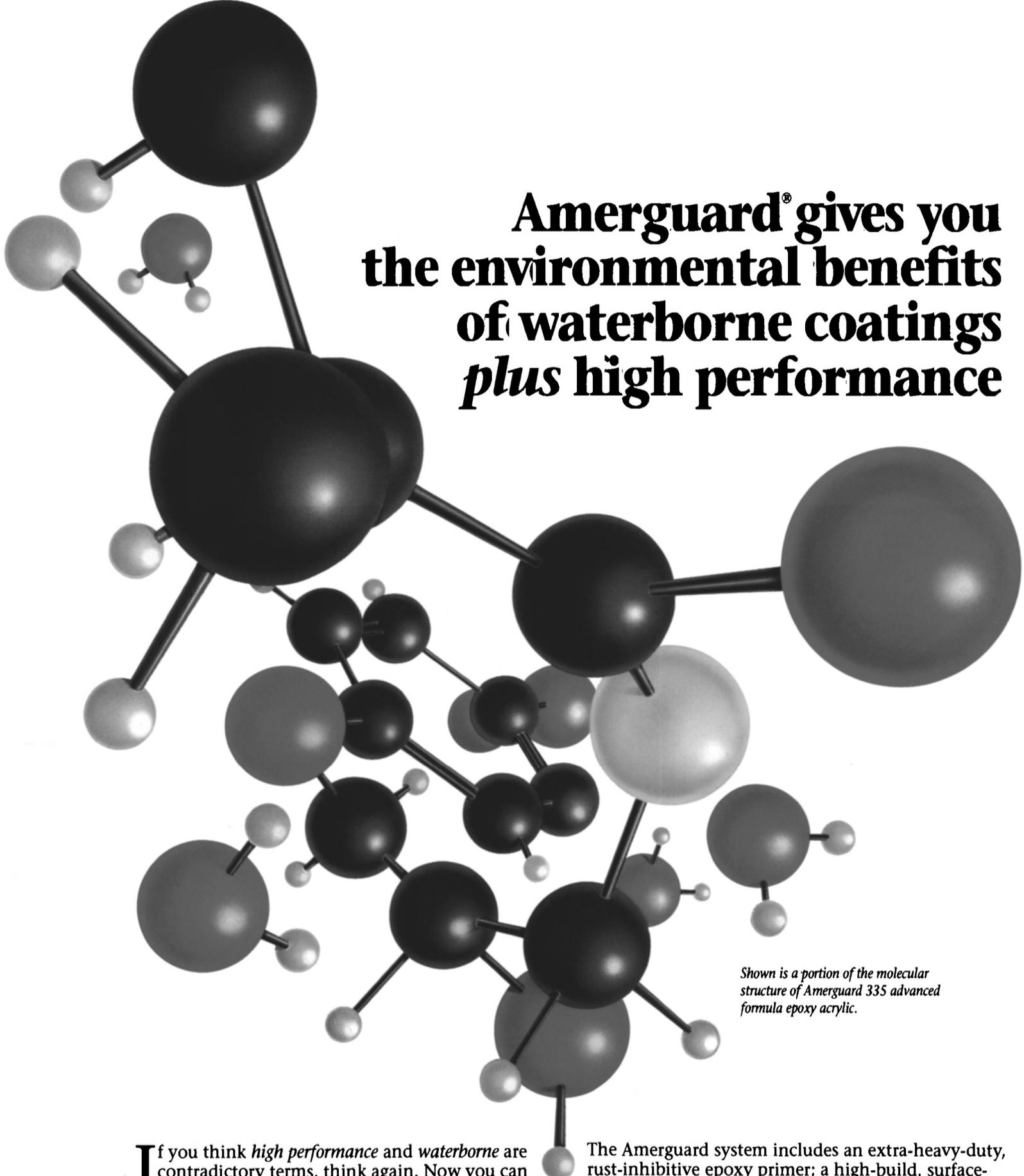


## **American Waterways Operators**

THE NATIONAL ASSOCIATION FOR THE BARGE AND TOWING INDUSTRY HOLDS THE FALL CONVENTION AND DIRECTORS MEETING.

## **America's Shipyards-Small & Medium**

AN IN-DEPTH REPORT ON THE BUILDING and REPAIR YARDS SERVING THE INLAND, HARBORS AND COASTAL AREAS.



## Amerguard® gives you the environmental benefits of waterborne coatings *plus* high performance

*Shown is a portion of the molecular structure of Amerguard 335 advanced formula epoxy acrylic.*

If you think *high performance* and *waterborne* are contradictory terms, think again. Now you can have the environmental protection, low odor, VOC compliance and convenience of waterborne coatings along with high performance previously available only with solvent-based coatings.

Ameron, the leader in high-performance coatings technology for over 50 years, has developed the Amerguard waterborne system—a family of products formulated especially for tough applications, including marine topsides. You can use them in your most sensitive shipboard environments. And you won't have hazardous waste disposal problems.

Amerguard coatings significantly outperform conventional alkyds and many other solvent-based paints, yet they're easy to mix, apply and clean up.

The Amerguard system includes an extra-heavy-duty, rust-inhibitive epoxy primer; a high-build, surface-tolerant acrylic primer; a direct-to-metal, flexible acrylic topcoat; a high-gloss, water-resistant epoxy acrylic topcoat; and a rugged, 100% solids epoxy topcoat with zero VOC and an EPA hazardous waste designation of *none*.

Contact Ameron's Marine Coatings Division: Brea, California (USA), 714/529-1951; Croydon, Surrey (UK), 680-3777; Hong Kong, 5-298212.

Circle 283 on Reader Service Card

**Ameron.**

# PLAYING IN THEIR YARD IS OUT OF THE QUESTION.



To the men and women of Maxon, the boatyard is very serious business. No games. No dawdling. No daydreaming. Each individual sharply focused on an individual job. There's really no substitute for that level of commitment and concentration. Time and effort distinguish the exceptional



venture from the commonplace. Making Maxon custom barges the choice of those who think in the long term. Putting us at the forefront of the industry. In strength. In service. In reputation. Which would seem to make Maxon barges a lot like the people who build them. Serious.

## MAXON

### STATE OF THE BARGE

8 1 2 • 5 4 7 • 2 3 4 1

# ON THE COVER

Photos - Riverboat casinos, clockwise from lower left; The Diamond Lady, built by Atlantic Marine; Odyssey, built by Service Marine Industries; Dubuque Casino Belle, built by Patti Shipyard; Chicago's First Lady, built by Steiner Shipyard; and Desert Princess, built by Skipperliner Shipyard.

## INSIDE

<b>National Waterways Conference Annual Meeting</b>	<b>22</b>
<b>AWO Fall Convention</b>	<b>28</b>
<b>U.S. Small And Medium-Sized Shipyards</b>	<b>34</b>
<b>Ferries And Small Passenger Vessels In The U.S.</b>	<b>36</b>
<b>New Expanding Market In Gambling Vessels/ Riverboat Casinos</b>	<b>44</b>

### Sperry Marine Wins Equipment Order For New Class Of Navy Ship

Sperry Marine has received a contract from Bollinger Machine Shop and Shipyard of Lockport, La., to equip the first eight of the Navy's new class of Coastal Patrol Boat (PBC) with Sperry Marine VMC-1000 Voyage Management Systems, dual RASCAR Radar/ARPAs, Mkl-27 gyrocompasses, SRP-680 steering controls and SRD-331 speed logs.

According to John V. DeMaso, Sperry Marine vice president, the VMS-1000 provides basic bridge integration for mission planning, electronic charting and sensor monitoring. Information from all navigation sensors including gyrocompass, speedlog and radar are continuously monitored by the VMS-1000 to provide additional safety and efficiency for the vessel.

For further information on Sperry Marine products,

Circle 95 on Reader Service Card

## MARITIME REPORTER and Engineering News

Editorial and Executive Offices  
118 East 25th Street, New York, NY 10010  
(212) 477-6700 • ITT Telex: 424768 MARINTI  
Telefax: (212) 254-6271

<b>Publishers:</b>	<b>JOHN C. O'MALLEY CHARLES P. O'MALLEY CHARLES P. O'MALLEY</b>
<b>Editorial Director:</b>	<b>JOHN R. SNYDER</b>
<b>Editor:</b>	<b>THOMAS H. PHILLIPS</b>
<b>Senior Editor:</b>	<b>DANIEL A. ARNOLD</b>
<b>Regional Sales Manager:</b>	<b>LUCIA ANNUNZIATA</b>
<b>Regional Sales Manager:</b>	<b>LAURA CONNOLLY</b>
<b>International Sales Manager:</b>	<b>SHELLY M. RECCHIO</b>
<b>Production Manager:</b>	<b>MAY LOUIE</b>
<b>Production Coordinator:</b>	<b>DALE L. BARNETT</b>
<b>Circulation Manager:</b>	

Advertising Circulation and Sales Offices  
118 East 25th Street, New York, NY 10010  
Telephone (212) 477-6700

## REPRESENTATIVES

**U.S. MR. JAMES N. McCLINTOCK**  
Gulf States Wheelhouse One Building  
634 Village Lane North, Suite 205  
Mandeville, LA 70448  
Telephone: (504) 626-7990  
Telefax: (504) 624-5163

**Scandinavia MR. STEPHAN R. G. ORN**  
AB Stephan R. G. Orn  
Box 184, S-271 24 Ystad, Sweden  
Telephone 0411-184 00  
Telefax: 411 10531  
Telex: 33335 Orn S

**United Kingdom MR. MICHAEL J. DAMSELL**  
Euromedia, Ltd.  
Tern House, Upper West St.  
Reigate, Surrey RH2 9HX, England  
Telephone: 07372 242558  
Telefax: 0737 223235  
Telex: 932699 KENPUB G.

**Italy MR. VITTORIO F. NEGRONE**  
Ediconsult Internazionale  
Piazza Fontane Marose, 3-16123 Genova, Italy  
Telephone: (010) 583520  
Telefax: (010) 566578  
Telex: 211197 EDINT I

## SAVE up to 300 barrels of oil per year!

### ELIMINATE THAT OLD STEAM HORN

The Kahlenberg **TRITON** Piston Horn Is a unique sound producing unit because it requires no compressed air and no diaphragms yet utilizes air vibrations in a tuned sound column. The unit consists of an electric motor driving a piston with a cylinder similar in appearance to an air compressor. Very economical to operate and install. Write for bulletin 92C. The KB-20 electric horn is available in 110 volt, A.C. or 24 volt, D.C. for vessels up to 246' in length.



## KAHLENBERG BROS. CO.

1986 Monroe St.  
Two Rivers, Wisconsin, 54241 U.S.A.  
414-793-4507

Circle 315 on Reader Service Card

## MARITIME REPORTER AND ENGINEERING NEWS

ISSN-0025-3448

No. 7

Volume 53

118 EAST 25th STREET  
NEW YORK, N.Y. 10010  
(212) 477-6700  
Telex: MARINTI 424768  
Telefax: (212) 254-6271

ESTABLISHED 1939

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

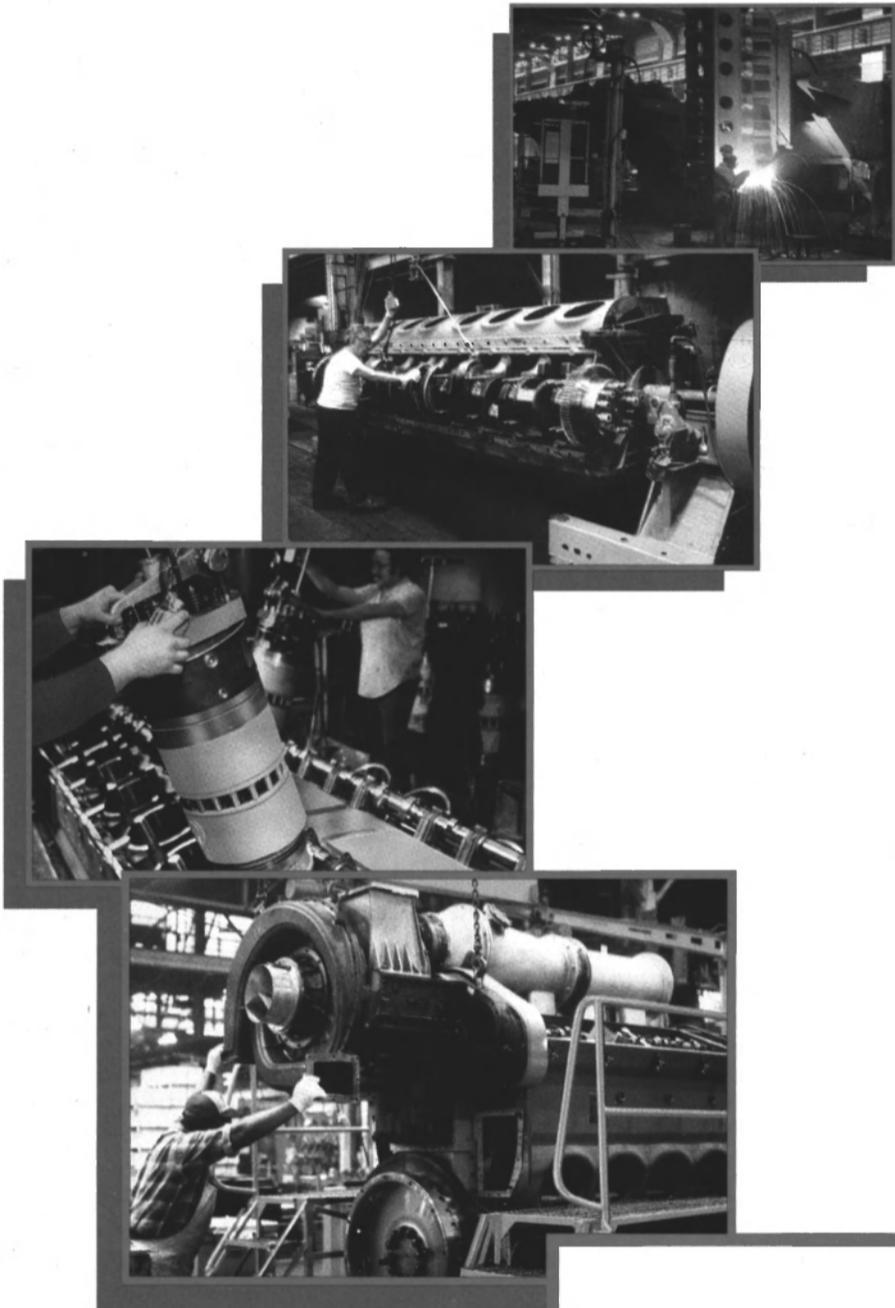
Postmaster send notification (Form 3579) regarding undeliverable magazines to Maritime Reporter/Engineering News, 118 East 25th Street, New York, NY 10010.

Publishers are not responsible for the safekeeping or return of editorial material.

Member



Business Publications Audit of Circulation, Inc.



## **EMD**

**A Name The  
World Has  
Grown To**

*Trust*

**60,000 engines!  
No other manufacturer of  
medium speed Diesel engines  
has produced as many.**

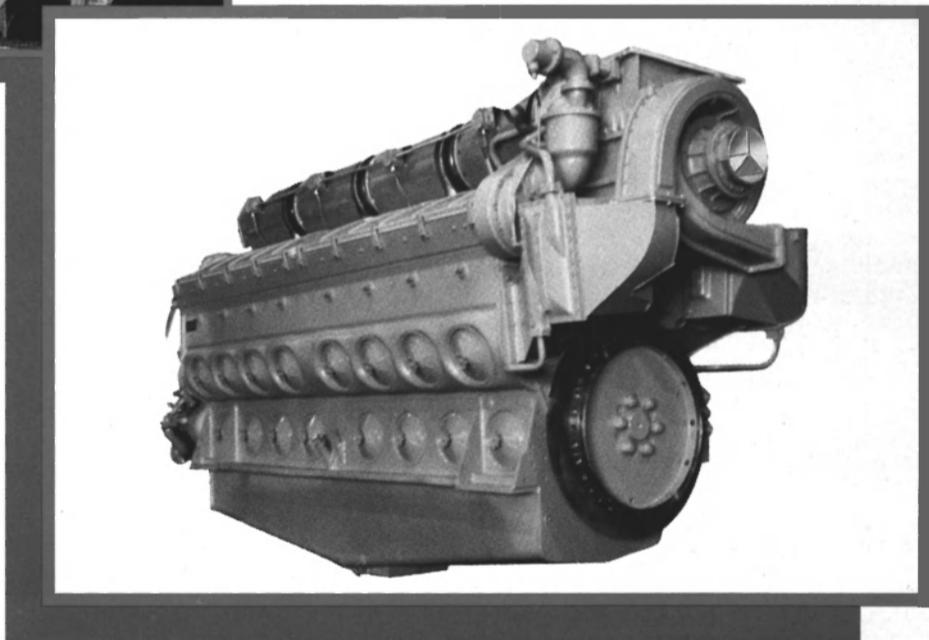
**General Motor's Electro-Motive  
Division is the leading manufacturer  
of medium speed Diesel engines, build-  
ing more engines than any other man-  
ufacturer in its class.**

**EMD employs advanced engineer-  
ing technologies and proven manufac-  
turing processes to produce Diesel  
engines that are reliable, economical  
and easy to maintain. Our commit-  
ment to quality is built into every  
engine.**

**At EMD, this commitment has pro-  
vided world-class products for the past  
fifty years. That tradition continues  
today.**



**A Proud  
Tradition  
Continues**



## Boats & Barges

### New Blount Cruise Ship Features Passenger Comfort

Luther H. Blount, president of Blount Marine Corporation, recently announced construction of a fifth cruise ship to be built at the Blount Marine Shipyard in Warren, R.I.

The new vessel, Hull #280, is 172 feet in length and will carry 90 passengers on overnight cruises. It will be built for routes that extend from the upper St. Lawrence River in northeast Canada to the Caribbean rim and Central America. The USCG has approved conceptual plans, many of which follow "H" Rules and include many new features.

New acoustic technology will ensure quiet operation of the cruise ship. Night power will be supplied from a super quiet hospital-type

generating unit located on the extreme stern deck.

A new style of ductless air conditioning system will allow occupants of each cabin to control the temperature on an individual basis. This system, too, eliminates the usual air conditioning hums and noises, and all air shuts down automatically on fire or smoke detection.

Hull #280 will be equipped with Blount's newest invention, the silent Pint-A-Flush commode, which uses only one pint of water per flush and cannot be heard during flushing.

The pilothouse will be retractable so the ship can glide under 22-foot-high bridges during popular



Artist's conception of the new cruise ship to be built by Blount Marine. Most cabins will have picture windows, hanging lockers, vanities, and can be converted from two singles to double beds upon request.

canal cruises. The vessel will draw only 6 feet 6 inches of water, allowing sailing into the exotic and out-of-the-way areas of the Caribbean. The special bow ramp will extend as far as 40 feet, insuring a dry landing onto remote beaches.

The interior will reflect many different Mayan designs indigenous to

the areas the vessel may navigate. The entire interior will be built of fireproof materials.

The cruise ship is scheduled for completion in early 1992.

For free literature detailing the facilities and capabilities of Blount Marine,

Circle 83 on Reader Service Card

### Furuno/Steenhans Shipboard Communications



Furuno now offers Steenhans rugged, commercial-quality shipboard communications equipment for the U.S. market: the System P-4200 battery-less telephone, and the System PK Command Intercom.

The P-4200 provides reliable communications for up to 24 stations, even if all other shipboard power fails, and a wide variety of station styles are available. Operation is very simple: turn the handle on the telephone set a few times for ringing signal and approximately five minutes of conversation. If more time is required, turn the handle again.

The System PK provides top quality voice communications between the bridge and up to 40 individual locations aboard ship. Standard packages are 5, 10 and 20 lines, and various types of substations are available to meet almost any conditions: indoor/outdoor, high noise, or wet locations.

Get complete information today on the Furuno/Steenhans communications equipment from any of our more than 200 authorized dealer outlets, or send for our free full-color, all-product catalog.

**FURUNO U.S.A. INC.**  
P.O. Box 2343, South San Francisco, CA 94083

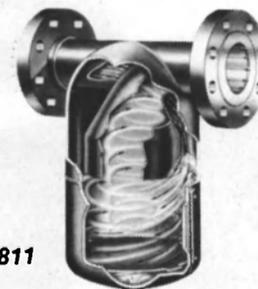
Furuno. Choice of the professionals.

Circle 256 on Reader Service Card

## RELIABLE, EFFICIENT, WRIGHT-AUSTIN GAS/LIQUID SEPARATORS



MADE IN U.S.A.



The quality, and performance of these gas/liquid separators has earned them "SPECIFIED" status on practically every Navy combatant vessel since WW 1.

- 99% efficiency
- We meet or exceed ABS, USCG, ASME and Naval specs.
- Designed for FV to High Pressure on air, gas or steam
- Highest efficiency over entire flow range
- They're self-cleaning, no maintenance
- Simple, easy to install

Write for Bulletin 811



**WRIGHT-AUSTIN COMPANY**

3250 Franklin St., Detroit, Michigan 48207  
Phone (313) 259-1925 FAX (313) 259-1962

Circle 314 on Reader Service Card

Maritime Reporter/Engineering News

## Cellnet Provides Cellular Pay Phone Service To Marine Industry

Cellnet Corporation, a leading provider of cellular credit card telephone service, has recently begun providing its *CallAboard*® cellular payphone service on a national basis to the marine industry. The company, based in Stamford, Conn., has been providing service throughout the country for the past three years to the transportation industry, primarily in limousines, buses and trains. The company has also provided service to ferries and dining yachts.

*CallAboard* service allows callers to dial anywhere in the world, and calls are billed directly to the user's credit card. The marine vessel operator or oil rig operator need not be concerned about overseeing use of a company-owned cellular phone, which often proves to be both a financial and administrative headache. In addition, this service prevents monopolization of the onboard radio communication system by callers. *CallAboard* allows anyone onboard to stay in touch with the outside world at no cost to vessel operators.

Aside from the obvious benefits of *CallAboard*, marine operators will be pleased by Cellnet's unique ability to provide service with very little notice. The company recently provided two phones for the McDermott Marine Construction and Gates Construction natural gas pipeline project in the Long Island Sound. After McDermott's initial call to Cellnet, arrangements were made promptly and phones were placed on McDermott's Lay Barge 29 within less than a week. Upon completion of the project, with two days notice the phones were removed.

Cellnet has the capability to service most marine operators and the company is flexible about responding to unusual applications. For further information,

Circle 91 on Reader Service Card

## A&T Wins Over \$22 Million In New Contracts During June 1991

Analysis & Technology, Inc., North Stonington, Conn., which specializes in professional and technical services for submarines and antisubmarine warfare (ASW) and in training programs for Fortune 500 clients, won over \$22.3 million in contracts and subcontracts during June 1991. **A.T. Mollegen Jr.**, chairman and CEO recently announced. The company's total contractual backlog stood at approximately \$276 million at the end of June, compared with \$279.7 million on June 30, 1990.

A \$15.1 million, five-year contract was awarded by the Naval Underwater Systems Center (NUSC), Newport, R.I., for A&T to continue providing technical evaluation support for submarine weapon systems.

## Siemens Awarded USCG Contract For Solar Modules (Generators)

Siemens Solar Industries recently signed a requirements contract with the U.S. Coast Guard for solar modules. The solar modules (generators) are designed to last 20 years and will be used to power navigational buoys.

Many powered navigational

buoys are in remote areas and are difficult to service. Records show that the use of solar power provides cost savings and is operationally efficient. The U.S. Coast Guard currently has over 14,000 solar-powered navigational aids in operation.

The solar modules' photovoltaic cells transfer sunlight into electrical energy which is stored in a battery. The energy is used to light the buoys at night or send out electronic signals to passing ships.

This is the fifth consecutive award

out of a possible six that Siemens Solar has received since 1986 from the USCG. Under these contracts, the company has delivered 17,000 solar modules, equivalent to 325 kilowatts.

Headquartered in Camarillo, Calif., Siemens Solar Industries is part of Siemens AG, a multinational corporation. For more information and free literature,

Circle 69 on Reader Service Card

# Wherever You Turn

MC ENGINES  
The Most Chosen -  
Now With New Ratings

MAN B&W Diesel A/S  
Stamholmen 161 • DK-2650 Hvidovre • Copenhagen • Denmark • Phone: +45 31 49 25 01

MAN B&W

## MAN B&W Diesel Invests \$55.3 Million In New Research Center

MAN B&W Diesel A/S, Copenhagen, Denmark, is currently building a new research center adjacent to the company's factory at Tegholmen in Copenhagen's harbor area.

The building project, scheduled

to be completed by the end of 1993, will comprise a total floor area of some 1,100 square meters which, inter alia, will house a specially built engine for testing new components and new modes of operation. There will also be facilities for demonstrating individual components, showing films, etc. Finally, new facilities for training the shipowners' marine engineers will also be located at these premises.

The total investments in ground,

buildings and technical installations amount to nearly DKK 100 million (about \$55.3 million). The engine alone will cost over DKK 25 million (about \$13.8 million).

The research center will be the cornerstone in MAN B&W Diesel's endeavors to maintain the leading position in the world's marine engine market. At the company's main offices, some 250 engineers and technical staff are engaged in development work and giving advice to a

worldwide network of 23 licensees.

The development activities are the basis on which ship engines designed by MAN B&W Diesel have, for the last five years, captured approximately 55 percent of the world marine market.

This strong market position has been used to increase the sales within other areas, such as spare parts to owners and engine components to licensees. The increasing turnovers have also resulted in a considerable improvement in earnings in the latter years.

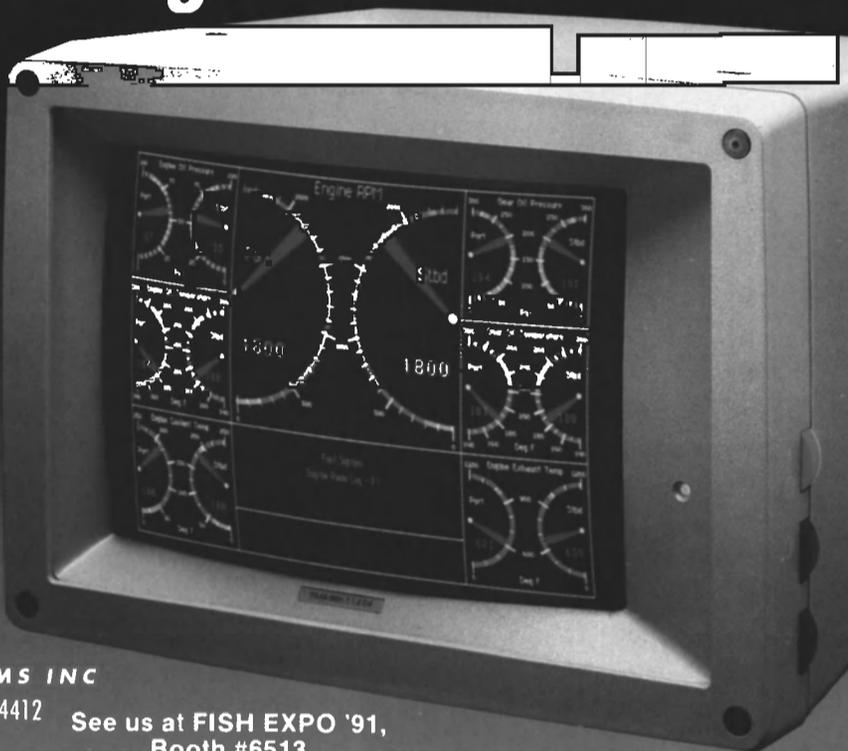
For free literature giving full information on MAN B&W Diesel,

Circle 66 on Reader Service Card

## The Leader in Integrated Instruments and Alarms

The VIAS System-128 is a sophisticated information system designed for commercial marine vessels. It integrates instrumentation and alarm systems, using advanced microprocessors to continuously monitor up to 128 different ship-board functions.

What you see here is only the beginning...to see more, call today.



VESSEL INFORMATION SYSTEMS INC

7723 24th Avenue N.W. • Seattle, WA 98117-4412  
(206) 789-8146

See us at FISH EXPO '91,  
Booth #6513

© 1991 Vessel Information Systems, Inc.

Circle 284 on Reader Service Card

## Commodore To Transfer Two Cruise Ships Being Built In Spain To Crown

Commodore Cruise Line has announced that Crown Cruise Line will get two 820-passenger cruise ships now being built in Spain.

The vessels are under construction at the Union Naval de Levante shipyard in Valencia, Spain, for Commodore's parent company, EffJohn International BV Group. The ships will be transferred to Crown.

Under a joint-venture agreement announced recently between Commodore and Palm Beach Cruises, Crown's former owner, Commodore owns the Crown Cruise Line trade name and holds a half interest in other Crown assets.

In the summer of 1992, the first new ship, named Crown Jewel, will enter service. In 1993, the other ship, not yet named, is scheduled to enter service. They will join the Crown Monarch, introduced in December 1990, which currently offers seven-day luxury cruises from the Port of Palm Beach, Fla., to Key West, Grand Cayman, Ocho Rios and Crown's exclusive "out island," Labadie Shores.

The noted Norwegian architect Peter Yran created the Crown Jewel's design. Mr. Yran's credits include the Sovereign of the Seas, Seaward, Seabourn Pride, Seabourn Spirit, Sija Serenade and Nordic Empress.

## Carnival Plans Share Issue

Miami-based Carnival Cruise Lines plans to issue 5 million shares to raise about \$115 million from U.S. and foreign investors.

In addition, shareholders and Ted Arison, owner and founder of Carnival, will sell 2.85 million shares worth about \$65.5 million.

The cash from the share issue will be used toward debt payment and possible future acquisitions.

The share issue was originally intended to fund the \$220 million net cost of acquiring Premier Cruise Line. The deal, however, was called off because of disagreements over company earnings projections.

# BULK TERMINALS

For innovative, practical solutions to materials handling, Hall-Buck Marine, Inc.'s bulk terminals set industry standards:

### PROFIT ISLAND TRANSFER TERMINAL

Near Baton Rouge, La.  
• Truck-to-barge transfer  
• Calcined petroleum coke  
• Construction material storage and distribution

### BATON ROUGE COKE TERMINAL

Baton Rouge, La.  
• High-speed conveyors  
• Petroleum coke  
• Railcar-to-barge transfer  
• Railcar storage  
• Material storage for 60,000 tons

### BATON ROUGE LIQUID DOCK

Baton Rouge, La.  
• Liquid bulk storage and transfer  
• Transfer from railcar or truck to river or ocean-going barge

### BELLE HELENE TERMINAL

Geismar, La.  
• Dry-bulk/Liquid handling  
• Truck-to-barge transfer  
• Storage and distribution

### GRAMERCY BULK TERMINAL

Gramercy, La.  
• Railcar-to-barge transfer  
• Calcined aluminum oxide  
• Enclosed conveyor system with dust collector/suppressors  
• Railcar storage

### MOBIL COKE WHARF

Chalmette, La.  
• Petroleum coke handling  
• Truck or barge loadout

### PORT ARTHUR BULK FACILITY (PABFAC)

Port Arthur, Tx.  
• Railcar-to-ship or barge transfer  
• Latest dust collection/suppressor technology  
• Soda ash and potash  
• 1000 mt/h transfer rate

### AGWAY PHILADELPHIA PORT TERMINAL

Philadelphia, Pa.  
• Ship-to-rail or truck transfer  
• 72,000 tons bulk storage capacity  
• Urea, DAP and potash  
• 1500 mt/h transfer into storage  
• 400 mt/h transfer into truck or railcar

### PORTLAND BULK FACILITY

Portland, Or.  
• Railcar-to-ship, truck or barge transfer  
• 1500 mt/h transfer rate  
• Traveling gantry crane  
• Latest dust collection/suppressor technology  
• Soda ash and potash  
• Bentinit and talc

### BENICIA COKE TERMINAL

Benicia, Ca.  
• Railcar-to-storage, storage-to-ship transfer  
• 900 mt/h transfer to ship  
• Pneumatic railcar unloading  
• 24,000 mt of storage capacity

# USA

Call or write for our latest brochure.

504/675-5387

P.O. Box 35

Burnside, La. 70738

Terminal Construction & Operation/Vessel Cleaning & Repair/Ship Agents/Material Handling Services/Aggregate Sales/In-plant Services.

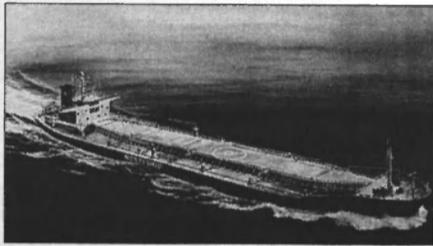
**HBM**  
HALL-BUCK MARINE, INC.

Member  
THE AMERICAN WATERWAYS OPERATORS, INC.

Circle 267 on Reader Service Card

Maritime Reporter/Engineering News

## Kvaerner Orders Wartsila Main/Auxiliary Engines For Two Crude Carriers



Artist's conception of one of two Wartsila Diesel-powered crude oil carriers Kvaerner Masa-Yards is building for Finnish oil company Neste Oy.

Kvaerner Masa-Yards has ordered Wartsila Diesel main and auxiliary engines for the two crude oil carriers the shipyard is building for the Finnish oil company Neste Oy.

The 91,000-dwt tankers will each have six-cylinder Wartsila Vasa 46 main engines with an output of 5,430 kw. The auxiliary engines in each vessel will be three 8-cylinder Wartsila Vasa 22/26s with an output of 1,300 kw. The total output of the machinery will be 14,760 kw. The engines for the first vessel will be delivered at the end of this year and for the second vessel in spring 1992.

The vessels, scheduled for completion in August 1992 and February 1993, respectively, will carry crude oil and oil products in short haul traffic in Northern Europe, the North Sea, Scandinavia and the Baltic Sea. However, they will also be equipped for worldwide operation.

The choice of compact lightweight Vasa 46 engines instead of cross-head engines allows more efficient space utilization. Other advantages of the two-engine installation are operational reliability and flexibility, since on lower speeds the vessel can be operated with only one engine. The advanced technology of the engines also minimizes the service cost and improves the overall economy of the machinery.

For further information on Wartsila Diesel engines,

Circle 92 on Reader Service Card

## Alaska Fish Conference, Exhibit Set For Anchorage, October 11-13, 1991

The 2nd Annual Alaska Fish Conference & Exposition has been scheduled for Anchorage, Alaska, October 11-13, 1991, in the George Sullivan Sports Arena.

More than 18,000 commercial fishermen from around the state of Alaska are expected to attend the meeting, the state's largest commercial fishing trade show, which is organized by Sourdough Productions of Anchorage.

According to "Alaska Seafood Industry Study," March 1989, total capital investment in Alaska's seafood industry amounts to between \$3.7 billion and \$4.3 billion, with

the following components: Harvesting Vessels and Onboard Equipment, \$2 billion to \$2.3 billion; Commercial Fishery Permits, \$900 million to \$1 billion; Seafood Processing Plants and Equipment, \$800 million to \$1 billion.

For literature giving complete information on the 2nd Alaska Fish Conference & Exposition, contact: Sourdough Productions, 4241 B Street, Suite 300, Anchorage, Alaska 99503, phone (907) 563-7469, fax (907) 561-5038.

## Trinity Industries Launches 345-Foot Vehicle Barge For Hawaiian Use

Trinity Industries, Inc., subsidiary of Gretna Machine and Iron Works, Inc., recently christened and launched the 345-foot roll-on/roll-off (RO/RO) barge Waialeale in Harvey, La. The approximately \$9 million barge will be operated by Matson Navigation Company, Inc.,

transporting autos and cargo trailers from Honolulu to the neighbor islands of Maui, Kauai and Hawaii.

In a departure from traditional side launches, the Waialeale was launched by opening gates from the Harvey Canal to flood the graving dock where the vessel was built.

The principal speaker at the ceremony was C. Bradley Mulholland, president and chief operating officer of Matson Navigation Company, Inc. of San Francisco, Calif.

Litton's Category I EPIRB Fulfills GMDSS EPIRB Requirements

# "Marine Insurance No One Can Be Without"

If you are involved in a disaster at sea, there will be very little time. You must be located, identified, and rescued... immediately. There is no time to waste and no time for doubt. Your life and the lives of everyone on board depends on organized survival techniques and a swift rescue.

Litton's satellite EPIRB (Emergency Position Indicating Radio Beacon) provides mariners the latest in position indicating technology. Litton's EPIRB broadcasts two signals. One transmits to the COSPAS/SARSAT satellites providing the identification of your vessel and other vital information to the ground based rescue stations. The other signal is also capable of being received by the satellites; however, it is primarily used by rescue ships and aircraft

as a homing beacon for pinpointing your vessel. Add to this a high-intensity xenon strobe for visual detection, and you and your craft will no longer be a needle in the haystack.

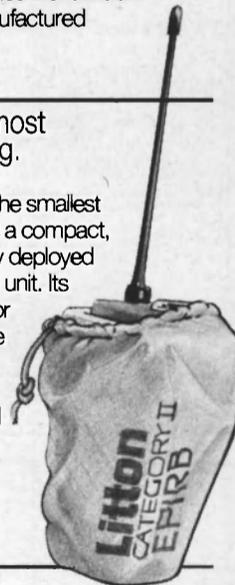
It's common sense. And it's fast becoming a law.

The Category I EPIRB is designed to release automatically, or manually when the situation permits. It can even be activated while wearing survival gloves. The hydrostatically released mechanism activates the EPIRB automatically when submerged in water 3-12 feet deep. This gives you more time to gather survival gear and prepare yourself and everyone on board for rescue. In a situation where lives are at stake, the hands free operation of the Litton Cat I EPIRB gives you one less thing to think about and more reason to feel confident.

- True global coverage. Using SARSAT/COSPAS satellite system.
- Six year battery storage life. 50% longer than most EPIRBs.
- Powerful xenon strobe for visual detection.
- Can be mounted at any angle.
- Four year limited warranty.
- Approved for use in the U.S., Canada and other countries worldwide.
- Designed & Manufactured in the U.S.A.

The CAT Is Almost Out Of The Bag.

The Cat II EPIRB, the smallest 406MHz EPIRB, is a compact, stowable, manually deployed version of our Cat I unit. Its small size is ideal for stowing in inflatable life rafts, life boats and for use on private yachts, and will be available soon.



**Litton**  
Special Devices

To find out about your particular EPIRB requirements, call Litton at 1-800-328-0948 or Fax 1-215-328-4016 Mon.-Fri. 8:30 to 5:00 pm EST. This product also distributed by KODEN International under their own name.

Circle 221 on Reader Service Card

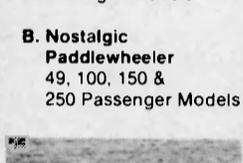
When you choose

# SkipperLiners

you own a boat...  
and a business



**A. Modern Luxury Vessels**  
49, 100, 150 and 225  
Passenger Models



**B. Nostalgic Paddlewheel**  
49, 100, 150 &  
250 Passenger Models



**C. Water Taxi**  
49 & 100 Passenger Models



**D. European Canal Boat**  
(Clears 9'6" Bridge)  
49, 100 & 150 Passenger Models



"Outstanding  
Passenger  
Vessel of 1989!"  
Maritime  
Reporter

"Outstanding  
Passenger  
Vessel of 1990!"  
Maritime  
Reporter

## BUSINESS OPPORTUNITY

At SkipperLiner, we are in business to help you succeed in business. Check out these "SkipperLiner Advantages:"

- **Superior Craftsmanship** - We construct each SkipperLiner Cruise Ship to uncompromised standards of materials and workmanship. This devotion to quality has made SkipperLiner Shipyards the largest U.S. builder of custom cruise ships in their class.
- **Turnkey Operation** - We offer a total turnkey operation, including a fast-start ticket sales plan, comprehensive training and financial resources. . . Truly a turnkey BUSINESS OPPORTUNITY
- **Volume Production** - We can manufacture commercial boats in ten weeks and deliver on time, producing for the U.S. and International markets
- **Competitive Pricing** - Our efficient factory operation means you do not have to pay more for superior quality and service.
- **Fall Discount Program** - Ask about our special pricing for fall and winter production. We're sure you'll choose the "SkipperLiner Advantages!"  
Call (608) 784-5110 today for additional information.

**SkipperLiners**  
*The Margin of Excellence*



**SkipperLiner Shipyards**  
621 Park Plaza Drive, La Crosse, WI 54601 • (608) 784-5110

Circle 254 on Reader Service Card

## Tidewater Pays \$407 Million For Zapata Affiliate

New Orleans, La.-based Tidewater Inc. announced that it will pay an estimated \$407 million for Zapata Corp's offshore supply vessel affiliate, Zapata Gulf Marine Corp.

The purchase, which was first announced recently by Houston-based Zapata, would make the new entity the nation's largest offshore supply vessel company.

Zapata Gulf currently is owned by three entities, which would receive a combined total of 23.8 million new shares of Tidewater stock, valued at \$315 million. Zapata owners then would control about 45 percent of Tidewater, a New Orleans-based energy company. Tidewater also would assume some \$92 million of Zapata's debt.

Zapata Corp. of Houston, Zapata Gulf's majority partner, is an oil producer started in the 1950s by President **George Bush**, who no longer holds any interest in the firm.

**John P. Laborde** will continue as chairman, president and chief executive officer of Tidewater. Tidewater's board of directors will be increased from seven to 10 members with the addition of three former directors of Zapata Gulf. The combined company will be headquartered in New Orleans.

## Seaward Awarded Contract For Submarine Fenders

Seaward International, Inc., Clearbrook, Va., was recently awarded a contract exceeding \$500,000 by the Naval Submarine Base in Kings Bay, Ga.

Seaward will design, manufacture and deliver one shipset of heavy-duty pneumatic fenders which will incorporate a polyurethane elastomer body. This elastomer, developed and produced by Seaward, is specially formulated to increase the fender's strength and abrasion resistance, and to prolong the fender's operational life. Each fender will have a nominal body size of 14 feet in diameter by 35 feet in length and will be designed to meet the critical performance criteria specified by Navy operations.

For further information on Seaward's marine fenders, buoys and elastomer composite materials,  
Circle 45 on Reader Service Card

## HPMV '92 Conference Set By ASNE For June 24-27 In Arlington, Virginia

The American Society of Naval Engineers (ASNE) has announced that a 1992 Intersociety High Performance Marine Vehicles Conference and Exhibit (HPMV-92) will be held on June 24-27, 1992, at the Ritz-Carlton Hotel in Arlington, Va.

ASNE's Flagship Section is the principal sponsor for HPMV 92.

Cosponsors include American Society of Mechanical Engineers (ASME), International Hydrofoil Society, The Society of Naval Architects and Marine Engineers (SNAME), Surface Navy Association (SNA), U.S. Hovercraft Society, Wingship Society, David Taylor Research Center (DTRC), U.S. Coast Guard (USCG), and U.S. Maritime Administration (MarAd).

In addition to featuring an exhibit area for table-top exhibits, HPMV will host demonstrations and inspections of various high-performance marine vehicles at local sites.

A call for papers has been issued for the symposium, with suggested topics as follows:

Applications; Operations; Design & Construction; Test & Evaluation; Economics; Logistics; Maintenance; Planing Monohulls; Planing Catamarans; Catamarans; Wave Piercers; Small Waterplane Area Twin-Hulls (SWATH); Hydrofoils; Wingships (WIG); Air Cushion Vehicles (ACV); Surface Effect Ships (SES); Seaplanes; Propulsion Systems; Components; and Materials and Fabrication.

Abstracts are due by October 1, 1991. Accepted papers must be prepared as camera-ready copy and must be received by March 1, 1992. Instructions to authors will accompany notice of acceptance.

For further information on HPMV '92, contact American Society of Naval Engineers, 1452 Duke Street, Alexandria, Va. 22314-3458, Attn: Capt. **James Kehoe**, USN (ret.); telephone contact, Capt. **James E. Grabb**, USCG (ret.), phone 1-(703) 836-6727, fax 1-(703) 836-7491.

## 10th Offshore Europe Conference Expands

The 1991 Offshore Europe Conference and Exhibition will feature a record-setting technical program and exhibition September 3-6, at the Conference and Exhibition Center in Aberdeen, Scotland. With more than 130 papers and nearly 1,500 companies from 20 countries exhibiting the latest offshore products and services, the 10th edition of this biennial conference will be the largest held since it began in 1973.

The comprehensive 21-session technical program covers drilling engineering and design, protection of the environment, subsea systems, drilling technology and equipment, environmental muds, flow measurements, mud and cement, case histories, North Sea Operations and innovations, riser technology and facilities, horizontal wells, formation evaluation, remedial well treatment, sand control, safety procedures in drilling and production, reservoir modeling, completions, integrity of platform design, and business aspects of offshore operations.

Full information on all aspects of Offshore Europe 91 is available from Offshore Europe, Rowe House 55/59 Fife Road, Kingston upon Thames, Surrey KT11TA, U.K., phone (081) 549-5831, fax (081) 541 5657/5016.



The Thomas G. Thompson accommodates a total of 20 officers and crew and 30 scientists. All share common dining, lounge, recreation and training facilities.

## Trinity Shipyard Delivers Advanced U.S. Navy Oceanographic Research Ship

Trinity Industries, Inc.'s Halter Marine, Inc., New Orleans, La., has delivered the Thomas G. Thompson (AGOR-23), a 274-foot oceanographic ship to the U.S. Navy.

Halter was awarded the \$20.9 million contract in August 1988, when its design for the 3,200-ton, diesel electric, dynamically positioned ship was selected in a national competition.

The Thompson will be operated by the University of Washington under the University National Oceanographic Laboratory System (UNOLS) sponsored by the office of the Chief of Naval Research, U.S. Navy. It will serve as a general purpose, all-season, oceanographic ship in coastal and deep ocean waters.

Typical scientific missions will include physical, chemical and biological oceanography, multi-discipline environmental investigations, ocean engineering, marine acoustics, marine geology and geophysics, and survey tasks such as bathymetry and magnetometry.

AGOR-23 has a diesel electric propulsion system with three 715-kw and three 1,500-kw diesel generators integrated to provide power for propulsion and ship service electrical systems.

The ship is equipped with a dynamic positioning system which provides automated precision track-line and station-keeping capability. The system uses data from a global positioning system, an acoustic vertical reference system, the gyrocompass,

and a wind sensor system to control the ship.

The ship has over 3,500 square feet of working deck space and can accommodate four standard laboratory vans which have direct access to the ship's interior. It also has over 4,000 square feet for various scientific laboratories. The laboratory spaces are designed to facilitate rapid rearrangement and are maintained at 70-75 degrees F, with a maximum relative humidity of 55 percent.

The Thomas G. Thompson is 274 feet in length, with a 52.5-foot beam, and a 18.5-foot draft. Full load displacement is 3,250 tons.

Two Halter-designed and built Navy oceanographic ships, Moana Wave, and Gyre are operated by the University of Hawaii, and Texas A&M, respectively.

In addition to Halter Marine, Inc., other shipbuilding companies in the Trinity Marine Group are Moss Point Marine, Inc.; Equitable Shipyards, Inc.; Gretna Machine and Iron Works, Inc.; Aluminum Boats, Inc.; HBC Barge, Inc.; and Trinity-Beaumont.

Trinity Industries, Inc., based in Dallas, Texas, manufactures and markets a wide variety of metal products in six business segments: rail cars; containers; structural products; marine products; metal components; and leasing.

For free literature detailing the facilities and capabilities of the Trinity Marine Group,

Circle 88 on Reader Service Card

## \$6 Million Refurbishment To Be Performed On RCCL's 'Song Of America'

Royal Caribbean Cruise Line recently announced that its 1,390-passenger Song of America will undergo a \$6 million refurbishment this September.

During the ship's normally sched-

uled drydock in BethShip, Sparrows Point, Md., (formerly Baltimore Marine Division, Bethlehem Steel Corporation) on September 8 through 22, the area containing the ship's cinema, photo gallery, America's Cup Bar and casino will be restructured to include a state-of-the-art conference center, a photo display center, new Casino Royale and Schooner Bar overlooking the ocean. Also, the Verandah Cafe will be redesigned,

the shopping center expanded, and all passenger cabins will receive wall-mounted color televisions.

According to an industry source, BethShip will perform normal scheduled underwater maintenance and drydocking. Royal Caribbean Cruise Line will be responsible for a majority of the refurbishment, with assistance and support from BethShip.

BethShip Sparrows Point, one of the most active U.S. yards in the overhaul and drydocking of cruise

ships, recently changed its name from Baltimore Marine Division of Bethlehem Steel Corporation. Along with the name change, **David Watson** was named president. **Ray DeVinney**, was named the president of BethShip Sabine (Texas) yard.

For free literature detailing the ship repair facilities of BethShip Sparrows Point or BethShip Sabine,

Circle 87 on Reader Service Card

## MARINE INDUSTRIES CORPORATION

### Marine Supply Specialist

#### COMPANIES REPRESENTED:

<p>Basler - Voltage Regulators Bird Johnson - Propellers (Bronze &amp; Stainless Steel) Carlisle &amp; Finch - Searchlights Centex Marine - W.T. Doors and Hatches Delco - Voltage Regulators Fernstrum - Engineered Gridcoolers L.F. Gaubert - Armored Shipboard Cable Jim Buoy - Flotation Equipment Johnson Duramax - Keel Cooler, Bearings, Fendering Products, Stuffing Boxes Kahlenberg - Air Horns, Stuffing Boxes, Propellers (Bronze &amp; Stainless Steel) Kobelt - Marine Engine and Transmission Controls, Shaft Brakes Lima - Generators Marine Industries Corporation - Hardcoated Shaft Sleeves, Pilot House Chairs, Engine Degreaser Microphor - Marine Sanitation Units, Low Flush Toilets Morse Controls - Marine Controls, Red Jacket Control Cables Murphy - Switch Gauges, Alarm Panels</p>	<p>Nashville Bridge Company - Deck Fittings Nashville Bridge Company - Manual, Hydra-electric, Electric Winches and Special Winches Available New Mar - Power Supply, Battery Charger, Inverters and Converters Night-Star - Barge Mooring &amp; Pumping Lights Perko - Navigation Lights, Searchlights Philadelphia Resins - Chockfast Orange - Coatings - Phillybond Rexroth (WABCO) - Pneumatic Controls Riley-Beard, Inc. - Mufflers, Exhaust Silencers Rope - Leaving, Lock-Lines and Nylon Rope Safeguard - Life Jackets Stearns - Life Jackets Steelecase - Steel Doors Sure Seal - Teflon Packaging Thordon - Marine Bearings Wynne - Windows</p>
--	---

Distributors of Marine Equipment, Hardware and Supplies

**(800)733-3130**

601 E. Riverside Dr., Clarksville, IN 47130 • Fax (812) 283-9628  
Sales Offices Gulf Coast and Paducah, KY

Circle 243 on Reader Service Card

Alden Electronics  
Introduces...

# SATFIND -406 EPIRB



Alden Electronics' SATFIND-406<sub>™</sub> EPIRB could save your life. It sends 406 and 121.5 MHz signals to rescue forces giving the precise location of the vessel in distress, in any ocean, at any time.

- Fully enclosed antenna cannot be damaged.
- High flotation for maximum strobe visibility.
- Horizontal, vertical or slanted installation.
- Five year battery for long term peace of mind.
- USCG, Canadian, COSPAS-SARSAT approved.

For the name of your local Alden Marine Electronics dealer and a free brochure, call 1-508-366-8851 or send the coupon to Alden Electronics, 54 Washington St., Westborough, MA 01581.

## ALDEN ELECTRONICS

Please send me information on the SATFIND-406 EPIRB.

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
Phone (\_\_\_\_) \_\_\_\_\_ Boat Type \_\_\_\_\_  
Alden Electronics, Inc. • 54 Washington St. • Westborough, MA 01581

Circle 333 on Reader Service Card

## Jered Brown Wins Second Contract For VCHT System

Jered Brown Brothers has been awarded a contract to design and manufacture a shipboard vacuum collection, hold and transfer (VCHT) toilet system for a 120-foot USCG Aton barge being built by the Marinette Marine, Marinette, Wis.

This is the second Aton order awarded to Jered Brown since the company formed a new business unit in 1990 to design, manufacture, and market standard vacuum toilet system equipment for commercial, passenger, and military ships, as well as for boats and private yachts.

Jered Brown Brothers is an operating unit of Vickers Marine Engineering Division, which in turn is a major division of Vickers P.L.C., the London, England, parent company

of Rolls-Royce Motors, and a worldwide supplier of systems and equipment.

## Braswell In Bid To Take Over Panamanian Yard

U.S. ship repairer Braswell International, Charlotte, N.C., is negotiating a deal to takeover the Pana-

manian repairer Astilleros Balboa.

Reports indicate that Braswell has already agreed to terms with **Don Carlos Eleta**, majority holder of the current concession and is now looking to finalize arrangements with Panamanian government officials.

If the deal goes through, the fortunes of Astilleros Balboa are expected to turnaround, after years of operating losses. The company is currently carrying a debt in the neighborhood of \$15 million.

The negotiations with government officials center around the share of debt which Braswell will have to pick up.

Furthermore, Braswell is seeking an extension of the present concession, which will run out in 5 years. An extension of the concession, possibly by as much as 15 years, is seen as a key factor in justifying the investment necessary to secure the yard's future.

According to **Rudy Matzner**, a former Braswell chief financial officer who is expected to work as assistant general manager of the Astilleros Balboa yard, Braswell is likely to investment \$2.5 million to \$3 million in the Panamanian facility.

## Marioff Offers New Hi-fog Sprinkler System To Vessel Owners

Swedish-based Marioff is offering a free 10-page, full-color brochure on the "Hi-fog" sprinkler system for vessels.

Since it has been practically impossible to install and operate normal sprinklers on a ship, safety is becoming a major factor to passengers in the increasingly competitive ferry and cruise line business. Marioff now provides a turnkey solution—Hi-fog.

Hi-fog is a high-pressure automatic sprinkler system using small bore pipes which can be easily installed on new ships or retrofitted to existing vessels.

In a sprinkler system, the water drops fight the fire in two ways—by cooling the air surrounding the drops and by absorbing the energy of the fire.

In a conventional system the drops of water are comparatively large, whereas the Hi-fog droplets are very small but far greater in number. For the same volume of water, the cooling surface area of the Hi-fog drops is more than 10 times that of the conventional drops, so less than 10 percent of the water is required to have the same cooling effect.

Hi-fog is always supplied as a complete turnkey system. Marioff will supply the sprinkler heads, pump sets and all piping components as well as carry out the installation, cleaning, testing and certification of the complete system.

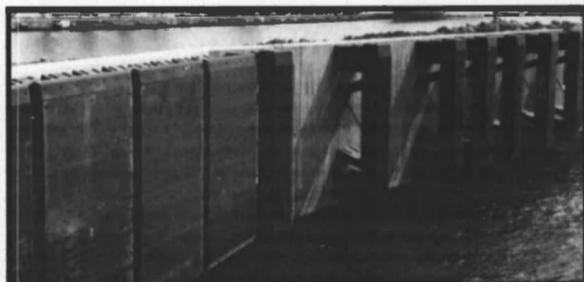
For a free copy of Marioff's new full-color brochure on the Hi-fog sprinkler system,

Circle 53 on Reader Service Card

## Solidur 2090 Dock Fenders... Fulfill All Requirements And Are Field Proven

Solidur 2090, Made of UHMW-PE Offers A Combination of Important Benefits:

- Eases berthing — low friction
- Reduces wear — abrasion resistant
- Protects docks — highest impact strength
- Unaffected by chemicals
- Non-pollutive — will not leak chemicals or splinter and break on impact
- Unaffected by marine organisms
- Will not rot — absorbs no water
- Easy installation — light weight — custom design
- Cost effective



SOLIDUR fender facing on rail ferry terminals.



SOLIDUR fender facing in canal system.

# solidur

200 Industrial Drive • Delmont, PA 15626  
1-800-322-8469 • Fax 412-468-4044

Solidur Pacific Co. • 18179 S. W. Boones Ferry Rd.  
Portland, OR 97224

1-800-343-0444 • Fax 503-620-9316

Solidur Canada, Inc. • 281 Ambassador Dr.  
Mississauga, Ontario L5T2J3  
416-564-6870 • Fax 416-564-6901

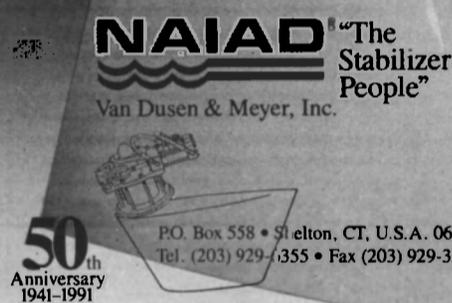
Circle 282 on Reader Service Card

**sta • bil • i • ty** / n 1 : the quality, state, or degree of being stable; as a : the strength to stand or endure : FIRMNESS b : the property of a body that causes it, when disturbed from a condition of equilibrium or steady motion, to develop forces or movements that restore the original condition 2 : the dramatic effect of NAIAD roll stabilizers on a vessel at sea.

Worldwide, NAIAD has made thousands of vessels substantially more stable in all weather conditions. NAIAD stabilizer systems automatically reduce roll by up to 90 percent, and also reduce yaw. This results in improved fuel economy and comfort for passengers, with decreased stress and wear on machinery and crew. Let one of nine advanced, fully hydraulic, rugged models define a new meaning for the word "stability."

For displacement and planing hulls 4-54 knots, 35-350 feet.

Two Year Warranty  
Worldwide Sales  
& Service



Circle 244 on Reader Service Card

## DIESEL PUMPS

### SPECIAL OF THE MONTH



#### DIESEL PUMPS

2, 3, 4 INCH  
CENT & TRASH

#### DIESEL AMERICA

5217 River Road, New Orleans, LA 70123  
Tel.: (800) 628-9885, Tel.: (504) 733-6944  
FAX: (504) 733-6939

#### DIESEL AMERICA (EAST)

P.O. Box 3116, Union, NJ 07083  
Tel.: (800) 762-5171, Tel.: (201) 964-3370  
FAX: (201) 964-8475

#### DIESEL AMERICA (West)

P.O. Box 968, Friday Harbor, WA 98250  
Tel.: (800) DIESEL 1, TEL.: (206) 378-4182  
FAX: (206) 378-3315

Circle 226 on Reader Service Card

## Marco Introduces New Shallow-Water Oil-Spill Recovery Vessel



One of Marco Pollution Control's new Class 1-C fast-response oil-spill recovery vessels shown during pre-delivery trials in Seattle, Wash.

Marco Pollution, Seattle, Wash., an international leader in marine oil-spill cleanup technology, has announced the introduction of a new fast-response recovery vessel. Designated the Class 1-C, it is designed to be used in shallow-water and near-shore environments. Marco-built recovery vessels were recently called in to work on the massive Persian Gulf spill.

With increasing demand for shallow-water recovery capability, Marco put its 20 years of experience in developing recovery technology to work on the new Class 1-C. The result is a boat specifically designed to meet both the needs and the budgets of cleanup contractors and smaller-scale users such as refineries, boat harbors, and others.

The all-aluminum vessel is 28 feet 8 inches long, with a beam of 8 feet and a depth of 3 feet. At light draft, the boat draws 13 inches of water and only 16 inches with full collection sumps. Powered by twin 70 or 115-hp outboard engines, it can respond at speeds in excess of 20 knots.

For additional information on the Class 1-C or any of Marco's other vessels,

Circle 43 on Reader Service Card

## San Francisco Cruise Terminal Project Moves A Step Nearer

Following the execution of a development memorandum with developer Scandinavia Center Inc. (SCI), the Port of San Francisco has moved one step closer to obtaining a new \$200 million international cruise terminal.

Headed by Danish civil engineer **Erik Norgaard**, SCI has proposed a mixed-use complex that includes a two-berth cruise terminal and public access harbor at Piers 30/32, plus trade and exhibit areas, a 360-room hotel, and a United Nations World Center across the Embarcadero from the terminal.

Mr. **Norgaard** moved his consulting practice to San Francisco in 1981 and has worked on various marine projects in Australia, Europe, Alaska, Hawaii, and California during the past 20 years.

Scandinavia Center would provide more than 1,000 permanent jobs as well as attracting millions of

dollars in revenue for both the city and the port.

Under terms of the development memorandum, SCI now has 20 months to obtain all necessary regulatory approvals, during which time lease terms will be negotiated with the port staff.

Although the developer will finance and construct the entire project, the port will have complete control over the cruise terminal and public areas.

## South Korean Yards Receive Order Influx

South Korean shipyards appear to be emerging from the shipbuilding slump caused by the Gulf War. According to the Korean Shipbuilders' Association, in June the nation's shipbuilders experienced their best intake of orders in over a year.

During the month, Korean yards won 13 ships aggregating 799,000

gt. In contrast, the yards only took in a total of 460,000 tons of new orders in the previous five months.

The half-year total of 1.26 million gt of new orders for the world's second largest shipbuilding nation is well behind the 3.52 million tons of orders taken in last year during the corresponding six-month period. Recent new orders, include three Hapag-Lloyd containerships and eight 86,000 dwt tankers for Petroleos de Venezuela (PDVSA).

# Our Field Service Team Has Really Been Around The Block.



Diesel engine users the world over depend on Hatch & Kirk's on-site service. The reason? Our people.

Many are former OEM employees, adding expertise in their respective engine lines. Additionally, all Field Service Teams spend countless hours of training through intensive in-house troubleshooting and repair seminars. This education, reinforced by work in the field with Senior Technicians, means you get the best service in the business.

And you get it fast.

We stand ready to send our team anywhere at any time... arriving on-site within 24 hours. With our extensive inventory, we ship the needed parts and tooling to the job immediately. This means you receive superior work with minimal downtime and expense, backed by an industry-leading warranty.

Hatch & Kirk on-site services include:

- Troubleshooting
- Complete Engine Surveys

- Alignment Verification
- Engine Overhauls and Tune-ups
- Turbo and Blower Installations
- Complete Repair of Engine Blocks: Welding / Fabrication / Line Boring

Depend on Hatch & Kirk to provide quality and efficiency. Because when it comes to Field Service, our crew has really been around the engine block.

For more information on our abilities, call Chuck Johnson, Field Service Supervisor, at (800) 426-2818.

**HK HATCH & KIRK**  
Diesel Parts Specialists

5111 LEARY AVE. N.W. ■ SEATTLE, WA 98107

**The World's Largest Inventory of Slow & Medium Speed Engine Parts!**

Circle 221 on Reader Service Card

## TOI 92 Exhibition And Conference Scheduled For Miami, May 19-21

The emergence of the tourist submarine industry in the 1990s will be a primary topic at the three-day Tourist Oceanology International 92 (TOI 92) conference scheduled at the Hyatt Regency Hotel, Miami, Fla., May 19-21, 1992.

The choice of the tourist subma-

rine industry as a primary topic at the conference is not surprising, as the number of passengers carried in safety since the early 1980s exceeds 1.5 million in what promises to become a \$1 billion industry.

Other conference sessions will cover a wide variety of marine-related topics, including marketing, finance and insurance, and marine leisure spending trends in the 1990s.

### Tourist Submarines

The tourist submarine industry

is one set for a period of sustained and dynamic growth throughout the 1990s. With 15 new submarines being built over the next year alone by 11 manufacturers worldwide, tourist submarines are a maturing industry—one that has carried some 1.5 million passengers in safety since the early 1980s.

Currently, there are around 20 companies designing or building tourist submarines. Some 45 submarines will be in service worldwide within the next 18 months pro-

viding 1,275 passenger seats. Annual industry revenue is worth in excess of \$95 million.

Tourist submarine-related exhibits at TOI 92 will cover their design, manufacture and operations, consultancy, and components.

### Cruise Ships

The cruise shipping industry is growing at around 11 percent per annum, and to meet this demand more than 80 new cruise ships are on order worldwide. This will increase the world cruise ship passenger capacity by 50 percent by 1994—a clear indicator that cruise lines see more people with disposable time and discretionary funds choosing marine recreation vacations.

Increasingly, cruise ship operators are attracting younger passengers onto "floating fun palaces," and are exploiting the trend toward shorter holidays. Such cruises offer passengers active marine recreation opportunities, be it visits to remote tropical islands, tourist submarine trips or scuba/snorkeling activity.

### Semisubmersibles

There are currently 15 semisubmersibles off Australia's Great Barrier Reef. Resembling a submarine on the surface, passengers go below and sit beneath the waterline. Looking out through clear panels into shallow waters, with prolific ambient light and marine life. With high market acceptance, no surface support required, low maintenance and low construction costs, profitability can be extraordinarily high.

For further information on the TOI 92 conference, contact International Exhibitions Inc., 1635 West Alabama Street, Houston, Texas 77006, phone (713) 529-1616, fax (713) 529-0936.

## Northern New England Section, ASNE, To Host Symposium In Fall, 1992

The Northern New England Section of The American Society of Naval Engineers (ASNE) will host a technical symposium titled "The DDG 51 Class, a Surface Combatant for the 21st Century; From Design to Construction, the Evolutionary Process," in Brunswick, Maine, on September 23-25, 1992.

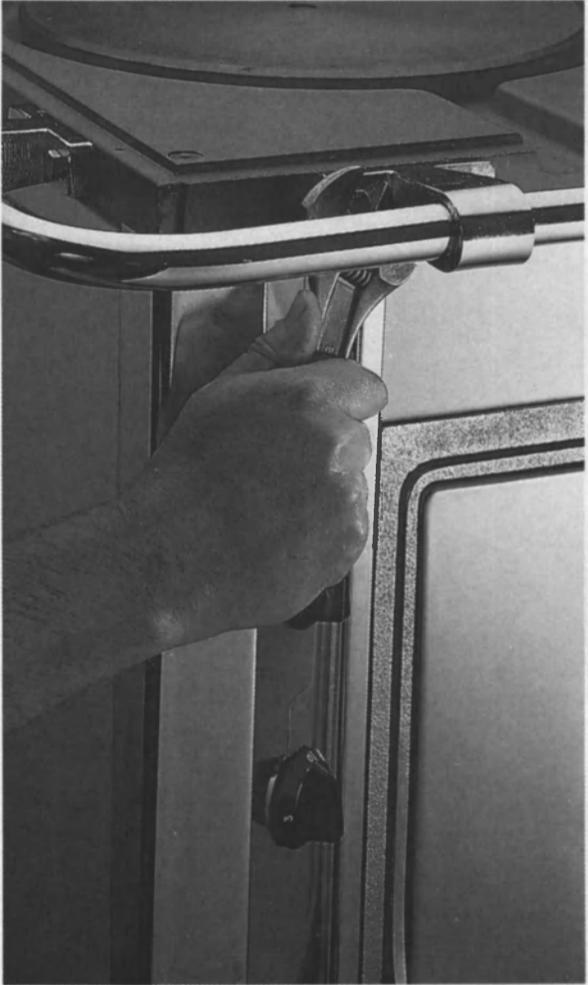
The symposium is being sponsored by the Supervisor of Shipbuilding, Conversion and Repair, USN, Bath, Maine, with cooperation from the American Society of Naval Engineers and participation from the Bath Iron Works Corporation.

The meeting will be held at the Atrium Inn and Convention Center in Brunswick, and will feature many presentations and speeches from prominent members of the marine industry.

For more information, contact **A.C. Hargreaves**, Steering Committee Chairman, ASNE-NNE, P.O. Box 206, Bath, Maine 04530, or call (207) 442-8466.

THE COMPLETE PACKAGE SUPPLY

FRYING • COOKING • HEATING • PROCESSING • REFRIGERATING • FREEZING



### At Beha Hedo Industries, We Use The Worlds Most Advanced Technology Creating Galleys.

For almost seventyfive years Beha Hedo has had an excellent reputation for making the worlds most solid and reliable galley equipment. Each item is carefully crafted by that most advanced instrument - Man.

In our Company, handcraft and machinery have worked together in perfect harmony throughout the years. Our company is quite a contrast to the conveyor belts and industrial robots of modern times. After almost seventyfive years we still prefer the production method which puts quality first.



Main office and production site Skien:  
Industrigaten 10, P.O.Box 1083, N-3701 Skien  
Tel.: +47 3 525546 Fax: +47 3 525736  
Production site Tønsberg: Fjordgaten 9, N-3100 Tønsberg  
Tel.: +47 33 13029 Fax: +47 33 10323

CRAFTED BY HAND IN NORWAY

Circle 335 on Reader Service Card

## WILLIAMS AND COMPANY, INC.

"The House of Metals"



Supplying the metal needs of American Industries for over 80 years

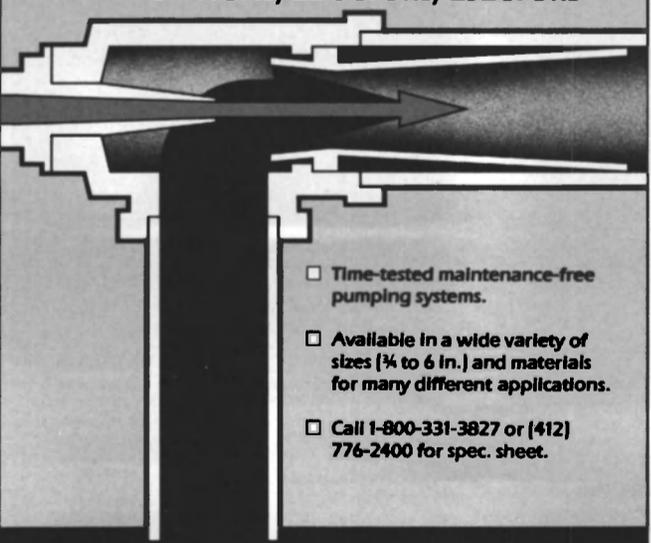
Aluminum • Boiler Tubes  
Copper Alloys • Nickel Alloys  
Stainless Steel •  
Tube & Pipe Fittings  
Welding Equipment & Supplies

Philadelphia, Pittsburgh PA, Providence RI &  
Charleston WV 800-245-4475  
Buffalo, Cleveland, Toledo 800-321-1500  
Cincinnati, Columbus, Louisville 800-543-8665  
Charlotte NC, Dallas TX, & Nashville TN 800-641-0240  
Seattle 800-544-9556

Circle 345 on Reader Service Card

## EUREKA

SYPHONS/EDUCTORS/EJECTORS



- Time-tested maintenance-free pumping systems.
- Available in a wide variety of sizes (¾ to 6 in.) and materials for many different applications.
- Call 1-800-331-3827 or (412) 776-2400 for spec. sheet.

AMERICAN METALLIC & MACHINE CO.  
A Division of THAXTON  
25 Leonburg Road, Mars, PA 16046 (412) 776-2400 1-800-331-3827

SINCE 1900



Circle 343 on Reader Service Card

## Gillespie Joins Dt As Project Engineer



Charles Gillespie

Diversified Technologies (Dt) of Chesapeake, Va., recently announced that **Charles Gillespie** has joined the firm where he will assume the position of project engineer for general naval architecture support and deck equipment design. A recent graduate of Virginia Tech, with a degree in ocean engineering, Mr. Gillespie is highly trained in the areas of marine systems and computer analysis.

## Sembawang Wins Contract Worth \$22.6 Million To Rebuild Tanker

Sembawang Shipyard recently received a reconstruction contract worth about \$22.6 million to rebuild the Alandia Surf, a 79,000-dwt tanker built by Mitsubishi Heavy Industries in 1981.

The vessel, owned by Alandia Tankers of Finland, was heavily damaged by a massive explosion which tore through its starboard wing tank. Fire completely gutted the ship's accommodation block and caused extensive damage to the ship's deck piping, cabling, navigational and electrical systems.

The complex nature of the repairs entails precise coordination and detailed planning.

The repairs will include removal of scrap metal; complete rebuilding of the accommodation block; some 2,500 tons of steel renewal; work on piping, cabling, deck machinery and fittings; and installation of new safety, navigational, communication and electronic instrumentation.

For free literature on the facilities and capabilities of Sembawang Shipyard,

Circle 35 on Reader Service Card

## MTU Offers Financing For Vessel Construction Through Mercedes-Benz

MTU North America, through the financial backing of Mercedes-Benz Credit Corporation, now is offering marine financing for customers building MTU-powered commercial vessels and yachts.

Since April 1, MBCC—a sister company under Daimler-Benz InterServices—has provided more than \$20 million in financing and loan commitments to manufactur-

ers. In conjunction with MTU, financing also is available to marine dealers and commercial operators.

MBCC, based in Norwalk, Conn., offers financial services exclusively for products of Daimler-Benz AG, which now includes MTU-powered yachts and commercial vessels.

**Craig Abraham**, MBCC director of vendor programs and project financing, views the association with MTU as a positive move both for MTU and MBCC, as well as the

individuals and companies who ultimately will benefit.

"The marine sector is a new arena for MBCC, and MTU's dominant position provides us an entry into the active, and highly visible top end of that business," said Mr. **Abraham**. "In addition, builders, owners and operators who previously were unable to fund new construction of MTU-powered vessels now can do so, resulting in incremental business not only for MTU

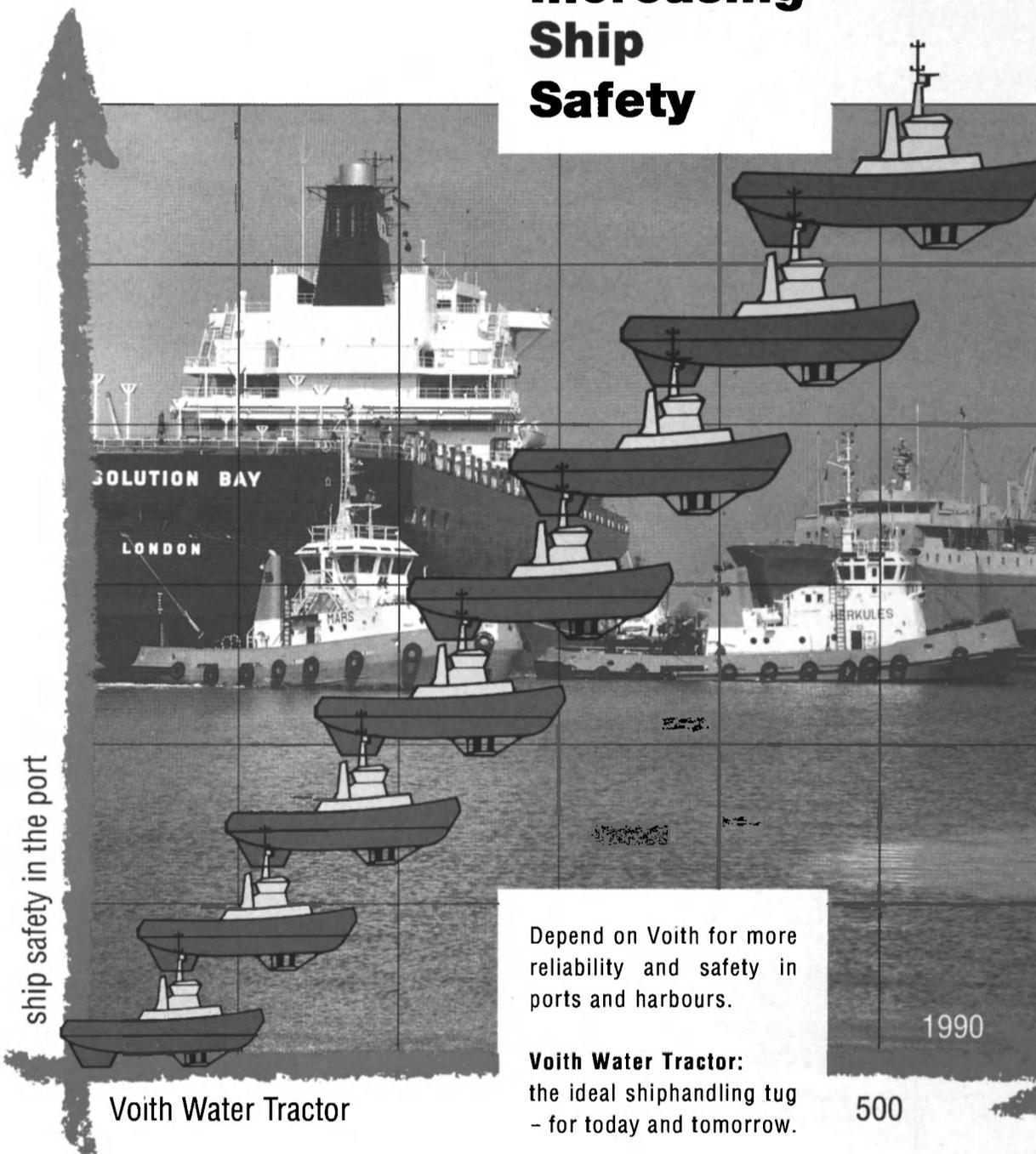
but for the marine industry overall."

MTU North America, incorporated in 1978 to provide compact, high-power-density marine diesel engines in North America and the Caribbean, is the marketing, sales and service subsidiary of MTU Friedrichshafen, one of the world's leading manufacturers of high-speed diesel marine engines.

For free literature detailing the financial services of MTU,

Circle 20 on Reader Service Card

## Increasing Ship Safety



ship safety in the port

Depend on Voith for more reliability and safety in ports and harbours.

**Voith Water Tractor:**  
the ideal shiphandling tug  
— for today and tomorrow.

1990

500

Voith Water Tractor

**USA**  
Voith Schneider America Inc.  
(Eli Shaprut)  
121 Susquehanna Avenue  
Great Neck, N.Y. 11021  
Telephone: 5 16-4 66 57 55  
Fax: 5 16-4 66 53 80

**Canada**  
Diamond Canapower Ltd.  
P.O. Box 5051, 1122 Pioneer Rd.  
Burlington, Ontario L7R 4 A7  
Telephone: 4 16-3 35 03 21  
Fax: 4 16-3 32 63 99

**J.M. Voith GmbH**  
**Marine Engineering Division**  
Postfach 19 40  
D-7920 Heidenheim  
Tel. (0 73 21) 37-0  
Fax (0 73 21) 37-71 05

# VOITH

We create new dimensions.

Circle 223 on Reader Service Card

## Sealift Head Predicts More RO/RO Ships Will Be Built In American Yards

Navy Vice Adm. **Francis R. Donovan**, head of the U.S. Military Sealift Command, recently told 120 Massachusetts Maritime Academy graduates, on the 100th anniversary of the state college's charter, that an unspecified number of roll-

on/roll-off ships will be built in American shipyards to meet the nation's military cargo needs.

In the past two fiscal years, some \$1.275 billion has been appropriated for new sealift ships, with another \$1.3 billion possible in the fiscal year that begins October 1, 1992.

Depending on results of a sealift mobilization study due next fall, the Navy will decide whether to own and operate the new ships, or lease

them out to liner companies.

Admiral **Donovan** said U.S.-flag vessels carried 80 percent of all military cargoes, including some 40,000 forty-foot containers during the peak December-February buildup during the Persian Gulf War sealift.

Among lessons learned from the sealift, he said, are that reserve ships of similar type should be kept together in outports near repair yards, and that the fleet needs more exercise. He said the reserve fleet needs

more roll-on ships than the 17 available for Desert Storm, and he agreed with Defense Secretary **Richard Cheney** that such ships might be for sale on the commercial market.

Admiral **Donovan** defended rates the military paid to charter privately owned vessels, noting that the General Accounting Office, Congress' investigations arm, had found the prices fair and reasonable for the conditions we were dealing with.

## HHI Is Leader In Bid To Build 8 Tankers For Venezuelan Owners

Industry sources indicate South Korean shipbuilder Hyundai Heavy Industries (HHI) is emerging as the most likely candidate to win a contract to build a series of eight tankers for Petroleos de Venezuela (PDVSA).

State-owned oil company PDVSA revealed plans earlier to double the size of its current fleet of 19 ships to 39 ships. The ships HHI is bidding on are eight 86,000-dwt tankers.

If HHI is successful in its bid, it would come as a severe blow to Spanish builder Astilleros Espanoles S.A., which is the only European bidder on the project among nine shipyards. AESA's proposal for the project would split the order, with four being built by the Spanish shipbuilder and four being built by other European yards.

## Cruise Traffic Surged In First Quarter Of 1991

Cruise Lines International Association, a cruise shipping trade group, reported that the number of people taking cruises rose strongly in this year's first quarter.

On ships operated by members of the Cruise Lines International Association, passenger traffic jumped 14 percent in the first three months of 1991 compared with the same period of 1990. The 860,000 passengers set a new record for the quarter.

The association said, at the same time, air travel for the period was down an estimated 6.7 percent, resort vacations were off 7 percent, and total international travel declined by 18.1 percent.

**James G. Godsman**, the association's president said the gain in cruise traffic reflects the cruise industry's continued commitment to expansion and its decision to promote aggressively into the recession.

The association predicts that more than 4 million people will take a cruise this year if current booking trends continue.

Cruise Lines International Association is the marketing and training organization of the cruise industry, representing 35 member companies, some 20,000 travel agency affiliates and almost 99 percent of North American cruise passengers.

March 29, 1991

**\$8,262,577**

Equipment Financing

was provided to



**Southern Towing Company**

Memphis, Tennessee

Financing provided by:

**USWEST FINANCIAL SERVICES**

Special Industries Finance Division  
Surface Transportation Group  
4435 Main Street, Suite 500  
Kansas City, Missouri 64111  
(816) 753-8250

Providing financing for marine equipment and related industries nationwide.

*This announcement appears as a matter of record only.*

March 20, 1991

**\$8,200,000**

Acquisition Financing

was provided to



**BENDER**

BENDER SHIPBUILDING & REPAIR CO., INC.

Mobile, Alabama

For the acquisition and mobilization of a 17,500 ton dry dock.

Financing provided by:

**USWEST FINANCIAL SERVICES**

Special Industries Finance Division  
Surface Transportation Group  
4435 Main Street, Suite 500  
Kansas City, Missouri 64111  
(816) 753-8250

Providing financing for marine equipment and related industries nationwide.

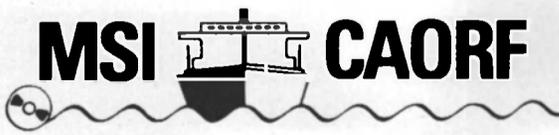
*This announcement appears as a matter of record only.*

Circle 325 on Reader Service Card

## TUG - BARGE SPILL AND DAMAGE PREVENTION

Simulator training for tug captains and mates. Maneuvering, traffic, docking and emergencies. Towing, in-notch or on-hip- 2 or 4 thous. hp tugs, 300-400 ft. barges. Various areas, docks, winds and currents, 3-5 days.

For information call Tom Garrigan at (516) 773-5603, FAX 5604.



U.S. Merchant Marine Academy  
Kings Point, NY 11024

Circle 346 on Reader Service Card

## MARINE HYDRAULICS INTERNATIONAL, INC. SHIP REPAIR AND SERVICES



\*COMPLETE REPAIR AND CONVERSION OF ALL TYPE SHIPS, TUGS AND BARGES  
\*VAPOR RECOVERY DESIGN, FABRICATION, INSTALLATION  
\*GAS FREEING  
\*DRYDOCK CAPACITY 3850 L.T. (326' X 81')  
\*2700' OF PIER SPACE - WATER DEPTH TO 27' MLW  
\*FULL PIERSIDE SERVICES; ELECTRIC, STEAM, SEWAGE, AIR, WATER (FIREFIGHTING/POTABLE)  
\*YARD CRANE CAPACITY TO 150 TONS

LOCATED ON THE EASTERN BRANCH OF THE ELIZABETH RIVER, NORFOLK, VA

Executive Offices:  
543 East Indian River Road  
Norfolk, VA 23523  
Tel (804)545-6400 Fax (804)545-8169

Circle 295 on Reader Service Card



# HOBART XL-525 STANDS UP TO ANY OFFSHORE ENVIRONMENT.

From shore to shore, Hobart® arc welding systems provide the offshore pipeline and petro-chemical industries with advanced welding technology. This industry-approved tubular wire produces extremely low diffusible hydrogen levels and is designed for Argon/CO<sup>2</sup> gas applications. The XL-525 excels both in C.T.O.D. and Charpy V-Notch

values withstanding impacts of up to 80 ft./lbs. at -20°F. In addition to offshore environmental jobs, XL-525 can also be used in shipbuilding, pressure vessels, storage vessels, structures, earth moving equipment and piping. For welding solutions that stand the test of time offshore or on... depend on Hobart.

Hobart is a registered trademark of Hobart Brothers Company, Troy, Ohio USA

Circle 30 on Reader Service Card

**HOBART**<sup>®</sup>  
WELDING PRODUCTS

## Boats & Barges

### SeaArk Marine Delivers Caterpillar-Powered Workboat To State Of Maryland

SeaArk Marine Inc., Monticello, Ark., recently delivered a new workboat to the Maryland Transportation Authority. The vessel will be used for the inspection and maintenance of the seven-mile Lane Memorial Bridge, which spans the Chesapeake Bay.

The 36-foot-long by 13-foot-wide workboat (Model 3612-V "Protector") is constructed of all-welded marine aluminum. Powered by twin V-8 Caterpillar 3208TA diesel engines, the boat is capable of running at speeds in excess of 30 mph. The V-hull is protected by 3-inch half-pipe

and a 4-inch heavy-duty extruded rubber bumper at the sheerline. The vessel is outfitted with two large push knees at the bow for pushing barges and to aid in docking during inspection and repair operations. A swim platform off the transom of the boat is designed to accommodate divers and provide a work area near the waterline.

Maryland's new workboat features a 17-foot-long, 9-inch-wide cabin which accommodates 12 passengers plus the operator. Inside, a heater/defroster and weathertight door are provided for passenger com-



SeaArk's Model 3612-V Protector is shown with optional bow push knees and aft work platform. The spacious crew cabin is ideal for passengers or survey equipment.

fort. A raised pilothouse provides increased visibility for the operator. For free literature on the facili-

ties and capabilities of SeaArk Marine,

Circle 23 on Reader Service Card

### Hyundai, Nor-Control To Establish Marine Computer Center

Hyundai Heavy Industries (HHI) of South Korea and Nor-Control Automation recently signed a 5-year agreement to promote marine automation and navigation in Korea. Part of the agreement calls for the

establishment of a marine computer center, which will be staffed by both companies. The center will run training courses for shipyards, as well as servicing Nor-Control products.

Under the agreement, Hyundai will be responsible for the application of software engineering, commissioning and services and Nor-Control will manage technology and production.



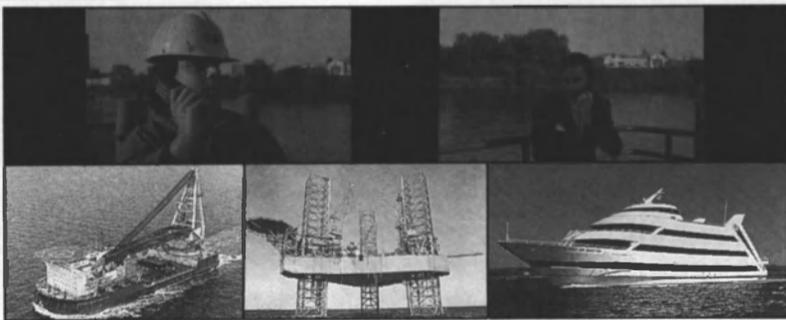
#### CELLULAR CREDIT CARD TELEPHONE SERVICE

CELLNET provides cellular pay telephone service for ferries, barges, dining yachts & other marine applications.

- Free cellular credit card pay phones
- No long term financial obligations
- Timely hook-up
- No phone bills to handle
- No maintenance expenses
- Eliminates administrative burdens
- Callers charge phone calls directly to their major credit cards

CallAboard® provides the best way for onboard employees, passengers & customers to stay in telephone contact without costing most vessel operators any money. We deliver state-of-the-art cellular pay phone equipment, installation, service and bill processing FREE of charge to qualified vessel operators.

CallAboard® eliminates any requirement for vessel operators to time calls, oversee billing, perform service or attempt collection. CallAboard® will handle all of your cellular communication needs and allow everyone onboard to remain in touch with those ashore!



Your link to the outside world  
to your destination...to your office... to your family...to your friends!

Cellnet Corporation  
400 Main Street  
Stamford, CT 06901  
Fax 203-359-6826  
Call 203-359-6333 ext. 307

Circle 263 on Reader Service Card

## ABS Classification makes sense



### Excursion Boat Owners know...

There's a reason why savvy owners and operators insist on ABS classification. In fact, more than one reason:

- ✓ Added sense of security for passengers
- ✓ Third party assurance of a vessel's structural and mechanical integrity
- ✓ Certification assistance for underwriting, Coast Guard and Governmental Regulatory authorities

That's why more and more excursion boat owners and operators—boats building and now in service—turn to ABS for the vital assurances in the areas of safety and operating economy that classification brings.

Call ABS to see what Classification can mean for you.



Offices in 159 Major Ports

Corporate Office: 45 Eisenhower Drive, Paramus, NJ, USA 07653-0910  
Telephone: (201) 368-9100 Telex: RCA 232099 ABNY UR Fax: (201) 368-0255

Circle 253 on Reader Service Card

Maritime Reporter/Engineering News

## IMO Moves Ahead On Double-Hull Tankers

The International Maritime Organization (IMO) recently agreed to greatly alter international legislation covering tanker design, thus paving the way for the introduction of double-hull ships.

In intense negotiations, IMO's Marine Environment Protection Committee (MEPC) agreed to distribute a set of proposals to member governments which provide an outline for the introduction of double-hull tankers and requirements for the retrofits of existing tankers.

The retrofit issue is one of the most radical proposals being put forth. Although double-hull tankers that have been built since the Exxon Valdez accident will be exempt, even if they don't meet the new requirements, shipowners of current single-hull ships would face the options of either scrapping vessels or undertaking expensive retrofits.

The new proposals under consideration would require all tankers of 3,000 deadweight tons and up to be fitted with a double hull with a minimum air space of 1 meter or about three feet between hulls.

MEPC, however, in a concession to the oil industry, has agreed to consider alternate designs if they are proven to provide the same protection as a double hull.

A study group funded by industry and under the auspices of the IMO will examine the effectiveness of alternative designs. The group will report its findings by the end of the year.

The results of the study will help the MEPC finalize the new regulations at the next meeting. They would probably come into force in 1993 or 1994.

## Coast Guard Selects 19 Cities For Storage Of Oil Spill Equipment

In accordance with the Oil Pollution Act of 1990, the U.S. Coast Guard recently released the list of cities it has selected for the storage of marine oil spill response equipment such as skimmers and booms.

The cities selected by the Coast Guard are: Boston, Mass.; New London, Conn.; Portsmouth, Va.; Charleston, S.C.; Miami, Mayport, and Tampa, Fla.; New Orleans, La.; Detroit, Mich.; Corpus Christi and Galveston, Texas; Long Beach and Eureka, Calif.; Seattle, Wash.; Honolulu, Hawaii; Astoria, Ore.; Anchorage, Alaska; and San Juan, Puerto Rico.

The petroleum industry has responded to OPA by forming the Marine Spill Response Corporation, a non profit organization, which is setting up a network of five oil spill response centers around the country. Port Hueneme, Calif., has been selected as one of the sites already. Negotiations are also underway with Miami as a possible second site.

## Megapulse 'Accufix 500' Loran Receiver Selected For U.S. Navy Programs

Megapulse, Inc., Bedford, Mass., designer and manufacturer of solid-state Loran-C systems, has had their Accufix 500 precision monitoring and survey grade Loran-C receiver selected by the U.S. Navy for the

M.S.O. (oceangoing minesweeper), COOP (craft of opportunity), and MCM (mine countermeasures) programs.

The Accufix 500 Loran receiver is specified for the MHC-51 (mine hunter coastal) class program.

This will ensure a common Loran-C sensor for ease of training and program management throughout the present and planned U.S. Navy mine-warfare fleet. After the cur-

rent contract completion, a total of 95 receivers and notch filters will be in operation. Some of these units were operated by the U.S. Navy during the Iran/Iraq war for 24 hours a day precision navigation requirements.

For free literature on Megapulse solid-state Loran-C systems,

Circle 47 on Reader Service Card



## The world's top shipbuilders turn to New Zealand for waterjets

With waterjets the preferred propulsion system for new age fast ferries, work and patrol boats, commercial influences demand reliability and engineering excellence. That's why more and more shipbuilders are turning to New Zealand, the home of Hamilton Jet.

For Japan, a nation leading the way in advanced technology and quality assurance

techniques, the only choice when it came to selecting the propulsion system for a new ferry was Hamilton Jet. A 33 metre, 35 knot passenger ferry built by Goriki Shipyard, "Nyenufabushi" was commissioned to carry passengers quickly between offshore islands. Crucial design factors were high speed, reliability, passenger comfort and outstanding manoeuvrability. Construction had to be certified to NKK standards. All these were met using the advanced technology and innovative features found only in Hamilton waterjets, adding "Goriki Shipyard" to an impressive and ever growing reference list of satisfied customers worldwide.

Hamilton Jet has built its reputation on providing the best marine jet propulsion systems anywhere in the world. That's why designers from the most technically advanced nations recognise New Zealand quality and expertise and have confidence in specifying Hamilton Jet.



## Highly Specified. Hamilton Jet

Manufactured in New Zealand by CWF Hamilton and Co Ltd, P.O. Box 709, Christchurch, New Zealand, Ph: +64-3-3484-179, Fax: +64-3-3486-969.  
Worldwide Distributors -- Italy, Spain, UK, USA, Canada, India, France, Germany, Holland, Australia, Finland, Hong Kong, Indonesia, Korea, Norway, Singapore, Sweden, Taiwan, Japan, Malaysia, Thailand, Denmark, Philippines, Panama.

CWF0034

Circle 344 on Reader Service Card

## Marine Computers '91 To Be Held In Boston, September 26-27

The New England Section of the Society of Naval Architects and Marine Engineers (SNAME) will hold Marine Computers '91, the second symposium on computer applications in the marine industry, at the Boston Marriott, Burlington,

Mass., on September 26 and 27.

The symposium will be divided into four sessions, with two presented each day. On September 26, in the "Analysis and Design" session, papers covering such items as design optimization techniques, propulsor design, computerization of stability tasks and practical interaction among commercial marine design software packages will be presented. On the same day, in the "Shipboard Applications" session,

papers will cover the use of computer technology for machinery monitoring and diagnostics, bridge automation, graphical user interfaces, navigation optimization and on board training.

On September 27, the first session will focus on CAD/CAM, with papers covering artificial intelligence applications in ship design and construction, shipbuilding project management applications and geometric modeling. The sec-

ond session will detail computer animation and simulation used in such applications as underwater vehicles and cyclic pitch propellers.

For further information, contact: Prof. Douglas Carmichael, Dept. of Ocean Engineering, MIT, Room 5-213, Cambridge, Mass. 02139; telephone: (617) 253-4316.

## Ferry Conversion Nears Completion At Marine Hydraulics

At the Port of Norfolk, Va., Marine Hydraulics International, Inc., is in the final stages of completing a conversion package on the ferry Virginia for the Commonwealth of Virginia. The conversion package includes: complete electrical repowering from DC to AC, fabrication and installation of two pilothouses and salon, and complete renewal of both car and salon decks.

To accomplish all underwater repairs to the vessel, MHI utilized Tidewater Construction Corp.'s floating heavylift derrick Samson to lift the 300-ton ferry from its pierside berth to a repair berth prepared on land.

Recent projects at Marine Hydraulics International include the lay-up preparation of the converted T-2 SS Washington for American Foreign Shipping Co. Inc., for her return to RRF status, installation of vapor recovery systems on two tank barges, and a number of U.S. Government contracts.

One noteworthy project involved post-delivery repairs and modifications on board the Navy Aegis destroyer USS Arleigh Burke (DDG-51) for Bath Iron Works. Marine Hydraulics International has provided this service and support for BIW during the last several years on an exclusive basis for all types of vessels constructed by the Maine shipbuilder.

Marine Hydraulics International maintains full service repair facilities with pier capacities of up to 600 feet in length with water depths to 27 feet at mean low water.

For further information,

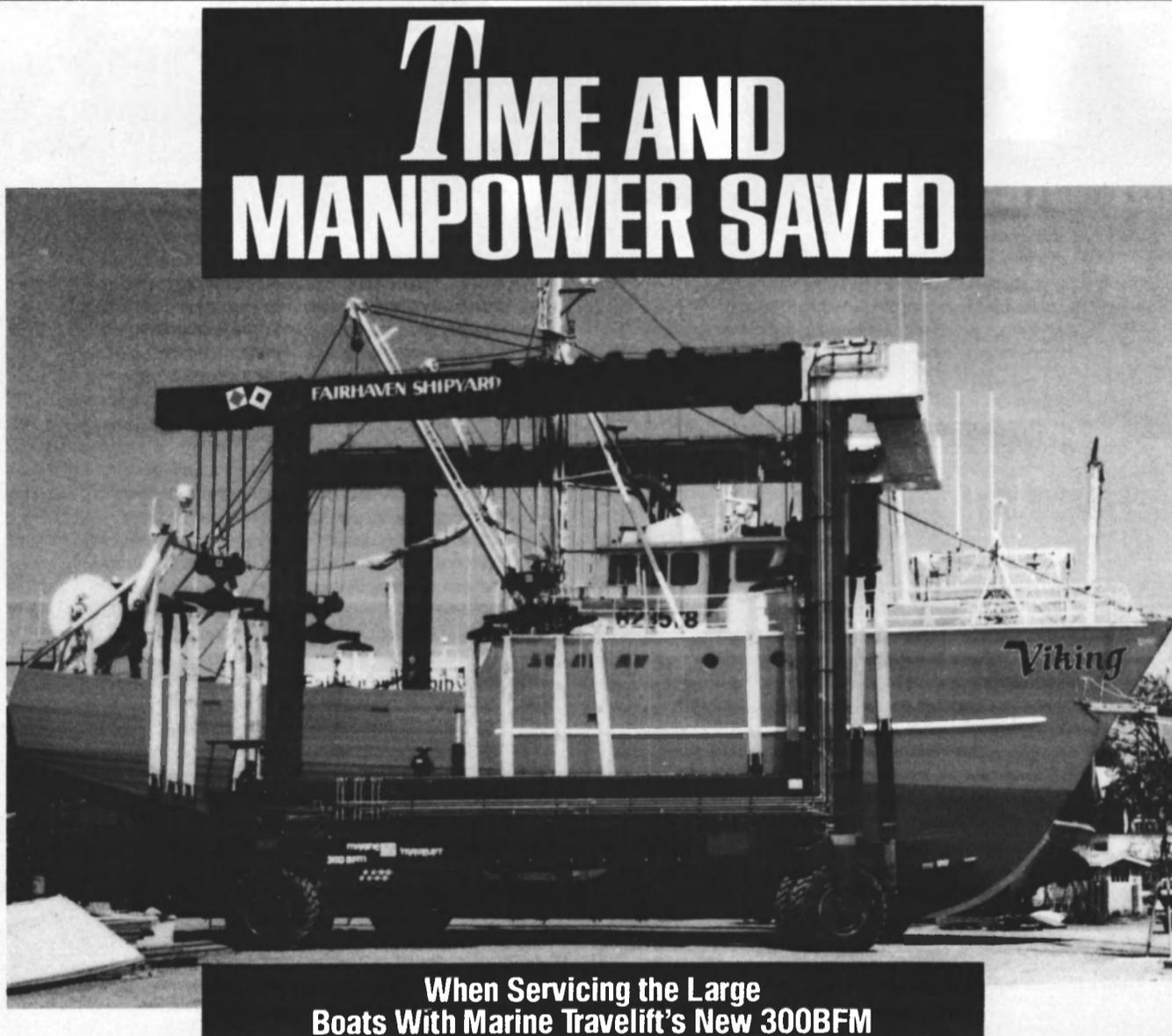
Circle 61 on Reader Service Card

## NCTI To Commercialize Electronic Mufflers For Detroit Diesel Engines

A worldwide joint effort to commercialize diesel engines equipped with electronic mufflers has been announced by Noise Cancellation Technologies, Inc. (NCTI) and Detroit Diesel Corporation.

The agreement culminates a two-year informal relationship between NCTI, an innovator in active noise reduction systems, and Detroit Diesel, a leading heavy-duty diesel engine manufacturer.

According to the agreement, the two companies will demonstrate NCTI's active noise control technology on Detroit Diesel engines in field tests of various applications.



### When Servicing the Large Boats With Marine Travelift's New 300BFM

Marine Travelift's 300BFM Mobile Boat Hoist, with its 300 ton capacity, will permit fast, safe haulouts and launchings.

Features of the 300BFM include —

- Adjustable open end and center sling sets for efficient handling of multi-length, heavy boats.
- 90° steering on closed end wheel set. ● Eight wheels driving. ● Ground bearing pressures comparable to much smaller hoists. ● Operator's compartment convenient for the operator and provides for best view of load and surroundings at all times. ● Handles boats to 150 ft. with beams to 32ft. ● Eliminates need of waiting for railway to clear.

For complete information and specifications on the 300BFM or our complete line of mobile boat hoists with capacities from 15 to 500 tons, contact Marine Travelift, Inc., 49 E. Yew St., P.O. Box 66, Sturgeon Bay, WI 54235 USA ● 414-743-6202 ● Telex: LIFTS STGB 260056 ● FAX: 414-743-1522.

*"Over 2,000 Units In Service Worldwide!"*

**MARINE TRAVELIFT<sup>INC.</sup>**

Model 300BFM lifts a 270 ton boat at Fairhaven Shipyard, Fairhaven, MA.

Circle 24 on Reader Service Card

For quiet, vibration-free operation and improved service life in passenger, commercial and naval vessels.

# LO-REZ

Shown are six 38RT/HLF flexible coupling assemblies as used on naval propulsion systems.

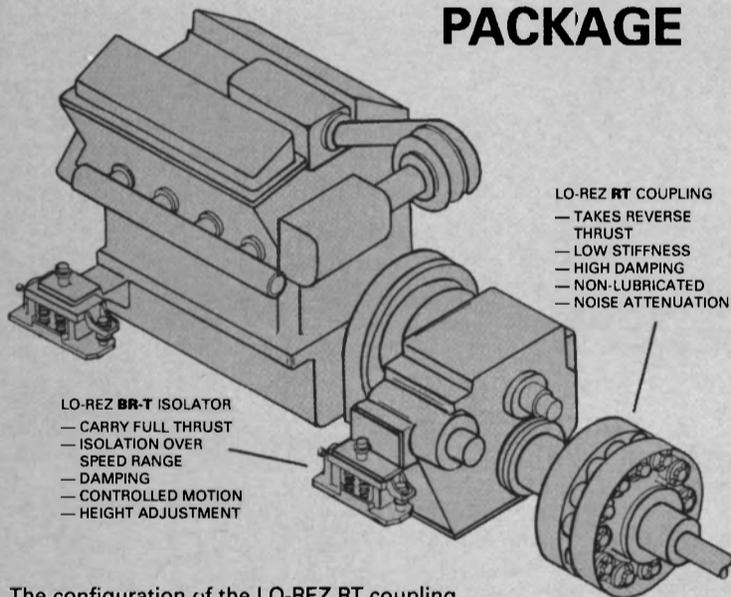
The 38RT couplings, which utilize elastomer cylinders pre-loaded in compression, have three dimensional lateral and torsional flexibility. They provide a high degree of noise attenuation, there being no metal-to-metal contact.

The HLF multiple-lamination coupling components have high Lateral Flexibility and allow the ship propulsion systems to accommodate very high lateral (and associated) excursions.

The particular assemblies shown here have been qualified for accelerations in excess of 35.0 G.



## THE LO-REZ 'SOFT MOUNT' PACKAGE



LO-REZ RT COUPLING  
 — TAKES REVERSE THRUST  
 — LOW STIFFNESS  
 — HIGH DAMPING  
 — NON-LUBRICATED  
 — NOISE ATTENUATION

LO-REZ BR-T ISOLATOR  
 — CARRY FULL THRUST  
 — ISOLATION OVER SPEED RANGE  
 — DAMPING  
 — CONTROLLED MOTION  
 — HEIGHT ADJUSTMENT

The configuration of the LO-REZ RT coupling provides many important characteristics such as two directional thrust and torque capability, shock absorption, **excellent noise attenuation**, high misalignment capability, etc.

The LO-REZ BR-T isolators have special thrust carrying devices which permit them to carry full thrust load without 'locking up' so that they are capable of **providing effective isolation of the engine-generated vibration over the entire speed range**.

With the installation of the LO-REZ *soft mount* package there is no requirement for a thrust bearing in the low-speed shafting so that the full thrust is transmitted through the RT coupling into the gearbox thrust bearing, and out to the gearbox/engine or raft brackets, to the LO-REZ isolators.

Our goal and commitment is to provide the highest possible quality of vibration control products and services to the Marine Industry.

*T.W. Spaetgens*  
 T.W. Spaetgens, P.Eng., Pres.



**1. 'MISS VIRGINIA BELLE'**

*Your vibration-control products are the best on the market. I would not build another single-hulled passenger vessel without your Soft Mount System. LO-REZ has gained a lot of prominence.*

**Frank Patti**, Owner, Patti Shipyard, Inc.

**2. 'ISLAND QUEEN V'**

*Passengers are constantly remarking on the quiet and vibration-free performance. I will often take them down to the engine room and point to the LO-REZ Twin Isolation Systems.*

**Ron Anderson**, Owner, 30,000 Island Cruise Lines, Inc.

**3. 'TSRV' VESSELS**

*These Torpedo and Ship-ranging vessels operate in an acoustically-sensitive area. The sophisticated LO-REZ systems make a significant contribution towards the quietness and smoothness, meeting various noise criteria neatly.*

**Malcolm Wall**, P.Eng., TSRV Project Manager, National Defence Hdqrs., Ottawa

**4. 'ODYSSEY'**

*I found the LO-REZ system to more than meet my expectations, (it is) uncanny, like a sailboat or being towed. When standing on the bridge, I have to look at my instruments to see if the engines are running, so quiet and vibrationless is the machinery.*

**Capt. John B. Buwen**, Master, M/V Odyssey

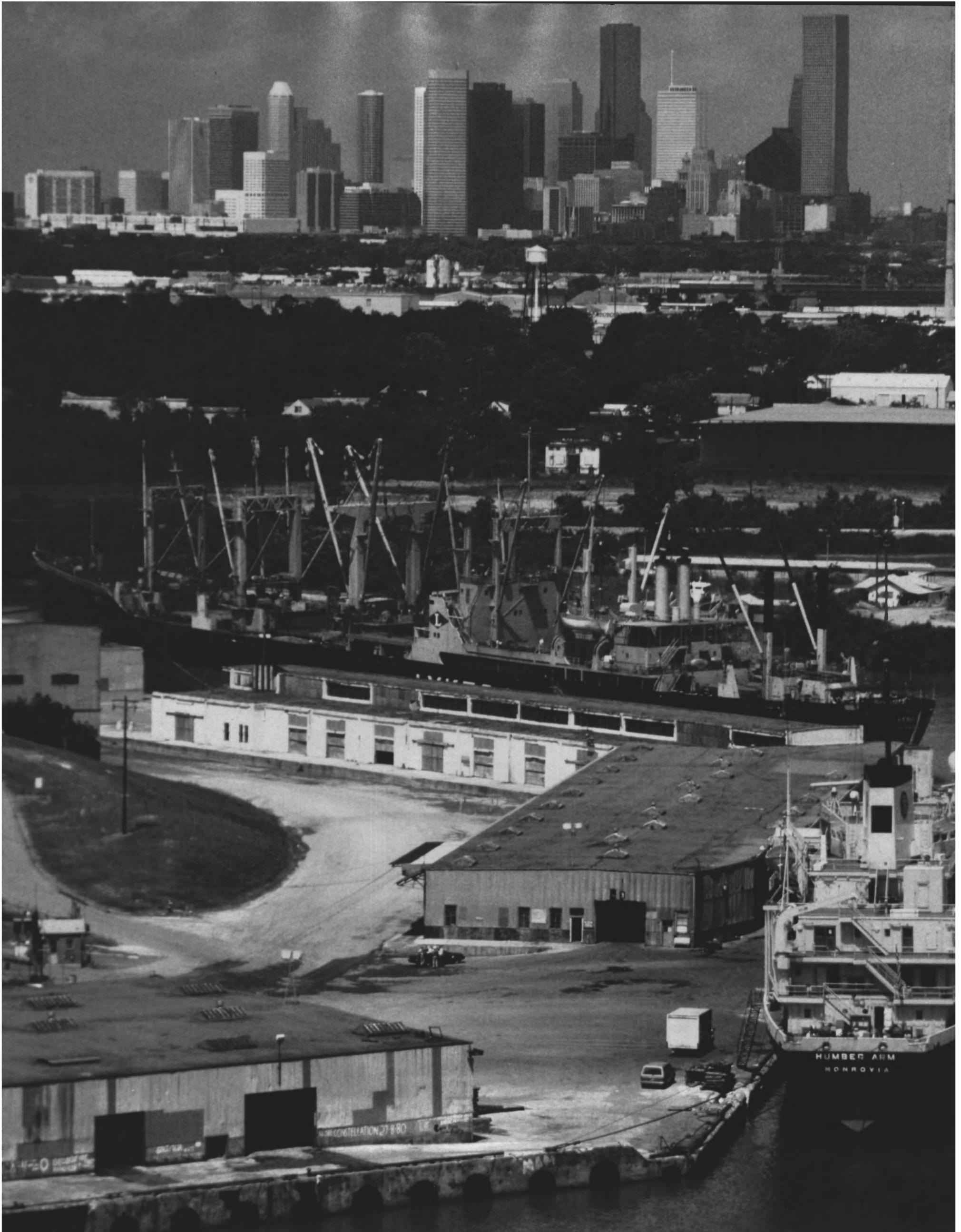


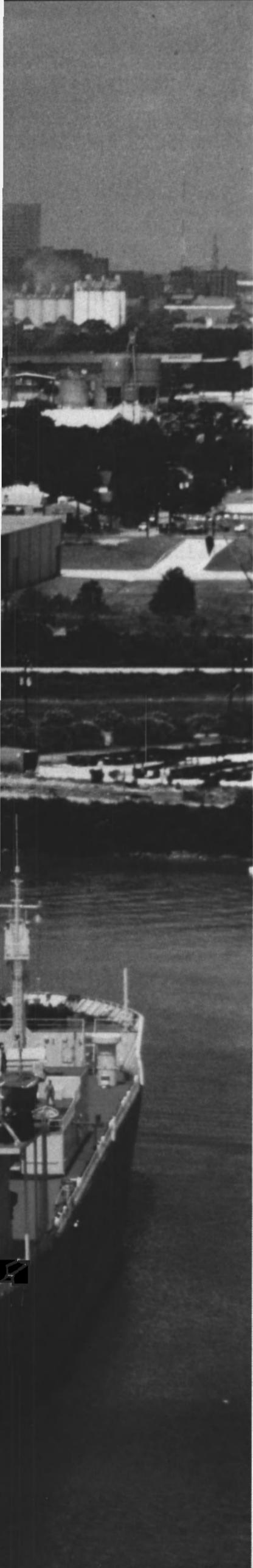
Circle 334 on Reader Service Card

Designed & Manufactured by

**LO-REZ VIBRATION CONTROL LTD.**

156 WEST 8TH AVENUE, VANCOUVER, B.C., CANADA V5Y 1N2 • TELEPHONE (604) 879-2974 • FAX (604) 879-6588





# NWCC

## A Preview

### National Waterways Conference & Exhibition Set For September 18-20 In Houston, Texas

The National Waterways Conference's 1991 Annual Meeting and Waterways Exposition, scheduled on September 18-20 at the Doubletree Hotel on Post Oak Boulevard in Houston, is expected to attract more than 400 water transportation leaders from all parts of the nation.

For the inland waterways industry, NWC's prestigious three-day annual meeting is one of the highlights of the year. The organization last met in Houston in 1983.

Planning for this year's convention began a year ago at the 1990 annual meeting when conference chairman **Berdon Lawrence** appointed **Dennis L. Kirwin**, vice president and general manager of Midland Marine Corp., as general arrangements chairman.

Also involved in the initial planning session was **J.D. (Johnnie) Laman**, manager of marine and international operations for DOW USA, who is the National Waterways Conference's vice chairman.

"We will be examining some of the most timely and troubling issues confronting our industry today," said Mr. **Lawrence**, who is president of Hollywood Marine, Inc., Houston, Texas. On the agenda will be such issues as addressing navigation infrastructure needs, determining investment priorities, heading off higher user taxes, and surviving environmental challenges.

Specifically, the NWC Annual Meeting will focus on pending projects such as the Sargent Beach erosion problem on the Gulf Intracoastal Waterway, the proposed use of Inland Waterways Trust Fund revenues to fund rehabilita-

tion projects, whether the industry is nearing the "saturation point" for waterway user taxes, and if a broad-scale reorganization of the Army Corps of Engineers is warranted.

Six discussion programs and two luncheons with widely known speakers are planned. In addition, there will be a number of special reports, breakfast sessions and business meetings.

Waterways exhibits will be set up in a ballroom adjacent to those where the general sessions will take place. Coffee breaks and pre-luncheon receptions will be held in the exhibit area.

For those who have exhibited at prior NWC conventions, a special discount is being offered. NWC members are also eligible.

The convention will kick off at 2 p.m., September 18, when the Waterways Exposition will open. There will also be committee meetings, registration and early arrivals' reception. It will be held in an open-air area surrounding the hotel pool.

Chairman **Lawrence** will gavel the first general session to order the next morning.

In his annual report, NWC president **Harry N. Cook** will review the imposition of almost a dozen waterway user fees, charges and taxes during the last decade. And, making use of a slide presentation, he will trace the role of waterway tolls in influencing a number of historical events.

Following will be two morning and two afternoon discussion sessions, each running just over an hour. The opening luncheon will take place at noon, with Mr. **Lawrence** presiding.

On Thursday evening, NWC members and guests will travel to the Houston City Dock, Pier 22, to board the *Colonel*, a paddlewheeler based in Galveston, for dinner cruise

on the Houston Ship Channel. When the boat reaches San Jacinto State Park, they will disembark for the trip back to their hotel.

Commissioned by the Moody Foundation of Galveston, the *Colonel*, a 152-foot, 800-passenger paddlewheeler, is a Victorian-style riverboat, built by Moss Point Marine, Inc., Escatawpa, Miss., in 1985 at a cost of \$3 million. She is named in memory of Col. W.L. Moody Sr., a Galveston business leader who died in 1920. Her crew is attired in authentic recreations of U.S. Navy uniforms of the 1860s.

On Friday morning, September 20, Maj. Gen. **Arthur E. Williams**, the Army Corps of Engineers' recently named Civil Works Director, will bring attendees up to date on the agency's civil works program, emphasizing ongoing navigation construction and future O&M plans.

Two morning discussion programs and the closing luncheon will follow. NWC vice chairman **Laman** will preside at the luncheon.

For spouses of those attending the NWC meeting, a special tour and luncheon has been arranged.

At least three other organizations plan meetings at the same hotel during the course of the NWC convention. These include the Arkansas Waterways Commission, Inland Rivers Ports & Terminals, Inc., and U.S. Section of the Permanent International Association of Navigation Congresses (PIANC).

NWC's headquarters, the Doubletree Hotel, is a modern 448-room hotel located in the famous Galleria area of Houston.

For registration information, details on special hotel and airfare rates, or an exhibitor's kit, contact: NWC, 1130 Seventeenth Street, NW, Washington, D.C. 20036; telephone: (202) 296-4415; or fax: (202) 835-3861.

The Port of Houston. In the background, skyscrapers of the nation's fourth largest city, site of the National Waterway's Conference's 1991 Annual Meeting & Exhibition.

## NWC ANNUAL

### Who's Who at NWC

Now rounding out his second year at NWC's helm, **Berdon Lawrence** is widely known in the waterways industry. He is president of Hollywood Marine, Inc., a firm operating some 100 towboats and 230 tank barges engaged primarily in moving petroleum products and petrochemicals along the Gulf Intracoastal Waterway.

A former chairman of American Waterways Operators, he is a newly appointed member of the Inland Waterways Users Board, an 11-member body which advises the Congress and the President on inland waterway investment priorities. He has been NWC's chairman since September 1989.

In line to succeed him in the top post is **J.D. (Johnnie) Laman**, manager of marine and international operations for DOW USA, a major waterway shipper, who is NWC's vice chairman. With Dow since 1957, he has been in his present position for the last 11 years.

**Harry N. Cook**, now in his 27th year as NWC's chief executive, has been the organization's president since 1978. Initially, he was managing director and then executive vice president. He is a former newspaper reporter and governor's press secretary.



NWC members and guests will board the 152-foot, Caterpillar-powered paddlewheeler Colonel on Thursday evening, September 19, for a dinner cruise on the Houston Ship Channel.

**W. Richard Christensen**, vice president, marine/surface transportation and facilities of Ashland Petroleum Co., Ashland, Ky., is NWC's first vice president. Ashland operates both towboats and tank barges.

NWC has four vice presidents: **Wallace A. Gieringer**, executive director of the Port of Pine Bluff, Ark.; **Dennis L. Kirwin**, vice president and general manager of Midland Marine Corp., Houston; **Charles F. Lehman**, vice presi-

dent of American Commercial Barge Line Co., Jeffersonville, Ind.; and **Donald G. Waldon**, administrator of Tennessee-Tombigbee Waterway Development Authority. **William J. Hull** is vice president and counsel.

**H. Nelson Spencer III**, publisher of The Waterways Journal, is NWC's secretary and **Donald C. McCrory**, director of the Memphis and Shelby County (Tenn.) Port Commission, is treasurer.

The organization's executive com-

mittee includes 15 members, and there are 75 on the board of directors. Directors serve staggered, three-year terms and represent five membership categories: water carriers, waterway shippers, shipyards and other waterway services, port authorities and other public members, and associations.

Members of the executive committee include: **Nicholas J. Barchie Jr.**, president, Warrior & Gulf Navigation Co.; **J. Ron Brinson**, president and chief executive officer, Port of New Orleans; **W.R. (Ron) Coles**, president W.R. Coles & Associates; **Brian L. Garrity**, supervisor-water distribution system, IMC Fertilizer, Inc.; **Keith R. Gosney**, vice president-marketing, Merchants Transportation, Inc.; **Carl B. Hakenjos**, senior marine consultant, Waldemar S. Nelson & Co.; **Gary P. LaGrange**, executive director, Port of West St. Mary; **Gary L. Mills**, assistant vice president, Cargill, Inc.; **Offa S. Nichols**, president, Warrior-Tombigbee Development Association; **R. Barry Palmer**, executive director, DINAMO; **Robert W. Portiss**, port director, Tulsa Port of Catoosa; **Gale R. Rhodes**, manager-river transportation, AEP Fuel Supply; **T. Mark Simmons**, president, Yazoo-Mississippi Delta Levee Board; and **L.E. (Les) Sutton**, president, Ingram Barge Co.



95' Aluminum Patrol Boat



167' Aluminum Crew Boat



100' Aluminum Dinner Boat



110' Aluminum Dinner Boat



90' Whale Watch Boat



## After 25 Years



### ...Our Reputation for Innovation and Excellence Continues

A company's reputation is its most valuable asset...in a family owned business, with three sons whose futures ride on that reputation...it's essential to maintain the highest of standards.

**When** you need innovation...Gulf Craft has set the standards for years. From designing and building the first quad, five and six screw crewboats, and the world's first two largest crewboats in the industry...to developing catamaran dinner and cruise vessels...Gulf Craft engineers have the expertise to custom design a vessel to fit your requirements.

**When** you need experience...the Gulf Craft craftsmen have over 470 years of combined skill and have been a part of Gulf Craft for many years. The stability of our company means you can depend on every one of us.

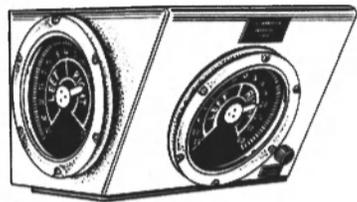
**When** you need a vessel...call us...we'd like to do business with you.

Gulf Craft, Inc...A Family Tradition of Vessel Excellence...Now

## Gulf Craft, Inc.

3904 Highway 182 • Patterson, LA 70392  
Phone (504) 395-5254 • FAX (504) 395-3657  
Member NAPVO

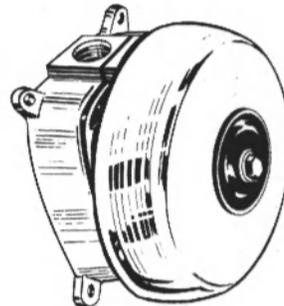
# The Diversity Of Hose-McCann



RUDDER ANGLE INDICATOR



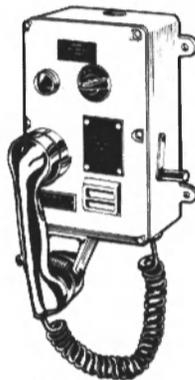
COMMERCIAL DIAL TELEPHONE



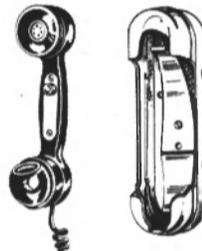
AUDIBLE SIGNALLING DEVICE



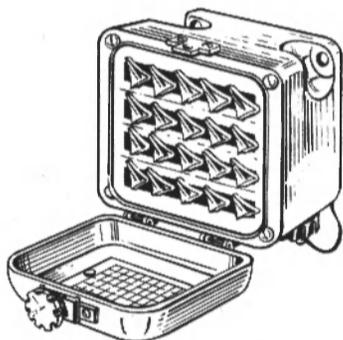
HEAD / CHEST SET



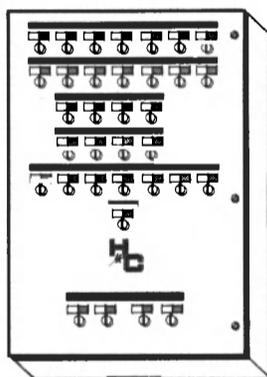
SOUND POWERED TELEPHONE



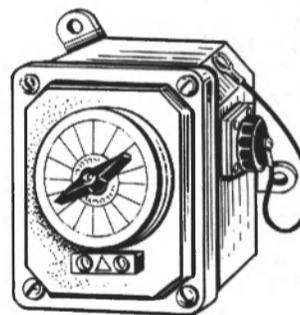
HANDSET & HOLDER



SWITCH BOX



CUSTOMIZED PANEL



ILLUMINATED ROTARY SWITCH

Hose-McCann Telephone Co., Inc., recognized for more than 50 years for the safety and reliability of its communications systems, fills all the equipment needs of vessels throughout the United States and other maritime nations.

Always foremost in the production of sound-powered telephones and shipboard monitoring equipment, Hose-McCann takes the lead in diversity by becoming one of the first manufacturer-suppliers in the industry. Hose-McCann's ready inventory of supplies includes a full array of commercial marine, as well as Navy electrical and mechanical products.

Whatever your shipboard need may be, Hose-McCann will fill it.



**HOSE-McCANN TELEPHONE COMPANY, INC.**

9 SMITH STREET • ENGLEWOOD, N.J. 07631 ☎ 201/567/2030 FAX • 201/567/4117

# User Taxes And Fees Take Billion Dollar Bite Out Of Shipping Industry

## Burden Could Escalate To \$2 Billion If Congress Acts

By Harry N. Cook, President  
National Waterways Conference, Inc.



Harry N. Cook

When shallow-draft waterway user charges were moving through the Congress in the mid-1970s, largely on grounds of promoting "competitive equity," inland navigation interests warned that deep-draft taxes would be next.

Not so, argued coastal ports and ocean carriers. Competitive equity didn't apply to them, they contended, because there was no viable alternative to deep-draft shipping.

Maybe so. But with the precedent already established on the inland waterways, user taxes were quickly slapped on deep-draft commerce in the Reagan Administration. The only justification which Congress needed was far more practical: cost recovery.

In an era of shrinking Federal domestic spending and mushrooming national deficits, the cost-sharing argument was compelling.

After 200 years of virtually toll-free water transportation, the U.S. shipping industry now faces at least a dozen various user taxes and user fees. These charges have been imposed in just one decade.

In all, they are taking a \$1 billion-a-year bite out of the shipping industry. That's the assessment of Channing F. Hayden Jr., vice president of the New Orleans Steamship Association, who suggests that the burden could escalate to \$2 billion a year as a result of other user fees which are pending, proposed or probable.

The user charge door is swinging wide open.

For instance, in the Omnibus Budget Reconciliation Act of 1990, Congress authorized the Coast Guard to collect "direct fees" for such

services as vessel inspections and documentation, plans review, equipment approval and licensing, certification and documentation of merchant marine personnel. Such fees were previously prohibited.

To allow the Coast Guard to levy user fees for these programs, the Congress directed the Coast Guard to establish user charges for almost any "service or thing" which it provides. That certainly opens the door, and the agency is already talking about new fees:

"New statutes, such as the Oil Pollution Act of 1990, may require the Coast Guard to establish new regulations or make substantive amendments to existing regulations," Adm. J.W. Kime, Coast Guard Commandant, said in a Federal Register notice published on July 1, "When this occurs, the Coast Guard will propose appropriate user fees in each rulemaking."

Waterway carriers and shippers are already suffering from the accumulative impact of so many user taxes and fees.

They add to the cost of transportation, contribute to diversion to foreign ports and are beginning to affect the competitiveness of U.S. products in overseas markets. A subcommittee of the House Merchant Marine and Fisheries Committee recently held "oversight hearings" on these trade taxes.

According to the American Association of Port Authorities, it costs importers and exporters about \$75,000 in user taxes every time an average containership loads or unloads at a U.S. port, and the vessel pays about \$5,400 in harbor and vessel taxes.

The subcommittee didn't advocate the repeal of any of these taxes but there was some discussion about the need for a public review and public period before any more taxes or fees are imposed.

In a statement submitted to the subcommittee, the National Waterways Conference urged that future proposals for any new or higher user taxes should be evaluated "in the total context of all the other fees and taxes in effect."

Individually, these taxes are commonly characterized by proponents as "trivial" or "insignificant." But in the aggregate, their impact is sub-

stantial.

Here is a rundown of the various user taxes and fees to which the maritime industry is subject:

- Inland fuel tax—Now 13 cents a gallon (increasing to 20 cents by 1995) on most shallow-draft waterways. Deposited in Inland Waterways Trust Fund and used to pay one-half of lock-and-dam replacement costs. Estimated FY 1992 yield: \$137.4 million.

- Harbor maintenance tax—A charge of 0.125 percent on the value of imports, exports and domestic cargo at deep-draft ports (except for commerce originating or terminating via barges moving on fuel-taxed waterways). Deposited in Harbor Maintenance Trust Fund and used to pay all maintenance of port access channels. Estimated FY 1992 yield: \$644 million.

- Tonnage tax—A tax of 9 cents (up from 2 cents) per ton on vessels entering U.S. ports from any foreign port in North, Central or part of South America and 27 cents (up from 6 cents) per ton on vessels from other foreign countries. Tax collected for a maximum of five visits annually by any vessel. Expected FY 1991 yield: \$53 million.

- Coast Guard fees—"Direct" user fees for inspection and examination of vessels and licensing certification and documentation of personnel. For non-self-propelled tank vessels, fee may not exceed \$500 a year. Expected yield: \$30 million annually.

- Leaking Underground Storage Tank (LUST) tax—A tax of 0.1 cents per gallon on most fuels, including that used on inland waterways. Deposited in LUST Trust Fund.

- Customs fees—An ad valorem fee of 0.17 percent on imports for the U.S./ Customs Service's merchandise and processing services.

- Grain inspections—The U.S. Department of Agriculture's Federal Grain Inspection Service has increased its fees for grain inspection and weighing by 8 percent.

- Other grain fees—An increase

in charges for warehouse inspectors' licenses is pending.

- Agricultural quarantine and inspection—The U.S. Department of Agriculture's Animal and Plant Health Inspection Service recently put into effect a user fee of \$544 per arrival for ships of 100 net tons or more, capped at 15 arrivals per year.

- Port or harbor dues—Non-Federal entities such as port authorities have authority to impose local "harbor dues" to recover their share of navigation improvement costs. Only beneficiaries may be charged. Now pending is a plan by the Massachusetts Port Authority to make waterfront terminal operators and others pay most if not all of its \$10.4 million share of a pending harbor dredging project.

- Section 404 permits—The Army Corps of Engineers has proposed increasing the fee for dock, pier and other waterway construction permits from \$100 each to \$2,000 each.

Additional user fees and taxes under consideration:

- Import fees—A user fee of 3 percent on imported oil to fund oil purchases for the Strategic Petroleum Reserve.

- FCC licenses—Vessel owners and others holding FCC licenses would be subject to new user fees covering a wide range of the agency's costs.

- O&M charges—The Congressional Budget Office has repeatedly suggested ton-mile fees or other levies to recover O&M costs on the inland waterways system. In 1990, CBO said a systemwide fee of \$1.61 per 1,000 ton-miles would be needed to recoup O&M outlays.

As long as anti-tax mood grips the national political scene, user charges which target a specific industry remain as one of the least painless ways to raise revenue without alienating millions of voters. But for the maritime industry, these taxes may become the "straws" which break its bow.



# Some ropes hate the water...

Ordinary ropes can lose their strength in water - and many just fall apart.

And, wire ropes just rust and corrode.

**Allied Fibers**

**A.C.E. Polyester**  
**SeaGard<sup>®</sup>**

**CAPROLAN<sup>®</sup> 2000<sup>™</sup>**  
**SeaGard<sup>®</sup>**



© 1991 Allied-Signal Inc.

# Other ropes love it!

*Caprolan 2000* nylon with *SeaGard* has 40% more wet strength than ordinary nylon rope.

And, *A.C.E. polyester* loves sea duty and fights abrasion better than ever before.

Ropes made with Allied Fibers are at home in your workplace -- the sea.

*Allied Fibers, the best wet workers you can get.*

For further information contact:  
Mr. Earl B. Clark, Allied Signal Inc.,  
1411 Broadway, New York, NY 10018.

Circle 204 on Reader Service Card

 **Allied  
Signal**



## American Waterways Operators Fall Convention Set For September 12-13 In Washington, D.C.

The American Waterways Operators (AWO), the national trade association of the inland and coastal tug and barge industry, will hold its fall convention on September 12-13, 1991, at The Washington Court on Capitol Hill Hotel in Washington, D.C. Outstanding attendance is expected from among the AWO's directors, designated representatives and alternates, committee members, shipyard members, directors emeritus, and others.

The convention will provide an excellent forum for members to be brought up to date on pertinent issues confronting the industry and the association, as well as an opportunity for industry leaders to meet on a social level. Special travel arrangements for convention attendees have been made by AWO to provide the best rates on air fare and hotel accommodations. The deadline for registration at the Washington Court on Capitol Hill, 525 New Jersey Avenue, NW; phone: (202) 628-2100, is Wednesday, August 14.

The 6,200-hp towboat M/V Robert Greene, built by Jeffboat of Jeffersonville, Ind.

On Thursday, September 12, four AWO Committees will meet throughout the day to provide analyses and recommendations to the board at its Friday meeting. The Health, Safety and Training (HSAT) Committee will meet from 7 a.m. until 9 a.m. to discuss proposals to define physical ability limitations as required in the Americans with Disabilities Act, and also to discuss plans for the December HSAT-sponsored safety seminar. The Legislative Committee meeting follows from 9 a.m. to 11 a.m., and that committee will discuss issues impacting the barge and towing industry including the decision by Congress not to use the Inland Waterway Trust Fund for rehabilitation expenditures, pending a clearer definition of the term. From 11 a.m.-noon the Public Affairs Committee meeting will take place. Items on that committee's agenda include the industry's environmental initiatives and an update on the Lifelines recreational boating safety program. The Regulatory Committee, which meets from 2-4:30 p.m., will consider the Working Group Reports on Towing Vessel Inspection; Navigation and Commu-

nication Equipment; and Manning, Licensing, Training, Watchstanding, and Pilotage. The Working Groups were formed last year by AWO's board of directors to further assess industry operations. These working groups were charged with reviewing the way industry does business in a broad range of areas. The findings of these working groups will be a central topic of discussion at the convention.

The American Waterways Shipyard Conference (AWSC) will also be meeting on Thursday morning from 8 a.m.-1:30 p.m. The evening will be highlighted by a reception beginning at 5:30 p.m. for members and guests.

On Friday, September 13, at 8 a.m., the board of directors convenes. Invited guest speaker, Lt. Gen. **Henry J. Hatch**, Chief of Engineers and Commander, U.S. Army Corps of Engineers, is scheduled to speak at 9 a.m. General Hatch's missions in the Corps of Engineers include military construction for both the Army and Air Force, and the Army's civil water resources program which includes planning, design, construction, operation and

maintenance for navigation, flood control and other purposes nationwide. He is also the senior staff engineer for the Army, supervising the Army's worldwide facilities engineering and family housing activities and providing advice on combat and topographic engineering. Prior to his selection as the Chief of Engineers, General Hatch served as the Director of Civil Works in the Corps headquarters and as the Assistant Chief of Engineers in the Pentagon. General Hatch has been awarded several military decorations and served in the 101st Airborne Division in Vietnam.

Immediately following General Hatch's remarks, the board of directors meeting will resume. In addition to the agenda presented by the committee, the board will consider the proposed 1992 budget and association 1992 business plan. Also key industry issues and association initiatives including the Working Group reports will be discussed.

For further information regarding the AWO Fall Convention, call **Lori Swenningsen**, director of membership and events planning, at (703) 841-9300.

**ENGINEERED  
POWER**

**STEWART & STEVENSON**



# Your Gulf Coast Distributor for



**ELECTRO-MOTIVE**

**Stewart & Stevenson Services, Inc.,** is your Gulf Coast and lower waterways distributor of Detroit Diesel and GM-EMD engines. We stock new and rebuilt engines and sell genuine GM and Detroit Diesel parts.

Our factory trained repair and overhaul specialists are available 24 hours every day, and our large, deep water service center is convenient. Near New Orleans, just off the Mississippi River on the Harvey Canal, and close to major ship repair yards.

With unmatched dedication to quality, sales, and service since 1903, we have become the world's largest distributor of diesel engines.

Call now for the best GM and Detroit Diesel sales and service, for any kind of work boat or ship.

**ENGINEERED  
POWER**

**STEWART & STEVENSON**



1400 Destrehan • P.O. Box 1776 • Harvey, LA 70059 • Tel: 504-347-4326 • Fax: 504-348-8970

Circle 302 on Reader Service Card

# AVAILABLE AT ZIDELL

## OCEAN DECK BARGES

Length	299'0"	302'0"
Beam	90'0"	76'0"
Depth	20'0"	20'0"
Deadrise	—	2'0"
Draft Light	2'7-1/2"	3'10"
Draft Loaded	15'10"	16'
Transverse Bulkheads	7	8
Length Bulkheads	3	1
No. Tanks	32	18
Rolled Bilge	—	24"
Curved Rake Bow	29'	49'
Long Flat Raked Stern	30'	50' Long Curved Rake
Deck Cargo		
Open Deck Area	25,284 S.F.	19,950 S.F.
Deck Load	2,050 P.S.F.	2,500 P.S.F.
D.W.T.	9,604 L.T.S.W.	7,236 L.T.S.W.

## Maltese Cross A-1 Deck Barges



## CRANES AND LIFT TRUCKS

### Level Luffing Crane

Model & Type	50PB Level Luffing Crane
Manufacturer	Washington Iron Works
Capacity	50 Tons
Main Hoist	Certified Rating at 100,000 lbs.
(4 part rigging)	@ 30' Radius and 30,000 lbs.
	@ 90' Radius

Excellent Condition

### Revolver Crane

Model & Type	305 American Revolver
Manufacturer	American Hoist & Derrick Co.
Capacity	125 Tons
Main Hoist	Certified Rating of 260,000 lbs.
	@ 50' Radius
Boom	140' - 160'

### Whirley Crane

Model & Type	Clyde 37 DB-145-20 Whirley Crane
Manufacturer	Clyde Iron Works
Capacity	200 Tons
Main Hoist	Certified Rating of 400,000 lbs.
(16 Part Rigging)	@ 47' Radius; 150,000 lbs. @ 150' Radius
Whip Tackle	2 part, 40,000 lbs. @ all Radiuses to 160' Max.

Excellent Condition

### Bridge Crane

Whiting 10 Ton Bridge Crane.  
80' Span.  
Completely overhauled and in excellent condition.

### Two 30-Ton Container Cranes 70' Track Span New 1970-72

*Priced at a fraction of today's new replacement cost.*

Immediately available. From LASH Ships. Late Model. Manufactured by PACEO. Suitable for Ship, Barge or Land use. Manufactured to ABS and MARAD requirements  
AC Power Input with Cable Reel  
MG set: 250 HP-AC-170 KW 230 DC.  
200 HP DC Hoist Motor  
100 HP DC Trolley Motor  
2-40 HP DC Gantry Travel Motors  
Trolley Travel 275 F.P.M.  
Gantry Travel 100 F.P.M.  
Hoist Speed: 30 LT @ 85 F.P.M., 20 LT @ 100 F.P.M.: Empty Spreader 200 F.P.M.  
32'0" Maximum Outstretch  
Hoist, Trolley Travel and Gantry Motors are DC and have VSR and VSX regulation.  
*Other areas of possible use: Pipe and steel yards, Barge building, Concrete pre-fab plants*

### Two Taylor Lift Trucks, Model TE 220S

22,000 lbs. Basic Capacity at a 24" Load Center  
Cummins Diesel Engine Model 6BT developing 151 HP at 2500 R.P.M.  
Taylor 3-speed Power Shift Transmission. Seperate transmission oil cooler.  
216" Lift Ultra View mast with an overall lowered height of 168".  
84" Wide Hydraulic side shift with 10" of total shift.  
Fully enclosed cab with heater, defroster and front wiper.

## SPLIT TYPE SELF-DUMPING SCOWS



Length	180'0"
Beam	50'0"
Depth of Mid-Body	14'0"
Hopper Length	128'0"
Level Hopper Volume	1421 cu. yd.
DWT @ d = 10.22 ft.	1615 L.T.
Rake Lengths F. & A.	26'0"
Twin Skegs	
Stern & Fwd. Rake Decks Stepped up 2'0"	
Engine GM 671	

Hydraulic Pumps	12 GPM & 75 GPM
Time to Open	
(Fully Closed to Fully Open)	6 Min. 5 Sec.
Time to Close	4 Min. 34. Sec.
Hopper Angle Fully Open	53.78 degrees
Fuel Tank Capacity	445 Gal.
Hydraulic Cylinders	18" Diam. 120" Stroke
(2 Fwd & 2 Aft)	
Plating	Side, 9/16"
	Bottom, 5/8"
	Hopper, 5/8"



**ZIDELL**  
MARINE GROUP

For additional information or to make an appointment to inspect, call or write:  
Sam Replin or Jack Breshears  
3121 S.W. Moody Avenue, Portland, Oregon 97201  
Phone: 1-800-547-9259, In Oregon (503) 228-8691 Fax: (503) 228-6750

# FOR SALE OR CHARTER

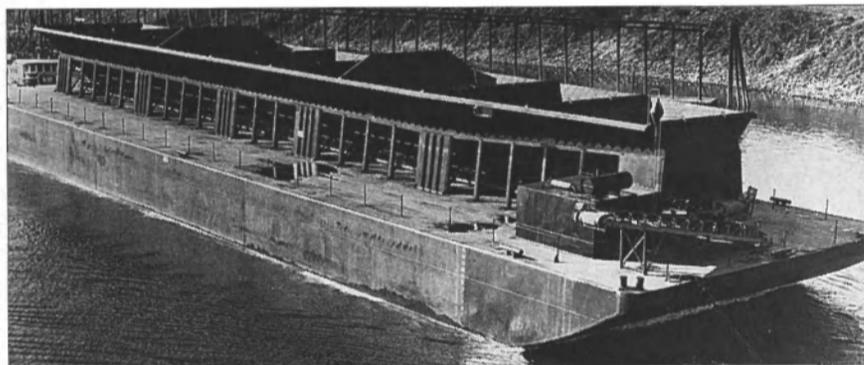
## MALTESE CROSS A-1 OIL TANK BARGE

Length . . . . . 296'0"  
 Beam . . . . . 60'0"  
 Depth . . . . . 22'0"  
 Deadrise . . . . . 6"  
 Number of Tanks . . . . . 12  
 Total Tank Volumes at 95% . . . . . 50,700 BBLs  
 Cargo Pumps . . . . . 3 Rotary Twin Screw, Allweiler 231  
 Rating . . . . . 1500 GPM, 150 PSI, 1200 RPM  
 Location . . . . . After Rake  
 Diesel Engines . . . . . 3 Detroit Diesel 8V-71, 233 HP @ 1800 RPM  
 Location . . . . . Engine Room on After Deck  
 Fuel Capacity . . . . . 1421.3 Gal. Diesel  
 Fill & Discharge Connections . . . . . 10" & 8"  
 Heating Coils . . . . . 2" Sch. 80 Pipe Coils for Shore Steam Supply  
 Hull Plating . . . . . Side Shell 1/2", Bottom 7/16", Deck 1/2"  
 Deck Cargo Dwt. at Loadline . . . . . 6761 LTSW



## SELF-UNLOADING AGGREGATE BARGE

**Billie-K** Maltese Cross A-1 Ocean Aggregate Barge



Length . . . . . 250'0"  
 Beam . . . . . 72'0"  
 Depth . . . . . 15'0"  
 Draft Light . . . . . 2'5"  
 Draft Loaded . . . . . 11'8-3/4"  
 DWT . . . . . 4603 LTSW  
 Diesel Electric Set . . . . . Cat 3406 Turbo, 260 KW Generators,  
 Sullair Model 351 Air Compressor  
 Hopper Capacity . . . . . 3000 Yds.  
 Hopper Unloading Gates . . . . . 24 Unloading Gates,  
 Pneumatic Operating Rams  
 Main Unloading . . . . . Conveyer Starboard Side Aft  
 Transfer Conveyer . . . . . 30" Belt Conveyers, 184' ea. P/S  
 Hull Plating . . . . . 1/2" Side, Bottom, Deck

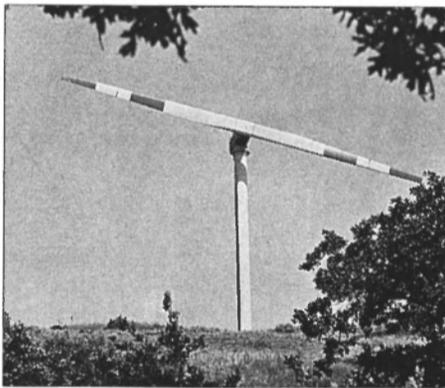
### TANKS

#### Steel Skid-Mounted Liquid Storage Tanks

**10 Available**

Coast Guard Approved  
 Capacity . . . . . 475 BBLs  
 Height . . . . . 7'0"  
 Width . . . . . 2'0"  
 Length . . . . . 32'0"  
 Piping . . . . . Single fill pipe  
 and distribution.  
 Gravity Discharge.  
 Valves and Manifold  
 included.

### WIND TURBINE



#### Three Wind Turbines

Rated Power Output . . . . . 2.5 megawatts each  
 Wind Speed Requirement . . . . . 14/45 M.P.H.  
 Computer Controlled  
 Producing Power in 1986  
 Prime Contractor . . . . . Boeing Engineering &  
 Construction

### AMERICAN CRANE BARGE

#### Barge Data

Displacement Light . . . . . 1,200 Tons  
 Gross Tonnage . . . . . 911  
 Net Tonnage . . . . . 911  
 Length . . . . . 151'6"  
 Beam . . . . . 60'0"  
 Hull Depth . . . . . 12'0"  
 Flush Deck Area . . . . . 6,000 Sq. Ft.  
 Engine Room Area . . . . . 412 Sq. Ft.  
 Office & Eating Area . . . . . 136 Sq. Ft.  
 Diesel Fuel Tanks . . . . . 36,000 Gal.  
 Fresh Water Tanks . . . . . 36,000 Gal.  
 Bunker "C" Fuel Tanks . . . . . 12,000 Gal.  
 Ballast System . . . . . None

#### Crane Data

Manufacturer . . . . . American Hoist & Derrick Co.  
 Model & Type . . . . . 305 Revolver  
 Capacity . . . . . 125 Tons  
 Boom (Certified Rating with 140' Length, 160' Available)  
 20 Part Rigging . . . . . 2,200', 7/8"C-6x36 I.P.S.  
 4 Part Standing Bail . . . . . 2-186', 1-3/4"C- 6x36 I.P.S.  
 Main Hoist  
 (Certified Rating: 58.5T @ 50' to 100', 8 part rigging)  
 20 part rigging . . . . . 3,250 ft., 1"C-6x36 I.P.S.  
 Aux. Hoist (Certified Rating: 10.0 T @ 100') 15 T. Capacity  
 2 part rigging . . . . . 635 ft., 7/8"C - 6x66 I.P.S.



**ZIDELI**  
 MARINE GROUP

For additional information or to make an appointment to inspect, call or write:  
 Sam Replin or Jack Breshears  
 3121 S.W. Moody Avenue, Portland, Oregon 97201  
 Phone: 1-800-547-9259, In Oregon (503) 228-8691 Fax: (503) 228-6750

Circle 25 on Reader Service Card

## Quayle Addresses Merchant Marine Graduates At Academy's 55th Commencement

Vice President **Dan Quayle** recently delivered the keynote address to the 169 members of the graduating Class of 1991 at the U.S. Merchant Marine Academy's 55th commencement. Vice President **Quayle** is the highest level government official ever to visit the academy since its dedication 48 years ago.

Other government officials at the ceremony included **Samuel K. Skinner**, U.S. Secretary of Transportation, and **Warren Leback**, U.S. Maritime Administrator.

During the graduation ceremony at the Kings Point, Long Island, N.Y., academy, Rear Adm. **Paul Krinsky**, the academy superintendent, presented third mate licenses to 82 members of the class. Third

assistant engineer licenses went to 79 graduates, while eight students received dual licenses, a combination deck and engineering certification.

During his keynote address, Vice President **Quayle** praised merchant mariners and midshipmen for their roles in Operation Desert Shield/Storm and presented the academy with a streamer in recognition to their service.

Mr. **Quayle** continued, "In World War II, the service of Kings Pointers made this academy the first and only federal service academy to have a battle standard. As of today, on account of Desert Storm, another battle streamer will adorn your flag." U.S.-flag ships carried 80 percent



U.S. Merchant Marine Academy superintendent Rear Adm. **Paul Krinsky** escorts Vice President and Mrs. **Dan Quayle** to the site of the academy's 55th commencement. Vice President **Quayle**, who presented degrees, merchant marine licenses and Naval Reserve commissions to each of Kings Point's 1991 graduates, was the highest level government official ever to visit the academy.

of the cargoes needed by the U.S. Armed Forces in the Persian Gulf. In all, 152 midshipmen from Kings Point sailed into the Persian Gulf assigned to merchant ships for training.

Operated by the U.S. Maritime Administration, the academy began full operations in 1943. Since its inception, its 18,600 graduates have served the maritime industry and the nation at sea and ashore.

# Avondale Propellers

*Avondale is one of the world's premier manufacturers of propellers, offering precision, performance and service.*

*Call us today for the right configuration for unexcelled performance.*

- INLAND - COASTAL - OFFSHORE
- STANDARD OR SPECIAL DESIGNS
- VAST INVENTORY OF PATTERNS 48" AND LARGER

## Avondale

Harvey Quick Repair  
P.O. Box 116, Harvey, Louisiana 70059  
(504) 340-0621 • Fax: (504) 348-7052

MEMBER AMERICAN WATERWAYS OPERATORS

OMSA

Circle 201 on Reader Service Card

## NEED TO DESIGN AN HVAC-R SYSTEM FOR YOUR NEW FERRY OR DINNER CRUISE SHIP?

# DON'T MAKE PLANS WITHOUT US!

For more than 40 years, Bailey has been known for the finest air conditioning and refrigeration systems. And now we'd like to design a system for your vessel **at no charge!** Just send us your drawings and we'll create a system that fits your specific needs. We'll construct and install your system using the finest quality equipment.

With Bailey, you get fast, reliable service backed by large local inventories of equipment, appliances and parts.

So if you're planning a new passenger ferry or dinner cruise ship, make sure Bailey is part of those plans. **Bailey. We're not just faster... we're better!**

# BAILEY

THE BAILEY GROUP

**HEADQUARTERS:**  
BAILEY REFRIGERATION CO.  
2323 Randolph Ave.  
Avenel, NJ 07001, (201) 382-1225  
Fax: (201) 382-1048, Telex: 4754293

**BROOKLYN, NY 11231**  
(718) 797-2002  
**NEW ORLEANS, LA 70117**  
(504) 943-2461  
Fax: (504) 944-8629

**OFFICES & WAREHOUSES:**  
NORTH MIAMI, FL 33179  
(305) 651-4160  
Telex: 441212 BAILEY Fax: (305) 651-5258

Circle 222 on Reader Service Card

# REPARA

## Shipyards

### Cadiz

Tel.: (34-56) 27 33 50  
Fax: (34-56) 27 83 62  
25 68 28  
Télex: 76021 ASTIL E  
76153 AVEN E

### Sevilla

Tel.: (34-54) 45 10 11  
Fax: (34-54) 45 76 59  
Telex: 72345 ASTIL E

### Bilbao

Tel.: (34-4) 495 71 50  
Fax: (34-4) 496 49 76  
Telex: 31519 AERS E

# CONVERT

### Santander

Tel.: (34-42) 54 00 50  
Fax: (34-42) 54 00 26  
Telex: 35810 ASSA E

### ASTANO Ferrol

Tel.: (34-81) 34 07 00  
Fax: (34-81) 34 09 54  
(34-81) 34 32 52  
Télex: 85507 ASTAN E  
82381 ASTAN E

## Why you should repair (or convert) your ships at Astilleros

We think that you have at least four good reasons to choose Spain:

Our strategic allocation.  
Spain is the natural crosspoint for all major routes linking America, Europe and the East, and crude oil shipping through the Suez Canal or

the Cape of Good Hope.

Our technical skills and facilities.  
12 dry docks and 2 floating docks, with capacities up to 400.000 d.w.t.

Our conversion experience Ask for the facts. Astilleros has successfully converted all kinds of vessels (our recent contracts include the conversion of a 21.000 dwt Bulkcarrier into a molten Sulphur carrier for Navimin). And Astilleros is a well known

leader in FPSO and FSU and in Internal Blasting and Coating.

A spread of specialized yards. Along the long coastline of Spain, and covering all tonnages.

And the Spanish weather... Last but no least: an excellent climate means that work is rarely held up by adverse weather.

As Astilleros offers, also, the best price and surprising financial

packages, don't you think it's high time to check on us?

# **ASTILLEROS ESPAÑOLES**

For further information: Astilleros Espanoles, S.A.  
Padilla, 17  
28006 Madrid  
Tel. (341) 435 78 40  
Telex 27648 ASTIL-E  
Fax. (341) 576 29 56

## The Shipbuilders of Spain

Circle 350 on Reader Service Card

# U.S. Small- And Medium-Sized Shipyards: A Little-Known But Vital Industry

By Robert F. O'Neill, Vice President,  
American Waterways Shipyard Conference

Over the years, small- and medium-sized shipyards have not occupied a sufficiently visible profile in the maritime industry. Since they are a key part of the domestic maritime industry and a key component in national security, it is time they step into a prominent position and make themselves more known to policymakers as well as the rest of the maritime industry.

There are over 250 small- and medium-sized shipyards in the United States. They employ over 30,000 Americans and they can be found on the entire inland river and coastal waterway system. They operate in 33 states, from Maine to Alaska and Florida to California. Individual shipyards range in size from small family-owned yards with a few dozen employees to state-of-the-art facilities with more than 500 employees.

These yards build and repair tugboats, towboats, passenger vessels and barges for the domestic water transportation industry. They build and repair supply boats, crewboats, and other specialized vessels for the offshore service industry, as well as build and convert a wide variety of fishing and fish processing vessels. They also construct and repair the Navy's smaller vessels, the Coast Guard fleet of patrol boats used in drug interdiction, vessels operated by the Army Corps of Engineers, and research vessels used by the National Oceanic and Atmospheric Administration (NOAA).

While small- and medium-sized shipyards don't build Navy aircraft carriers or huge oil tankers, they play a key role in the domestic waterways cargo and transport system and the transport of key military equipment and supplies. While this is not as visible as battleships and tankers, consider that the U.S. towboat industry, supported by small- and medium-sized shipyards, transports 30 percent of America's petroleum and petroleum products and 25 percent of our coal supply. Over 15 percent of all the nation's freight is moved on rivers and coastal waterways. In times of national emergency the tug and barge industry will transport vital materials for industrial production. Small- and medium-sized shipyards repair and service the barges and towboats that transport this cargo.

A vital part of Operation Desert Shield/Storm was carried out in several small- and medium-sized shipyards. Many Ready Reserve Force vessels were outfitted and readied so they could carry out their mission in support of U.S. troops in the Persian Gulf. This exercise is a prime

example of the quiet but important role of these shipyards. By working on such a wide variety of vessels—commercial and military—small- and medium-sized shipyards play a key role in America's national security and commerce.

Through the years small- and medium-sized shipyards have met the challenge of keeping river and coastal commerce moving without interruption. They have adapted to

and towing industry. Through its various activities, such as membership meetings and seminars, member shipyards work together on common challenges and exchange information. Working together helps the industry achieve effective representation before the Federal Government and Congress.

A particularly valuable service provided by AWSC is a series of surveys that provide useful infor-

mation, AWSC grows in strength as the industry's representative before Congress and regulatory agencies. The stakes become higher and higher each year. The number of regulations and legislation is multiplying. AWSC will add to its ranks by planning and carrying out an aggressive campaign that will identify and contact prospective shipyard members.

AWSC will continue to work on the many issues and tasks it initiated in 1990. In 1991, AWSC will also focus on several issues and regulations of great importance to shipyards:

- U.S. Coast Guard Tank Cleaning and Gas Freeing Regulation—AWSC members have met with USCG officials in order to guide the implementation of this new regulation. AWSC is now drafting a document, at the Coast Guard's request, that will provide guidance for enforcement of new regulations for shoreside tank barge cleaning facilities.

- Government and Military Affairs—AWSC is actively interested in issues relating to the Ready Reserve Force and the repair of other government and military vessels.

- OSHA Fall Protection Rule—AWSC is working with OSHA to arrive at a workable new rule for fall protection on barges in drydock. AWSC has worked closely with OSHA officials in this area and will work toward a reasonable resolution of this issue; and

- Organization of Economic Cooperation and Development (OECD) Trade Negotiations and U.S./Mexico Trade Talks—As business and commerce enter a new world marketplace, actions taken by our foreign competitors will have a direct impact on our domestic industries, including shipyards. AWSC will continue to work with the U.S. Trade Representative, the Department of Commerce, and the Department of Transportation in making sure the interests of small- and medium-sized shipyards are safeguarded and not harmed in any international trade agreement.

These and other issues are on AWSC's agenda. Having accomplished many goals in the past, AWSC will seek to accomplish more on behalf of its members. AWSC is dedicated to advancing the interests of second tier shipyards and always works to serve and protect its members. As we continue to grow and represent a wide variety of shipyards, meeting the challenges of the future is our most important goal.



One of the most active second tier shipyards in the country is Morgan City, La.-based Service Marine Industries, Inc. Shown is the excursion/dinner boat Spirit of Puget Sound under construction at the yard in 1989.

new developments in engine design, metals, industrial production, electronics and many new trends and changes. Small- and medium-sized shipyards have been there at every step along the path of progress, doing what's necessary to get the job done.

Looking to the future, small- and medium-sized shipyards fully intend to raise their profile in the maritime industry, and thereby highlight their contribution to the American economy. Through the many activities of their trade association—the American Waterways Shipyard Conference—small- and medium-sized shipyards will more firmly establish their place as an important member of the maritime community.

## The Role Of AWSC

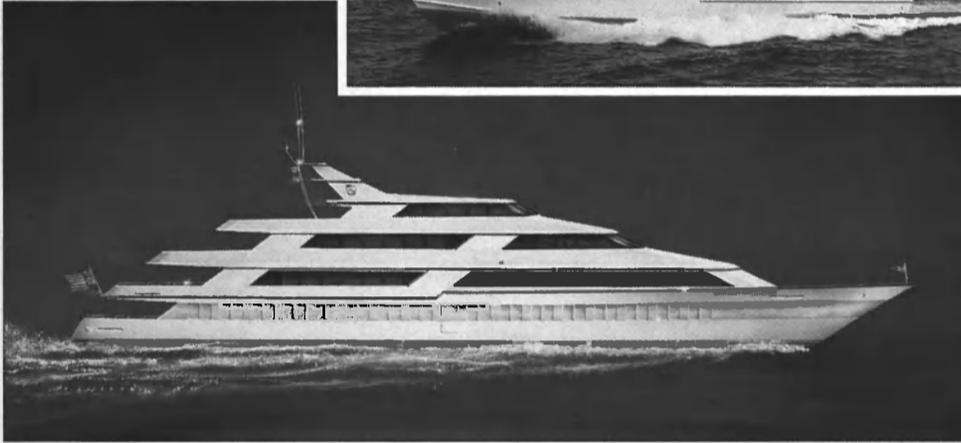
The American Waterways Shipyard Conference (AWSC) is the only national trade association dedicated solely to the interests of our nation's small- and medium-sized shipyards. AWSC was formed in 1976 as a conference of the American Waterways Operators (AWO), the national trade association representing the barge

and towing industry. Through its various activities, such as membership meetings and seminars, member shipyards work together on common challenges and exchange information. Working together helps the industry achieve effective representation before the Federal Government and Congress.

AWSC has, over the past 15 years, confronted several major issues—including challenges to the Jones Act, the need for a vertical standard of OSHA shipyard regulations, passage of the Anti-Reflagging Act—and a host of environmental and safety regulations. In each instance, AWSC provided the input of second tier shipyards in a professional and effective manner. AWSC has traveled a long road in 15 years, and although the road at times has been arduous, the accomplishments have been numerous.

Now new challenges face AWSC. While AWSC continually adds to its membership ranks, it is working to become a strong spokesman for the second tier shipyard industry. While AWSC is growing fast, it has a way to go. As it adds more shipyards as

## Passenger vessel operators...



**NAME YOUR STYLE, WE CAN DESIGN & BUILD IT.**

# FRONTIER TO 21<sup>ST</sup> CENTURY

We design and build all kinds of passenger vessels. From elegant floating reminders of yesteryear, to spectacular, ultra-modern dinner cruise and casino ships.

We also offer a wide range of tour boats, whale watch, and ferries for inter-island and commuter applications. We will build to your design or ours, to any regulatory standard.

Want innovation? We are a U.S. pioneer in design and construction of commercial and military surface effect ships (SES) and are now working on new SWATH applications. And, we lead the U.S. in design and construction of military and commercial vessels with ultra-quiet, diesel/electric propulsion.



You are assured of top quality and low maintenance because of our experience in the design and construction of thousands of durable, reliable boats for just about any purpose imaginable. Together, our ten shipyards have built over 14,000 vessels!

With that kind of experience, and the fact that we are a NYSE, "Fortune 500" company, you are assured of financial strength and stability, bonding capacities, and support programs.

So, if you need a passenger vessel with the look of yesterday, today, or tomorrow—look no further than the Trinity Marine Group. We can design and build any boat you need.

14055 Industrial Seaway Road  
P.O. Box 3029, Gulfport, MS 39505-3029 USA  
Tel: 601-864-0029 / Fax: 601-867-1666 • Telex: 6821246 / Cable: HALMAR

HALTER MARINE INC. • MOSS POINT MARINE INC. • EQUITABLE SHIPYARDS INC. • GRETNA MACHINE & IRON WORKS INC. • ALUMINUM BOATS INC. • HBC BARGE INC. • TRINITY-BEAUMONT

Circle 311 on Reader Service Card

# Ferries And Small Passenger Vessels In The U.S.

## Forecast Of Vessel Construction & Assessment Of Future Equipment Requirements

By James R. McCaul, President  
International Maritime Associates, Inc.

U.S. shipyards have delivered more than 2,000 ferries and small passenger vessels over the past 10 years. Over 5,000 of these subchapter H, T and super T vessels are now operating in U.S. harbors, rivers and coastal waters. With 150 to 200 vessels ordered annually, this is one of the most dynamic sectors of the U.S. marine industry.

IMA has just completed an in-depth study of this business sector. The study:

- profiles the current inventory and documents building activity over the past 10 years;
- assesses developments impacting future vessel construction activity;
- describes vessel building plans of major ferry and small passenger vessel operators;
- examines future requirements for propulsion machinery, other mechanical systems, electronics, passenger access equipment, etc.

### Characteristics Of Current Fleet

These vessels are as diverse as the services offered. They range from ferries with capacity for more than 5,000 passengers—to water taxis equipped to carry only five to 10 persons.

Exhibit 1 shows the breakdown of the current fleet in terms of passenger-carrying capacity. As indicated, the majority of vessels are designed to carry less than 100 passengers. More than two-thirds are rated below 50 passenger capacity. Interestingly, 4 of the 26 vessels are rated to carry between 1,000 and 1,499 passengers are subchapter T



designs. These vessels are designed to be less than 100 gross tons—in order to be subject to regulations less stringent than those applicable to larger passenger vessels.

### Recent Vessel Construction Activity

Construction of ferries and small passenger vessels has provided a relatively strong business base for shipyards and equipment suppliers over the past 10 years. Deliveries have averaged about 190 vessels annually. The sector has also been one of the most dynamic in terms of experimentation with new concepts—including innovative hull forms, high speed propulsion, etc.

Vessel construction activity declined somewhat in the early 1980s—reflecting the 1981-82 recession. As the economy improved, deliveries rose significantly throughout the second half of the 1980s. While 1990 construction figures are not complete, it appears that there was a downturn in orders last year—reflecting the current recession.

### Major Builders

There are currently about two dozen firms in the U.S. involved in ferry and small passenger vessel construction. While there is considerable overlap in types of activities, many of these builders have focused on specific market niches and vessel designs. Some of the major players are shown in Exhibit 2. Details for each of these builders, including recent deliveries and an analysis of the market focus are provided in IMA's report.

### Vessel Construction Plans

More than two dozen operators of small passenger vessels were interviewed. Among the questions was—how many and what type vessels do you plan to purchase over the next three to five years? The interview results indicated that many owners

have near term building plans which will interest shipyards and equipment manufacturers. For example:

Washington State Ferries plans to build three jumbo ferries beginning late 1993;

Delaware River Authority is discussing replacement for two or three vessels in the mid-1990s;

Golden Gate Ferries plans to solicit bids in the next several months for a new fast ferry;

Gateway Clipper Fleet is looking at building more casino/dinner boats;

Spirits Cruises plans to solicit bids for three 600 passenger dinner vessels.

### Owner Requirements & Buying Influences

What factors influence owners in selecting a vessel design and specifying equipment? What type of changes in vessel technology should be anticipated over the next several years? We put these questions to more than three dozen vessel operators, builders and naval architects.

Owners of large public ferries, commercial ferries, recreational passenger vessels and crewboats have different requirements and buying preferences. These differences greatly impact on the selection of design and equipment.

### Large Public Ferries

The large public/quasi-public ferry operators generally tend to be quite conservative in choice of design and equipment. They look for long operating life, good fuel consumption, reliability and equipment commonality.

### Commercially Operated Ferries

These operators cover the entire spectrum from highly conservative to extremely innovative. Some owners won't try anything new. Other owners are willing—even anxious—to try the most advanced technology available for ferry service.

### Recreational Passenger Vessels

Owners in this group look at vessel design and equipment requirements differently than ferry operators. They are interested in dining room and galley layout, drawing power of the vessel design, vessel ambiance, flexibility for multiple uses, etc. Machinery and power plant efficiency are of secondary interest.

### Crewboats

These are strictly utilitarian vessels. There are few creature comforts on board. Engines and equipment are subject to a great deal of abuse. As one operator described, a crewboat "has two speeds—wide open throttle and stop." An owner wants a vessel and equipment which is proven in service. He wants no downtime.

Builders and suppliers have to gear their product design, marketing activities and pricing to the peculiarities of each of these market sectors.

### Anticipated Technology Changes

The report analyzes anticipated changes in vessel design, propulsion machinery, control systems, access ramps, habitability design, etc. Included is an analysis of the impact of pending changes in Coast Guard regulations for passenger vessels. Also included are details on the potential impact of the new Americans With Disabilities Act—a law which will have far-reaching impact on future vessel design and handicap access requirements.

IMA's report, "Ferries and Small Passengers in the United States," is available at \$575. To order, contact International Maritime Associates, Inc., 2600 Virginia Avenue, NW, Suite 901, Washington, DC 20037; telephone: (202) 333-8501; fax: (202) 333-8504. Telephone and fax orders are accepted.

Exhibit 1

Breakdown of Ferry and Small Passenger Vessel Fleet, by Passenger Capacity (as of December 31, 1990)

No. Of Passengers	No. of Vessels	Percent of Total <sup>1</sup>
2000+	14	*
1500-1999	2	*
1000-1499	26 <sup>2</sup>	*
500-999	114 <sup>3</sup>	2
200-499	292	5
150-199	160	3
100-149	387	7
50-99	729	14
20-49	2,523	47
under 20	1,142	21
Total	5,389	100

#### Notes:

1. \*Indicates less than 0.5 percent
2. 4 of the 26 vessels are subchapter T designs
3. 77 of the 114 vessels are subchapter T designs

Source: IMA report No. 7118, *Ferries and Small Passenger Vessels in the U.S.*, June 1991

Exhibit 2

Major Ferry and Small Passenger Vessel Builders

Blount Marine	Houma Fabricators
Gladding-Hearn	Leevac Shipyard
Washburn & Doughty	SeaArk
Atlantic Marine	Bender Shipbuilding
Eastern Shipyards	Swiftships
Freeport Shipbuilding	Skipperliner
Trinity Marine	Marine Builders
Service Marine	Nichols Bros.
Gulf Craft	Westport Shipyard
Avondale	Munson Manufacturing
Patti Shipyard	Swath Ocean

## Upcoming Events

• **Transshipment Conference** in Quebec City, Quebec, Canada, September 10-12. Run by Mariport Group Ltd., the event is on cargo shipment and handling concepts for the 1990s. Held at the Loews le Concorde Hotel Grande Allee. Phone: (416) 333-8171; fax: (416) 333-1162.

• **Baltic & International Maritime Council (BIMCO)** in Venice, Italy, September 20-24. The conference program of this general meeting will feature sessions on quality assurance and life extension of ships, Europe after 1992, and dialogue between owners and charterers. Held at the Hotel Excelsior, 161 Bagsvaerdvej, DK-2880 Bagsvaerd, Denmark. Phone: (+45) 444-44500.

• **Petroleum Tankship Operations Course** in Houston, Texas, September 30-October 3. Course for shoreside personnel taught by Arthur McKenzie, New York Trade Center Institute. Phone: (212) 466-4044.

• **Admiral of the Ocean Seas (AOTOS)** in New York, N.Y., October 11. Annual awards dinner for AOTOS. This year award presentations will be made to Warren Leback, U.S. Maritime Administrator, and Charles I. Hiltzheimer, president and chief executive officer of Puerto Rico Marine Management Inc. Held at the New York Hilton. Phone: Barbara Spector Yeninas, AOTOS coordinator (201) 226-6260; or United Seamen's Service (212) 775-1262.

• **West Coast Tanker Operations Symposium** in La Jolla, Calif., October 11-12. Sponsored by the Los Angeles Metropolitan Section of the Society of Naval Architects and Marine Engineers. Will be held at the Sheraton Grande, Torrey Pines Resort. The symposium will discuss technical issues relating to tanker operations on the U.S. West Coast. Operating experience and the impact of new legislation on the tanker fleet will be among the topics discussed. Contact Harold D. Ramsden, MCA Engineers, Inc., at (714) 662-0500.

• **65th Annual Convention of Propeller Club of the U.S.** in Brownsville, Texas, October 14-18. Panel sessions will cover Gulf of Mexico fisheries, Shipping Act review, foreign trade market assessment, pollution issues, and lessons of the Persian Gulf War. Held at Fort Brown Hotel & Resort. Contact Propeller Club of the U.S., 3927 Old Lee Highway, #101A, Fairfax, Va. 22030; phone: (703) 691-2777.

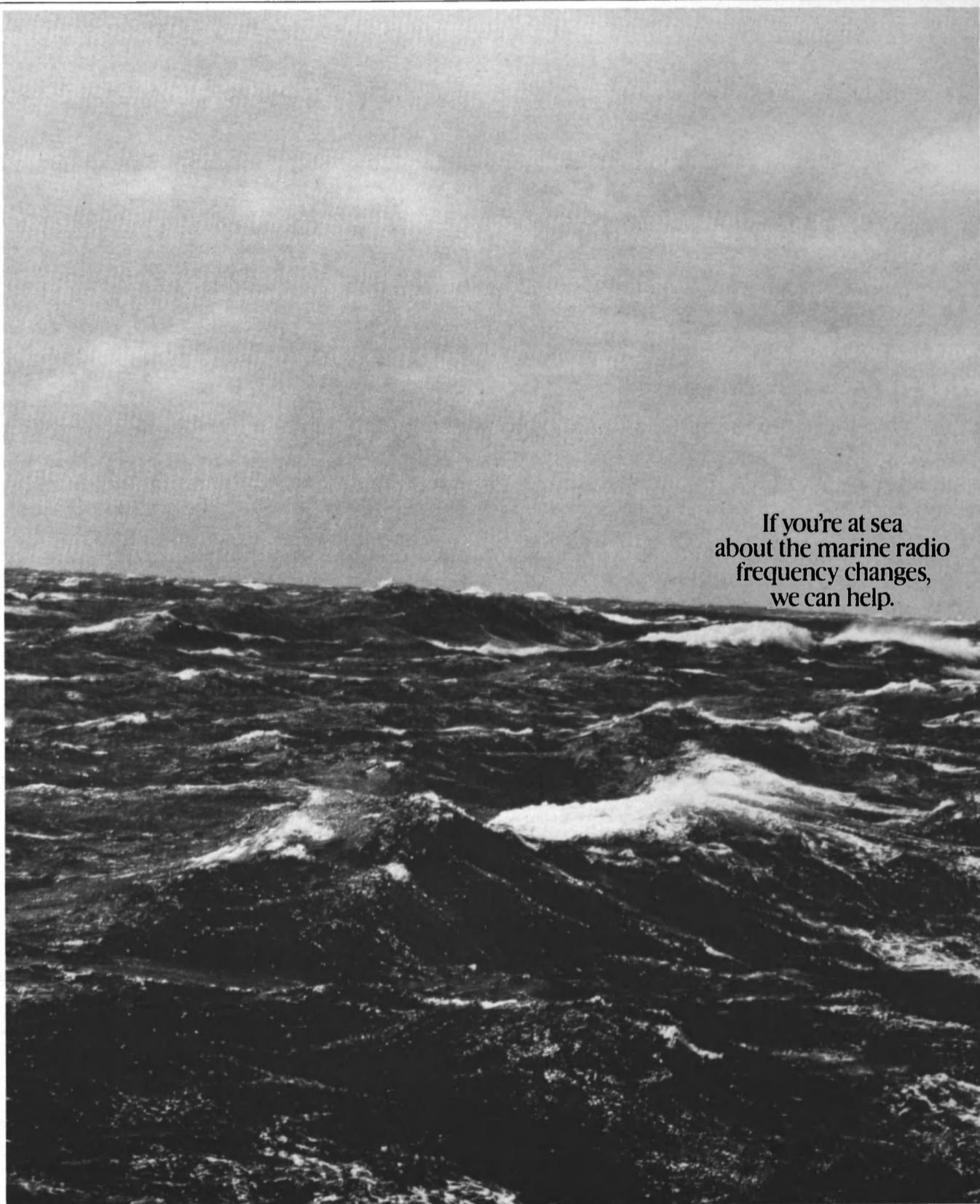
• **Seatrade Expoship Riomar 91** in Rio de Janeiro, Brazil, October 21-25. Conference and exhibition organized by Seatrade. Held at Centro de Convencoes do Hotel Nacional. Contact Michael Kazakoff, phone: (609) 452-9414 or fax: (609) 452-9374.

• **Fleet Maintenance in the 21st Century** in Virginia Beach, Va., October 22-23. Joint symposium sponsored by the Commander in Chief, Atlantic Fleet and American Society of Naval Engineers, at the Pavilion Convention Center. Technical papers regarding fleet maintenance management, engineering, logistics and training within aviation, surface and submarine fields will be presented. Contact Lewis J. Friedrichsen, M. Rosenblatt & Son, Inc., 5700 Thurston Avenue, Suite 204, Virginia Beach, Va. 23455; phone: (804) 460-4449; or fax: (804) 464-2801.

• **Permanent International Association of Navigation Congresses (PIANC)** in San Francisco, Calif., October 23-25. Regional conference covering future changes and challenges for the U.S. port industry. Held at the Fairmont Hotel. Phone: (202) 504-4312.

• **MHDS 91: International Symposium on Superconducting, Magnetohydrodynamic Ship Propulsion** in Kobe, Japan, October 28-31. Organized by Ship & Ocean Foundation, Tokyo, Japan. Held at the Portopia Hotel. Contact Jetro New York in the U.S. at (212) 997-0448.

• **Panama Maritime 91** in Panama City, Panama, November 12-15. Conference topics will include the Panama Canal, marine pollution



If you're at sea  
about the marine radio  
frequency changes,  
we can help.

On July 1st, the frequencies of many channels on your SSB radio changed.\* Before you can communicate on the altered channels, your radio has to be adjusted.

For a free guide listing all the new frequencies, call AT&T at 1 800 874-4000 Ext. 213, toll-free.

Your local electronics dealer or the manufacturer of your SSB radio can adjust your specific equipment.

AT&T is always ready to help.

Because at sea, nothing is more critical than your ability to communicate.



\*As required by the FCC, high frequency channels were affected, while medium frequency channels were not. © 1991 AT&T

control, marine casualties, Panama ship registry and other open registries, and Panama's maritime court. Held at the Atlapa Convention Center. Contact the Panama Trade Bureau Inc., World Trade Center Panama, P.O. Box 6-2432, el Dorado, Panama City, Panama; phone: (+507) 696124.

•Offshore Pipeline 91 in New Orleans, La., December 4-6. An international workshop on offshore pipeline safety, will be held at the

Doubletree Hotel and Conference Center. Participation will include representatives of the gas and petroleum industry, consulting firms, offshore contractors, manufacturers and fabricators, government agencies, and academic and research institutions from many countries. Contact Dr. D.V. Morris, 111 Offshore Technology Research Center, 1200 Mariner Drive, College Station, Texas 77845; phone: (409) 847-9011; or fax: (409) 845-9273.

## Deutz MWM Supplying Sixteen Marine Sets For Four New Frigates

The German Navy will be replacing the three destroyers of the Hamburg class Z101A between 1994 and 1996 and will commission instead four new frigates of the Deutschland class F123 with Deutz MWM specialized marine sets. The consortium, consisting of Blohm+Voss,

Howaldtswerke-Deutsche Werft and Thyssen Nordseewerke, has recently placed an order with the Mannheim company for delivery of 16 generator sets, four for each frigate.

The total order value amounts to some DM 14 million (about \$7.7 million). The first package of generator sets is scheduled for delivery early in 1992, the last package in March 1994.

The encapsulated Deutz MWM sets with double-resilient mounting are being supplied within a power range from 750 to 1,000 kw. They have been developed to meet military demands in respect to power output, response to load changes under extreme impact loads and suppression of air- and structure-borne sound

For further information and free literature on Deutz MWM generators,

Circle 68 on Reader Service Card.

## The Seaward Marine Fender Protecting Vessels and Port Facilities Worldwide For Over 15 Years

Seaward International is the world's largest manufacturer of foam filled marine fenders and flotation products. Our reputation for delivering the highest quality, best performing products to serve the military and commercial marine industry is unequalled.

Seaward Products and Services include:

- Dock Fenders
- Ship Fenders
- Lightering Fenders
- "Donut" Pile Fenders
- Foam Filled Marine Buoys
- Flotation Products
- Urethane Marine Coatings
- Specialty Elastomeric Materials

As an elastomer technology corporation solving the problems of fendering, flotation, energy absorption, abrasion and corrosion, Seaward International has the experience and resources needed to solve your problems.

For information contact Seaward International, P.O. Box 98, Clearbrook, Virginia 22624. Telephone: (703) 667-5191, Fax: (703) 667-7987.



Circle 252 on Reader Service Card

## COMSAT Expands Coverage With Turkish Agreement

As part of an effort to provide global coverage for maritime and land mobile communications services, the Communications Satellite Corporation (COMSAT) has entered into an agreement with the Republic of Turkey to expand the Inmarsat coast earth station at Ata, Turkey, for COMSAT coverage in the Indian Ocean Region (IOR). The agreement was signed in Washington, D.C., by COMSAT chairman and CEO Irving Goldstein and M. Emin Baser, general director and chairman of the Turkish PTT.

The new Ata facilities, which will be operated and maintained by the Turkish PTT, are scheduled to be in service by early 1992 and will enable COMSAT's Mobile Communications division to provide satellite communications services directly to and from Inmarsat A-equipped ships and land mobile terminals.

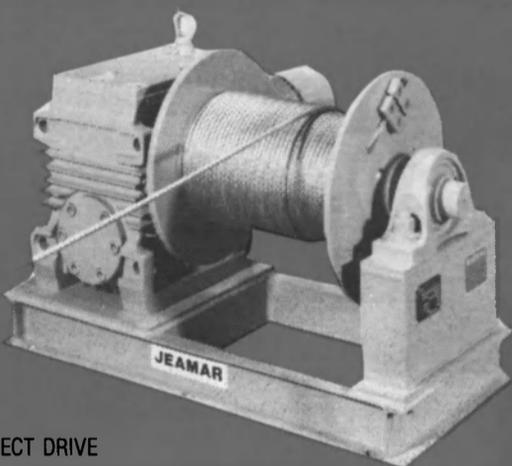
COMSAT currently serves both the Atlantic Ocean Regions and Pacific Ocean Region through its U.S. coast earth stations in Southbury, Conn., and Santa Paula, Calif. The new IOR arrangements will enable COMSAT to provide global coverage in all ocean regions from its own facilities for the first time.

"With this agreement, we now will be able to provide our customers one-stop shopping for their communications needs," said Ronald J. Mario, president of COMSAT Mobile Communications. "By early 1992, our customers will be able to obtain the same high quality services in the Indian Ocean Region that they are used to receiving in the Atlantic and Pacific. This is a logical move for us, as the IOR now is the source of the highest voice traffic growth in the Inmarsat system," continued Mr. Mario.

For free literature detailing COMSAT's marine communications services,

Circle 19 on Reader Service Card

## ELECTRIC WINCHES



- DIRECT DRIVE
- FAIL SAFE BRAKING - STANDARD
- POWER IN & POWER OUT - FULLY REVERSING
- NUMEROUS OPTIONS TO SUIT YOUR APPLICATIONS
- GROOVED DRUMS - CONTROLS - FREE SPOOLING - EXPLOSION PROOF
- LINE PULLS FROM 400 LBS TO 32,000 LBS VERTICAL LIFT

### JEAMAR WINCHES INC.

1051 Clinton St., Buffalo, N.Y. 14206  
TEL (716) 854-3211 FAX (416) 889-3795

Circle 232 on Reader Service Card

## Dt

### DIVERSIFIED technologies

- NAVAL ARCHITECTURE
- MARINE ENGINEERING
- SALVAGE ENGINEERING
- MOORING DESIGN
- DRYDOCK CERTIFICATION & CALCULATIONS
- COMPUTER AIDED DESIGN & ENGINEERING
- COMPUTER AIDED LOGISTICS SUPPORT
- TECHNICAL DOCUMENTATION
- SPECIALTY EQUIPMENT DESIGN
- PROJECT MANAGEMENT

CHESAPEAKE, VA  
(804) 420-9532

ALEXANDRIA, VA  
(703) 739-8844

Circle 264 on Reader Service Card

## U.S. Navy To Use Floating Accommodation Facility At Newport News Ship

A Trane Integrated Comfort™ system is part of a unique Floating Accommodation Facility built to house the duty crews of aircraft carriers while the giant ships are in port for refitting. The comfort system includes Trane HVAC and building automation equipment exclusively and is fully direct digitally controlled. Accommodating the 250 to 300 duty crew of a super carrier, the vessel includes bunk areas, galley, mess halls, sick bay and classrooms.

The Floating Accommodation Facility (FAF) will be used by the U.S. Navy at Newport News Shipbuilding. Construction was contracted to McDermott Inc. shipyard of Gulfport, Miss. Carl E. Woodward Inc. served as general contractor for the superstructure portion of the FAF, with the involvement of various subcontractors.

The plan for building the FAF was unusual in that the hull and the superstructure were constructed separately. The hull was built on land and launched into the water. It was then partially sunk and the entire superstructure (a four-story building) was slowly winched into place on the hull, sliding on greased steel rails.

With only six months from start to shipping out, construction for the FAF was definitely fast track. Instrumental to achieving this were the Trane programmable control modules mounted on the Trane Climate Changer-R air handling units. These modules allowed individual units to be started up under stand-alone direct digital control and then later tied into the Tracer-R building automation system. This staged startup made faster overall commissioning possible. During the final preparation of the vessel for launching, Newport News Field Engineer **Leigh Goodwin** said, "Trane delivered everything they promised. The Tracer is ready to go."

The fully electronic control system was originally specified as pneumatic and was changed to direct digital control at Newport News Shipbuilding's request. The shipbuilding firm has several automation systems in service at their Newport News, Va., yards, including another Tracer system.

If the Floating Accommodation Facility proves a successful alternative to shore housing of crews, it may serve as a prototype for others like it.

## Seaway Vessels Will Be Able To Carry More Cargo

Vessels that use the St. Lawrence Seaway will now be allowed to carry as much as 100 metric tons of additional cargo as a result of an in-

crease in the maximum vessel draft (the depth of a vessel's keel below the waterline).

The U.S. Department of Transportation's St. Lawrence Seaway Development Corporation and the Canadian St. Lawrence Seaway Authority said they will permit an increase in the maximum vessel draft for Seaway locks and the binational shipping route from 26 feet to 29 feet 1 inch. It is the first increase

since 1970 and the fourth in the Seaway's 32-year history.

"This draft increase will have a positive economic impact on Seaway users and represents another step toward making the Seaway more competitive," U.S. Seaway Administration **Stanford E. Parris** said. "Additional draft goes directly on the shipper's bottom line."

Mr. Parris said the Great Lakes/Seaway maritime community for

years has urged the Seaway agencies to increase the maximum draft. The agencies carefully studied the suggestion and have now determined a small increase is feasible, safe and cost effective. He said he and his Canadian counterpart, Seaway Authority president **Glendon R. Stewart**, are committed to continuing efforts to study methods of further increasing the maximum vessel draft for Seaway users.

# How To Prevent A Part Attack.

When it comes to finding or selling marine parts and equipment, Inventory Locator Service, Inc. (ILS) can put you in touch with the world. We list the inventories of suppliers industry-wide on our data base for easy access by buyers in need of marine equipment.

**Ship owners and managers** use ILS to locate equipment around the clock, improve logistical support and reduce communication costs.

**Marine industry suppliers** use ILS to open new markets, find new customers, and increase sales.

As a subscriber to our service, you can search the inventories of marine industry suppliers worldwide in seconds with a single call. The ILS data base can tell you:

- Who has the equipment you need
- Quantity on hand
- Condition - whether it is new, used or overhauled

And we give you the information to contact the seller directly. As an independent provider of information, we do not take part in the sales transaction.

There's never been an easier way to find or sell marine parts and equipment.

Investigate now! Call or write:

**Inventory Locator Service, Inc.**  
3965 Mendenhall Road  
Memphis, TN 38115 - U.S.A.  
901/794-4784 • 800/233-3414  
Fax 901/794-1760

Intralink Service (Europe) Ltd.  
Crawley, West Sussex, UK  
0293-562011 • Fax 0293-562066



## Dunstons Yard Completing Last Of Three Vessels For Arabian Gulf Service



The mooring boat Berri 3, one of three vessels ordered by Aramco Overseas Company from Richard Dunstons yard in Hessle, U.K.

The last in a series of three vessels ordered by Aramco Overseas Company B.V. (AOC B.V.), on behalf of the Saudi Arabian Oil Company (Saudi Aramco), is now nearing completion at the U.K.-based yard of Richard Dunstons. Two mooring boats, the Berri 3 and Berri 4 were handed over to AOC B.V. in April. A docking and firefighting tug, the Al Hawtah, is in the final stages of outfitting.

London-based consultants Three Quays Marine Services were awarded a contract for marine project support by AOC B.V. This primarily involves providing on-site inspection at Richard Dunstons.

AOC B.V.'s three vessels are ABS-classed and offer high maneuverability. The docking tug has a length overall of about 137.8 feet and molded breadth of 40 feet. Propulsion comprises two Caterpillar 3608

diesels driving two Liaaen CP propellers in Towmaster nozzles, with steering and flanking rudders.

The mooring boats have a length overall of 107.4 feet and a molded breadth of 35.4 feet. Propulsion consists of two Caterpillar 3512 diesels, driving two Voith Schneider 21G cycloidal propellers.

For free literature on the facilities and capabilities of Richard Dunstons shipyard,

Circle 75 on Reader Service Card

## SCA To Seek Subsidy Law Again

Following the failure of the latest round of Organization for Economic Cooperation and Development (OECD) talks, U.S. shipbuilders will once again seek legislative action against ships built with subsidies.

According to **John Stocker**, president of the Shipbuilders Council of America (SCA), the association will pursue legislation through Congress which would give U.S. maritime authorities the power to impose fines of \$1 million or more on ships deemed to have been built with unfair subsidies.

Mr. Stocker said that there was an increasing level of frustration because of the lack of a trade agreement after two years of OECD negotiations.

## Hugo Stamp Offers Free Color Brochure On Diesel Services

Motor-Services Hugo Stamp, Inc., is offering a free color brochure on its diesel engine services.

According to the brochure, Hugo Stamp is an authorized distributor and service center for Deutz MWM and Krupp MaK engines. The company is in the process of representing MAN B&W engines for South Florida as well.

Hugo Stamp offers inline boring of all types of diesel engines in situ or in its full service shop located in Port Everglades. The facility has a complete machine shop for precision machining, overhead crane, fabrication of generator units, rebuilding of engines and a comprehensive stock of spare parts.

Hugo Stamp service engineers use the latest Chris-Marine equipment for grinding landing surfaces of engine blocks and liners, valve seat cutting and honing of liner cylinder liners.

For a free copy of the color brochure detailing Motor-Services Hugo Stamp,

Circle 96 on Reader Service Card

## Naval Ship Symposium Set For February 25, 1992 In Arlington, Virginia

The Ship Design Committee and the Chesapeake and Hampton Roads Sections of The Society of Naval Architects and Marine Engineers are planning a one-day Naval Ship Design Symposium to be held on February 25, 1992, in Arlington, Va.

The theme of this symposium will be "Setting Course for the 21st Century."

Emerging technologies and construction strategies must be exploited to produce a 21st century

Navy that is effective, flexible and affordable. The entire Navy and industrial community must cooperate to meet this challenge. Papers addressing all facets of the subject are solicited from all areas of the community, from research to acquisition. Both submersibles and surface ships will be addressed. Emphasis will be on mission flexibility and on acquisition and life cycle cost reduction.

For further information contact **Amos Baki**, M. Rosenblatt & Son, Inc., Two Crystal Park, Suite 612, Arlington, Va. 22202, phone (703) 685-8700, fax (703) 685-8760.

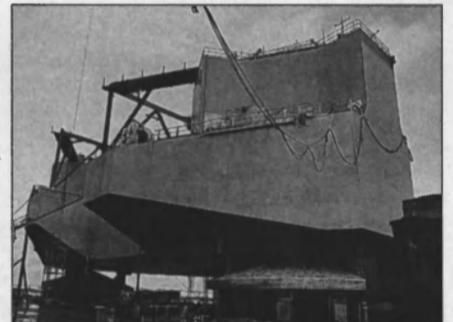
## Keppel Philippines' New Floating Dock Now Operational

Keppel Philippines Shipyard, Inc. recently announced that their newly acquired floating dock (KFD 3) is now operational. With this expansion in facilities the shipyard is able to drydock and repair vessels up to 20,000 dwt.

The KFD 3 can accommodate vessels with the following particulars: length overall 518.3 feet; maximum breadth 75.4 feet; maximum draft 22.9 feet; and light displacement 7,500 tons.

For further information and free literature on Keppel Philippines Shipyard facilities and capabilities,

Circle 79 on Reader Service Card



**NORTH SEA HOTEL**-type facility to accommodate 336 maintenance personnel who service the oil drilling rigs, platforms and other facilities in the Ecofisk Field of the North Sea is what BethShip Sabine Yard is modifying this independent-leg oil drilling rig for. The rig represents the yard's largest, single commercial contract since the Bethlehem Steel yard became operational in 1985. **Raymond F. DeVinney**, president of the Sabine Yard, said the majority of work on Rigmar 301 consists of strengthening the three spud cans (feet) with steel sections to withstand heavy winds and rough waters. The rig will be secured in 262 feet of water by anchoring the three spud cans to the ocean floor. Work on the rig is scheduled for completion this summer. Employment at the Sabine Yard will top 200 during peak work periods.

For free literature on the facilities and capabilities of Bethlehem Steel,

Circle 57 on Reader Service Card

# PROTECT WITH THE PYRAMIDS

## MEGA FILM™

### The new advanced temporary floor/deck protection system

MegaFilm with its uniquely durable pyramid structure is tailor-made to protect all floor surfaces above and below decks.

- In manageable rolls
- Reusable
- Labour saving
- Custom-printed on request

Specifically designed with safety in mind, Megafilm is:

- Anti-slip
- Anti-trip
- Flame retardant

Used by major shipyards and cruise line operators worldwide for top quality protection during newbuild and drydocking. Brochures and samples available on request from our Sales Shipping Division.

Special Films Limited  
Factory J, Bone Lane Industrial Estate  
Newbury, Berkshire, RG14 5ST, UK  
Tel: (0635) 521494 Fax: (0635) 521717



Circle 234 on Reader Service Card

## Viking Ship Skipper Chooses Robertson For Vinland Voyage

Robertson Tritech, Norway, recently announced that their navigational and communications systems have been selected to equip the three Norwegian Viking ship replicas for the "Vinland Revisited" voyage.

The satellite and communications systems—which include Robertson's Robchart chart systems—onboard the flagship of the voyage, the Gaia, will allow the progress of the voyage to be followed round the world. Its exact position will be fixed onboard with the help of a GPS satellite navigator. The exact position will also be transmitted by satellite-operated telex from the Viking ships to the home base in Norway.

For the past 15 years, **Ragnar Thorseth**, the skipper of the voyage, has devoted a great deal of time to the study and development of the three ships he will lead down both the Norwegian and North American coasts, and across the North Atlantic. He has worked closely with experts from the Danish Viking Ship Museum in Roskilde, and the Norwegian Viking Ship Hall in Oslo researching and testing the Viking shipbuilding and navigational techniques.

For further information and free literature on Robertson navigational and communications systems, Circle 52 on Reader Service Card

## Daewoo To Build Two Huge Tankers For World-Wide

South Korean shipbuilder Daewoo recently signed a contract with World-Wide Shipping, based in Hong Kong, to build two 280,000-dwt crude oil tankers, with options for two additional ships.

The two 2-million-barrel-capacity VLCCs will be built at the company's Okpoyard and are scheduled for delivery in the second half of 1993. If the options are exercised for the third and fourth vessels, they would be delivered in 1994.

It is not clear at this time whether the tankers are of single- or double-hull configuration. Current prices for single-hulls are in the neighborhood of \$87 million to \$90 million, with double-hulls about 15 percent higher.

## Sealift Head Predicts More RO/RO Ships Will Be Built In American Yards

Navy Vice Adm. **Francis R. Donovan**, head of the U.S. Military Sealift Command, recently told 120 Massachusetts Maritime Academy graduates, on the 100th anniversary of the state college's charter,

that an unspecified number of roll-on/roll-off ships will be built in American shipyards to meet the nation's military cargo needs.

In the past two fiscal years, some \$1.275 billion has been appropriated for new sealift ships, with another \$1.3 billion possible in the fiscal year that begins October 1, 1992.

Depending on results of a sealift mobilization study due next fall, the Navy will decide whether to own

and operate the new ships, or lease them out to liner companies.

Admiral **Donovan** said U.S.-flag vessels carried 80 percent of all military cargoes, including some 40,000 forty-foot containers during the peak December-February buildup during the Persian Gulf War sealift.

Among lessons learned from the sealift, he said, are that reserve ships of similar type should be kept together in outports near repair yards, and that the fleet needs more exer-

cise. He said the reserve fleet needs more roll-on ships than the 17 available for Desert Storm, and he agreed with Defense Secretary **Richard Cheney** that such ships might be for sale on the commercial market.

Admiral **Donovan** defended rates the military paid to charter privately owned vessels, noting that the General Accounting Office, Congress' investigations arm, had found the prices fair and reasonable for the conditions we were dealing with.



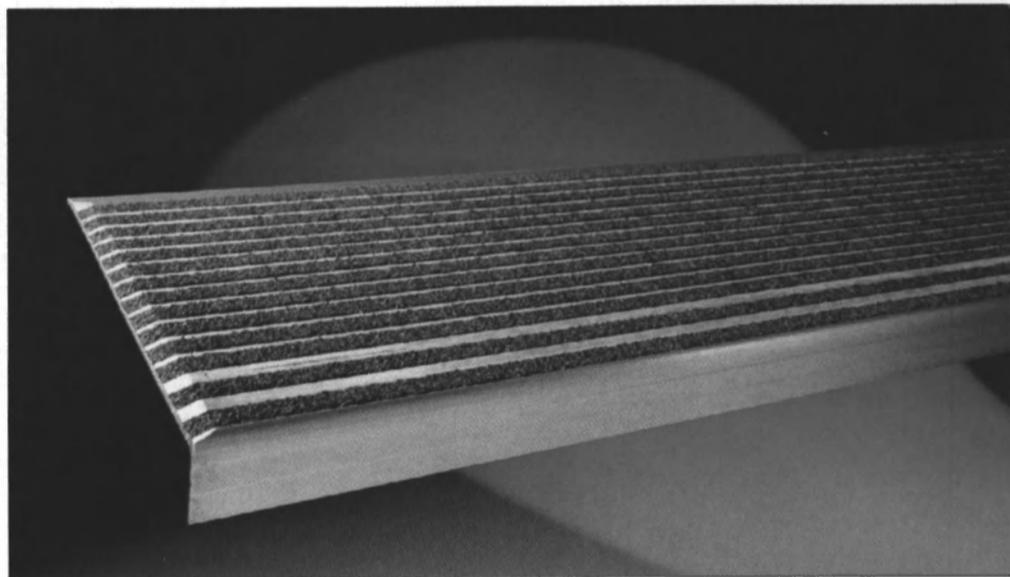
"Patti Built"

Dubuque Casino Belle

The finest vessels  
Use the finest Safety Treads...

Specify

# STAIRMASTER SAFETY TREADS



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

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

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

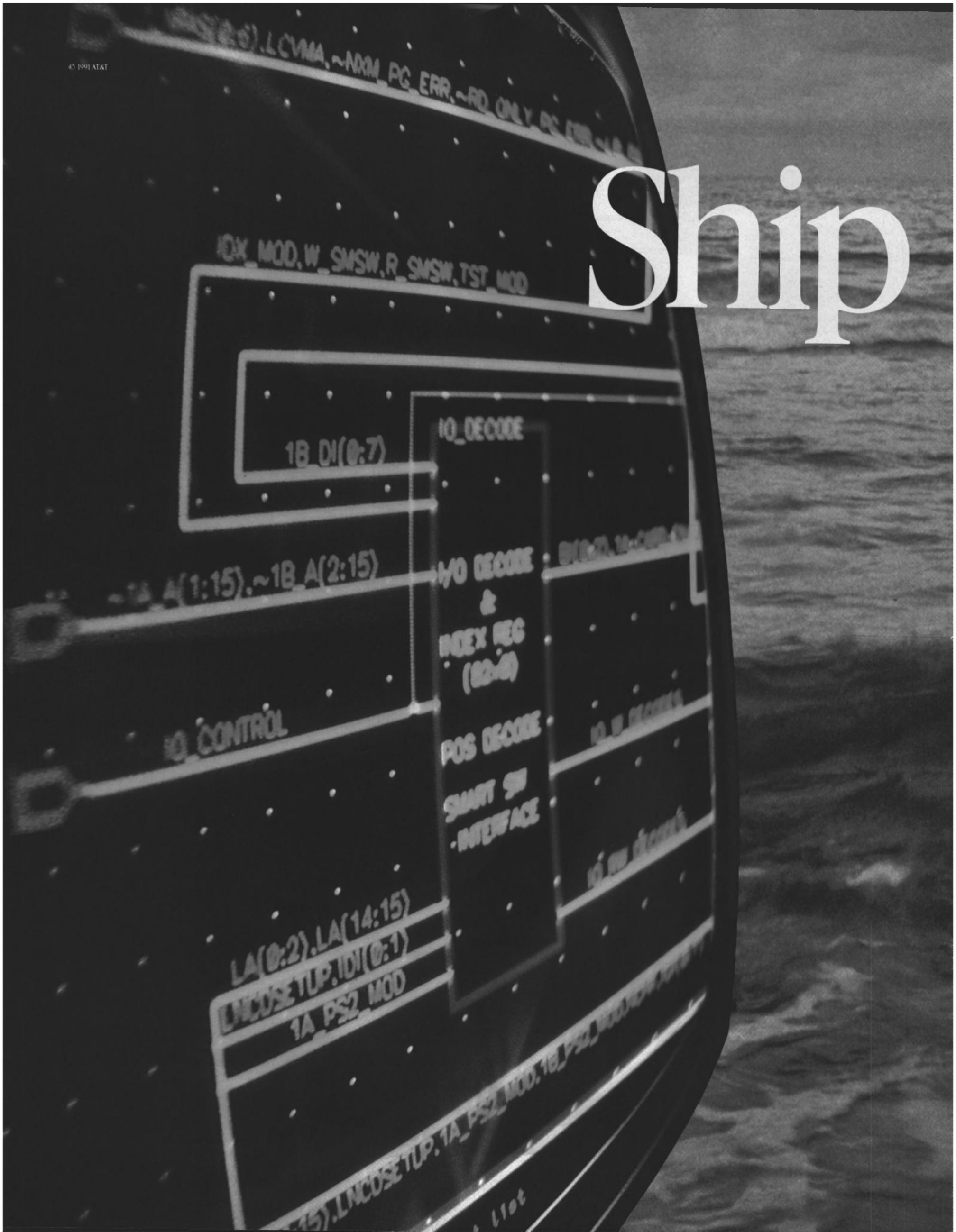


## WOOSTER PRODUCTS INC.

1000 Spruce Street, P.O. Box 896 Wooster, Ohio 44691  
Fax (216) 262-4151 Call Toll Free: (800) 321-4936

Circle 255 on Reader Service Card

# Ship



# Shape

*Or, How AT&T's Specialized  
Fiber Optic Systems Will Help Navigate  
Your Specialized Applications.*

Not all working environments are tidy office spaces. Take the Navy. They wanted to make their ships smarter. So Network Systems designed a specialized fiber optic cable solution. Integrated fiber into the existing copper wiring system. And lifted tons from each vessel. Result? Navigation systems improved. Greater fuel efficiency. Better maneuverability. And overall improved onboard communications. We can improve your business, too. Whether it's an oil platform or chemical facility, a mining operation or power plant. Whether you want to make your system work more efficiently, or grow more gracefully. Make your products smarter or make your communications more secure. Whatever the application, adding AT&T products to your existing equipment will help your ship run smoother. Just give AT&T Network Systems a call at 1 800 344-0223, ext. 1052.

*AT&T Network Systems and  
Bell Laboratories.  
Technologies For the Real World.*



**AT&T**  
Network Systems

Circle 285 on Reader Service Card





## Owners, Builders Find New Expanding Market In Gambling Vessels/Riverboat Casinos

### New Legislation Could Mean Construction Of 50 Boats In Next 5 Years

Maritime Reporter Staff

#### Laws Offer New Opportunities For Shipyards

With the return of the Mississippi gambler, small- and medium-sized shipyards have found a new niche market, one which could offer significant construction opportunities over the next three to five years. Conservative estimates place the number of these vessels to be built in the next five years at over 50.

Bayou La Batre, Alabama, builder Steiner Shipyard, for one, is planning to capitalize on the booming casino boat market. "Casino boats are the hottest segment of the entire marine construction industry," said **Russell Steiner**, the company's president.

#### The Legislation

After years of political maneuvering, state counties in Iowa, Illinois and Mississippi have approved legislature legalizing riverboat gambling. The Louisiana legislature recently passed a bill legalizing riverboat gambling. Revenues for Louisiana alone are projected at \$20 million to \$30 million per year. The bill would allow riverboat gambling

on the Mississippi River, Lakes Pontchartrain and Maurepas, Bayou Bienvenu, the Gulf Intracoastal Waterway, the Mississippi River Gulf Outlet, and the Red, Ouachita, Atchafalaya, Calcasieu and Mergementau Rivers. The bill limits the number of licenses to 15 riverboats. All the boats will have to be built and repaired in Louisiana, as well as crewed by state residents and outfitted with gaming equipment by state suppliers. The bill also requires all the vessels be paddlewheel driven. The Louisiana yards of the Trinity Marine Group, Service Marine Industries and Leevac are expected to be the most important players in this market.

The bill has been sent to Gov. **Buddy Roemer**, who is expected to sign it into law.

In Illinois, the M/V Alton Belle Casino is expected to be the first gambling vessel to operate out of that state when she starts service this month.

In Iowa, where operations began April 1 of this year, gaming legislation is geared more toward low stakes gambling. The Diamond Lady and Emerald Lady, operated by Steamboat Development Corp., Dubuque Casino Belle and Mississippi Belle II, owned by Robert's

River Rides and the President, owned by the Connelly Group, are in service now, with several others expected to join them later this year.

#### The Largest On The Mississippi

Delivered by **Patti Shipyards**, Pensacola, Fla., the Victorian-style riverboat Dubuque Casino Belle is reportedly the largest passenger vessel and gambling boat operating on the Mississippi. Owned by Roberts River Rides and operating out of Dubuque, Iowa, the 387-foot four-deck floating casino, fully outfitted with its gaming equipment, was built at a cost of about \$12 million. U.S. Coast Guard-certified to carry 2,000 passengers, the Dubuque Casino Belle was reportedly the first American-flagged vessel to receive a license for casino gambling.

Although designed to resemble a 19th century sidewheeler, the Dubuque Casino Belle is fitted with a modern screw propulsion. Three Cummins model KTA38-M diesel engines, supplied by Northern Iowa Diesel of Dubuque, produce a total horsepower of 2,400 hp at 1,800 rpm. Power is transmitted to her three

Michigan Work Horse 64-inch-diameter propellers via Aquamet shafting and three ZF BW-251 transmissions. The Dubuque Casino Belle, with a beam of 58 feet, draft of 5 feet, is actually an integrated combination vessel, consisting of a 100-foot power module and 250-foot passenger barge connected by a winch cable system.

She has three casinos, with a 272-seat theater lounge and bar, and two dining areas, as well as the children's play area, and souvenir gift shop.

#### DUBUQUE CASINO BELLE Equipment List

Main engines (3) .....	Cummins
Propellers.....	Michigan
Thrusters (2) .....	Thrustmaster
Generator engine.....	Cummins
Reduction gears .....	ZF
Engine controls.....	Schrader-Bellows
Steering controls.....	Custom Hydraulics
Shafting .....	Aquamet
Coatings.....	Seaguard
VHF radio .....	Kenwood
Radar.....	Furuno
Fire pump.....	MCM
Bilge pumps.....	M.P. Pump

(continued)

### Three Jewels

**Atlantic Marine, Inc.**, Ft. Georges Island, Fla., delivered The Diamond Lady and The Emerald Lady, two 201-foot sternwheel casino/dinner vessels for Steamboat Development Corporation of Davenport, Iowa. The vessels, built at a cost of \$8 million apiece, have an authentic 1890's design specially developed by **John W. Gilbert**, owner of Boston-based John W. Gilbert Associates, Inc.

Interior Design International of Seattle, Wash., complements Mr. Gilbert's 1890's theme with its distinctive Victorian period interiors design. Gilded Philippine mahogany, Aubusson-style carpet, carved Victorian glass panels, sconces, crystal chandeliers, marble/avonite counter tops, and embossed ceiling panels make the two sisters some of the most elegant inland passenger vessels afloat.

Powering each vessel are three Caterpillar 3412 main diesel engines, rated at 671 horsepower each, two of which drive screw propellers and a third, the functional rear paddlewheel. The riverboat can operate by using the paddlewheel alone, the paddlewheel and screw propellers together, or the screw propellers alone. The top speed is about 9-1/2 knots.

The Diamond Lady and The Emerald Lady are berthed in Iowa and cruise the Mississippi River with calls at Keokuk, Fort Madison, and Burlington. Each carries a maximum of 1,200 passengers.

The third of the three-vessel contract for Steamboat Development, the Golden Lady, will be slightly larger than her sisters at 227 feet and is expected to be delivered shortly.

gaming equipment, lounges, bars and food preparation and serving areas. The main deck and the second deck are totally enclosed with stern walk around areas while the third deck has an enclosed area forward with an open sun deck aft.

A pair of 1,125-hp Caterpillar D-399 diesel engines are used for propulsion, while two other engines are used to generate 430 kw of electricity. A fifth Caterpillar engine drives a bow thruster, giving the boat excellent maneuverability.

Steiner believes this vessel has several advantages for a prospective gaming operator. "First the owner can put a large casino onboard," said Mr. Steiner, "and have room for food service, bars, a dance floor and the other amenities passengers are looking for."

"Secondly, our vessel offers the flexibility to be used dockside and can cruise offshore. Plus it can be delivered in four months, while new boats this size will take nine months to a year to build."

### Two Vessels In One

Florida naval architects DeJong & Lebet, together with the Connelly Group, developed the articulated power unit/passenger barge concept in 1984. This development culminated in the Pittsburgh-based dinner/excursion boat Majestic and was used in the construction of the Belle of St. Louis. The goal of the power

(continued)

## A Jewel Of A Design



### The Emerald Lady...

Designed by **John W. Gilbert & Associates** and patterned after the most successful sternwheelers of the late 1800's, the "Hudson" and the "Queen City," "The Emerald Lady," twin sister of "The Diamond Lady," offers the grandeur of the original 19th Century Steamboats with rich Victorian interiors on four decks of casinos, gift shops, passenger lounge, main dining room and upper dining areas and children's arcade. Coast Guard approved for 1000 people, "The Emerald Lady" will call on the Ports of Keokuk, Fort Madison and Burlington, Iowa.

For over 25 years, **John W. Gilbert & Associates** has been known for excellence and innovation in design of all types of riverboats and coastal vessels.

## JOHN W. GILBERT & ASSOCIATES, INC.

*Naval Architects & Marine Engineers  
for over 25 years*

**66 Long Wharf, Boston, MA 02110  
(617)523-8370 (617)523-2178 fax**

#### DIAMOND LADY/EMERALD LADY Equipment List

Main engines (2).....	Caterpillar
Reduction gears.....	Twin Disc
Generators.....	Caterpillar
Generator engines.....	Caterpillar
Propellers.....	Michigan Wheel
Engine monitoring equipment.....	Murphy
Steering system.....	Control General
Coatings.....	International Paint
Keel coolers.....	Fernstrum
Air compressors.....	Quincy
Thrusters.....	Schottel
Capstans.....	McElroy
VHF radios.....	Standard
Radar.....	Furuno
Compass.....	Ritchie
Searchlights.....	Carlisle & Finch
Doors.....	Deansteel Mfg.

### New Life As Gambling Boat

**Steiner Shipyard** is converting a 190-foot oilfield supply boat to a gambling vessel with two other investors. Steiner has stripped her down to her main deck and added a modern three-deck steel superstructure. Called the Mirage, she can accommodate 450 passengers plus

## Gambling Vessels

(continued)

unit/barge concept is to have two vessels appear as one when connected by deck winches, while reducing noise and vibration on the passenger barge.

Built by **Leevac Shipyards, Inc.**, Jennings, La., at a cost of \$7.5 million, the Belle of St. Louis replaced the excursion vessel *President* in May of this year.

The barge portion of the Belle of St. Louis is 195 feet long, 65 feet wide and has a hull depth of 10 feet

### BELLE ST. LOUIS Equipment List

Main engines (2).....	Caterpillar
Generator engines (3).....	Caterpillar
Emergency generator.....	GM
Switchboards.....	Industrial Power Systems
Reduction gears.....	Rexroth
Steering controls.....	Custom Hydraulics
Winches.....	NABRICO
Capstans.....	FMC
Shafting.....	Aquamet
Coatings.....	Sigma
Radar.....	Raytheon
Depth finder.....	Datamarine
Potable water pump.....	Sta-Rite
Bilge, ballast & fire pumps.....	Flomax
Sewage pumps.....	Pacific Pumps
Main shaft cooling pump.....	Jabsco
A/C.....	Carrier
Elevator.....	Canton
Vent fans.....	Hartsell
Sewage systems.....	Envirovac
Searchlights.....	Carlisle & Finch
Air compressors.....	Air Compressor Prod.
Doors.....	Deansteel Mfg.



Charter boat *Crystal Dolphin*, built by Aluminum Boats, Inc., the Trinity Marine Group.

at the low point of the sheer. The Belle has three enclosed decks with the pilothouse on her fourth deck. About 1,200 of her 2,000 passengers can be seated for dinner at one time.

The first deck features a large dance floor, while the second has six-foot-wide panoramic arched windows.

Outfitting materials, including wall and deck coverings, as well as furniture were purchased through St. Louis-based *Directions in Design*, who also designed the interiors. The Belle's interior is reminiscent of the Victorian era, with rich mahogany and brass textures and a glass chandelier.

The propulsion plant in the 85-

foot-long power unit consists of a pair of Caterpillar 3508 diesels rated at 775 hp each at 1,800 rpm and Twin Disc MG-530 reduction gears with a 4.04:1 reduction ratio and two bronze four-bladed propellers. Auxiliary power is provided by two Cat 3512 diesels driving a pair of 500-kw generators and a Cat D353 diesel driving a 300-kw generator.

### First Illinois Riverboat Casino

**Bender Shipbuilding & Repair Co., Inc.**, Mobile, Ala., which has a reputation as one of the major

conversion yards in the U.S., has delivered the 156-foot M/V *Alton Belle Casino*, converted from the dinner cruise boat *Empress of Palm Beach*, to owners *Alton Riverboat Gambling Partnership of Alton, Ill.*

By converting an existing vessel, the owners were able to get an early start on the race to place casino riverboats on the Mississippi River. When the *Alton Belle* begins operation on the Mississippi near St. Louis this month, she will be the first Illinois riverboat casino.

Bender was able to complete the conversion in only 90 days. The shipyard cut the dinner cruise boat at mid-section and inserted a 50-foot midbody. The vessel was gutted and refitted to accommodate gaming tables and slot machines. The vessel was made handicap accessible and all stairways were widened to accommodate larger crowds. A new electrical system and a massive Trane heating and air conditioning system were added to meet casino standards. Two 290-kw Caterpillar 3406 B-driven generators were added to the existing two 80-kw Cummins generators to power the new HVAC equipment.

The *Alton Belle* will accommodate 600 passengers and 60 crew members and is equipped with approximately 400 gaming positions.

The vessel was designed by *Maritime Design, Inc.*, of Jacksonville, Fla. Interior design was by *Kuhlmann Design Group, Inc.*, St. Louis, Mo. Gaming equipment was supplied by *International Game Technology*, Reno, Nev., and sur-

## MORE THAN A PRETTY FACE! EXPERIENCED PROFESSIONALS.



### Bunker Fuel Experts . . .

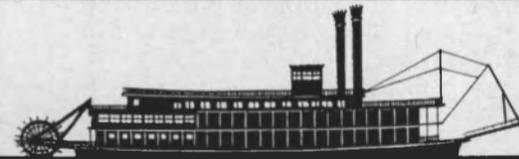
These captains and crew members represent over 100 years of maritime transport and refueling experience. They are typical of the Crescent City Marine employees that deliver bunker C and diesel fuel for ocean shipping from Baton Rouge to Pilot Town along the lower Mississippi River. These professionals deliver the fuel you need when you want it. For the best in bunkering service ... call the professionals at Crescent City Marine.



*Crescent City Marine*

POST OFFICE BOX 23666  
NEW ORLEANS, LA 70183  
**CALL (504) 733-2574**  
**FAX (504) 734-5086**

Circle 29 on Reader Service Card



## PUT YOUR MONEY ON

**MICROPHOR** Quality Marine  
Plumbing & Waste  
Handling Products

**Marine Sanitation Devices** provide simple and efficient waste treatment. No moving parts, no power requirements, minimum maintenance. USCG certified.



**Microflush® Marine Heads.** Two quarts per flush toilets, full size and made from vitreous china in a selection of colors.



**Bidets and Lavatories** in vitreous china, also in a selection of colors to complement your decor.



**OWS Oily Water Separators.** Fully certified and approved. Economical and reliable. Models in seven sizes to meet your needs.



Microphor products for marine plumbing and waste handling are in wide use on pleasure yachts, passenger vessels, and work boats around the world. Engineered for efficiency and built to last, our products will give you years of trouble-free service.

**MICROPHOR**  
Microphor, Inc.  
P.O. Box 1460, 452 E. Hill Rd.  
Walrus, CA 95480, USA  
Telephone: (707) 459-5563  
Toll Free in US: (800) 358-9280  
FA. I. (707) 459-6617  
Microphor Export  
1 Lakeside  
Paultons Park  
Over, Near Romsey  
Hants SO51 6AL, England  
PHONE & FAX: 44 703 814486

Circle 331 on Reader Service Card

veillance equipment was supplied by Electronics Specialists, Inc., of Las Vegas.

**ALTON BELLE CASINO  
Equipment List**

Main engines (2).....	Cummins
Generator engines.....	Caterpillar
Reduction gears.....	Twin Disc
Engine control.....	Schrader-Bellows
VHF radio.....	Cybernet
Radar.....	Furuno
HVAC.....	Trane

**Grand Ole Lady**

The "Grand Ole Lady of the River," the newly refurbished 3,000-passenger President has the largest rated capacity of any of the gambling vessels operating on the Mississippi. The 297-foot, five-deck riverboat underwent an extensive \$11 million refurbishment by Custom Ship Interiors. According to **Darrell Price** of Custom Ship Interiors, the President's refurbishment began in 1989 in St. Louis, when the Maryland-based firm replaced steel, girders and fixed and installed new windows. The following year in October, the vessel's interior was gutted, including the removal of 110,000 pounds of dance floor. Custom Ship Interiors built archways, installed tin ceilings and new stairwells. She was also drydocked in New Orleans at Avondale Shipyards, where her engines were raised and bow and stern thrusters were added. The President, a National Historic Landmark, began life as the overnight

packet boat Cincinnati owned by Louisville and Cincinnati Packet Company in 1924. After several owners and upgrades and a name change, she was bought by **John Connelly's** St. Louis River Cruise Lines in 1985 and now operates out of President's Landing in Davenport, Iowa.

Because of her grandfathered status, the 2,000-hp, Caterpillar-powered President is now able to feature the largest floating casino—289 feet long and 27,000 square feet. She has 640 slot machines and 32 gaming tables.

Directions In Design, Inc., Chesterfield, Mo., a firm that specializes in turnkey interior design services, worked with Custom Ship Interiors on the President's interior.

**Patti Conversion**

Christened in 1986, the 196-foot Mississippi Belle II has since been converted by **Patti Shipyards** and features full casino gambling and entertainment year-round as well as lunch, dinner and day-long cruises. Harbored at the Showboat Landing, Riverview Park, in Clinton, Iowa, the Belle II is powered by three 500-hp Cummins K-19 main engines and holds 500 passengers and 35 crew.

**New Dinner/Excursion  
Boats For Lake Michigan**

The dinner/excursion boat market of the passenger vessel industry

has been as active as the gambling/riverboat market. Over the last 12 months, a number of shipyards around the country have delivered and received notable orders. Two new dinner/excursion boats, for example, recently entered into service on Lake Michigan.

One, the 800-passenger Odyssey, was delivered by **Service Marine Industries, Inc.**, Morgan City, La.

**Tom Hensley**, president of Service Marine, said that the Odyssey is by far the most glamorous of the megayacht-style dinner boats designed by the company. The 175-foot long by 37-foot wide boat will carry her 800 passengers on three "whisper" quiet decks.

Odyssey Cruises operates the M/V Odyssey year-round from the Navy Pier in Chicago, which is undergoing a \$250 million renovation. The managing partners, **Mike Higgins** and **Roy Sanders**, offer a true yachting experience with specially prepared food served at the guests' tables, so that the Odyssey is more like a "fine restaurant on the water."

For the passengers' comfort, the engine room has been made as quiet and vibration free as possible by use of special engine mounts and sound isolation panels. Lo-Rez supplied flexible couplings, which connect the gears to the shaft, and flexible engine mounts. According to Mr. **Hensley**, the Lo-Rez system has been very effective in reducing sound and vibration.

The boat is powered by two Caterpillar 3408 DITA engines, rated

at 470 bhp each at 1,800 rpm. The two generators are Caterpillar 3406T marine gensets with 250 kw generators.

A second Lake Michigan boat was delivered by **Steiner Shipyard**, Bayou La Batre, Ala. The 96-foot charter vessel Chicago's First Lady will operate on Lake Michigan and the Chicago River, offering luxury dining and sightseeing.

"Because of the quality of our boats, Bayou La Batre quickly became known as the fishing boat capital of the world," noted **Russell Steiner**, president of the yard. "We intend to broaden our reputation for quality by building outstanding passenger vessels of all types."

Chicago's First Lady is a recreation of a 1920s steam-powered yacht and bears a striking resemblance to the Presidential yacht Sequoia.

Designed by Florida naval architect **Bill Preston**, the \$1.2 million vessel has a pair of Caterpillar 3306s, each producing 220 hp, for main propulsion, and twin Caterpillar 3304s driving 165-kw Cat SR-4 generators for auxiliary power.

Owned by **Bob and Holly Agra** of Chicago, who operate Mercury Skyline Cruise Lines, Chicago's First Lady features brass-framed windows on the forward section of the first deck superstructure and a cosmetic stack just behind the pilot-house on the second deck. This stack is of two-piece construction so it can be raised and lowered to fit under

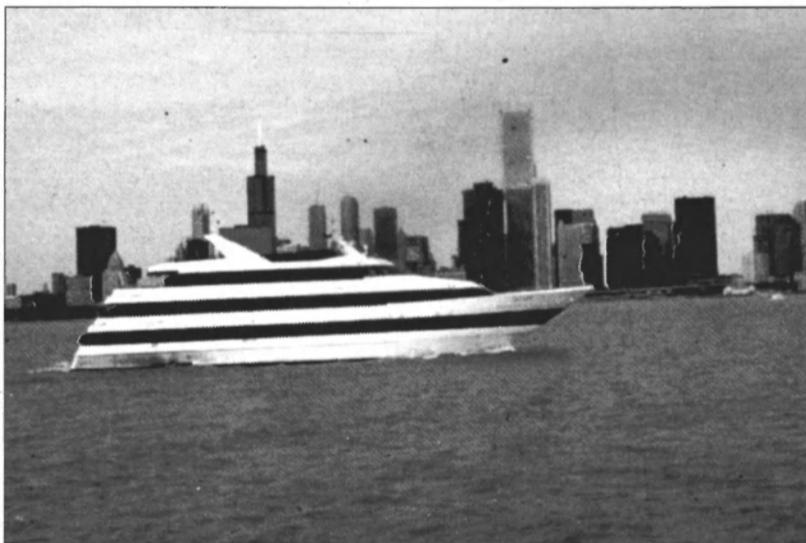
(continued)

**LEADER-SHIP  
LEADER: OUT IN FRONT**

Service Marine, the nation's leader in design and construction of dinner boats, charter yachts and casino boats, has a brand new design that will put you out in front of your competition.

Following lineage of the highly successful Spirits of Norfolk and Puget Sound, the new LEADER-SHIP displays the sleek clean lines which are Service Marine's trade marks. Seen from shore or another boat, the viewer would be sure that they're looking at a sumptuous 175' long private yacht. The two beautifully decorated main cabins are set up for haute cuisine table-served dining for 400 guests, with food prepared in the first deck galley. Passengers can move between whisper-quiet cabins without intruding on other guests. The third deck cabin provides secluded privacy for fifty special guests.

The LEADER-SHIP is out in front for guests' comfort, also. Windows are heavily tinted to block unwanted heat, and sized to give an unprecedented view of the surrounding scenery. Tables are arranged so that everyone



has a view of the entertainment and dance floor. Ceiling heights close to eight feet, and air conditioning especially designed to provide continuous fresh air, will satisfy even your most critical

guest. With an extended keel and specially designed anti-roll chocks, this boat will be operating in relative comfort while other boats are restricted to port.

The LEADER-SHIP is designed to USCG regulations for 800 passengers operating in rough waters up to twenty miles offshore from a safe harbor. You can add movable fin stabilizers and have a very roll-free yacht.

The boat can be designed in various lengths, from 140' to 200', depending on your mission. Passenger counts can vary from 149 to 1500, depending on length, beams and number of cabins. Choose the two-cabin design, add some luxurious couches, chairs and draperies along with a spectacular lounge, and you'll have an exciting charter yacht.

BE OUT IN FRONT, build with Service Marine, and you'll realize the best and lowest investment per passenger and the shortest possible delivery time.

**SERVICE MARINE INDUSTRIES, INC. IS A FULL SERVICE SHIPYARD - DESIGN,  
ENGINEERING, CONSTRUCTION, INTERIOR DECORATING - MODULAR DESIGN OR  
CUSTOM BUILDING TO YOUR SPECIFICATIONS.**



**Service Marine Industries, Inc.**

Trust • Quality • Economy • Service

P.O. Box 3806 • Morgan City, LA 70381 • (504) 631-0511 or (504) 784-1817

Circle 341 on Reader Service Card

## Gambling Vessels

(continued)

low bridges on the Chicago River. The top section of the stack is plastic to accommodate a radar dome inside.

Her enclosed, air conditioned

### CHICAGO'S FIRST LADY Equipment List

Main engines (2).....	Caterpillar
Propellers.....	Rice
Reduction gears.....	Twin Disc
Engine controls.....	MMC
Steering controls.....	Coast Air & Hydraulic
Shafting.....	Aquamet
Radar.....	Furuno
Coatings.....	Devoe
Compass.....	Ritchie
A/C.....	Cruise Air
Bilge & fire pumps.....	Crown Pumps

main deck salon features a skylight and a bandstand with a piano in the stern and a U-shaped bar forward. There is seating for 104 passengers, but in a reception/cocktail party setup, as many as 250 passengers can be entertained.

The second deck is open aft of the pilothouse.

### First Of Four Nichols-Built Passenger Boats

On the West Coast, the 150-foot San Francisco Spirit, was delivered by **Nichols Brothers Boat Builders'** Whidbey Island, Washington, yard, to Pacific Marine Yacht Cruises of San Francisco.

Designed as a VIP dinner and excursion vessel, the San Francisco Spirit accommodates 700 passengers on three decks for reception/



Jet Cat Express, built by Gladding-Hearn Shipbuilding

### JET CAT EXPRESS Equipment List

Main engines (2) .....	GM-Detroit-Diesel
Gear .....	ZF
Propellers .....	KaMeWa
Engine controls .....	KaMeWa
Gensets.....	Northern Lights
Generator	
control panel .....	Industrial Power Systems
Steering system .....	KaMeWa
Radar .....	Furuno
VHF .....	ICOM
Loran .....	Micrologic
Depth sounder .....	Datamarine
Compass .....	Ritchie
Loud hailer.....	Raytheon
A/C .....	Thrane

buffet programs and, if reconfigured, 550 guests for formal dining with an attending crew of 50.

Five Cummins diesel engines are employed on the boat—three for propulsion and two to generate 430 kw of electrical power. The three-engine propulsion design offers consistency. Should the vessel lose an engine, it can continue to operate efficiently on the other two. These engines consist of 350-hp Cummins NTA-855-M diesels driving conventional Sound Propellers equipment through 3.5:1 Twin Disc 514 gears.

### SAN FRANCISCO SPIRIT Equipment List

Main engines (3) .....	Cummins
Reduction gears.....	Twin Disc
Propulsion controls .....	MMC
Wheel .....	Hough Marine
Propellers .....	Sound Propeller
Bowthruster.....	Schottel
Generators .....	Newage
Generator engines .....	Cummins
Windows .....	Hehr Engineering
Watertight doors .....	Pacific Coast Marine
Pumps.....	Cascade Machinery/Pump Industries
Paint .....	Hempel
Deck coverings.....	Devoe
Radars, loran & autopilot .....	Furuno
VHF radios &	
loud hailer.....	Standard Communications
Depth recorder.....	Data Marine

monohulls operated by Catalina Channel Express that run daily from Long Beach, Redondo Beach and San Pedro to the island resort.

The triple-deck vessel is powered by a pair of Detroit Diesel 16V149TAs rated at 1,740 hp, each turning at 1,800 rpm, and driven by twin KaMeWa waterjets. By using waterjets instead of conventional propellers, draft was kept to only three feet, and a minimal wake is produced at all speeds. Hydraulically actuated, adjustable trim tabs, designed by the yard, further reduce the wake by adjusting for load at lower speeds.

### Washington Charter Boat

Trinity Industries, Inc., subsidiary **Aluminum Boats, Inc.**, Crown Point, La., has delivered the Crystal Dolphin, an 85-foot executive dinner cruise/excursion vessel to Tidewater Barge Lines, Inc., Vancouver, Wash.

The all-aluminum craft boasts a luxurious "modular" interior which permits the boat to be quickly configured for executive meetings, cocktail parties, dinners, or sightseeing cruises. The boat is available for charter in the Portland-Seattle-Vancouver area.

A unique feature of the main salon is a custom-made sectional which is placed in the center allowing full viewing at all times. The sectional

### Catalina Catamaran

Since May, Southern California operator Catalina Channel Express has been providing year-round excursion and commuter service aboard the new 102-foot catamaran Jet Cat Express from its homeport of San Pedro, Calif., to Avalon City on Catalina Island. According to company officials, the 368-passenger, all-aluminum catamaran is making the 26-nautical mile run in a fast-running time of about 52 minutes.

The new Incat-designed vessel, built by **Gladding-Hearn Shipbuilding**, The Duclos Corporation, Somerset, Mass., is the company's largest. She joined a fleet of five

## At last...a closed tank gauging system that's corrosion-resistant.

MMC introduces the simplest, safest way to keep track of a chemical tank's contents.

This new Flexi-Dip™ closed trimode is the latest addition to the world's leading line of tank gauging tapes.

Its completely closed configuration, when combined with the all-stainless-steel vapor control valve, results in a completely closed tank gauging system that satisfies all existing and forthcoming environmental regulations.

Beyond this, both the tape and valve are constructed of 316 stainless steel that meets or exceeds all your corrosion-resistance requirements: low maintenance, long life, undiminished accuracy.

MMC International has been, for over 30 years, the leader in tank gauging equipment. You can always count on us to develop new products to meet your changing needs.



COMING SOON  
A vaporless  
gauging tape  
designed for non-  
corrosive service.

Keeping You  
in Control

MMC International Corp.  
60 Inip Drive  
Inwood, NY 11696-1096 U.S.A.  
Phone: 800-645-7339  
516-239-7339  
Telex: 96-0140 MAMCAF INND  
Fax: 516-371-3134

MMC (Europe) Ltd.  
Milburn House, Dean St.  
Newcastle-upon-Tyne  
NE1 1LF UK  
Phone: (091) 232-8339  
Telex: 537005 MARINE G  
Fax: 44-91-232-9216

MMC (Asia) Ltd.  
2-20,4-Chome, Isobe-Dori  
Chuo-ku, Kobe 651  
Japan  
Phone: 078-251-1033  
Telex: 5624163 OPECK J  
Fax: 078-252-0265

Circle 211 on Reader Service Card



San Francisco Spirit, built by Nichols Brothers Boat Builders

can also be separated and is placed against the bulkheads to form individual seats, creating more space in the center of the salon.

The below deck includes a spacious galley for meal preparation.

Overall the Crystal Dolphin is 85 feet in length, with a 24-foot beam, and a 3.5-foot draft. The boat also includes a five-foot swim platform at the stern.

Propulsion is provided by two Caterpillar 3408TA diesel engines driving through Twin Disc reverse/reduction gears.

Aluminum Boats, Inc. is part of the Trinity Marine Group, Gulfport, Miss.

#### CRYSTAL DOLPHIN Equipment List

Main engines (2).....	Caterpillar
Reduction gears.....	Twin Disc
Propellers.....	Federal
Generators.....	Isuzu
Controls.....	Micro-Commander
VHF radio.....	Standard
Radar.....	Furuno
Fathometer.....	Datamarine
Bearings.....	BFGoodrich
Strainers.....	Groco
Bilge pump.....	Jabsco
Fire pump.....	Crown
Freshwater pumps.....	Deming
A/C & heating.....	Lemoine
Horn.....	Kahlenberg
Blowers.....	Hartzell
Compass.....	Ritchie
Life float.....	Jim Buoy
Life jackets.....	Stearns
Anchor.....	Danforth
Searchlight.....	Perko
Navigation lights.....	Aqua Signal
Engine room lighting.....	Pauluhn

#### Lake Mead Sightseeing Boat

Skipperliner Shipyards, Inc., La Crosse, Wis., is building a 117-foot dinner/dancing/sightseeing sternwheeler for Lake Mead Cruises, Boulder City, Nev., a wholly owned subsidiary of Travel Systems, Inc., Lake Tahoe, Nev., for operation on Lake Mead.

Called the Desert Princess, the boat will have two propulsion systems which can either be used separately or in tandem. For twin-screw propulsion, the 150-ton-displacement Desert Princess will be propelled by twin Caterpillar 3306 diesel engines and 36- by 30-inch pitch, four-blade Michigan Wheel Workhorse propellers, while for hydraulic sternwheel propulsion, she will be powered by a single Caterpillar 3306 engine. Her service speed is 10

knots.

Electrical power will be supplied by a 165-kw generator driven by a Caterpillar 3306 diesel. She will also be fitted with a hydraulically operated 16-inch, 55-hp thruster supplied by American.

Owner **Bob Kimble's** Desert Princess has an exclusive contract with the Parks Service to operate in the Black Canyon, which will provide her passengers with the unique experience of being at the top of Hoover Dam on Lake Mead.

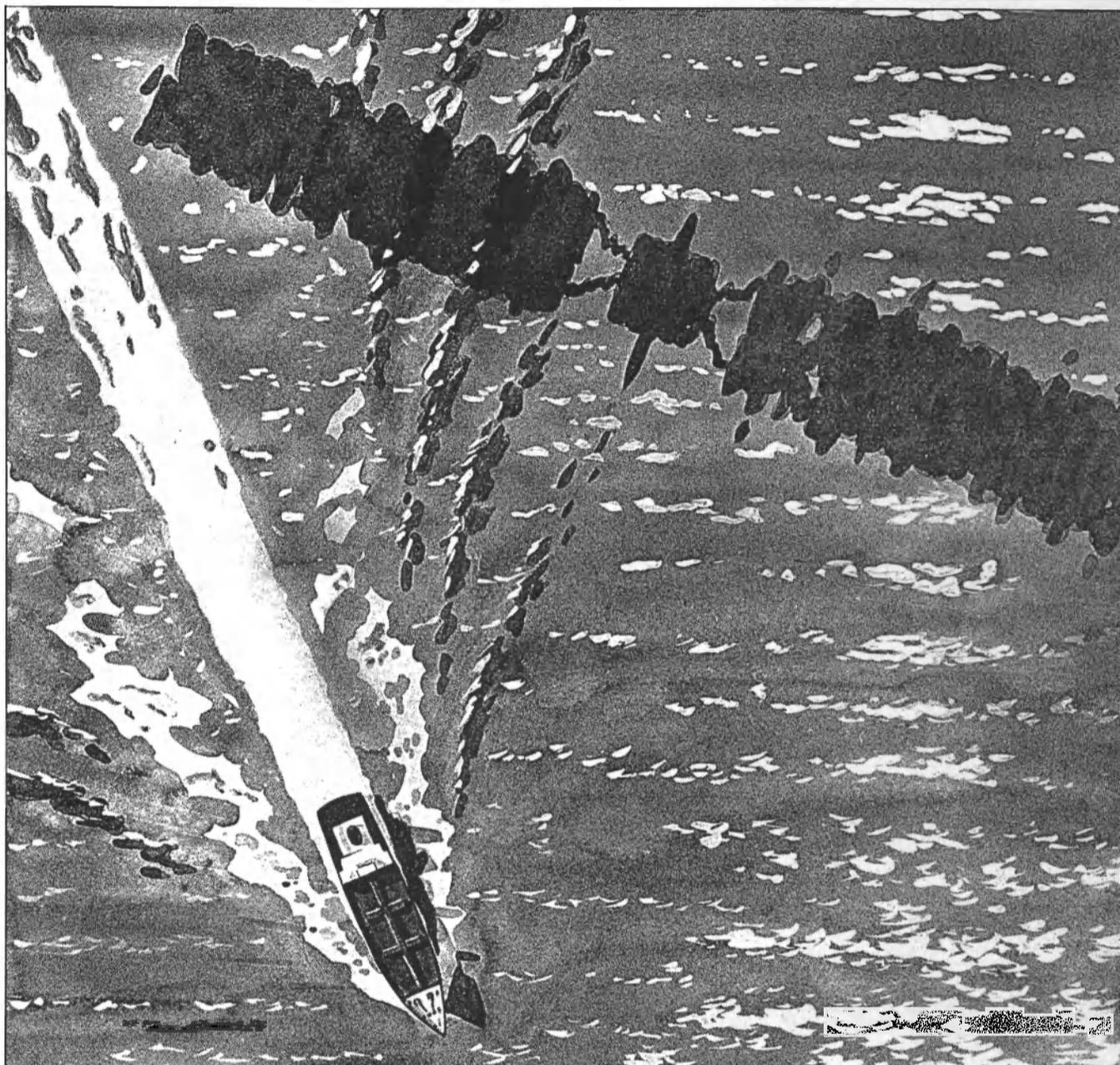
According to **Robert E. McMahon Jr.**, vice president, sales and marketing, Skipperliner Shipyards, the three-deck Desert Princess will accommodate about 300 passengers. About 220 passengers can be accommodated for dinner seating on her enclosed main and boiler decks. The interior of the sternwheeler will have a "Southwestern flair," with Indian type colors throughout.

For the passengers' comfort and enjoyment, the Desert Princess is

equipped with 40 tons of Cruisair air conditioning, the latest noise and vibration dampening systems from Lo-Rez, and full galley facilities including a char-broiler.

The naval architect for the vessel was **Timothy Graul**, Marine Design, Sturgeon Bay, Wis.

Following her completion at Skipperliner, the Desert Princess will be transported to Lake Mead via four tractor trailer shipments. On-site assembly should take approximately 10 to 14 days.



## WHATEVER YOUR COMMUNICATION NEEDS, COMSAT HAS YOU COVERED.

Thousands of ships throughout the world use COMSAT's Maritime Services because of their transmission quality, low rates and creative services not available anywhere else. Services such as daily news digests, special direct-dial telephone services, high speed data, electronic mail and more.

Our satellite communication services are provided over the INMARSAT global system. We cover both the Atlantic and Pacific Oceans through our two coast earth stations in Southbury, CT and Santa Paula, CA. So, if you're calling ship-to-ship or ship-to-shore there's only one answer, COMSAT.



**COMSAT®**

Maritime Services

For more information about COMSAT Maritime Services, write: 950 L'Enfant Plaza, S.W., Washington, D.C. 20024 U.S.A. Telephone: 1-800-424-9152 (in the U.S.); 1-202-863-6567 (outside the U.S.) Fax: 1-202-488-3814 Telex: 197800 WSDCOMSAT

Circle 213 on Reader Service Card

# A Viking Goes To Sea Once More

## Southwest Marine Completes \$75 Million Transformation Of Viking Serenade

Maritime Reporter Staff

Royal Caribbean Cruise Line's newly transformed Viking Serenade recently emerged from the San Diego shipyard of Southwest Marine, Inc., not only heralding her own rebirth, but perhaps the rebirth of the cruise ship conversion market in the U.S.

"We think this represents a major step forward, not only for Southwest Marine, but for the entire U.S. ship repair industry," said **Herb Engel**, executive vice president and chief operating officer of Southwest

erate from her homeport in Los Angeles to Ensenada, Mexico via Catalina Island on three-night cruises and via San Diego and Catalina to Ensenada on four-night cruises.

Occupancy was boosted from 976 to 1,514 passengers with the addition of 260 new cabins. The new cabin areas replaced a section formerly used as the ship's car decks. Stern doors, which allowed vehicular access to the car decks, were permanently sealed and new side doors were cut into the ship's hull to make the loading of provisions easier.

At peak production, more than 3,000 workers were involved in the project, 2,200 of which were Southwest Marine personnel and the rest subcontractors. According to Mr. **Engel**, the project took more than 1 million manhours.

"One of the most difficult parts of the project was that, because of tight cruise schedules, an incredible amount of work had to be done in a short period of time," noted Mr. **Engel**. "This work was much more concentrated than new construction."

The blue prints and drawings for the conversion were supplied by Elomarine, a Finnish marine engineering and design firm located in Turku.

All of the new furniture for the conversion of the cabins was supplied by H.W. Metallbau of Thedinghausen, Germany.

Pacific Marine Sheet Metal, a San Diego firm, built and installed four new galleys and two cocktail areas. The galley areas include food preparation equipment.

Hopeman Brothers, Waynesboro, Va., converted the main dining rooms and upgraded the casino,

shopping areas and the new Viking Crown Lounge.

The crew areas were remodeled, complete with dining areas and lounges. Southwest Marine and Hopeman Brothers supervised and conducted these improvements.

Northwest Marine, a division of Southwest Marine located in Portland, Ore., built the new bow and sponsons, which are designed to improve stability. An advanced drag-reducing ducktail stern was added as well.

On the Sulzer-powered Viking Serenade's lowest deck, a new Wartsila Vasa 6 R32D diesel generator unit was installed to support additional electrical loads.

On the second deck, 144 passenger and crew cabins were installed on an innovative "floating floor" which provides a vibration-free ride. To accommodate the new passenger capacity, a 132,000 gallon per day Serck Como 500/66 freshwater generator with stage flash evaporator was installed, as well as an air-conditioning system. New trash incineration and waste handling systems were supplied by from Norsk-Hydro of Norway. Additional sewage treatment plants were supplied by Jetts, also of Norway.

Deck 3 received 154 new crew and passenger cabins and a state-of-the-art conference center.

Part of the refurbishment included the extension of the 11th deck to facilitate the installation of the 12th deck, the home of the Viking Crown Lounge. Southwest Marine built the new 144-ton Viking Crown Lounge, a distinguishing feature of every RCCL ship. The lounge is located at the very top of the vessel.

The Azurlite glass and stainless steel faceted skylight and frame-

work were designed, engineered and fabricated by Southwest Marine and its subcontractor, Harmon Contracting.

The lounge is complete with new elevators, cocktail lounge, food preparation/service areas and high tech lighting and sound systems. During the day, it serves as an observation deck and at night, a dancing and entertainment area.

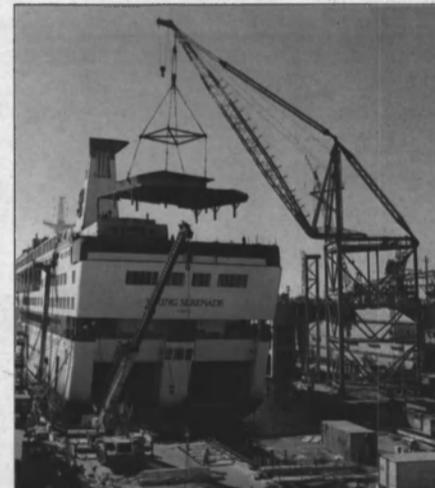
In summing up the project, Mr. **Engel** said, "We set out to take on an extremely significant project. We took the lead and showed that this type of work can be done in the U.S."



The Viking Crown Lounge in drydock at Southwest Marine's San Diego yard, undergoing preparations for lift to the 12th deck of the Viking Serenade.

Marine, San Diego. Mr. **Engel** noted that conversion and refurbishment work like this is often done in Europe and the Far East.

Converted under a \$75 million contract, the 625-foot Viking Serenade is now the largest passenger cruise ship scheduled for year-round operation on the U.S. West Coast. The 27,000-ton cruise ship will op-



The 11th deck extension being lifted atop the Viking Serenade.

The work we accomplished is as good or better than anywhere in the world. I think this project proves that the expertise for this type of work is available in the U.S."

For free literature detailing the facilities and capabilities of Southwest Marine,

Circle 28 on Reader Service Card



**NIGHT AND DAY:** At left, Royal Caribbean Cruise Line's Viking Serenade passes under the Coronado Bay Bridge en route to Southwest Marine's San Diego yard prior to her conversion. At right, the refurbished Viking Serenade.



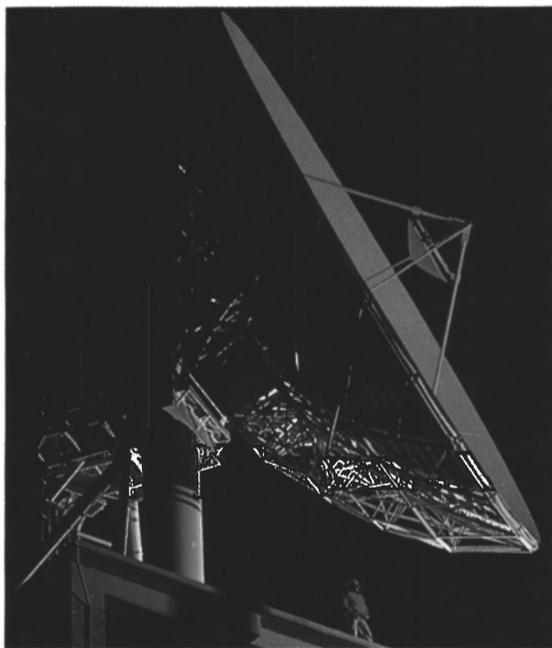
# DIAL 11 FOR THE BEST RATES ON EARTH

## IDB·A Offers Its Lowest Rates Ever For Ship-to-Shore Service

Pick up any shipboard phone and dial 11 for the highest quality transmissions and the only *full* worldwide coverage.

IDB Aero-Nautical is proud to announce the completion of its POR and AOR-W Coast Earth Stations at Niles Canyon, California. IDB·A's stations have been assigned the Decimal 11-Octal 13 ID numbers by INMARSAT.

Effective October 1, 1991,



all vessels can gain access to IDB·A's low rates of **\$8.74** peak, **\$6.84** off-peak and **\$3.85** telex simply by selecting our earth stations and dialing normally.

And remember IDB·A does not charge a tail charge for land-line voice connections to the US, Canada or UK, and charges a flat \$.85 per minute tail charge to all other international locations.

Call IDB·A today and compare our unsurpassed service and down-to-earth prices!

**1-800-IDB-AERO**  
1-800-432-2376 or 1-301-590-7074

IDB·A's interim Indian Ocean service via Perth (CES ID 02) remains in effect at \$9.97 per minute peak, \$8.04 off-peak, and \$5.80 telex. (Call 1-800-IDB-AERO to register.) IDB·A's permanent service by Perth using CESID 11 is scheduled for early 1992. ■ IDB·A will introduce AOR-E service through its Staten Island CES in November 1991. ■ IDB·A also offers shore-to-ship service in the U.S. at \$8.74 per minute by dialing 1-800-800-8282. ■ Note: INMARSAT has assigned IDB·A the Expanded ID Numbers 13·1 (Octal) and 11·1 (Decimal) which can also be used. However, Decimal 11/Octal 13 will default to IDB·A until the system expansion is complete.

## MCR Engineering Installs Two Control Systems For MarAD

MCR Engineering Co., Inc., of Norfolk, Ma., has installed two control systems for MarAd (Cape Domingo, Cape Diamond).

Because of the Gulf War, the installation of two additional control systems was delayed. The systems (for the Cape Decision/Douglas) are

tentatively scheduled for late summer '91.

Additionally, installation of a CP load control system (for the M/V Paul A. Tergurtha, operating on the Great Lakes) is scheduled for late summer/fall '91.

Currently, two particular developing projects are receiving a great deal of interest from the industry. The first project is enhanced alarm cards for the Galbraith Alarm system. The second project is a pitch indication system. The advantages

of the pitch indication system are master-slave configuration permits single calibration point for all meters; 110 vac or 24 VDC operation; extremely rugged—built for the marine environment; battery backup feature; non-linear calibration (front panel); and units displayed.

For additional details on all marine engineering and design services offered by MCR,

Circle 11 on Reader Service Card

## New Xenon Searchlight From Carlisle & Finch Targets Gambling Boats

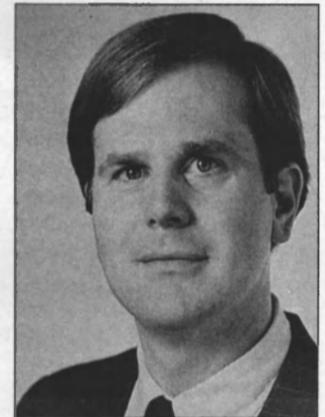
The Carlisle & Finch Co., Cincinnati, Ohio, recently introduced a xenon searchlight line designed for luxury passenger vessels and the emerging gambling boat market. The new products combine the power of a commercial xenon searchlight with the aesthetics of the company's pleasure boat searchlights.

The searchlight is offered in two models—remote electric joystick control or manual pilothouse control. The fixture is composed entirely of brass and can be specified with a polished brass or chrome finish. It is 15 inches in diameter and comes standard with a remote electric beam-size focus feature. The remote electric focus feature allows the navigator to widen the beam for short range flood applications by activating a switch in the pilothouse.

For further details on the new xenon searchlight form Carlisle & Finch,

Circle 32 on Reader Service Card

## Polansky Named Manager Of Applications, Service At ZF Of North America



Russ Polansky

Russ Polansky has been promoted to manager of applications and service for the Marine Division of ZF of North America Inc., the company recently announced.

In his new position, he will be responsible for applications engineering of ZF's entire line of marine reverse reduction transmissions ranging from 80 to 4,000 horsepower.

Previously, Mr. Polansky was accounts manager for the Marine Division, overseeing the sales of marine transmissions to the pleasure craft and commercial markets.

## Ship Scrapping Drops To 25 Year Low

The scrapping of ships worldwide in 1990 dropped to its lowest level in over 25 years, according to recently published figures by Lloyd's Register of Shipping.

Scrapped tonnage dropped to a low of 1.8 million gt in 1990, as compared with 2.5 million gt in 1989. The total number of ships scrapped last year was 701, with Japan demolishing the highest number.

Based on tonnage, however, India was the principal place of demolition, with a 60 percent share.

# Compared to keeping you alive, keeping you dry is a breeze.



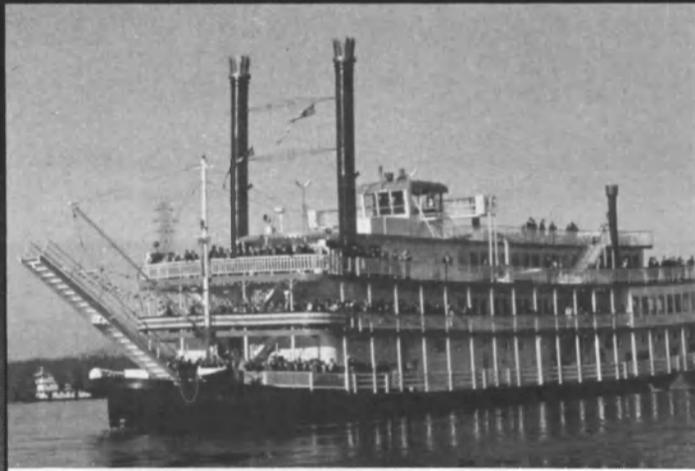
Stearns Tough™ foul weather gear keeps you drier and lasts longer than any other foul weather garment you can buy. That's because it satisfies technical demands and quality control standards that are comparable to those of Stearns most advanced anti-hypothermia Immersion Suits. For more information, call 1-800-328-3208.

STEARNS • P.O. Box 1498, St. Cloud, MN 56302 • Phone: (612) 252-1642

 an Anthony Industries company

**Those Who Know The Sea Know Stearns.**

Circle 309 on Reader Service Card



DIAMOND LADY—201 foot, 1200 passenger Sternwheel Casino Dinner Vessel cruising the Mississippi River for dining and gambling excursions. Atlantic built the Diamond Lady and her sisterships Emerald Lady and Golden Lady for Steamboat Development Corporation, Bettendorf, Iowa.

# YOUR BEST BET.

**WHEN ATLANTIC MARINE BUILDS YOUR BOAT—THE ODDS ARE IN YOUR FAVOR.**

**CALL US—WE'LL PROVE IT.**

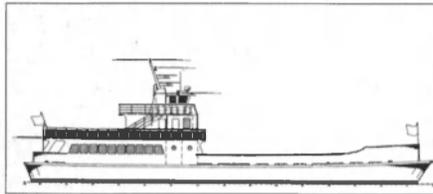


## Atlantic Marine, Inc.

8500 HECKSCHER DRIVE • JACKSONVILLE, FLORIDA 32226 • (904) 251-3111  
FAX (904) 251-3500

Circle 275 on Reader Service Card

## State Of Maine DOT To Get Two New Passenger Ferries



Outboard profile drawing of the REL&A-designed, Caterpillar-powered ferries to be built by Washburn & Doughty of East Boothbay, Maine.

Rodney E. Lay & Associates (REL&A), a naval architectural firm located in Jacksonville, Fla., recently completed the detail design for two auto/passenger ferries to be operated by the State of Maine Department of Transportation.

Washburn & Doughty of East Boothbay, Maine, has been awarded the construction contract for the vessels, scheduled to be delivered in the first quarter of 1992.

The 130-foot-long by 36-foot-wide ferries will offer year-round service off the coast of Maine, between Bass Harbor and Swan Island.

Propulsion will be provided by two Caterpillar engines with Twin Disc reductions gears and 54-inch four-blade stainless steel propellers.

Service generators will be Northern Lights.

The ferries are capable of carrying a maximum of 17 autos. Each is designed to comfortably accommodate 70 passengers plus additional open-air seating on the lounges' upper deck. Below deck aft of the engine room are the engineer's operating station and crew's lounge.

In addition to the ferries, the engineers at REL&A have been busy designing several paddlewheel gaming vessels to operate in the Mississippi River region, and a research vessel conversion for the University of Hawaii.

## Sperry Marine Receives Navy Periscope Order

The U.S. Navy has awarded Sperry Marine Inc. of Charlottesville, Va., a \$3.6 million contract for four periscope sets for the Navy's new Seawolf and other attack and Trident submarines.

According to Sperry Marine vice president **John V. DeMaso**, the new award was made when the Navy exercised an option under an earlier \$9.1 million contract, awarded Sperry Marine in 1990, for design upgrades and delivery of five periscope sets. An additional option of \$185,000 for spares is pending.

Sperry Marine Inc., a leading developer and manufacturer of marine electronic navigation, control and communications equipment, is a subsidiary of Newport News Shipbuilding, a Tenneco company.

For more information and free literature on Sperry Marine,  
Circle 12 on Reader Service Card

## Oronzio De Nora, Houston, Offers New Technology In Cathodic Protection

Oronzio De Nora S.A., a joint venture of the Dow Chemical Company and the Oronzio De Nora Group, has developed and patented their version of impressed current anodes, called the LIDA Offshore Cathodic Protection System.

LIDA is relatively maintenance free and costs up to two and one-half times less than the lengthy aluminum procedure in retrofit. Recent economic analysis of an upcoming rehabilitation of five Gulf of Mexico platforms calculated installed aluminum retrofit at \$350,000 each, versus a favorable comparison with LIDA at only \$150,000. Both were 15-year life designs.

LIDA assemblies, manufactured in Russelville, Ark., require mini-

mal diver time and no underwater welding. The upcoming installation retrofitting Gulf of Mexico platforms at nominal 265-foot depths is expected to take less than a week of labor.

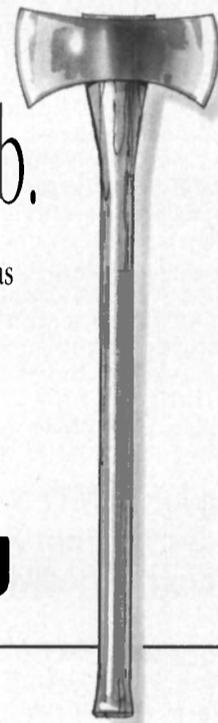
LIDA anodes, a trademark of Oronzio De Nora S.A., are sold in North America by Oronzio De Nora Technologies, Inc. of Houston, Texas.

For further information and free literature,

Circle 97 on Reader Service Card



## Choosing the Right Abrasive is Simply Matching the Tool to the Job.



**Clean Up to Twice as Fast With GMA Garnet.** Sometimes getting a job done fast is as simple as choosing the right tool. On many jobs, cutting faster — 20%-50% faster — is as simple as choosing **GMA Garnet**. That's what two shipyards and several refineries found when they tested **GMA Garnet** against slag.

**GMA Garnet** cleans larger areas with less material — often as much as two thirds less. Waste is minimized and costs are reduced. **GMA Garnet** generates less dust and is approved under MIL-A-22262 (SH).

Choosing **GMA Garnet** over other abrasives is like choosing a chainsaw over an axe.  
It's only logical.

Find out for yourself.  
Call or write for the distributor nearest you.

# BARTON

THE WORLD'S LARGEST SUPPLIER  
OF INDUSTRIAL GARNET

**Barton Mines Corp.**

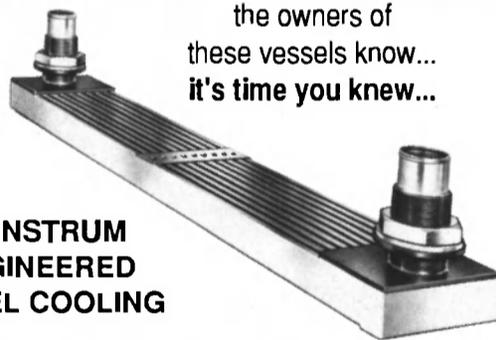
North Creek, NY, 518/251-2726

Golden, CO, 303/233-1145, FAX: 303/233-1256

Circle 219 on Reader Service Card



the owners of  
these vessels know...  
it's time you knew...



**FERNSTRUM  
ENGINEERED  
KEEL COOLING**

**"The FERNSTRUM GRIDCOOLER® is the simplest and most dependable form of fresh water cooling available."**

Ask any of our thousands of customers; they'll say the same thing. You can't find a better fresh water cooling system anywhere.

Call us... we'll let you know which of our over 8000 different Gridcoolers is right for you.

**OVER 40 YEARS EXPERIENCE IN KEEL COOLING**

### CHECK THESE UNIQUE QUALITIES ONLY FOUND IN THE GRIDCOOLER:

**Completely assembled and factory tested** to assure reliability. No complicated, time consuming assembly before installation.

**Silver brazed and welded joints** form a rugged keel cooler, no slip joints or "O" rings to leak.

**Heavy gauge 90/10 copper-nickel or 5000 series aluminum rectangular tube**, structurally stronger with more cooling surface, and twice the wall thickness of other package kit type keel coolers with round tube.

**Custom designed** to meet owner's operating conditions and the engine manufacturer's exact cooling requirements.

**The most compact form of keel cooling**, can be recessed for a flush with hull installation.

**R. W. Fernstrum & Company**

1716 11th Avenue • P. O. Box 97  
Menominee, MI 49858

Phone: (906) 863-5553  
Fax: (906) 863-5634

Circle 272 on Reader Service Card

## Transtema, Kockumation Sign Joint Contract With Stena Marine Management

The Swedish Transtema Group has signed a development contract with Stena Marine Management, the ship management division of Stena AB to jointly develop two new systems, both of which will be unique in their field when completed.

The Transtema companies involved are Kockumation AB of Malmo, the onboard computer systems specialists, and Transtema Communications of Gothenburg.

The first system is called MARIDAL (Marine Data Link). This will allow the computer networks onboard ship to be directly on-line with the computer networks in the owner's office on shore.

The second system is called Periodic Condition Control or PERCON, for short. This system is designed through the use of sensors to monitor the condition of onboard rotating equipment. There can be up to 1,000 measuring points onboard a ship.

For further information and free literature,

Circle 24 on Reader Service Card

## Hagglunds MTT Supplies Cranes For Four Reefers Building At Boelwerf

Hagglunds MTT AS, Bergen, Sweden, is supplying cranes for the Crystal Class of reefer vessels currently building at Boelwerf, Belgium, for Cool Carriers of Stockholm.

The series of four Crystal Class reefers is designed essentially for the banana trades between Central

and South America and consuming areas such as the U.S. and Europe.

Hagglunds MTT AS has developed a specialized crane suitable for both aspects—a so-called "pallet swinger." The crane is designed for conventional use with hook and is supplied with a special winch for lifting a four-point pallet cage, able to carry six pallets simultaneously. The pallet swinger can be operated in a semiautomatic mode via a remote control. The loading/discharging operation can be reduced in time with the use of the pallet cage arrangement. Along with an innovative hatch cover system the cargo is unaffected by weather conditions during loading and discharge.

This concept, which will significantly speed-up loading and discharging operations, can be utilized on all types of cargoships apart from reefer vessels.

For free literature giving more information on cranes from Hagglunds,

Circle 33 on Reader Service Card

## New Paint Removal System Offered Shipyards By Polygon Industries

The Polygon Paint Removal System (PPRS) is a self-contained coating's removal unit. This Xenon Flashlamp works on the same principle as the flash attachment on a camera, but produces light that is several thousand times more intense. An electric current is discharged through xenon gases in the lamp. These gases absorb energy and subsequently release the energy as photons (light).

The light of the xenon flashlamp

is pulsed for a matter of microseconds. In this time, the coating absorbs the light energy and carbonizes without entering the melt phase. The byproduct of fine ash and gases is simultaneously trapped in a vacuum/filtration system and drawn into the containment unit.

The main components for the PPRS include a power source (220 VAC), a pulse-forming network and a controller housed in a console on wheels, and a lamp head or housing. The hand-held head is connected to the console by an umbilical in length of up to 250 feet, allowing the yard worker on scaffolding to work with ease. The head is also fitted with a vacuum and a water source for cooling. Inside the head, and around the xenon lamp is a reflective surface that focuses the light flash onto the surface.

For further information on PPRS, Circle 94 on Reader Service Card

## Lo-Rez Offers Brochure On 'Soft-Mount' Package For Propulsion Systems

Lo-Rez Vibration Control Ltd., Vancouver, B.C., Canada, is offering a free six-page, full-color brochure on the Lo-Rez "soft-mount" package for propulsion systems.

The Lo-Rez state-of-the-art "soft mount" package consists of the Lo-Rez RT (Reverse Thrust) elastomer flexible coupling and the Lo-Rez highly flexible BR-T steel-spring vibration isolators.

The configuration of the Lo-Rez RT coupling provides many important characteristics such as two-directional thrust and torque capability, shock absorption, excellent noise

attenuation, high misalignment capability, etc.

The Lo-Rez BR-T isolators have special thrust-carrying devices which permit them to carry full thrust load without "locking up" so that they are capable of providing effective isolation of the engine-generated vibration over the entire speed range.

Tests on actual propulsion systems fitted with the Lo-Rez "soft mount" system show noise level reductions of from 13 to 20 dB.

Recent Lo-Rez applications include the 175-foot-long luxury dinner cruise vessel Odyssey, built by Service Marine Industries. The Caterpillar engines are mounted on Lo-Rez vibration isolators and feature a Lo-Rez torsional shaft vibration isolator, in order to improve the quality of the ride from noise and vibration standpoints.

For more information and a free copy of the brochure from Lo-Rez Vibration Control,

Circle 25 on Reader Service Card

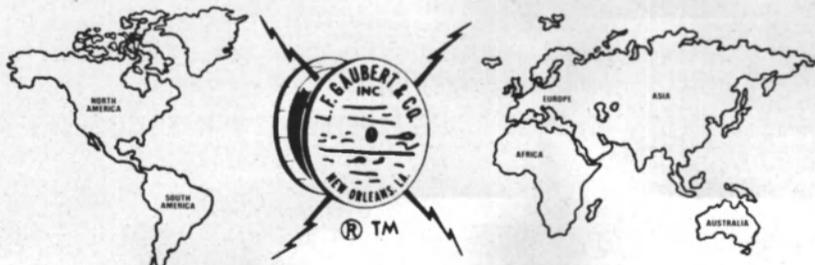
## Kauffman Promoted To Chief Financial Position At Foss

Charles Kauffman has been promoted to senior vice president and chief financial officer of Foss Maritime Company, Seattle-based marine transportation services and support company, Tom Van Daward, president and chief executive officer, announced.

Mr. Kauffman joined Foss six years ago as director of marketing and later became vice president of marketing and business development. In his new position, he will continue to be responsible for those two functions.

**• ELECTRICAL SHIPBOARD CABLES**  
**• PORTABLE CORDS & POWER CABLES**  
**• INDUSTRIAL CABLES & BUILDING WIRE**  
**• WELDING & MINING CABLES**  
**• CONTROL & SIGNAL CABLES**  
**• COMMUNICATION, ELECTRONIC & COAXIAL CABLES**

*More Than 40 Years Of Dependable Service!*



**L.F. GAUBERT & CO. INC.**  
**P.O. BOX 50500**  
**NEW ORLEANS, LA. 70150 (504) 822-7272**

Circle 236 on Reader Service Card

**Major Chemical and Oil Companies confirm Tanksystem's closed HERMetic gauging/sampling system greatly reduces hydro carbon vapor exposure to personnel.**

Now you too can protect your tankermen from hazardous vapor. Tanksystem's economical, gas-tight system is easy-to-use and it permits safe, closed-tight gauging and sampling, plus contents level sighting and monitoring of Ullage, temperature and water.

*Major benefits you will receive from Tanksystem*

- **APPROVAL** — meets U.S.C.G., state and federal standards.
- **SAFETY** — protects workers and the environment from hazardous emissions or noxious fumes.
- **ACCURACY** — HERMetic UTI-GT equipment lets you determine exact measurement of Ullage, interface water-oil, and temperature.
- **PORTABILITY** — light-weight and easy to move and secure.
- **9 VOLT BATTERY POWER** — eliminates separate electrical source. Intrinsically safe and approved by FM.
- **LOCAL WAREHOUSE** — all equipment is shipped and serviced from our Baytown, Texas, facility.

**CURRENT USERS INCLUDE:** B. P. Chemical, Chevron Chemical, Crowley Maritime, Dixie Carriers, Dow Chemical, Exxon Chemical, Mobil, National Marine, Scott Chotin Fleet, Stolt Nielsen, Sun Oil, Union Carbide and others.

*For more information call John Lombard today.*

**tanksystem**

c/o Lombard Sales & Marketing Corp.  
 14 Fenno Way, Nahant, MA 01908  
 Tel (617) 592-5500 Fax (617) 592-2740

Circle 292 on Reader Service Card

## New Luxury Cruise Vessel Features Double Radar System By Selesmar Italia

The first of four luxury cruise vessels, the M/V Hanseatic Renaissance, was recently delivered by Nuovi Cantieri Apuania, a yard located in Marina di Carrara, on the west coast of Italy.

Owner of this class of specialized passenger vessels is the Yacht Ship Italia Srl of Milan. The Renaissance class was designed as a medium size luxury vessel able to provide high quality service to demanding tourists, in an exclusive environment.

The shipyard is well known for its reliable construction and concern for safety in navigation, assured by the onboard installation of a double radar system, Selesmar 1024 ARPA, by Selesmar Italia S.p.A.

Selesmar Italia produces and sells over 300 radar units per year. Over 700 ships, belonging to 45 different flags, are fitted with a Selesmar ARPA and, more recently, with the Integrated Navigation system "Vec-

tor."

For more information and free literature from Selesmar Italia, Circle 80 on Reader Service Card

## BP Chemicals Offers Literature On 'Refrasil' Weld Protection Fabric

BP Chemicals (Hitco), Gardena, Calif., is offering free literature on Refrasil®, a silica-based, refractory-type fabric that protects shipyard personnel and equipment from sparks, spatter and molten metal splash.

High-temperature, silica-based refractory fabrics are finding increased use for personnel and equipment protection during welding and torch-cutting operations because of its resistance to sparks, spatter and molten metal splash.

Available as cloth, tape, sleeving, gasket, cordage or batt, these asbestos-replacement fabrics are capable of operating continuously at temperatures to 2300 degrees F with

little or no change in properties. They also exhibit minimal dusting and fly-off of fiber particles, and present no known health hazard.

As an inexpensive and common blanketing material, maintenance professionals generally select either uncoated and neoprene-coated fiberglass or a silica-based cloth such as BP Chemicals' Refrasil. A third possibility, ceramic-based cloth, while difficult to justify from a cost standpoint, also provides excellent high-temperature protection.

Because of the potential for fire and catastrophic damage aboard ship or in shipyards, the Navy maintains a database for high-temperature refractory textiles used in welding and stress-relief applications.

Because of its ability to pass all of the Navy's criteria, silica-based blankets and protective shields have become standardized—per MIL-C-24576A(SH)—for welding applications and are in use throughout all Navy shipyards and other ship-basing facilities.

For further information,

Circle 21 on Reader Service Card

## Alfa-Laval Introduces New D-TU Distiller —Literature Available

Alfa-Laval Desalt, one of the world's largest manufacturers of freshwater production equipment, recently introduced its new D-TU Multi-Effect Freshwater Distiller, the concept of which is based on the latest technological advances in the field of tube-type distillers, using evaporation under vacuum with the familiar rising film principle.

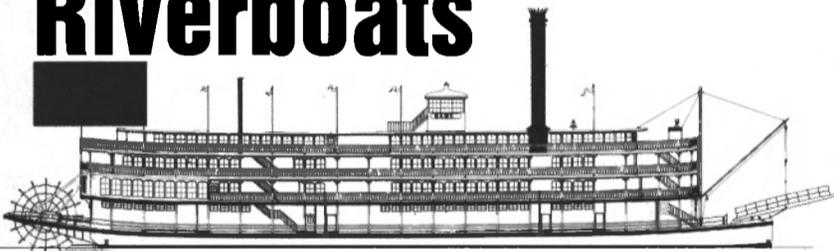
Capturing heat generated by the vessel's propulsion system, the D-TU freshwater distiller features modular and compact design to adapt to limited engine room space and weight requirements.

The D-TU and the entire Alfa-Laval product line of freshwater makers, plate heat exchangers, centrifugal separators, heaters and filters are marketed in North America by Alfa-Laval Separation, Inc.

For additional information and free literature,

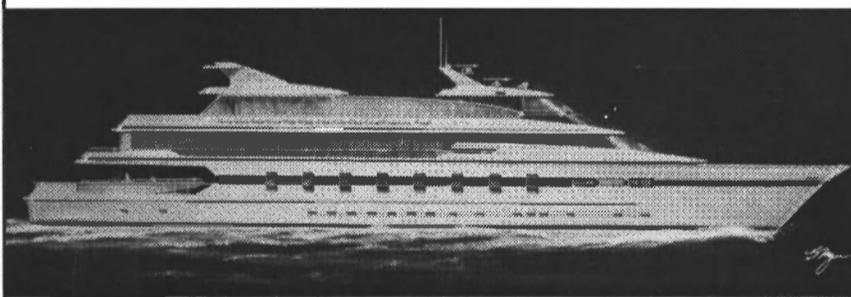
Circle 16 on Reader Service Card

# Riverboats



Whether you're looking for the space-age luxury of a modern cruise ship or the bygone elegance of a classic riverboat, Bender Shipbuilding is the builder for you. We've combined more than 70 years of shipbuilding experience with state-of-the-art engineering to produce vessels of superior design — all backed by our world-wide reputation for quality, on-time delivery and competitive prices.

# Passenger Vessels



# BENDER

**BENDER SHIPBUILDING & REPAIR CO., INC.**

P.O. Box 42, Mobile, Alabama 36601  
Phone: (205) 431-8000  
FAX: (205) 432-2260 TELEX: 505-457

Circle 322 on Reader Service Card

Finally...a flexible valve-control system that's built for speed and designed for endurance.

## Introducing "UNIFLEX" RMVO

from Elliott

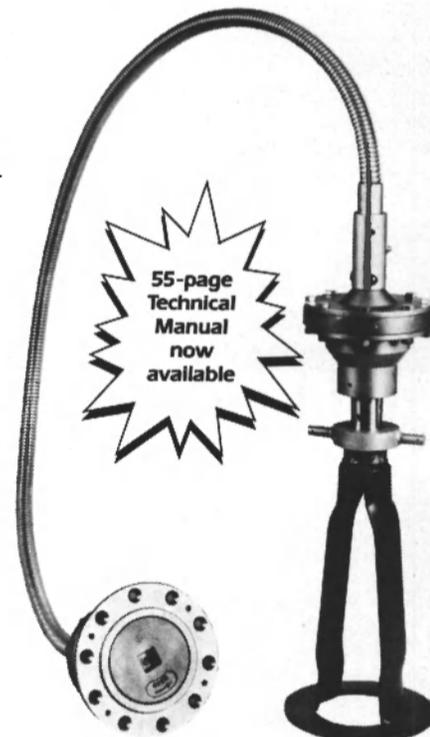
**Flexible Shaft**  
A single 3/8 in. dia., high-tensile, stainless steel flexible shaft assembly

**Deck Box**  
100-turn indication, non-corrosive materials

**Valve Coupling**  
Standard NAVSEA design

**Output Gear Box**  
17:1 cyclo gearing, extreme shock load capacity up to 4000 in. lbs. output

**Installation**  
Simple torque bar and turn buckle



55-page Technical Manual now available

**Heat resistant and non-corrosive.** UNIFLEX Remote Manual Valve Operators are engineered to last. In fact, UNIFLEX hardware is similar to valve-control components now in use on all U.S. Naval vessels. And, it weighs much less than other RMVO units, allowing **higher speeds** with **greater payloads**.

But the biggest advantage Elliott offers is **ease of installation and operation**. That reduces installation complexity and cost. And UNIFLEX's torque advantage means easier operation.

UNIFLEX...another flexible design solution from Elliott. Call today for more information and **FREE UNIFLEX RMVO literature**.

# ELLIOTT MANUFACTURING

P.O. Box 773  
Binghamton, NY 13902

Telephone (607) 772-0404  
FAX (607) 772-1358

Circle 312 on Reader Service Card

## Boat Tax Repeal Gains Attention Of Congress

The boating industry is continuing its campaign to repeal the so-called 10 percent "luxury tax" on boats costing \$100,000 or more. In the wake of widespread job loss in the marine industry, bipartisan Congressional support as well as White House backing have heightened awareness for repeal of the tax, ac-

ording to **Jeff Napier**, president of the National Marine Manufacturers Association (NMMA).

Within the Senate, repeal efforts led by Senators **John Breaux** (D-La.) and **John Chafee** (R-R.I.) continued to gain momentum as The Boating Jobs Preservation Act of 1991 (S.649) picked up significant support from both sides of the aisle. Companion legislation (H.R.951) introduced by Congressman **Clay Shaw** (R-Fla.) is enjoying similar bipartisan support in the House.

Among those endorsing repeal of the tax are the Senate's ranking Republican and Democratic members. Minority leader **Robert Dole** of Kansas joined other critics of the tax for its hardship on middle-class workers and called for repeal of all luxury taxes. And majority leader **George Mitchell**, representing the hard-hit boatbuilding state of Maine, has been a vocal supporter of industry workers, pushing for review of the boat tax policy since January when it first went into effect.

Senator **Mitchell** was also one of many members of Congress testifying on behalf of the boating industry at a recent hearing of the Senate Finance Committee, confirming job loss and negative revenue implications associated with the tax. Although the U.S. Treasury Department stated at the same hearing that it did not support repeal of the boat excise tax at this time, **Richard Darman**, director of the Office of Management and Budget, said the tax was hurting the boatbuilding industry and indicated the White House would not stand in the way of repeal where evidence shows the tax to be counterproductive. Job loss number presented at the hearing provided such evidence.

NMMA estimates that 19,000 mostly blue collar workers are losing their jobs due to the drop in sales of boats subject to the tax.

# The Latest Conversion At Bethlehem Steel

The Sparrows Point Shipyard has a new name. We've been a part of Bethlehem Steel since 1915 and we're changing our name to reflect our pride in Bethlehem's maritime tradition.

Under our new name, BethShip Sparrows Point Yard, our massive facilities, veteran workforce and Bethlehem Steel's reputation for quality workmanship combine to offer you one of the east coast's largest and most experienced shipyards.

For a copy of our new 4-color brochure and a complete description of our facilities & capabilities call, fax or write:

**BethShip**  
Sparrows Point Yard  
Sparrows Point, MD 21219-2599

Repair Inquiries: (301) 388-6383 • New Construction Inquiries: (301) 388-7786 • Fax (301) 388-6687 • Telex: 84-7417 (BETHSCO BETM)

Circle 332 on Reader Service Card

## Zapata To Double Gas Production From U.S. Gulf Field

U.S. offshore firm Zapata plans undertake a \$10.5 million workover and recompletion program designed to double gas production from its Wisdom Field in the Gulf of Mexico.

The program should boost daily gas deliveries to 55 million cubic feet per day, adding about 25 billion cubic feet to the field's current reserves of about 64.5 billion cubic feet.

The workovers will be carried out on four of nine wells on Zapata's Tequila platform, located around 100 miles south of Galveston on East Breaks Block 110. The work is expected to be completed by December.

"This is the first time Zapata has been able to take an affirmative step to develop its businesses and increase stockholder value since the bottom fell out of the offshore drilling market in 1986," said company chairman and chief executive **Ronald Lassiter**.

Zapata believes the drilling could add 30 percent to the life of the Wisdom Field, extending through the end of the next decade.

The company completed a financial restructuring early this year by selling the majority of its offshore drill fleet which it still manages.

## ZF Marine Division Names William Eickelberg Account Manager

**William C. Eickelberg** has been named account manager for the Marine Division of ZF of North America, the company recently announced.

In his new position, Mr. **Eickelberg** will be responsible for the sales, service and application of ZF marine transmissions for the Great Lakes area and the north-eastern U.S. His territory also includes the eastern Canadian provinces.

# CLEANING AND REPAIRS.

## HBM River Plant, Inc.



The Port Allen River Plant is a complete vessel cleaning and repair facility offering a wide range of services. Located at Mile 225 (left bank) lower Mississippi River near Baton Rouge, Louisiana.

**HBM**  
HALL-BUCK MARINE, INC.

Call 504-769-9800  
P.O. Box 3635  
Baton Rouge, LA 70821

Member THE AMERICAN WATERWAYS OPERATORS, INC.

### Services and Facilities

- Cleaning Plant equipped with two (2) 1150 HP Boilers to provide Change of Cargos, Gas Freeing & Live Steam for up to 8 barges simultaneously
- Waste Disposal or Treatment
- Two (2) Docks—2,300 tons (200' x 74') & 800 tons (151' x 63')
- Liquid Cargo Transferring

- 1,000' of Fully Equipped Dock Space for Topside Repairs.
- Four (4) Cranes
- 1,000 HP Towboat
- Vessel Fleeting
- Equipment Maintenance & Repairs
- Extensive Parts Inventory
- Sandblasting & Painting
- Equipment Loading & Unloading

Circle 274 on Reader Service Card

## New Vapor Recovery Alarm System Developed By Row Technology

Row Technology, Inc., Littlestown, Pa., has developed a complete vapor recovery alarm system approved under Coast Guard regulations and mandated by the Clean Air Act of 1990.

The new system features state-of-the-art alarm panel that is micro-processor-driven, complete with intrinsically safe Zener barriers, indicators, alarm signals, and back-up emergency power.

The high-end over-fill liquid level sensor is designed with two adjustable float rods, that allow field adjustment. Construction material is either stainless steel, brass, or epoxy-coated steel to withstand harsh environments.

The new "TruSight" sight glass has been designed for restricted space application, fitting onto a standard 6 inch ANSI schedule 40 or 80 pipe. The flush-mounted Lucite lens has 20 square inches of wiped viewing area. Standard construction is ALMAG 35 alloy, or optional brass, with a heavy duty locking hinged cover.

For further information,

Circle 18 on Reader Service Card

## World's Largest Trawler Gets Sigma Treatment —Literature Available

Sigma Coatings is offering free literature detailing the successful use of Sigma products on ferries, fishing vessels and chemical carriers.

For example, Sigma technology has been involved from the beginning with what is said to be the world's largest fishing trawler, the Zeeland, designed and built under cover on the sheltered shipway of Ysselvliet Combinatie in the Netherlands.

The steel plate for this newbuilding was coated with Sigma's new weldable primer Sigmaweld MC. This new generation prefabrication primer assisted the building process, its high heat resistance minimized thermal damage and facilitated overcoating.

The water ballast tanks and freshwater tanks were treated with Sigmaguard CSF 75 tank coating for long and durable protection.

Decks have received the Sigmadur HB system, a combination of epoxy primer, recoatable micaceous iron oxide epoxy and silk gloss polyurethane.

The Zeeland can operate in any climatic conditions and can remain at sea for prolonged periods. Her Sigma paint systems have been specially tailored to provide the strongest possible protection and ease of maintenance.

For further information and free literature from Sigma Coatings,  
Circle 98 on Reader Service Card

Circle 145 on Reader Service Card →

## AESA Manises Engine Facility Passes LR Quality Program

The Manises diesel engine factory of Astilleros Espanoles S.A. of Spain was recently granted quality certificates by Lloyd's Register of Shipping and Lloyd's Register of Quality Assurance.

Located near Valencia, Spain, the facility manufactures diesel engines

for vessels and onshore electricity generation plants.

AESA reports that the certificate granted by Lloyd's Register of Shipping is in accordance with the classification society's Quality Assurance Scheme (QAS) for Machinery and is the first one conferred on a factory building high power engines.

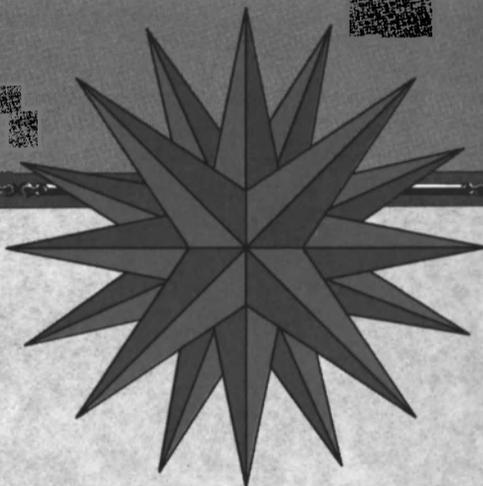
The Manises factory was granted ISO 9002 certification by Lloyd's Register of Quality Assurance. The widely known certification covers not only building operations, but

aftersale services as well.

Both certifications, as well as others received by the group's yards over the last few months indicate the effort undertaken by AESA to improve quality through its quality program implemented two years ago.

For free literature detailing the diesel engines manufactured by Manises,

Circle 73 on Reader Service Card



Metritape's

# DeckMaster Gauging System Wins Outstanding Product Award



CENTRAL CARGO GAUGING DISPLAY



CENTRAL CARGO PROTECTION DISPLAY

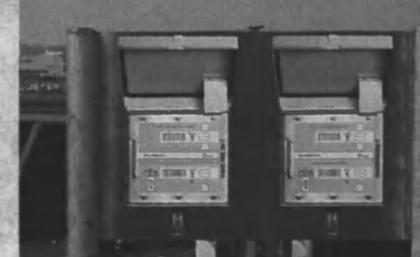
The new DeckMaster Gauging System introduced by Metritape has earned Marine Logs' 1990 Innovative Marine Product Award. DeckMaster was specifically recognized for its contribution to operating efficiency and safety providing owners with a maximum return on investment when faced with complying with new U.S. Coast Guard regulation for vapor recovery.

The DeckMaster cargo gauging and overfill protection systems utilize state of the art electronics packaged for the rigors of on-deck service. Comprehensive in function, yet simple to use, the systems provide readout of ullage, Hi Alarm, overfill alarm, self test and system scanning abilities at each tank.

Although completely independent electrically, both systems can share a common mounting arrangement providing significant cost savings.

The DeckMaster system utilizes resistance-tape level sensors, having over 25 years marine experience, employing no moving parts and providing a high level of reliability and trouble free operation required by barge and tanker operators.

Call or Telefax Metritape for a complete DeckMaster Brochure.



ON DECK DISPLAY, CARGO GAUGING AND OVERFILL PROTECTION, PORT AND STARBOARD TANKS.



59 PORTER ROAD, P.O. BOX 2366, LITTLETON, MA 01460 U.S.A.  
TEL: 508-369-7500 • TELEFAX: 508-486-0170 • TELEX: 92-34-92

## ABS Urges Special Inspection Of Bulkers

The American Bureau of Shipping (ABS) is urging owners under its class to carry out special inspections, following concern over recent bulk carrier losses.

Furthermore, ABS plans to change its class rules in view of handling abuses to cargo holds. Other factors, such as corrosive car-

goes, have also prompted ABS to act.

ABS is recommending that bulk carrier owners initiate as soon as possible a close-up survey of the welded attachment of the side shell frames in number one cargo holds.

According to the society, heavy wastage of the brackets and framing in way of the upper and lower areas of hold shell structure has been common to most recent incidents of bulker damage. In combi-

nation carriers, the problem has extended to ballast tanks.

ABS has initiated a study into bulk carrier failures. Indications are that these are often operational and maintenance related, but ABS believes that initial design criteria should also be considered to help minimize future problems.

The society has completed a criteria development exercise for tanker hull structures, and is now addressing bulk carrier designs.

## German Association Sponsors Yard Subsidies

German shipbuilders need government assistance to remain competitive in the subsidized world shipbuilding market, according to a leading domestic association official.

According to **Norbert Henke**, president of the Association for Shipbuilding & Marine Technology, **Juergen Moellemann**, the country's Economics Minister, is not only hurting German shipbuilders by reducing subsidies, but breaking the trust of other European shipbuilding industry members who have been working on a European solution to the subsidy problem. The association favors subsidy solutions through the EC and OECD's economic policy committee.

Mr. **Moellemann** recently released \$97 million in subsidies to German shipbuilders only after industry pressure. Another \$48.6 million in subsidies was provided by regional governments.

An official in the Economics Ministry said no decision had been reached on whether additional subsidies would be released.

Meanwhile, West German shipbuilders have reported profits for the first time since the shipbuilding crisis of the early eighties. Mr. **Henke** attributes the yards' success to their specialization in high technology tonnage. Mr. **Henke** foresees German yards entering the bulk and crude carrier construction sectors in the near future.

## Riverboat Gambling Bill Passes In Louisiana

Louisiana moved one step closer to joining three other states in allowing riverboat gambling, when its legislature recently passed a bill legalizing riverboat gambling. The bill has been forwarded to the governor.

The bill would allow riverboat gambling on the Mississippi River, Lakes Pontchartrain and Maurepas, Bayou Bienvenu, the Gulf Intracoastal Waterway, the Mississippi River Gulf Outlet, and the Red, Ouachita, Atchafalaya, Calcasieu and Mermentau Rivers. The bill limits the number of licenses to 15 riverboats and stipulates that all the boats will have to be built and repaired in Louisiana, as well as crewed by state residents and outfitted with gaming equipment by state suppliers. The bill also requires all the vessels be paddlewheel driven.

If the bill is signed into law by Gov. **Buddy Roemer**, who is expected to do so, Louisiana would join, Mississippi, Iowa and Illinois as states that allow riverboat gambling.

While revenues from riverboat gambling are projected in the neighborhood of \$12 million to \$13 million annually for Iowa, Louisiana, with its ready made convention and meeting market in New Orleans, is expected to have annual revenues of \$20 million to \$30 million.

# ...BEING A DAY LATE MAY LEAVE YOU MORE THAN A DOLLAR SHORT!

## Announcing

### The Marine Industry's Best And Most Authoritative Newsletter...

- The Marine Newsletter is edited for Marine Industry decision-makers... people like yourself...and it's packed with information...the kind of "Need To Know" information that you rely on the make critical business decisions...
- You'll stay ahead of the competition... while our Washington correspondent keeps you posted on the latest legislation that may impact on how marine companies like yours will do business, you'll know first-hand from our staff around the country the implications of the latest legal rulings, topics like Oil Spill Legislation and Your Liability, Double Hull Legislation... The Latest Contracts... Coast Guard Rulings... even a complete list of Vessels For Sale.
- Every 10 days (three times a month) you'll receive your personal First Class copy of The Marine Newsletter... (36 news-packed issues a year) for the special charter subscription rate of only \$295. Order yours...this vital and timely information will provide you with insight on the Marine Industry not available from any other source and place you among the best informed industry executives!

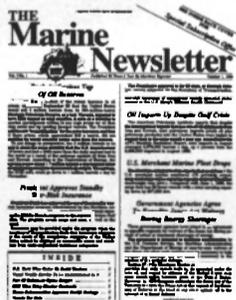
The Marine Newsletter has it all... and it covers the entire industry...  
Oceangoing, Inland Rivers, Offshore,  
Coastal Harbors, Great Lakes, Navy,  
Coast Guard...

...Information You Need To Know!

Subscribe today and take advantage of the special "Charter Rate"!

## THE Marine Newsletter

SUBSCRIBE TODAY!



Name \_\_\_\_\_  
Company \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
Country \_\_\_\_\_  
Signature \_\_\_\_\_

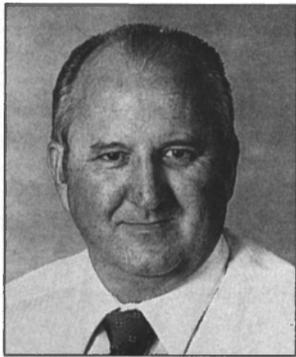
**YES!**  Enter my subscription to The Marine Newsletter. I'll receive a Full Year - 36 news-packed issues at the special introductory rate of \$295.

- Enclosed is my remittance of \$295.  
 Bill me.  
 Bill my company.

**SPECIAL CHARTER  
SUBSCRIPTION OFFER  
10% DISCOUNT**

This vital and timely information will provide you with insight on the Marine Industry, not available from any other source and place you among the best informed industry executives. Mail to: MARITIME REPORTER, 118 East 25th Street, New York, NY 10010 USA

## Casmer Kirby Named Engineering Manager At SeaArk Marine



Casmer Kirby

SeaArk Marine, Inc. of Monticello, Ark., has named **Casmer (Cas) Kirby** as the new engineering manager. Mr. Kirby has 27 years' experience in the aluminum workboat industry and over 15 years' experience in marine design. Before joining SeaArk, he had worked with Trinity Marine, Gulf Craft, Camcraft, and Progressive Shipbuilders, Inc.

As engineering manager, Mr. Kirby's duties will include management of engineering staff, new product design and special projects.

SeaArk Marine, formerly the Workboat Division of MonArk Boat Company, builds special-purpose workboats including patrol boats, fireboats, survey vessels, and passenger launches.

## U.S. Delivers Maritime Safety, Environmental Protection Pacts To IMO

Major improvements in maritime safety and the protection of the marine environment were recently set in motion, when Adm. **A.E. Henn** of the U.S. Coast Guard delivered four treaties to the International Maritime Organization in London. The treaties had been ratified by the U.S. on June 10.

The first treaty concerns Annex III of the International Convention for the Prevention of Pollution from Ships. This treaty regulates the shipping, packaging and labeling of hazardous substances shipped in packaged form. U.S. ratification will bring this treaty into force internationally in mid-1992.

The second deals with the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers. This treaty sets international standards for a ship's officers and crew in an effort to reduce accidents at sea.

The last two, the Safety of Life at Sea (SOLAS) Convention and the Loadline Convention, amended existing treaties. They set construction and safety equipment standards for seagoing vessels. Inspection intervals are coordinated so that vessel inspections for both conventions can be completed concurrently.

## 44th Annual Technical Conference, CSOE '92, Issues Call For Papers

The 44th Annual Technical Conference of the Canadian Maritime Industries Association will be held at the Ottawa Congress Centre, Ottawa, Ontario, on February 17-18, 1992, and will include the seventh Canadian Shipbuilding and Offshore

Exhibition (CSOE '92).

The conference open session will be held on Tuesday, February 18, at the Ottawa Congress Centre.

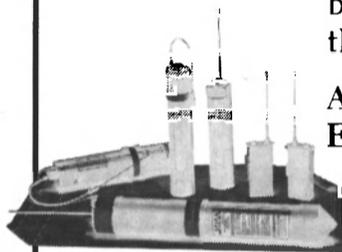
Papers should be of noncommercial nature. The principal objective of the conference should be kept foremost in mind—to promote the technological advancement of the shipbuilding, ship repairing, offshore and ocean industries in Canada. While the conference papers may address any aspect of ma-

rine technology, it is suggested that some emphasis on protection of the marine environment, on safety at sea and on improving productivity be given where applicable.

To be considered, a copy of the abstract is required no later than September 30, 1991. Send it to the attention of Mrs. **Joy MacPherson**, Director, Administration and Finance, Canadian Maritime Industries Association, P.O. Box 1429, Station B, Ottawa, Ontario K1P 5R4.

# For over three decades our best has kept you ready for the worst.

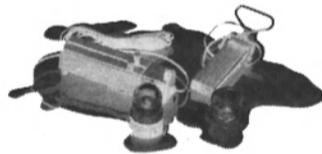
Accidents do happen, but you can plan for emergencies with proven ACR equipment. When it comes to safety, survival and security, ACR is the recognized leader. It's been that way for more than 30 years.



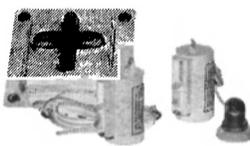
ACR leads the way in Emergency Position Indicating Radio Beacons (EPIRBs). Our latest, the RLB-23,

Category I, 406 MHz EPIRB, signals COSPAS/SARSAT low-orbit satellites and directs Search and Rescue forces precisely to the emergency. ACR Class A EPIRBs continue to be an industry standard.

Our powerful Sun Strobe Marker light sets industry standards with 4-million candle power brightness. Our full range of marker, strobe and signal lights meet the toughest requirements.



ACR is also the leader in personal rescue lights and marshalling lights.



Our Sea Light is Coast Guard approved for use on inflatable survival craft. Our water-activated Personal Rescue Light has two-plus mile visibility and operates for more than eight hours.

For pocket-sized distress strobes, ACR Firefly is the answer. It's been a military standard for more than 20 years. We also

make an underwater version for divers. For family emergencies, ACR Strobalite is an inexpensive strobe that's ideal for boat, car, camper or backpack.



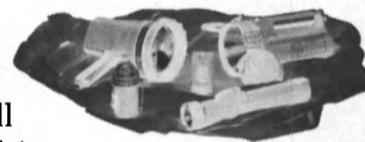
ACR remote controlled searchlights light up the darkest night.

From single Halogen lamp units, to million



candlepower searchlights, ACR has the brightest solutions.

Heavy-duty waterproof flashlights, life preserver marker lights, automatic S.O.S. searchlights and ruggedized crew lights are all ACR specialties.



In an emergency, lives can be lost due to faulty or inadequate equipment. Trust ACR, the safety, survival and security specialists. Anything else is a dangerous compromise.

## ACR Electronics, Inc.

The World Leader in Safety, Survival and Security Equipment



5757 Ravenswood Road,  
Fort Lauderdale, Florida  
Mailing Address: P.O. Box  
5247, Fort Lauderdale, FL  
33310-5247 (305) 981-3333  
Telex 519645 ACR HOWD  
FAX (305) 983-5087

Circle 219 on Reader Service Card

## Italy's New Cruise Ship 'Costa Classica' Completes Preliminary Sea Trials

Italy's new cruise ship Costa Classica recently completed preliminary sea trials only four months after her float-out from the Marghera yard on the Venetian mainland.

The \$282.3 million vessel is due for handover to Genoa-based Costa Crociere this fall. She will be the first large newbuilding addition to

the Italian cruise vessel fleet for 25 years.

Costa Crociere is one of three operators fulfilling fleet development projects by way of contracts with the Fincantieri organization.

Fincantieri is looking to strengthen its position on the cruise ship newbuilding market. It is widely expected to land an order from P&O for a third large vessel and is making a concerted effort to attract a first contract for the 760-passenger, luxury Alabarda-design

developed in house.

## Raytheon Names Berte General Manager, Northeast Region

Saverio J. (Sal) Berte has been named general manager of the northeast region of Raytheon Service Company's Marine Sales and Service Division.

From his office on Staten Island, N.Y., Mr. Berte will be responsible

for sales and service of the diversified marine electronics product lines represented and serviced by the company.

Mr. Berte joins Raytheon with more than 20 years of management experience in the manufacturing, distribution and sales areas of the marine industry. He has been regional sales manager with Radio Holland USA, B.V., and director of marketing for the Communications Systems Division of North American Phillips.

## FOR SALE STEEL DIESEL CATCHER PROCESSOR

This vessel is in excellent physical and mechanical condition, and ready for work...

Dimensions: 154.7' X 38.5' X 12.5'  
Gross Tonnage: 286  
Net Tonnage: 194  
Horsepower: 1700 @ 1225 RPM  
Fuel Capacity: 60,000 Gallons  
Fresh Water Capacity: 27,000 Gallons

### Engine Compartment:

- 2 - Mo. D-398, Twelve cylinder, Caterpillar diesel engines keel cooled, air start, with LO and Water Temp alarms
- 2 - Mo. 3198, Caterpillar hydraulic clutches with 3.95:1 gear ratio driving four blade propellers
- 2 - 300 KW, 110/408 V AC generators driven by keel cooled, Mo. 353 Caterpillar diesel engines
- 2 - Two stage, Gardener-Denver, air compressors and tanks
- 1 - 3" Aurora bilge pump, 3" Aurora fire pump, 3" FO transfer pump
- 2 - 1" Deming FW pumps and system
- 1 - 4" Ammonia compressor cooling water pump
- 1 - 1-1/4" SW wash down pump

There are approximately 1400 wood lath traps on the vessel with 30 miles of 9/16" polypropylene rope with floats, etc. necessary for the operation of the traps.

There is a material lift from the ice hold to the processing room that is electrical operated.

There is a hydraulic crane on the second deck for lifting stores, catch boats, etc.

There are ten (10) hydraulic fishing reels on the main deck.

On the second deck of the vessel there is a processing room certified by the U.S.D.A. (composition covering).

The vessel is renovated with a total of 11,000 cu. ft. of below freezing, cargo hold with a plate freezer that has an estimated capacity of 1500# of frozen product per three (3) hours of operation

There are ammonia compressors on the vessel with 100% redundancy for the protection of the frozen product, and 6" of insulation through out the refrigerated spaces.

There are packaging machines, conveyors, stainless steel work tables, sinks, etc. for processing the product.

On the second deck port side there is a laboratory, to be used in the quality control of the product.

This vessel has an appraised value of \$2,450,000.



## DIVERSIFIED MARINE BROKERAGE, LTD.

1201 Northern Boulevard, Manhasset, New York 11030  
Telephone: (516) 365-5650 Fax: (516) 627-5329  
Contact: Gil Castro - President

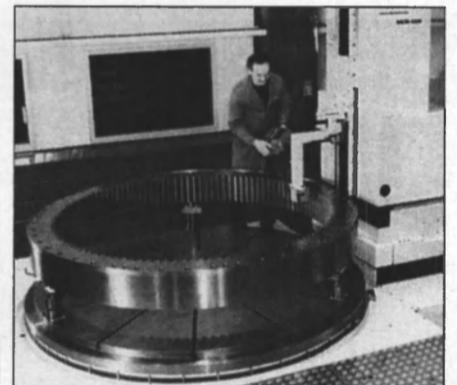
## Aalborg Ciserv Opens New Service Facility In Los Angeles, Calif.

Los Angeles has become the new home for an engineering and service facility of Aalborg Ciserv, San Francisco, Calif. The company has moved into approximately 2,500 square feet of space at 1891 North Gaffey Street, San Pedro, Calif. 90731.

Aalborg Ciserv is dedicated to worldwide service, repair and maintenance of seagoing vessels. Service extends from Alaska to Hawaii, and includes all ports of call on the West Coast.

Aalborg Ciserv, with machine shop services and a worldwide spare parts organization, services and repairs all types of marine and land-based energy installations. This includes repair and maintenance of marine diesel engines, boilers, control systems and steam turbines.

The new Los Angeles facility is staffed with sales, administrative, engineering and service personnel.



**GEAR MEASURING DEVICE**—Philadelphia Gear Corporation's (PGC) new Maag MCR 500 is capable of measuring gears from 4 inches through 200 inches in diameter with gross weights of up to 110,000 pounds and face widths up to 60 inches. Designed and built by Maag, the Swiss manufacturer of gear cutting and measuring equipment, PGC believes the MCR is Maag's greatest achievement. It was also among their most time-consuming projects, taking nearly six years to meet the rigid specifications set forth by Philadelphia Gear. Precision gears are typically used in high-speed applications such as gas turbine/generator drives as well as such military applications as nuclear submarine drives and other marine propulsion drives.

For more information from Philadelphia Gear Corporation, Circle 82 on Reader Service Card

Circle 317 on Reader Service Card

## Caterpillar-Powered Tug Delivered By Damen For Service In Arabian Gulf



The all-steel tug Anfooz has been specially constructed for operations in the Arabian Gulf area. The wheelhouse, over which a rope guard is fitted, is placed well inboard. From the steering position the helmsman has an unobstructed view in all directions.

Damen Shipyards, Gorinchem, Holland, recently delivered the 63.4-foot-long by 21.3-foot-wide tug Anfooz to Abu Dhabi Petroleum Ports Operating Company.

The vessel is a modern, twin-screw tugboat of the Damen Standard series, Stan Tug 1906, of which more than 20 units have been built.

Propulsion is provided by twin Caterpillar diesels, type 3408B TA/A, each 300 kw at 1,800 rpm, driving twin Lips fixed-pitch propellers in Van Der Giessen nozzles. The engines are electrically started and water-cooled by means of a closed cooling system with longitudinal outside bottom frames serving as cooling channels.

A Sperry hydraulic steering system controls the two rudders which are mounted with bolted horizontal flange couplings to the rudder stock, allowing easy removal of the rudders.

Electric power is supplied by two auxiliary Lister CR3 diesels driving 17.5 kVA Stamford generators.

The accommodation below the main deck includes a cabin for crew of four, a galley/messroom and a store compartment.

The Anfooz, built to comply with the rules of Lloyd's Register of Shipping and also with the rules, regulations and requirements of other regulatory bodies, will be registered in the United Arab Emirates.

For free literature detailing the facilities and capabilities of Damen Shipyards,

Circle 74 on Reader Service Card

## R&H Rudder Roll Stabilization System Detailed In New Brochure

Van Rietschoten & Houwens (R&H) of Rotterdam, the Netherlands, is offering free literature on the R&H Rudder Roll Stabilization System (RRS) developed by the company.

August, 1991

The RRS principle is that roll data are collected by various sensors and subsequently computer processed to generate compensating rudder movements. Two properties make the R&H system unique: (1) As these sensor data are being evaluated over time, the system adapts itself to the weather conditions and ship dynamics. This implies that the system can be permanently operative. For instance, in the absence of roll, the system will

not generate roll-stabilization output. (2) At no moment can the system demand rudder deflections the steering engine cannot cope with. This patented R&H feature implies that the system is inherently safe and can never become unstable.

The RRS has been fully proven in operational practice and under severe sea-state conditions.

The R&H rudder roll stabilization system, therefore, offers a wide range of choices: from an indepen-

dent unit for a retrofit to new construction with full platform automation as the design goal. Whatever the option chosen, the RRS will enhance a ship's overall performance economically and safely, and reduces life-cycle costs for new construction.

For a free copy of the brochure on the R&H Rudder Roll Stabilization System,

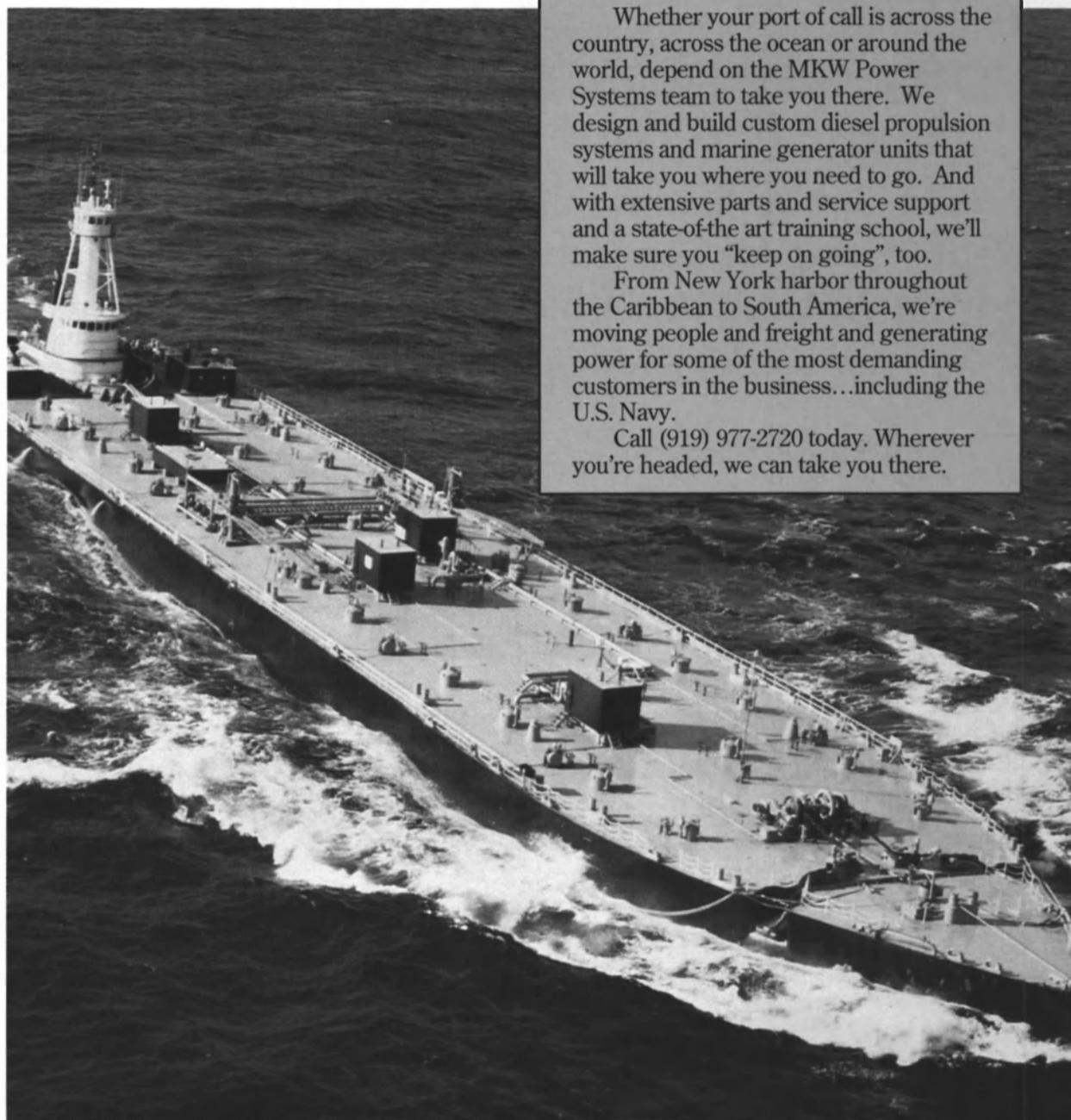
Circle 54 on Reader Service Card

## We Can Take You There.

Whether your port of call is across the country, across the ocean or around the world, depend on the MKW Power Systems team to take you there. We design and build custom diesel propulsion systems and marine generator units that will take you where you need to go. And with extensive parts and service support and a state-of-the-art training school, we'll make sure you "keep on going", too.

From New York harbor throughout the Caribbean to South America, we're moving people and freight and generating power for some of the most demanding customers in the business...including the U.S. Navy.

Call (919) 977-2720 today. Wherever you're headed, we can take you there.



## MKW POWER SYSTEMS, Inc.

P.O. Box 1928, Rocky Mount, NC 27802 • For 24 hour service, call (919) 977-2720  
For more information, call 1-800-759-2720 • FAX: (919) 446-3830



Authorized distributor for EMD products on the U.S. east coast and the Caribbean.

Miami Sales Office: MKW Power Systems  
2101 NW 79th Avenue, Miami, Florida 33122  
(305) 594-4644 • FAX: (305) 599-2956 • TLX: 460080 swd ui

Circle 27 on Reader Service Card



## Polish Yards Appoint Nor-Tech (U.S.A.)

**Enrique Cubeiro**, president of Nor-Tech (U.S.A.), Inc., recently announced the appointment of Nor-Tech by Gdansk Shiprepair Yard, Gdansk, Poland, as their exclusive agent in the Western Hemisphere. Gdansk, one of the leading ship repair yards in Northern Europe, encompasses 73 acres, maintains seven floating drydocks and complement of 4,000 workers.

Nor-Tech will also represent the Szczecin Shipbuilding Yard, a plant capable of building vessels up to 40,000 dwt.

In addition, Nor-Tech will represent Gdynia Shipbuilding Yard. This yard, with a complement of 6,500 workers, has capacity to build up to 440,000 dwt.

Mr. **Cubeiro** also announced appointment of **Gino Ferrari** as vice president of Nor-Tech. Mr. **Ferrari**, formerly sales manager for Jacksonville and Maryland Drydock, will head the shipyard division.

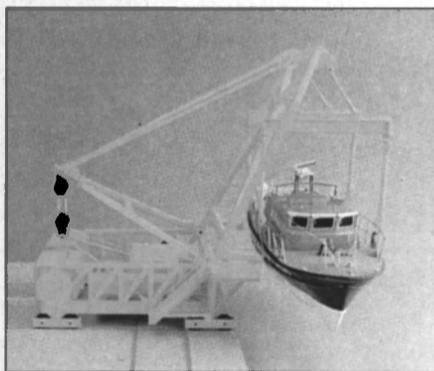
For further information,  
Circle 78 on Reader Service Card

## MMA Appoints New Board Chairman

The Marine Machinery Association (MMA) recently announced the appointment of **Jack Janetatos** as chairman of its board of directors. Mr. **Janetatos** was the first president of the organization and has served as a member of its board since it was formed.

**Jim Fromfield** of Leslie Controls remains as president and chief executive officer of the association.

The Marine Machinery Association, headquartered in Washington, D.C., is the trade association that represents suppliers of hull mechanical and electrical equipment to the U.S. Navy and the marine industry.



**IMPROVING SAFETY AT SEA**—GEC Alsthom Engineering Systems Ltd., Leicester, U.K., has designed and built a lifeboat launching system for the Royal National Lifeboat Institution. The system's carriage and rail-mounted cantilevered crane enable fully safe launching of lifeboats weighing up to 265 tons in any weather. The first set of equipment was recently installed at the Workington lifeboat station on the Irish Sea coast.

For further information from GEC Alsthom Engineering Systems,  
Circle 81 on Reader Service Card

## New Drew Ameroyal CF Treatment For Cleaning Ship Evaporator Systems

Drew Ameroid Marine, worldwide suppliers of one of the most widely used marine evaporator treatments, has expanded its line with a new concentrated product that is especially suited for high-temperature, high-production, multi-stage evaporators.

Ameroyal CF concentrated evaporator treatment utilizes Drew's knowledge of advanced polymer technology to produce a more concentrated evaporator treatment which can be used over a broad range of applications. Its concentrated formula reduces the overall costs of producing distilled water because only a few milliliters per ton of water produced are required to eliminate scale formation, prevent carryover, and to minimize the need for acid cleaning.

Ameroyal CF concentrated evaporator treatment is a liquid formulation that combines active polymers with a highly effective anti-foam agent. This treatment is diluted with fresh or seawater and fed continuously to the evaporator feed lines by means of a metering pump.

For more information and free literature from Drew Ameroid Marine,

Circle 17 on Reader Service Card



## Master of Decisions

Take the easy course by specifying **Lyngsø-Valmet Marine** for your next newbuilding.

All onboard automation and communication tasks can be handled by one supplier to satisfy your demands on safety, ease-of-use and cost efficiency.

The choice is obvious when you require equipment where technical advice and back-up is available all over the world at any time.

Let us make the future easier for you too.

 **Lyngsø-VALMET Marine**

Lyngsø Alle  
DK-2970 Horsholm  
Denmark

Phone + 45 45 76 75 00  
Fax + 45 45 76 71 00  
Telex 22990 stl dk

P.O. Box 130  
N-3430 Spikkestad  
Norway

Phone + 47 3 28 30 30  
Fax + 47 3 28 59 94  
Telex 77231 valin n

Circle 235 on Reader Service Card

## ANCHORS CHAINS

1/2" up to 4 1/2", U2/U3  
from STOCK!

G. J. Wortelboer jr. B.V.  
Eemhavenstraat 2-6  
P.O. Box 5003  
3008 AA Rotterdam  
Holland  
Telephone: (0)10 - 4292222  
Telex: 28393 GJWNL

## WORTELBOER



Circle 256 on Reader Service Card

## VAPOR RECOVERY CONTROLS



**ROW TECHNOLOGY HAS THEM!**

Coast Guard and ABS approved. Electronic control panel w/test mode and battery back up. High & over-fill alarms, fluid sensors and TRU SIGHT sight glasses.

**ROW TECHNOLOGY, INC.**

P.O. Box 265 Littlestown, PA 17340

Phone (717) 359-4587 FAX (717) 359-8341

DISTRIBUTION AVAILABLE

Circle 246 on Reader Service Card

## A&T Wins Over \$22 Million In New Contracts During June 1991

Analysis & Technology, Inc., North Stonington, Conn., which specializes in professional and technical services for submarines and antisubmarine warfare (ASW) and in training programs for Fortune 500 clients, won over \$22.3 million

in contracts and subcontracts during June 1991. A.T. Mollegen Jr., chairman and CEO recently announced. The company's total contractual backlog stood at approximately \$276 million at the end of June, compared with \$279.7 million on June 30, 1990.

A \$15.1 million, five-year contract was awarded by the Naval Underwater Systems Center (NUSC), Newport, R.I., for A&T to continue providing technical evaluation support for submarine weapon systems.

# NOTHING WORKS BETTER THAN A PROPELLER MADE TO ORDER

Bird-Johnson Company manufactures the most complete line of fixed pitch propellers in the U.S.A. - 3 to 33 feet in diameter in stainless steel, nickel-aluminum bronze and manganese bronze. We can work from our stock designs, selected to meet the varied performance needs of a wide range of specialized work and fish boats, or engineer a custom propeller. We will work to your specific vessel requirements to provide the right propeller - sized, pitched and configured to maximize your operational efficiency and fuel economy. We also supply shafting, nozzles and other marine propeller accessory items and can provide repair and reconditioning services for the lifetime of your propeller.

When you need a propeller that works just for you, call for a Bird-Johnson distributor location near you.



## BIRD-JOHNSON COMPANY

P.O. Box 286 ■ Pinto Island ■ Mobile ■ AL 36601 ■ 800 237 7353 ■ 205 690 7841  
Walpole, MA ■ Pascagoula, MS ■ Seattle, WA An Axel Johnson Inc. Company

Circle 321 on Reader Service Card

## Boats & Barges



The Detroit Diesel-powered Albacora will assist ships in and around the port of Esmeraldas, Ecuador.

### Trinity Shipyard Delivers Detroit Diesel-Powered Mooring Boat For Use In Ecuador

Trinity Industries, Inc., subsidiary Equitable Shipyards Inc., New Orleans, La., has delivered the Albacora, a 50-foot, all-steel, mooring boat, to the Bariven Corp. of Houston, Texas.

The Albacora will assist ships in and around the port of Esmeraldas, Ecuador, by transporting their mooring lines to buoys or other docking positions. A "cage" over the pilothouse and collapsible mast facilitates the movement of the lines and protects the vessel during mooring operations.

The boat is also equipped with dispersant booms linked to a dispersant storage tank for oil dispersal,

and an explosion-proof generator for added safety.

Also included is a small, self-contained galley with stove, refrigerator and sink in the pilothouse.

The Albacora is 50 feet 7 inches in length, with a 15-foot 3-inch beam and 6-foot draft. It is powered by two Detroit Diesel 8V71NA diesel engines.

The tug is similar to three other mooring launches built in 1971 by Halter Marine, Inc., a sister company to Equitable Shipyards, Inc.

For free literature detailing the facilities and capabilities of Trinity Industries,

Circle 26 on Reader Service Card

### Tanker Operations Symposium In California Set For October 11-12, 1991

The Joint California Sections of the Society of Naval Architects and Marine Engineers (SNAME) are sponsoring the "West Coast Tanker Operations Symposium" at the Sheraton Grande, Torrey Pines Resort in LaJolla, Calif., for October 11-12, 1991.

The symposium will discuss technical issues relating to tanker operations on the West Coast, especially in Alaskan service—this fleet represents one of the largest and most vital concentrations of American-flag vessels in the world. Furthermore, recent events, operating experience, and legislation have had and will continue to have profound impact on the U.S. tanker fleet and the way they are operated.

Eight papers have been scheduled, most of which will be of interest even beyond the tank ship industry.

The intention of this symposium is to provide a useful forum on the future of the American tank ship by

gathering representatives of all related disciplines.

The program will also include free time and planned social activities to promote the exchange of ideas.

For further information on the symposium, contact **Harold D. Ramsden**, MCA Engineers, Inc., at (714) 662-0500.

### Electric Boat Division Names Roger Tetrault VP And General Manager

**Roger E. Tetrault**, an executive with more than 20 years' experience in naval nuclear programs, has been appointed corporate vice president and general manager of General Dynamics Electric Boat Division.

Mr. Tetrault was most recently vice president and group executive of the Government Group of Babcock and Wilcox, a subsidiary of McDermott International. In that position, he was responsible for a diversified business with seven plants, 5,500 employees and annual sales of about \$500 million.

## Maritime Services Moves To Expanded Facilities

Maritime Services Corporation (MSC), Hood River, Ore., has moved to expanded facilities, according to **George Selfridge**, CEO. The new facilities will more than triple office, warehouse and manufacturing space. Located on 3.5 acres of light industrial land in Hood River, Ore., the corporation will have land for expansion as necessary.

Company president **Charles Capovilla** indicated that additional space is essential due to the increase in manufacturing and resale portions of MSC's ship interiors business.

Maritime Services Corporation manufactures wooden and lightweight nonflammable composite furnishings for a wide variety of vessels, including cruise ships, large fishing vessels, tankers and ferries.

In addition, Maritime Services is the U.S. distributor for numerous product lines, including Cape Marine Hardcore Joiner System, Hydro Aluminum's Danacoustic Ceilings, Norac's Soft Core Aker Panel Joiner System, Insulation Equipment's Aluminum and Melamine Panels, Window Boxes and related goods, Fibo Joiner Systems as well as A-, B- and C-class joiner doors from several sources, Norac and Cape Marine floating floors, and European style toilet modules.

Limited quantities of most product lines are warehoused by MSC and available for immediate delivery.

Maritime Services Corp. is a full service joiner company which provides material and installation labor packages for projects throughout North and Central America as well as abroad. The company is capable of providing nearly every aspect of an interior from design and concept work through final installation of detail and finish items.

For further information,  
Circle 44 on Reader Service Card

## Napa System For Ship Design Chosen By Det Norske Veritas

Recently, after a five months' testing period, Det norske Veritas Classification A/S (DnVC) decided to acquire the NAPA system for their ship activities in Oslo. DnVC's testing period was preceded by a thorough survey of the naval architectural systems available on the market, in which DnVC found the NAPA systems to be the best suited for their purpose. The main reasons for choosing NAPA were the system's suitability for all possible types of ship, its flexibility in use, excellent graphics and uniform user interface, and the totally integrated modern structure. DnVC also found NAPA to be the most flexible and efficient system on the market today.

NAPA (the Naval Architectural Package), the CAE system for basic ship design, is now used by many of

the major European shipyards, such as Bremer Vulkan, Harland and Wolff, Howaldtswerke-Deutsche Werft, Masa-Yards and Meyer Werft. Other new users include Brand Werft, Burmeister & Wain and Flender Werft.

The aim of the continuous development work on the NAPA system is a total solution for basic ship design. The applications already include a product model-oriented definition of the ship's geometry (both 3-D hull surface and

compartmentation from bottom to top of the vessel), preliminary lines and production level fairing of lines (based on true surfaces instead of mere curve grids), and a full suite of ordinary hydrostatic and hydrodynamic calculations. New applications, such as weight calculations based on the product model of the ship's geometry, are on their way.

NAPA is today available on VAX, Sun SPARCstation and H-P 9000/series 300-400. Further implementation for the 486-PC under Unix

will be started this spring.

The NAPA system is developed and sold by Napa Oy (Ltd.), a software house in Helsinki, Finland. The company was founded in late 1989 to continue the traditions of software development for basic ship design of the former Wartsila shipyards and the Wartsila-owned information technology company Witec.

For further information and free literature from Napa Oy,  
Circle 51 on Reader Service Card

## MULTI-TASK REGIONAL CHARTER VESSEL

Operated by Experienced U.S.C.G. Licensed Masters, Mates, and Crews

## CAPE MAY to NANTUCKET



**We have Ph.D. Biologists, Engineers, Technicians and Equipment On Call 24-Hours Daily for:**

- Benthic and Biological Baseline Measurements
- Oceanographic Mapping, Hydro Lab, and Sonar Studies
- Remotely Operated Vehicles (ROV) and Ocean Engineering Projects
- Mid-ocean Salvage and Critical Component Resupply Services
- Commercial Fishing Vessel Support and Military Contractor Liaison Services

### Vessel Description:

- 65 Ft. Steel Research Vessel (90 gross tons), newly refitted August, 1990.
- Strong, Stable, Reliable, Fully Equipped Sea Boat, U.S.C.G. Documented & Inspected for 49 passengers + 2 crew and All-weather Coastwise Service to 20 miles.
- Safety equipment: Category II EPIRB; 20-man life raft; full PFDs; strobes and throwing rings; fire pump and hose station with 4" water pump for fire safety and special projects; Davit-launched 12 ft. Achilles with outboard cruises at 30 mph for off-vessel work; and 4 watertight bulkheads.
- Design specifications: Built to U.S.C.G. and ABS. Certified. Full set of drawings available.
- Complete Bridge of New Navigational Electronics, plus Global IIF Communications, Cellular Telephone, WeatherFax, Color TV (200 mi), and CD/Stereo System. Current FCC ship inspection.
- Access: Watertight hatches and doors throughout. Interior companionway from pilot house, over engine room, to aft cabin. Full standing headroom and walkways in engine room for excellent service accessibility.
- 30 Ton Cargo Hold: 18'x25" Foredeck. Fully equipped with stern bits and quadrant for deployment of towed arrays or vessel towing operations. Metal halide floodlights fore and aft.
- Electric generators for 220/110 VAC 50/60 HZ 1 Ph.; 24 VDC, 280A; 12 DC.
- Full Galley in aft cabin for Hot Meals at Sea; Real Flush Toilets and Category II M.S.D. Sleeping accommodations: Can accommodate 4-16 berths in 2 compartments. Oil-fired hot water heating system with radiators throughout vessel; full insulation.

### Performance Data:

- Cruising speed: 10 knots @ 1600 rpm.
- Fuel consumption: 9 gph @ 1600 rpm.
- Fuel capacity: 1000 gal.
- Range: 1100 nautical miles
- Sewage treatment system: Continuous usage 6-10 persons, overboard discharge certified.
- Fresh water: 250 gal.
- Cargo capacity: 30 tons.
- Towing and pushing capacity: Heavy duty 46" propeller and towing gear.

### Location:

- Now Lying at Greenport, NY, Sea-ready 24 hours for Charter at your location, on time, anywhere.

### Availability:

- Vessel may be hauled and configured to any requirement, including installation of sea chests and special transducers, deck equipment, etc.
- Minimum Charter Period: 3 days

### For Successful Marine Projects, Contact:

*Gil Castro*, Diversified Marine Brokerage, 1201 Northern Boulevard, Manhasset, NY 11030  
(516) 365-5650 Phone or (516) 627-5329 Fax

Circle 215 on Reader Service Card

## ASNE-N.Y. Section Presents Paper On New York Home Port

The New York Metropolitan Section of the American Society of Naval Engineers (ASNE) recently held a tour and presentation of the Naval Station New York Shore Intermediate Maintenance Activity (SIMA), Stapleton Complex, Staten Island, N.Y.

Comdr. **James M. Haddock**, the commanding officer of SIMA, gave the presentation on "Maintenance in the New York Home Port." In Commander **Haddock's** presentation, he outlined the maintenance organization planned at the home port, as well as the capabilities

of the Intermediate Maintenance Activities at Staten Island and Earle, N.J. He also discussed the ship population planned for Staten Island and Earle.

According to Commander **Haddock's** presentation, SIMA will be used to provide intermediate maintenance to ships assigned to Staten Island and Earle, as well as providing shore duty to support sea/shore rotation, in-rate training for sea intensive ratings, a mobilization base for wartime maintenance and battle damage repair and tar shore billets. The maintenance work at the facility will be of the pierside and topside variety.

To date, five officers and 160 enlisted personnel are stationed at the facility. A total of seven officers and 260 enlisted personnel are projected for SIMA. The facility has an allowance of 380 enlisted personnel.

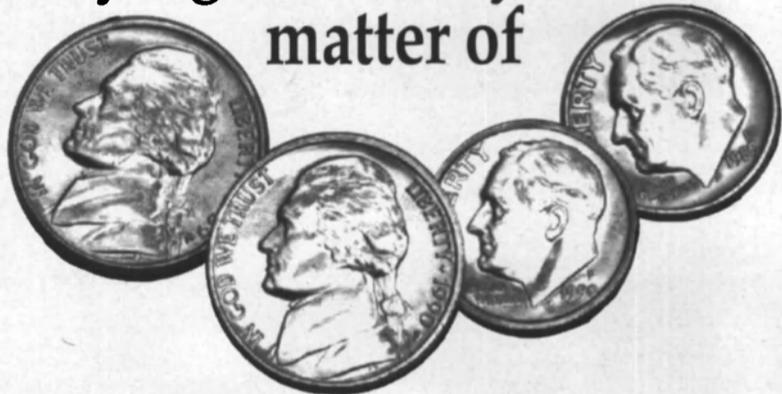
Besides a tour of the 24 active shops of the facility, the 40 attendees to the meeting were given an extensive and thorough guided tour of the Aegis missile cruiser USS Normandy (CG-60) which is stationed at the home port.



Comdr. **James M. Haddock**, commanding officer of the Shore Intermediate Maintenance Activity (SIMA), flanked by **Bruce S. Rosenblatt**, secretary, M. Rosenblatt & Son, (on left) and **Jerry Gruber**, chairman, Metropolitan Section of A.S.N.E., pierside of the cruiser USS Normandy. Commander **Haddock** presented a paper of the maintenance work that would be performed at the home port.

For those of you who think buying a water system is a

matter of

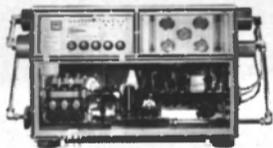


we'd like to put in our



All watermakers will produce water when new. What you don't know is for how long, and at what final cost. When you invest your precious dollars in a Matrix reverse osmosis system, we guarantee satisfaction and back it up with ...

- Years of proven, trouble-free performance.
- Thousands of installations worldwide.
- Global, round-the-clock service and support.
- Standard, lowest replacement parts cost.
- High volume, best value manufacturing.



So when it comes time to buy a reverse osmosis system...buy a Matrix. It's as good as money in the bank.

MATRIX GOLD SERIES™ - 1,000 to 10,000 Gallons Per Day

# MATRIX

DESALINATION, INC.

3295 Southwest 11th Avenue • Fort Lauderdale • Florida 33315 • U.S.A.  
Ph: 305-524-5120 • Fax: 305-524-5216 • Telex: 910-250-5354 MATRIX FTFL

## Service Marine Industries Wins Contract To Build Another Spirit Dinner/Excursion Boat

Spirit Cruises, Inc., Norfolk, Va., one of the nation's largest and fastest growing harbor cruise companies, has awarded a contract to Service Marine Industries, Inc., Morgan City, La., to build a new dinner/excursion boat. This will be the fourth boat that Service Marine has built for use by Spirit Cruises, Inc.

The new vessel will be similar in profile appearance to the highly successful Spirit of Puget Sound, but the interior layout will incorporate alterations to meet changing passenger tastes. The boat will be 187 feet long by 40 feet abeam by 12 feet 9 inches depth and will be built to Subchapter T for 600 passengers.

Main engine power will be two Cat 3408 DITA diesels rated for 470 hp at 1,800 rpm. The two generators will be Cat 3406 DIT diesels with 250 kw gensets. The bow thruster will be a 230-hp Schottel model S103-L driven by a Cat D 3116 DITA diesel.

A very spacious full service galley will be located in the hold with food service provided by a dumbwaiter to the two service decks. Restrooms for the main deck will also be located in the hold.

Passengers may board the boat on either deck through a lobby connecting to an interior stairtower. This enables Spirit Cruises to maintain complete privacy in the two passenger cabins. Restrooms for the second cabin are on that deck, and food service personnel can go to the second deck without entering the first deck.

**Tom Hensley**, president of Service Marine, said that their experience in building eight previous dinner boats, and watching the opera-

tion of the boats in service, have provided great insight as to the details required for a smooth cruise operation and a pleasant experience for the passengers.

Whisper-quiet and vibration-free cabins have long been characteristics of Service Marine-built dinner boats. Extensive soundproofing will be used in the engine compartments and Lo-Rez flexible couplings and engine mounts will be used to eliminate vibration.

**Joe Good**, senior vice president of Spirit Cruises, said that some exciting and eye-catching interiors are planned for the new dinner boat. A large dance and show area is placed midship. The table arrangements have been made so that all passengers have a good view of the variety reviews which are crowd pleasers onboard Spirit Cruise boats.

The boat will be delivered to Spirit Cruises at Amelia, La., early Spring 1992.

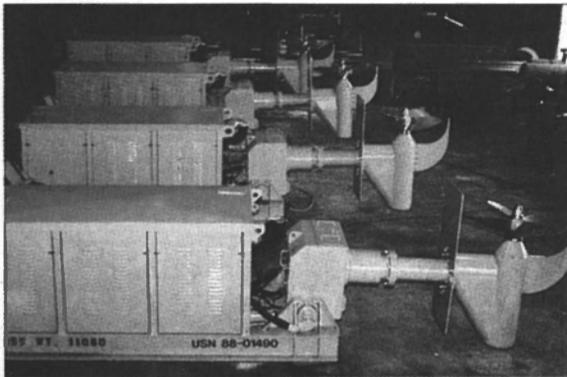
For free literature on Service Marine Industries,

Circle 65 on Reader Service Card

## McDermott International Names James J. Wildasin

**John P. Eckert**, president and chief operating officer, McDermott International, Inc., recently announced that **James J. Wildasin** has been named vice president and group executive, North Sea, Middle East, and West Africa Operations, McDermott Marine Construction. Mr. **Wildasin**, who has assumed his new position, is located in London.

## Thrustmaster Of Texas Outboard Propulsion Units Used On Corps Of Engineers Crane Barges



Thrustmaster of Texas, Inc., hydraulic outboard propulsion units are available in configurations from 35 to 1,000 horsepower. Five units were recently delivered to the U.S. Army Corps of Engineers for use on work and crane barges.

Thrustmaster of Texas, Inc., Houston, Texas, recently completed a contract with the shipment of five model OD250 outboard propulsion units for the U.S. Army Corps of Engineers, Vicksburg District.

These units are for primary propulsion of work and crane barges used for maintenance of locks and dams. The units are completely self-contained and designed for mounting on the deck. They are capable of 360-degree steering and 18-degree tilt for allowing service without drydocking the vessel.

According to Thrustmaster of Texas, the propulsion systems utilize hydraulic power in lieu of conventional mechanical gear systems providing greater reliability and serviceability. The units provide excellent slow-speed maneuverability and control of the vessels.

These units are available in a horsepower range of 35 to 1,000 as standard designs. Many different configurations are available for primary propulsion assist applications.

For a free color brochure on Thrustmaster of Texas propulsion units,

Circle 84 on Reader Service Card

## Seamen's Church Institute Offers Sophisticated Shiphandling And Navigation Training

As automation in shipping and the maritime industry has grown over the last two decades, the need for more sophisticated simulated and computer-aided instruction and comprehensive training has grown as well. The recently opened Maritime Headquarters of the Seamen's Church Institute houses one of the most sophisticated training facilities in the U.S., offering courses in original radar license certification and recertifi-

cation, ARPA, ship handling, tug and barge handling, bridge team training, and emergency shiphandling.

The centerpiece of the SCI Maritime Training Division, which occupies the entire third floor of the new headquarters in lower Manhattan, is a large self-contained radar, navigation and bridge team training simulation center, complete with four fully equipped interactive ship bridges, debriefing rooms and sophisticated computer simulation equipment. The computer simulation equipment and software, both developed and supplied by Nor-Control, parallel the advanced technology of modern ship bridges, providing sophisticated levels of training for ships' officers.

The four ship bridges allow students to interact with each other rather than solely with an instructor, thus simulating real life situations and numerous scenarios. Each bridge is equipped with ARPA, radar, throttle control, gyrocompass, autopilot, VHF radios, sound-powered telephone, etc. Each exercise can be recorded and played back for analysis.

At present, only one of the bridges has visual simulation, but, according to **Eric K. Larsson**, director of the Maritime Training Division, SCI hopes to upgrade another bridge for visual simulation.

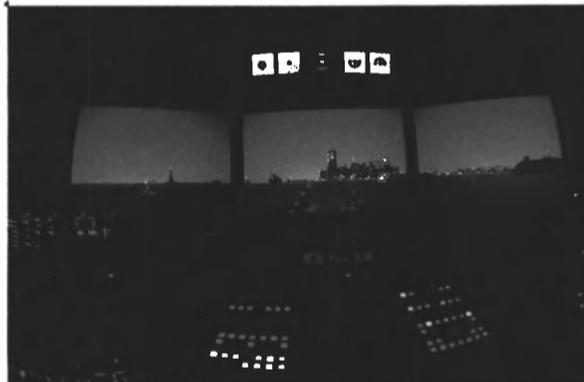
"We have one of the most extensive New York Harbor databases," said Mr. Larsson. "We can simulate from Ambrose Channel to the Narrows to the Arthur Kill." Other areas which can be simulated include Rotterdam, Singapore and Prince William Sound.

"A difference in our approach to teaching," Mr. Larsson continued, "is that we tap into people's life experiences. We not only tailor each course to a company, we tailor it to an individual."

The 400 to 500 officers trained at SCI per year come from such companies and agencies as Texaco, Mobil, Maritrans, Army Corps of Engineers, Coast Guard, and Navy, as well as individuals from numerous other firms.

For free literature detailing the maritime training services offered by SCI,

Circle 42 on Reader Service Card



The Norcontrol bridge simulator at the Seamen's Church Institute Maritime Training Division showing the approach to lower Manhattan at night.

## ELIMINATE COSTLY DOWN TIME & EARLY DRYDOCKING!!!

The most effective way to protect against seal damage.

- Prevents destruction of shaft seals.
- Avoid expensive haul-outs and drydocking.
- No costly "Down Time" for seal repairs.
- Prevents the need for expensive towing.
- One size fits all. 100% stainless steel.
- Used On: US Coast Guard, US Navy & 30,000+ pleasure and commercial vessels.

**SPURS**® LARGE VESSEL LINE & NET CUTTER  
285 S.W. 33rd St. • Ft. Lauderdale • Florida 33315

Call Now For a Complete Information Package Toll Free: 1-800-824-5372

Circle 323 on Reader Service Card

August, 1991

<h3>Oil Spill Tracking VHF Radio Beacon</h3> <ul style="list-style-type: none"> <li>1 Track spill day or night</li> <li>1 Drop from aircraft</li> <li>1 Drifts with spill</li> <li>1 Use Novatech Direction Finding Receiver to locate</li> </ul>	<h3>Oil Spill Tracking Xenon Flasher</h3> <ul style="list-style-type: none"> <li>1 High visibility flashing light</li> <li>1 Locate spill at night</li> <li>1 Drop from aircraft</li> <li>1 Drifts with spill</li> </ul>
<h3>VHF Radio Beacons</h3> <ul style="list-style-type: none"> <li>1 Use to recover and locate equipment at sea</li> <li>1 Range 4 to 8 miles to a vessel, up to 25 miles to an aircraft</li> <li>1 FCC approved</li> </ul>	<h3>Xenon Flashers</h3> <ul style="list-style-type: none"> <li>1 Adjustable intensity 2 to 4 mile range</li> <li>1 Adjustable flash rate</li> <li>1 For external power 4 to 16 v DC input</li> <li>1 Low current drain</li> <li>1 Low cost</li> </ul>

**NOVATECH**  
NOVATECH DESIGNS LTD.  
HEAD OFFICE: 820 Curmoyart St., Victoria, B.C., Canada, V8W 1R1 Tel. (604) 381-1121, Fax (604) 381-1055  
U.S.A. OFFICE: 4131 Mitchell Way, Ballingram, WA, 98226 Tel. (206) 734-1380

Circle 288 on Reader Service Card

## SITUATION WANTED INSURANCE

Over 15 years Experience  
Marine and Corporate Insurance Broker

Please Contact:

**Harvey M. Cooke**  
23 Connecticut Avenue  
Greenwich, CT 06831  
(203) 661-8652

## ANCHOR WINCHES



- UP TO 3,000 POUND CAPACITY
- SEALED DRIVE IN OIL BATH
- POSITIVE STOP MECHANICAL DOG
- COMES WITH HYD. VALVE

'SPECIALIZING IN HYDRAULIC MACHINERY'

- LONG LINE EQUIPMENT • NET REELS
- CAPSTANS • TOW WINCHES

**NORDIC**  
MACHINE & MANUFACTURING

4700 BALLARD AVENUE NW, SEATTLE, WA 98107  
206-782-5585 800-468-6416

Circle 231 on Reader Service Card

## ESGARD BIO-KOTE™/BIO-FLOAT™ BALLAST & VOID TANK COATINGS

- Non-Hazardous
- Safe
- Firm Film
- Resists Washout
- Not Slippery
- Long Life
- Single Package
- Minimal Surface Prep
- Easy to Apply
- World Wide

"EVERYTHING YOU COULD WANT BUT NOTHING YOU DON'T"

**ESGARD** CORROSION COATINGS  
P.O. Drawer 2698  
Lafayette, LA 70502

TEL (318) 234-6327 FAX (318) 234-0113 TLX 586602

Circle 193 on Reader Service Card

## Electronics Update

### Radio Holland Group-Houston Introduces New 'Sailor Solution' GMDSS Communication Package

Radio Holland Group (RHG)-Houston recently introduced the "Sailor Solution" GMDSS communication package to maritime professionals.

The "Sailor Solution" GMDSS package, manufactured by S.P. Radio A/S Aalborg, Denmark, and sold exclusively by the Radio Holland Group, brings together the latest in communication electronics to meet all HF and SatCom GMDSS requirements.

The system is equipped with an

MF/HF RX/TX for general communication, MF/HF RX/TX DSC watchkeeping receiver, MF/HF DSC/telex for general communication, VHF for general communication, and Standard-C terminal for satellite communication.

This entire "Sailor Solution package is one of the most compact, complete GMDSS systems available, measuring approximately 37 inches wide by 16 inches high. Each radio component has the same standardized casing dimensions (approx-



The "Sailor Solution" GMDSS package, manufactured by S.P. Radio A/S Aalborg, Denmark, and sold exclusively by the Radio Holland Group.

mately 10 inches wide by 5 inches high), allowing for maximum mounting flexibility. Other features include patented high efficiency aerial couplers and nylon-coated metal cabinets available in black or standard "Sailor" green.

RHG-Houston has prepared a technical drawing package for the "Sailor Solution" GMDSS system. For this or other information on the Radio Holland Group and the "Sailor Solution" GMDSS package,

Circle 40 on Reader Service Card

High Performance Aluminum

# LANDING CRAFT

From MUNSON MFG., INC

**MUNSON MFG.** specializes in building high performance landing craft which can be utilized at high speed without the usual pounding associated with traditional landing craft hulls. Our proven Hammerhead Square Bow hull incorporates a deep V forefoot and 16 degree V bottom which softens even the nastiest chop. Hulls available 21' x 8.5' to 72' x 25' in 2' increments. Outboard, inboard outboard, straight shaft, or inboard jet available. Over 200 units in use throughout the world.

Ask for our Volume 10-84 page workboat catalog!

**MUNSON**  
Munson Manufacturing Inc.,  
150 West Dayton, Edmonds, WA 98020

Phone 206 776 8222 • Fax 206 672 0395

## USCG APPROVED

### the Humphrey

## SEWAGE TREATMENT

CERTIFIED PROTECTION FOR THE FUTURE

TYPE II, MARINE SANITATION DEVICES  
U.S.C.G. CERT. NOS.  
159.15/1054/1/II  
159.15/1054/2/II  
159.15/1054/3/II

SMALL RUGGED AFFORDABLE

**THE Model 12**  
(two components)  
Designed for vessels with limited space  
Sizes:  
F-12 Filter:  
12 1/2" x 12 1/2" h  
D-12 Digester:  
27" x 15" x 12" h  
Weight:  
40lbs. dry, 115lbs. wet  
Power:  
low draw  
12 volt system drawing 6 amps  
or 110 volt drawing 10 amps

**Unique Simple Process**  
Sewage flows from the head directly into the Digester(s) where it makes its way through a series of baffles. It is broken down and dissolved by natural bacterial action during this stage. The resulting liquid (effluent) is then pumped through the Filter and passes through the chlorinator, where the final stage of purification and deodorization takes place.  
Upkeep simply requires an addition of the Humphrey Activator flushed through the head periodically, a spot check on the chlorine pellets and filter. That's it, No Muss, No Fuss!

This compact Sewage Treatment system emits clear and odorless discharge better than the TYPE III, no discharge devices, which requires the use of pump out facilities that are inadequate across the country.

**THE Model 10A**  
(three components)  
Sizes:  
F-1 Filter:  
12 1/2" x 15" x 12" h  
D-1 & D-2 Digester:  
27" x 15" x 12" h  
Weight:  
66lbs. dry, 225lbs. wet  
Power:  
Available in 12V or 110V  
6 or 10 amp draw

### Models available for any crew size

U.S.C.G. Approved  
Barge Lights

**NABRICO**—  
winches  
hatches &  
deck fittings

**PROPELLERS & NOZZLES**  
Up to 120" dia. — We ship anywhere

**BYRNE, RICE & TURNER, INC.**  
1172 Camp Street  
New Orleans, Louisiana 70130  
1-800-228-9711 ext. 278 or 504-525-7137  
FAX: 504-525-6303

Circle 16 on Reader Service Card

Circle 265 on Reader Service Card

## Tin-Free Self-Polishing Antifouling Introduced By Hempel's Marine Paints

Hempel's Marine Paints A/S has announced the introduction of their second generation of tin-free self-polishing antifouling: Hempel's Nautic Tin-Free 7190.

The product is based on extensive research carried out at Hempel's research centers in Copenhagen and Barcelona, and is the result of a total commitment by Hempel's to the development of environmental-friendly antifouling—a culmination of carefully planned and targeted research programs started in 1976.

According to the Hempel Group's technical director, **Niels Conradsen**, Hempel has invested heavily in antifouling research and the new product, which will be followed by further developments based on even more advanced technology within the next few years.

Hempel's Nautic Tin-Free 7190 is based on extensive practical testing of similar compositions which have provided satisfactory performance under various conditions for periods approaching four years.

According to Hempel's worldwide marketing manager, **Svend Johnsen**, Hempel will continue to market antifouling according to the "tailor-making" philosophy, which means that the new product will be specified according to the vessel's operating conditions. We are confident that the new product will be able to provide drydocking intervals up to five years, Mr. **Johnsen** said, but until we have sufficient practical results to prove that we shall only specify it up to 48 months.

Provided that the existing primer and antifouling system is sound, the new antifouling can be applied directly on top of tin containing self-polishing antifouling, ablative antifouling and the Classic types.

For further information and free literature on Hempel's Nautic Tin-Free 7190,

Circle 60 on Reader Service Card

## Barton Mines Increase U.S. Supply Of Australian Garnet Blasting Abrasive

Barton Mines Corporation recently took delivery of a second bulk shipment of its Navy-approved garnet blasting abrasive from Australia. The GMA Garnet is now available in bulk or in bags throughout the U.S. and Canada.

GMA Garnet is used in shipyards and on offshore facilities around the world. A Barton spokesman indicated that the blast media is a cost-effective substitute for slag because of low consumption rates and high rates of production. In addition, users are said to benefit from very low levels of objectionable dust, and the media can be recycled several times.

GMA Garnet contains less than 0.1 percent free silica and no heavy metals. Barton's garnet is the tough

almandite variety, the only mineral-based abrasive to earn a position on the Navy's qualified product list for MIL-A-22262(SH).

Barton Mines Corporation is one of the world's largest suppliers of high-quality garnet products, with over 100 years of continuous service to industry.

For more information on this new advance in traditional abrasive blast cleaning, and to find out how a demonstration can be arranged,

Circle 49 on Reader Service Card

## Cement Barge Reenters Service After Conversion At Fraser Shipyards

The 49-year-old cement carrier *Altena* was reentered into service by Inland Lakes Management Inc. following her shortening at Fraser Shipyard, Superior, Wis.

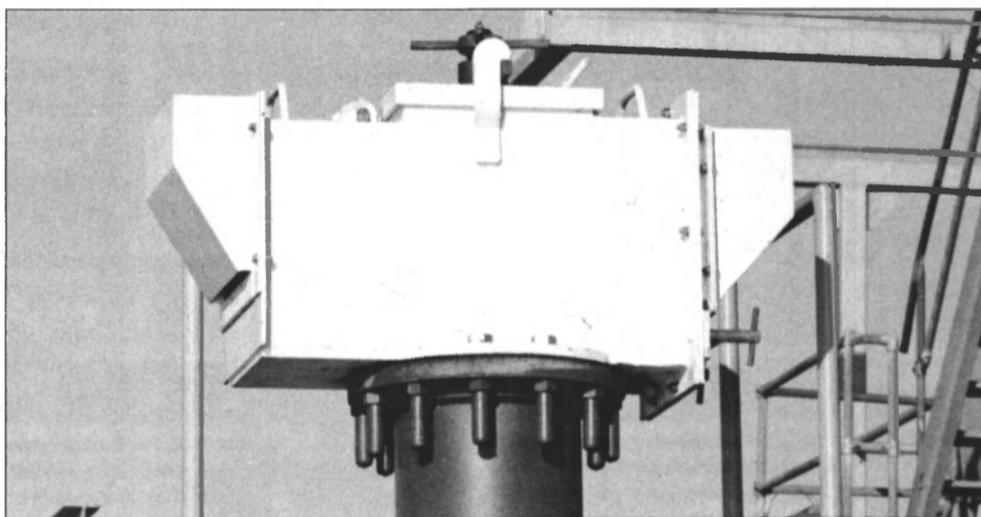
The conversion, which cost in excess of \$17 million, shortened the vessel by 120 feet to allow her better

access to Great Lakes ports. The *Altena*, ex-*Leon Fraser*, now has a deadweight of 4,538 tons and length of 519-1/2 feet. Fraser also installed self-loading gear.

According to Capt. **Eugene P. Stafford**, vice president for Inland Lakes Management, the vessel's cargo capacity was cut by about 15 percent.

The *Altena* along with six other Inland Lakes Management vessels are chartered to LaForge Corp.

# VAPOR RECOVERY



P/V valve fitted on ocean-going barge.

## IMMEDIATE AVAILABILITY TECHNICALLY SUPERIOR HIGH VELOCITY P/V VALVES

- Quiet operation.
- Fitted with pressure and vacuum lift/check devices.
- USCG approved (#162.017/119/1)
- All critical moving parts and valve seats constructed of stainless steel.
- Pivot points clear of discharged gases for maximum corrosion resistance.
- High velocity valve can be opened for venting at facilities not using VRS.
- In service over 20 years on inerted oil tankers and closed-loading chemical carriers.
- 100% manufactured and assembled in U.S.A.
- Various sizes available to accommodate all loading rates and flanges.

Call our toll-free hotline: 1-800-445-4654  
for a reference list, low price and immediate delivery

## WILSON WALTON INTERNATIONAL

Wilson Walton International, Inc.  
66 Hudson Street  
Hoboken, New Jersey 07030  
Phone: (201) 795-2044  
FAX: (201) 795-3805

Wilson Walton International Tx.  
7102 Navigation  
Houston, Texas 77011  
Phone: (713) 923-7230  
FAX: (713) 923-8019



Wilson Walton International Offices:

Australia, Bahrain, Belgium, Curacao, France, Greece, Hong Kong, Italy, Japan, Korea, Mexico, Netherlands, Norway, Portugal, Spain, Singapore, UK, Venezuela

Circle 247 on Reader Service Card

## Army Honors Cummins For Desert Shield/Storm Support

Cummins Engine Company was recently honored by the U.S. Army Materiel Command (AMC) with a Certificate of Recognition for excellent performance during Operation Desert Shield and Desert Storm.

Cummins was specifically recognized for accelerating delivery of military engines and components and helping the Army maintain a high level of readiness throughout the Gulf conflict.

The certificate was presented to **W. Michael Cantrell**, Cummins vice president of Columbus opera-

tions, during ceremonies at the company's engine plant in Columbus, Ind.

Cummins provides marine propulsion and auxiliary power for the LCU 2000 class Landing Craft Utility Vessel. A number of these units, each containing six Cummins Marine engines, were employed in the Desert Storm effort.

Cummins's first marine diesel was installed in 1931. Currently, main propulsion power from 76 to 1,385 hp and auxiliary power up to 1,620 hp is available for a wide variety of marine applications, including pleasure and commercial boats.

For free literature giving full information on Cummins engines,

## New England Trawler Celebrates 65 Anniversary With New Owner

New England Trawler Equipment Company (NETEC) of Chelsea, Mass., recently announced a change of ownership.

**William C. Hoyt** is now the new owner of the company, replacing **William W. Symonds** who had been the owner and president since taking the helm from his father, the founder of the company, **Ralph F. Symonds**, in 1964. **William Symonds**, a member of The Society of Naval Architects and Marine Engineers, will stay on as chief operating officer, a role that will allow

him more time to focus on the engineering, design, and product development areas of the company.

**Mr. Hoyt**, who is new to the company, comes from a background of 14 years in manufacturing and financial management with the Freudenberg Group, where he had experience in North America, Mexico, the Far East and Europe. **Mr. Hoyt** will serve as president, and looks forward to further strengthening the company's already strong position as a leader in providing deck machinery to the marine industry.

Founded in 1926, New England Trawler Equipment Company has

Circle 48 on Reader Service Card

(continued)



- Diesel Engine Repair
- Mobile & Riding Crews
- Precision Machine Shop
- Welding & Fabrication
- Parts Inventory & Acquisition

## COMPLETE SHIP REPAIR

(800) 326-GMSI

Ft. Laud. (305) 522-1489      Fax: (305) 524-9082  
Miami (305) 944-5857      Tlx: 514318 GLO MAR

247 SW 33 Court • Fort Lauderdale, Florida 33315

Circle 270 on Reader Service Card

## JOSEPH R. PRESS

*Attorney at Law*

---

Provides affordable, excellent and experienced trial lawyering for small and medium-sized ship repair contractors involved in litigation with Navy, MSC and USCG Contracting Officers. Flat fees; no hourly billing.

**665 Broadway, Bayonne, NJ 07002**  
**(201)436-8640 Fax (201)436-0355**

Circle 214 on Reader Service Card

### SHIP REPAIR - WORLD WIDE

*We Specialize in all types of Ship Repair, either during the Voyage or at our facilities in Mobile, Alabama, USA.*

- Boiler Repairs • Pipeworks
- Steel Repairs / Renewal • Engine Repairs
- Pumps & Valves • Electrical Repairs

*Any type of vessel, we stock parts for Coffin Feed Pumps. Our facilities cover 75,000 ft.<sup>2</sup> Including Machine Shop, Fabrication Shop, Storage Area and Offices.*

- 24 Hour Service •



**Norconsult Engineering Co., Inc.**  
P. O. Box 529 • 5785 Plantation Road  
Theodore, Alabama 36582  
Phone (205) 653-1933 • Telefax (205) 653-1922  
Toll Free 1-800-344-9972 • Telex ITT 4933249

Circle 311 on Reader Service Card

### Thrustmaster Of Texas, Inc.



**Barge & Dredge Propulsion Units**  
**50 to 1000 H.P.**  
**12227-K FM 529**  
**Houston, Texas 77041**  
**Phone: 713/937-6295**

Circle 341 on Reader Service Card

## Do you know where your boats are?

## Is it worth 25¢ to know?



If you need real time boat location information -- and you need it now -- without high cost -- then you need the WATERCOM Automated Vessel Tracking System.™

WATERCOM's AVTS™ is an exciting innovation that tells you -- in seconds -- mile marker positions of all your boats. It also provides detailed information on fleeting areas, docks, locks and more. Along more than 4,000 miles of America's inland waterways.

WATERCOM has integrated its own direct-dial telephone network and Loran C or GPS positioning equipment into a simple, customized shore-side boat location system.

It's easy to run. Using your office or home computer, you dial up WATERCOM's AVTS service or program AVTS to call automatically. Instantly an info-packed river map appears on your screen. All of this without even talking to the captain or crew on your boats and at only 25¢ per boat per call.

For more information on AVTS and a demonstration in your office, contact your WATERCOM representative at 800-752-3000 today!

WATERCOM®. Automated Vessel Tracking System™, AVTS™, Quality at Your Fingertips™, are trademarks of Waterway Communications System, Inc.



**Waterway Communications System, Inc.**  
453 East Park Place  
Jeffersonville, IN 47130  
812-288-0300

**QUALITY AT YOUR FINGERTIPS** |

Circle 225 on Reader Service Card

grown and changed with the industry from originally supplying the commercial fishing fleet of New England to becoming an integral part of the most modern and technologically advanced military and research vessels. NETEC builds the nonmagnetic anchor windlasses necessary for the U.S. Navy's MMC and MHC class vessels; is supplying the Trident Submarine base at King's Bay with berthing capstans, and the Panama Canal Commission with replacement drydock capstans, among other projects.

Recently, both Mr. Hoyt and William Symonds joined the rest of the employees in a champagne toast to New England Trawler Equipment Company's 65th anniversary and to the continued success of the company. The reception, held at the company's facility in Chelsea, celebrated both its successful history and its plans for the future.

For complete details on all the services and equipment from New England Trawler Equipment Company,

Circle 50 on Reader Service Card

### Maxon Marine Delivers Floating Dock; Building 200-Foot Chemical Barges

Maxon Marine, located in Tell City, Ind., is a major builder and repairer of inland and offshore vessels, including deck barges for heavy construction, floating drydocks, chemicals barges, towboats and custom vessels.

Maxon recently delivered a 2,000-ton general purpose floating drydock for Hall-Buck Marine, as well as a quick-lift jumbo hopper barge drydock for Midland Enterprises' Triangle Fleet at Reserve, La.

Maxon is currently working on an order for several 200- by 35-foot chemical barges.

Maxon has the capability to construct larger vessels, most do not exceed 300 feet long by 80 feet wide or 1,200 tons. For repairs, the company's side-haul marine ways are 200 feet by 55 feet wide, with a weight capacity of 500 tons. Some larger vessels can be hauled up in Maxon's new construction area.

For free literature detailing the barge and vessel building facilities of Maxon,

Circle 86 on Reader Service

### Temporary Deck Protection Offered For Vessels Under Construction Or Repair

U.K.-based Megafilm has developed a new and unique temporary floor protection system made with a blend of polyethylene materials. Within the shipping industry, Megafilm is used on vessels during newbuild, drydocking and refurbishment programs to safeguard all types of floor and deck surfaces from damage by workmen activity.

Sales are very successful and Megafilm now supplies 80 percent of the main U.K. shipyards, including Rosyth Royal Dockyard, Swan

Hunter Shipbuilders and Engineering Ltd., Yarrow Shipbuilders Ltd. and Devonport Management Ltd., along with numerous other large and small yards throughout Europe, for example Blohm & Voss, H.D.W., and Arno Dunkerque. Megafilm is also used by the majority of cruise and ferry lines, naval vessels, workships, interior designers, turnkey operators and contractors.

For free literature giving more information on Megafilm,

Circle 56 on Reader Service Card

### New Immersible Hand-Held Survival Radio From ACR Electronics

ACR Electronics has introduced a new hand-held VHF survival radio specifically manufactured to be used in life rafts and on immersion suits.

The SR101 radio is designed to meet the new SOLAS requirements, is FCC type approved, and is water-

proof to 1 meter.

According to ACR, the radio is a total departure from other hand-held VHF radios in that it is designed for a specific mission—emergency marine communications only. It is designed specifically for use in life-threatening emergencies.

For additional information and free literature on the new immersible hand-held survival radio from ACR Electronics,

Circle 14 on Reader Service Card

## BUYING OR SELLING A COMMERCIAL VESSEL?

At Diversified Marine Brokerage, Ltd., we presently maintain an exclusive worldwide database of over 25,000 prospective buyers and sellers of commercial marine vessels. This represents the largest available audience of its kind anywhere.

Our customer base includes all types of vessels from Barges, Tugs, Dry Docks, Passenger Boats, Ferries, Crew Boats, Supply Boats, etc ... to the largest Ocean-Going vessels.

Present market conditions have created a growing demand. So whether you are considering buying or selling, now is the time to contact us to discuss your needs.



**DIVERSIFIED MARINE BROKERAGE, LTD.**

1201 Northern Boulevard, Manhasset, New York 11030

Telephone: (516) 365-5650 Fax: (516) 627-5329

Contact: Gil Castro - President

Circle 229 on Reader Service Card

## Rubber-Backed 'Ultra Fend' From Ultra Poly Used For Floating Docks In Seattle

Manson Construction, Seattle, Wash., recently built a floating dock on Seattle's waterfront, Elliott Bay.

Because of the rough water and changing tides, Manson contracted for rubber-backed "Ultra Fend," manufactured by Ultra Poly of Tacoma, Wash., for the pile guides. With its low coefficient of friction (.06 - .13), the dock will glide freely along the surface of the Ultra Fend pile guide. Attached to the dock, Ultra Poly's marine formula

UHMWPE is extremely abrasion-resistant and UV-Stabilized. Finally, the added rubber will enhance Ultra Fend's already excellent impact resistance.

Rubber-backed Ultra Fend UHMWPE is available in a variety of sizes and shapes for pile guides and other marine fendering applications. Ultra Fend can be custom formed to fit new piles or retrofit worn piles and docks.

Ultra Poly fenders and marine products are also available in recycled UHMWPE formulations.

For further information and free literature,

Circle 64 on Reader Service Card

## New Hull Repair Method Used On 140-Foot Yacht By Knight & Carver

The 140-foot steam yacht Medea, owned by the Maritime Museum in San Diego, Calif., has received a first-of-its-kind repair to her deteriorating steel hull—a layer of Airex foam and a vinylester fiberglass skin.

When the Coast Guard declared that the plating had become too thin for continued use as a dinner cruise boat, the repair estimates of \$1.7 million were much too high for the San Diego Maritime Museum.

An innovative, and much less

costly repair procedure was proposed by Museum president and yacht designer Arthur DeFever of San Diego, and by John Knight. The procedure, to bond a layer of Airex foam and a fiberglass skin to the hull surface, was closely monitored by the Coast Guard, and was executed by Knight & Carver Yacht Center, the prime repair contractor.

This type of repair has been accomplished at approximately \$250,000, far less than \$1.7 million it would cost to replating and repair the hull.

For further information and free literature on Airex foam and the repair technique described above,

Circle 77 on Reader Service Card

### 1991 MARITIME DIRECTORY & MARINE INDUSTRY CENSUS

#### ORDER NOW!

\$145.00 Per Copy

The All New Edition contains over 500 companies - Name, Titles of key personnel - vessel operators, shipbuilding, boat building, worldwide with telephone and fax numbers and details of facilities. This edition will be the most valuable reference source you will refer to:

MARITIME DIRECTORY  
c/o Maritime Reporter  
118 East 25th Street  
New York, NY 10010

Telephone (212) 477-6700 Fax (212) 254-6271

## Premier Pro-Tec 900 Hull Coating

... helps keep hulls free from marine growth for 2 years!

- No harmful chemicals or pollutants
- Reduces leaching of antifouling paint
- Extends antifouling paint life
- Reduces dry dock time and cost
- Fuel cost savings
- Protects against marine growth
- Reduces drag resistance
- Protects against ultraviolet rays
- Quick drying time
- Coverage of 100 square feet per quart

Inquiries for Regional Sales Representative Welcomed  
United States and International



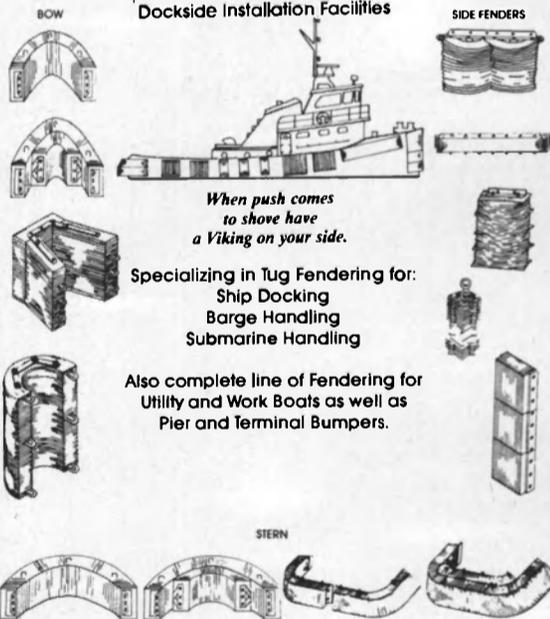
**GLOBALTECH**

9801 Westheimer, Suite 202, Houston, TX 77042  
Tel: (713) 784-2230 Fax: (713) 784-9620

Circle 240 on Reader Service Card

## VIKING FENDER CO.

Complete Marine Fendering  
with  
Dockside Installation Facilities



When push comes to shove have a Viking on your side.

Specializing in Tug Fendering for:  
Ship Docking  
Barge Handling  
Submarine Handling

Also complete line of Fendering for  
Utility and Work Boats as well as  
Pier and Terminal Bumpers.

#### NEW

• Distributors for **6000/YEAR** molded & extruded rubber "Ship-side" marine fenders.

• Distributors for the **VIKING** "Softlite" Foam ship & pier fender

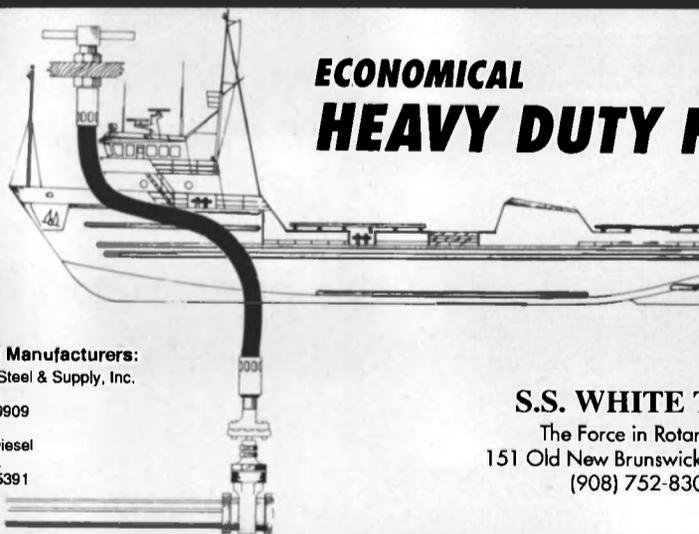
50 Church Street • Sea Bright, NJ 07760  
908-530-6600 Fax: 908-530-6866  
Built on a commitment to quality,  
reliability and customer satisfaction.

Circle 216 on Reader Service Card

### ECONOMICAL

## HEAVY DUTY FLEXIBLE

## REACH RODS.



Licensed Manufacturers:  
Southland Steel & Supply, Inc.  
Houma, LA  
(800) 256-9909

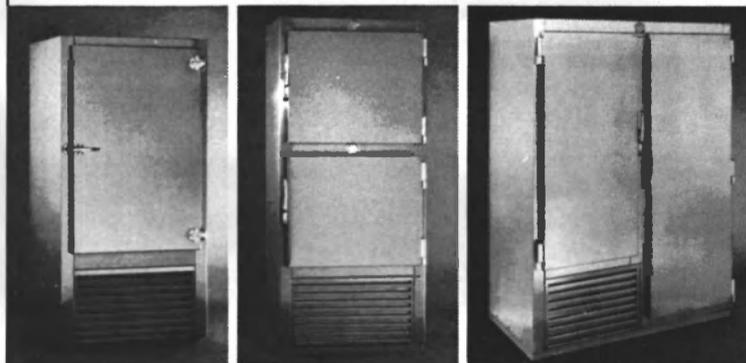
Industrial Diesel  
Norfolk, VA  
(800) 876-5391

**S.S. WHITE Technologies, Inc.**

The Force in Rotary Motion Flexible Shafts  
151 Old New Brunswick Road, Piscataway, NJ 08854  
(908) 752-8300 (908) 752-0698

Circle 217 on Reader Service Card

## In Marine Refrigeration, We've Got You Covered



Cospolich designs and manufactures refrigerators for all types of marine applications and offshore installations. We build to one standard only—the best. That's why all of our refrigerators, freezers, freezer doors, brine tanks, and components meet U.S. Navy standards.

Our "hatchable" modular refrigerators solve replacement problems by eliminating costly cutting through decks, bulkheads, and accessways.

Specify Cospolich. Superior design, construction, quality and service since 1937.

**COSPOLICH**

REFRIGERATOR CO.

949 Industry Road • Kenner, Louisiana, USA 70062  
Tel: (504) 469-6555 • Fax: (504) 469-1819

Circle 220 on Reader Service Card

# BUYERS DIRECTORY

This directory section is an editorial feature published in every issue for the convenience of the readers of MARITIME REPORTER/Engineering News. A quick-reference readers' guide, it includes the names and addresses of the world's leading manufacturers and suppliers of all types of marine machinery, equipment, supplies and services. A listing is provided, at no cost for one year in all issues, only to companies with continuing advertising programs in this publication, whether an advertisement appears in every issue or not. Because it is an editorial service, unpaid and not part of the advertisers contract, MR/EN assumes no responsibility for errors. If you are interested in having your company listed in this Buyers Directory Section, contact John C. O'Malley at (212) 477-6700.

## ABRASIVES

Barton Mines Corp., 1658 Cole Blvd., Golden, CO 89401  
Chesapeake Specialty Products, 5055 Northpoint Blvd., Baltimore, MD 21219  
Stan-Blast Abrasives, P.O. Box 968, 3300 River Road, Hawey, LA 70059

## AIR CONDITIONING AND REFRIGERATION—Repair & Installation

Adrick Marine Corp., 320 Cantor Ave., Linden NJ 07036  
Bailey Group, 2323 Randolph Ave., Avenel, NJ 07001  
Stal Refrigeration AB, Butangsgatan 16, S-601 87 Norrkoping, SWEDEN  
York Int'l, P.O. Box 1592-0836, York, PA 17405

## BALLAST

Chesapeake Specialty Products, 5055 Northpoint Blvd., Baltimore, MD 21219  
Genstar Stone Products, Executive Plaza IV, Hunt Valley, MD 21031  
Mineral Research & Recovery Inc., 4565 S. Palo Verde, Ste 203, Tucson AZ 85714  
Queen City Iron & Steel, P.O. Box 7205, Charlotte, NC 28241-7205

## BARGE BUILDING

Conrad Industries, P.O. Box 790, Morgan City LA 70381  
Maxon, South Boundary Street, P.O. Box 69, Tell City, IN 47586

## BARGE—Leasing

McDonough Marine Service, 2300 Surekote Road, New Orleans, LA 70117  
Zidell Explorations, Inc., 3121 SW Moody Ave., Portland OR 97201

## BASKET STRAINERS

Beard Industries, P.O. Box 31115, Shreveport, LA 71130

## BEARING—Rubber, Metallic, Non-Metallic

B.F. Goodrich, Engineered Polymer Products, 150 Division Dr., Wilmington, NC 28401  
B.F. Goodrich, Marine Products Group, 6061 B.F. Goodrich Boulevard, Jacksonville, FL 32226

Kahlenberg Bros. Co., P.O. Box 358, Two Rivers, WI 54241

Thomson Gordon Ltd., 3225 Mainway, Burlington, Ont., CANADA L7M 1A6

Waukesha Bearings, P.O. Box 1616, Waukesha WI 53187

## BOILER—Manufacturers

Aalborg Ciseru (Miami) Inc., 1539 SW 21st Avenue, Ft. Lauderdale, FL 33312

## BROKERS

Captain Astad Company, Inc., P.O. Box 350486, Ft. Lauderdale, FL 33335  
2900 Energy Centre, 1100 Poydras Street, New Orleans, LA 70163-2900  
Diversified Marine Brokerage, 1201 Northern Blvd., Manhasset, NY 11030  
Jack Faulkner, 2419 Caddy Lane, P.O. Box 371, Flossmoor IL 60422  
Mowbray's Tug & Barge Sales Corp., 35 De Hart St., Morristown NJ 07960

## BUNKERING

Zidell Explorations, Inc., 3121 SW Moody Ave., Portland OR 97201

## CARGO ACCESSORIES

Morgan Crane Company, Inc., 1300 Normandy Place, Santa Ana, CA 92705

## CHAIN

Baldt, Inc., 6 M. Butler St., Chester, PA 19013  
Crandall Dry Dock Engineers Inc./Marit Chain, 21 Pottery Lane, Dedham MA 02026  
Milligan Marine Supply Inc., 5832 Harvey Wilson, Houston TX 77020  
G.J. Wortelboer Jr. B.V., Postbus 5003, 3008 AA Rotterdam, NETHERLANDS

## CHOCKING COMPOUNDS

ITW Philadelphia Resins, 130 Commerce Drive, Montgomeryville, PA 18936

## CLAMPING—Pipe, Tubes, Hose

ZSI, 32497 Schoolcraft Road, Livonia, MI 48150

## COMPACTORS

International Compactor, Inc., P.O. Box 5918, Hilton Head, SC 29938

A/S Vesta, Skudehavsvej 27, DK-2100 Copenhagen, DENMARK;

Sales Agents: American United Marine Corp., 5 Broadway, Rt 1, Saugus, MA 01906, USA

## COMPUTERIZED INFORMATION SYSTEMS

TIMSCO, P.O. Box 91360, Mobile AL 36691

Coastdesign, Inc., Unit 201, 12837 76th Avenue, Surrey, BC CANADA V3W 2V3

## CONDENSERS/SEPARATORS

Beard Industries Inc., P.O. Box 31115, Shreveport LA 71130

Standard Refrigeration Co., 2050 N. Ruby, Melrose Park, IL 60160

Wright Austin Co., 3250 Franklin St., Detroit MI 48207

## CONTROL SYSTEM—Monitoring

Henschel, Inc., 9 Hoyt Drive, Newburyport MA 01950

IMO Industries, Gems Sensors Division, One Cowles Rd., Plainville CT 06062

Lyngso-Valmet Marine A/S, P.O. Box 130, N-3430 Spikkestad, NORWAY

MMC International, 60 Inip Dr., Inwood NY 11696

Marine Electric RPD, Inc., 50 Carol St., P.O. Box 1135, Clifton, NJ 07014-1135

Norcontrol A/S, P.O. Box 1024, N-3191 Horten, NORWAY

Robertson Marine Systems, 3000 Kingman St., Suite 207, Metairie, LA 70006

Robertson-Shipmate, 400 Oser Avenue, Hauppauge, NY 11788

Teleflex Inc., 771 First Ave., King of Prussia, PA 19406

## CRANE—HOIST—DERRICK—WHIRLEYS

The Crosby Group, Inc., P.O. Box 3128, Tulsa OK 74101

Del Gavio Marine Hydraulics Inc., 619 Industrial Rd., Carlstadt, NJ 07022

Liebherr-Werk Nenzing GES.mbh, P.O. Box 10, A-6710 Nenzing, AUSTRIA

Marine Travelift, Inc., 49 E. Yew St., Sturgeon Bay, WI 54235

Morgan Crane Company, Inc., 1300 Normandy Place, Santa Ana, CA 92705

J.D. Neuhaus Hebezeugue GmbH, D-5810 Witten, GERMANY

Pettibone-Tiffin Corp., 235 Miami St., Tiffin, OH 44883

Reco Crane Co., 5734 Jefferson Highway, New Orleans LA 70181

Zidell Explorations, Inc., 3121 SW Moody Ave., Portland OR 97201

<2B BOLD>DECK MACHINERY—Cargo Handling Equipment

All Set Marine Lashing AB, P.O. Box 14112, S-161 14 Bromma, SWEDEN

Braden Carco Gearmatic, P.O. Box 547, Broken Arrow, OK 74013

Markey Machinery Co., Inc., P.O. Box 24788, Seattle, WA 98124-0788

Morgan Crane Company, Inc., 1300 Normandy Place, Santa Ana, CA 92705

McElroy Machine & Mfg. Co., Inc., P.O. Box 4454, Biloxi MS 39535-4454

Seattle Crane & Equipment Co., Inc., 4403 20th Street East, Fife, WA 98424

Willem Pot b.v., P.O. Box 29102, 3001 GC Rotterdam, The Netherlands

## DECKS

Boatlife, 205 Sweet Hollow Road, Old Bethpage, NY 11804

## DIESEL ACCESSORIES

Coltec Industries Fairbanks Morse Engine Div. 701 Lawton Ave., Beloit, WI 53511

Diesel America Inc., 5217 River Rd., New Orleans LA 70123

Gearhardt's Inc., P.O. Box 10161, Jefferson, LA 70181

General Thermodynamics Corporation, 210 South Meadow Road, P.O. Box 1105, Plymouth, MA 02360

Giro-Engineering Ltd., 370 Brook Lane, Sarisbury Hampshire, ENGLAND S03 6ZA

Kiene Diesel Accessories, 325 S. Fairbanks St., P.O. Box 386, Addison IL 60101

Pow-R-Quik, 5518 Mitchelldale, Houston, TX 77092

## DIESEL ENGINE—Spare Parts & Repair

Aalborg Ciseru (Miami) Inc., 1539 SW 21st Avenue, Ft. Lauderdale, FL 33312

Alaska Diesel Electric, P.O. Box 70543, Seattle, WA 98107

Caterpillar, Inc., Engine Div., P.O. Box 610, Mossville, IL 61552-0610

Coltec Industries, Parts & Service Div., 701 Lawton Ave., Beloit, WI 53511

Global Maritime Services, 247 SW 33 Court, Ft. Lauderdale, FL 33315

Goldten Marine Company Inc., 160 Van Brunt Street, Brooklyn, NY 11231

Grace Dearborn, W.R. Grace & Co., 300 Genesee Street, Lake Zurich, IL 60047

Hatch & Kirk, 5111 Leary Avenue NW, Seattle, WA 98107

KHD Canada, Inc., 4420 Garand, Ville St-Laurent, Quebec, CANADA H4R 2A3

Kim Hotstart Mfg. Co., E 5724 Broadway Ave, P.O. Box 42, Spokane WA 99210

MAN B&W Diesel GmbH, Stadtbachstrasse 1, D-8900 Augsburg 1, GERMANY

MAN B&W Diesel, 17 State Street, New York, NY 10004

MTU of North America, 10450 Corporate Drive, Houston, TX 77478

Markisches Werk GmbH, P.O. Box 1442, D-5884 Halver 1, GERMANY

Pacific Rim Diesel, 3842 W. Marginal Way SW, Seattle, WA 98106

Paxman Diesels, P.O. Box 8, Paxman Works, Colchester, Essex, CO1 2HW, ENGLAND;

Paxman Diesels USA, (A Div. of Ruston Gas Turbines, Inc.), 15950

Park Row, Houston, TX 77084

S.E.M.T. Pielstick, 2 Quai de Seine, Saint Denis, Paris, FRANCE 93203

Sulzer Brothers Inc., 200 Park Ave., New York, N.Y. 10166

## DIVING & SALVAGE

H.J. Merrihue, P.O. Box 23123, New Orleans LA 70183

Muldoon Marine Services, Inc., P.O. Box 3221, Terminal Island, CA 90731

Sea-Side Diving, 28612 Harper Ave., St. Clair Shores, MI 48081

## DRY DOCKS—Design

Conrad Industries, 1501 Front Street, P.O. Box 790, Morgan City, LA 70381

Marine Design Services, P.O. Box 928, Bonita CA 92002

MAN GHH Sterkrade, P.O. B. 110240, D-4200 Oberhausen 11, GERMANY

## ELECTRICAL EQUIPMENT

L. F. Gaubert & Co., Inc., P. O. Box 50500, New Orleans LA 70150

MMC International, 60 Inip Dr., Inwood NY 11696

P.J. Plishner Marine/Radio Research Instrument Co., 584 N. Main St.,

Waterbury, CT 06704-3506

SPD Technologies, 13500 Roosevelt Blvd., Philadelphia PA 19116

Universal Marine Electric Co., Inc., P.O. Box 266-923, Houston, TX 77027-6923

## ELECTRONIC DISPLAY

Scandinavian Micro Systems, P.O. Box 155, N-1411, Kolbotn, NORWAY

## ELECTRONIC ENCLOSURES

A&J Manufacturing, 14131 Franklin Ave., Tustin CA 92680

## ELECTRONIC INFORMATION SUPPORT

Inventory Locator Service, 3965 Mendenhall Rd. South, Suite 10, Memphis, TN 38115

## ENGINE TEST EQUIPMENT

General Thermodynamics Corp., P.O. Box 1105, 210 S. Meadow Road, Plymouth, MA 02360

Instruments, Computers, & Controls, Inc., 6942 Haven Creek Dr., Katy, TX 77449

## EPIRBs

ACR Electronics, Inc., 5757 Ravenswood Rd., P.O. Box 5247, Ft. Lauderdale FL 33310-5247

Alden Electronics, 40 Washington St., Westborough, MA 01581

Litton Special Devices, 750 W. Sprout Road, Springfield, PA 19064

Koden International, 77 Accord Park Drive, Norwell, MA 02061

## EQUIPMENT—Marine

Byrne, Rice & Turner, Inc., 1172 Camp St., New Orleans, LA 70130

Maritime Power Corp., 200 Henderson Street, Jersey City, NJ 07302

Ovako Steel Inc., P.O. Box 745, Avon, CT 06001

## EVAPORATORS

Alfa-Laval, Desalt A/S, Stamholmen 93, DK-2650 Hvidovre, Copenhagen, DENMARK

Aqua-Chem, Water Technologies Div., P.O. Box 421, Milwaukee, WI 53201

Beard Industries Inc., P.O. Box 31115, Shreveport, LA 71130

## FANS-VENTILATORS-BLOWERS

Carling Turbine Blower Co., 10 Nebraska St., P.O. Box 88, Worcester, MA 01613

Jon M. Liss Associates, Inc., 411 Borel Ave., San Mateo, CA 94402

## FASTENERS

Jamestown Distributors, 28 Narragansett Ave., P.O. Box 348, Jamestown, RI 02635

Non-Ferrous Bolt & Mfg. Co., 4085 Nevso Dr., Suite C, Las Vegas, NV 98103

Rowe Bumpers, Conveyors & Caster Corp., 3501 Detroit Ave., Cleveland, OH 44113

Seaward International, Inc., Clearbrook Industrial Park, P.O. Box 98, Clearbrook, VA 22624

Solidur Plastics Co., 200 Industrial Dr., Delmont, PA 15626

Standard Refrigeration Co., 2050 N. Ruby, Melrose Park, IL 60160

Ultra Poly Inc., 2926 South Steele, Tacoma, WA 98409

Viking Fender Co., 50 Church Street, Sea Bright, NJ 07760

## FIBER OPTIC SYSTEMS

AT & T, Cables System/Fiber Optic Div., 111 Madison Avenue, Morristown, NJ 07962

## FUEL ADDITIVES, CONDITIONING

U.S. Borax/Industrial Chemicals, 3075 Wilshire Boulevard, Los Angeles, CA 90010

## GALLEY EQUIPMENT

Cospolich Refrigerator Co., 949 Industry Rd., Kenner LA 70062

Gaylord Industries, 10900 S W Avery St, P.O. Box 1149, Tualatin, OR 97062

McElroy Machine & Mfg Co., Inc., P.O. Box 4454, Biloxi MS 39535-4454

## GANGWAYS, LADDERS

Coast Marine & Industrial Supply Inc., 398 Jefferson St., San Francisco, CA 94133

Rampmaster Inc., 9825 Osceola Blvd., Vero Beach, FL 32966

Sea Systems Inc., 65 Avco Road, Ward Hill, MA 01835

Westmont Industries, 10805 Painter Ave., Santa Fe Springs, CA 90670

Wooster Products Inc., 1000 Spruce St., P.O. Box 896, Wooster, OH 44691

## HEAT EXCHANGERS

Alfa-Laval, Desalt A/S, Stamholmen 93, DK-2650 Hvidovre, Copenhagen, DENMARK

Alfa-Laval Separation Inc., 2115 Linwood Avenue, Fort Lee, NJ 07024

Beard Industries Inc., P.O. Box 31115, Shreveport LA 71130

## HORNS/WHISTLES

Kahlenberg Bros Co., P.O. Box 358, Two Rivers, WI 54241

## HOSE

HBD Industries, Inc., 1801 S. Railroad Street, Salisbury, NC 28145-0948

## HYDRAULICS

Aeroquip Corporation, 3000 Strayer, P.O. Box 631, Maumee, OH 43537-0631

Cunningham Marine Hydraulics Co., 201 Harrison St., Hoboken NJ 07030

Del Gavio Marine Hydraulics Inc., 619 Industrial Rd., Carlstadt, NJ 07072

## INCINERATORS

Teamtec A/S, P.O. Box 100, N-4912 Gjeving, NORWAY

A/S Vesta, 27 Skudehavsvej, DK-2100 Copenhagen DENMARK. US Agents: American

United Marine, 5 Broadway, Rte 1, Saugus, MA 01906; Western Pacific

P.O. Box 17555, Seattle, WA 98107

## INSULATION

Soundcoat Company, 1 Burt Drive, Deer Park, NY 11729

## JOINER—Watertight Door—Paneling—Ceiling System—Decking

Cupples Products, 2650 S. Hanley Rd., St. Louis, MO 63144

GEC-Marconi Electronic Systems Corp., 550 S. Fulton Ave., Mt. Vernon, NJ 10550

IMAC AB, Berga Alle 1, S-252 55 Helsingborg, SWEDEN

U.S. Rep: Hopeman Brothers, Inc., P.O. Box 820, Waynesboro, VA 22980

Maritime Services Corp., 3457 Guignard Drive, Hood River, OR 97031

Walz & Krenzer Inc., 1390 Mt. Read Blvd., Rochester NY 14606

## KEEL COOLERS

R.W. Fernstrum & Co., 1716 Eleventh Ave., Menominee, MI 49858

Kahlenberg Bros. Co., P.O. Box 358, Two Rivers, WI 54241

The Walter Machine Co., Inc., 84-98 Cambridge Avenue, Jersey City, NJ 07307

## LEGAL SERVICES

American Maritime Correspondents, One Embarcadero Center, Suite 330, San Francisco, CA 94111

## LIFEBOATS/RAFTS

Zodiac of North America, P.O. Box 400, Stevensville, MD 21666

Willard Marine Co., Inc., 1250 N. Grove St., Anaheim, CA 92806

## LIGHTING EQUIPMENT—Lamps, Fixtures, Searchlights

ACR Electronics, Inc., 5757 Ravenswood Rd., P.O. Box 5247, Ft. Lauderdale, FL 33310-5247

Archway Marine Lighting, 4501 Swan Ave., St. Louis, MO 63110

Carlisle & Finch, 4562 W. Mitchell Ave., Cincinnati OH 45232

The L.C. Doane Co., P.O. Box 975, Essex, CT 06426

Nautilus Equipment Ltd., P.O. Box 66, Station M, Halifax, Nova Scotia B3J 2L4, CANADA

Phoenix Products, 6161 N 64th St., Milwaukee WI 53218

## LINE BLINDS

Stacey/Fetterolf, P.O. Box 103, Skippack, PA 19474

## LOGISTICS

VL Logistics Consultants, Inc., 3420 Bienville Blvd., Ocean Springs MS 39564

QED

Nelson & Associates, Inc., 610 Northwest 183rd St., Miami, FL 33169  
Northern Marine, P.O. Box 1169, Traverse City, MI 49685  
Ocean Oil International Engineering Corp., 3019 Mercedes Blvd, New Orleans LA 70114  
Olsen Marine Surveyors Co., P.O. Box 283, Port Jefferson, NY 11777  
Omega Marine Engineering Systems, Inc., 11757 Katy Freeway, Ste 1100, Houston TX 77079  
QED Systems Inc., 4646 Witchduck Rd., Virginia Beach, VA 23455  
M. Rosenblatt & Son, Inc., 350 Broadway, New York, NY 10013 and 667 Mission St., San Francisco, CA 94105  
Sargent & Herkes, 225 Baronne St., Suite 1405, New Orleans LA 70112  
Sea School, 10812 Gandy Boulevard, St. Petersburg, FL 33702  
Seaworthy Systems Inc., P.O. Box 965, Essex, CT 06426; 17 Battery Pl., New York, NY 10004; P.O. Box 205, Solomons MD 20688; 2 Skyline Pl., 5203 Leesburg Pike, Suite 700, Falls Church VA 22041; 1305 Franklin St., Suite 210, Oakland, CA 94612  
Seaworthy Electrical Systems, 17 Battery Pl. N.Y. N.Y. 10004  
George G. Sharp, Inc., 100 Church St., New York, NY 10007  
R.A. Stearn, Inc., 253 N. 1st Ave., Sturgeon Bay, WI 54235  
Systems Engineering Associates (SEACOR), 200 East Park Dr., Suite 600, Mt Laurel NJ 08054  
TIMSCO, P. O. Box 91360, Mobile AL 36691

**NAVIGATION & COMMUNICATIONS EQUIPMENT**  
AT&T, High Seas Dept., 412 Kemble Ave., Room C380, Morristown, NJ 07960  
Comsat Maritime Services, 950 L'Enfant Plaza SW, Washington DC 20024  
Furuno U.S.A., 271 Harbor Way, S. San Francisco, CA 94080  
Henschel, Inc., 9 Hoyt Drive, Newburyport MA 01950  
Hose McCann, 9 Smith Street, Englewood, NJ 07631  
IDB Aero-Nautical Communications, 15200 Omega Dr., Rockville, MD 20850-3240  
Kelvin Hughes Ltd., New North Rd., Hainault, Ilford, Essex IG6 2UR ENGLAND  
Kenwood USA Corp., Marine Products Div., 2201 E. Dominquez St., Long Beach, CA 90810  
Mackay Communications, 441 US Highway #1, P.O. Box 331, Elizabeth NJ 07207  
Marine Electric RPD, Inc., 50 Carol St., P.O. Box 1135, Clifton, NJ 07014-1135  
Mobile Telesystems, Inc., 300 Professional Drive, Gaithersburg, MD 20879  
Naval Electronics, 5417 Jetview Circle, Tampa FL 33634  
Norwegian Telecom, P.O. Box 6701, Oslo 1, NORWAY  
Novatech, 820 Cormorant St., Victoria, BC V8W 1R1, CANADA  
Robertson Marine Systems, 3000 Kingman Street, Suite, 207, Metairie, LA 70006  
SPD Technologies, 13500 Roosevelt Blvd., Philadelphia, PA 19116  
Simrad, 620 Northwest Bright Street, Seattle, WA 98107  
Singapore Telecom, Orchard Point Post Office, P.O. Box 38, SINGAPORE 9123  
Sperry Marine Inc., 1070 Seminole Trail, Charlottesville VA 22901  
Standard Communications, P.O. Box 92151, Los Angeles, CA 90009  
Summer Equipment Ltd., 24 West 4th Ave., Vancouver V5Y 1G3, CANADA  
Trimble Navigation, 585 North Mary Avenue, P.O. Box 3642, Sunnyvale, CA 94086  
Vessel Information Systems, 7723 24th Ave., NW, Seattle, WA 98117-4412  
Waterway Communications System, Inc. 453 E. Park Pl., Jeffersonville, IN 47130

**NOZZLES**  
Nautican Enterprises Ltd., 407 Mountain Highway, North Vancouver, B.C. V7J 2L1

**OIL—Marine—Additives**  
Exxon Company International, 200 Park Ave., Bldg 222, Room A279, Florham Park, NJ 07932, P.O. Box 4706, Houston, TX 77210-4706  
Mobil Oil Corporation, 3225 Gallows Road, Fairfax, VA 22037-0001  
Texaco, International, 2000 Westchester Avenue, White Plains NY 10650

**OIL/WATER SEPARATORS**  
Alfa-Laval Separation, Inc., 955 Mearns Rd., Warminster, PA 18974-0556  
Centrico, Inc. (Westfalia Separators), 100 Fairway Court, Northvale NJ 07647  
FAST Systems, Inc., 3240 N. Broadway, St. Louis, MO 63147  
MMC International, 60 Inip Dr, Inwood NY 11696  
Shell Oil, P.O. Box 2463, Houston, TX 77252

**PAINT—COATING—CORROSION CONTROL**  
Ameron, 201 N. Berry St., Brea, CA 92622  
Enviro Coatings, Inc., 4560 Belt Line Rd., Suite 300, Dallas, TX 75244  
Esgard, Inc., P.O. Drawer 2698, Lafayette, LA 70502  
GlobalTech, 9801 Westheimer St., Ste. 202, Houston, TX 77042  
Jamestown Distributors, 28 Narragansett Ave., P.O. Box 348, Jamestown, RI 02635  
Microphor, Inc., Marine Division, 452 E. Hill Rd., P.O. Box 1460, Willits, CA 95490  
Sigma Coatings, 8979 Market St., Houston, TX 77029, 330 Rover Road, Harvey, LA 70059, 1100 Adams St., Hoboken, NJ 07030  
Unitor Ships Service, Unitor Marine Chemicals Division, 3 High St., Rickmansworth, Herts, WD3 1SW UNITED KINGDOM

**PIPE FITTINGS/CONNECTING SYSTEMS**  
Aeroquip Corporation, 3000 Strayer, P.O. Box 631, Maumee, OH 43537-0631  
Deutsch Metal Components, 14800 S. Figueroa, Gardena, CA 90248  
Stanley G. Flagg Co., 1020 W. High St., Stowe, PA 19464  
Thaxton, Inc., 25 Leonburg Rd., Mars, PA 16406-8401

**PORT SERVICES**  
Port of Iberia, P.O. Box 897, New Iberia LA 70561  
Port of Orange Texas, P.O. Box 516, Orange, TX 77630  
Port of Portland, 5555 N. Channel Ave., Portland, OR 97217

**PROPULSION EQUIPMENT—Bowthrusters, Diesel Engines, Gears, Propellers, Shafts, Turbines**  
Avondale Industries, Harvey Quick Repair, P.O. Box 116, Harvey, LA 70058  
American Air Filter, P.O. Box 35690, Louisville, KY 40432  
American Marine Jet, P.O. Box 8126, New Orleans, LA 70182  
ASEA Brown Boveri, 1460 Livingston Ave., North Brunswick NJ 08902  
ASEA Brown Boveri (Stromberg), P.O. Box 185, 00381 Helsinki, FINLAND  
Argo International, 140 Franklin Street, New York, NY 10013  
Aquamaster-Rauma Ltd., Box 220, SF-26101, Rauma, FINLAND  
Bergen Diesel A/S, P.O. Box 924, N-5002, Bergen, NORWAY  
Bird Johnson Company, 110 Norfolk St., Walpole, MA 02081  
CWF Hamilton & Co., Ltd., P.O. Box 709, Christchurch, NEW ZEALAND  
Caterpillar, 100 NE Adams Street, Peoria, IL 61629-2320  
Cincinnati Gear Co., 5657 Wooster Pike, Cincinnati, OH 45227  
Coltec Industries (Fairbanks Morse Engine Div.), 701 Lawton Avenue, Beloit, WI 53511  
Electro-Motive Division of GM, 9301 W 55th St., LaGrange, IL 60525  
Fincantieri, Diesel Engines Division—GMT, Bagnoli della Rosandra 334, Trieste, ITALY  
GE Marine & Industrial, 1 Neumann Way N-158, Cincinnati OH 45215  
GE Naval & Drive Turbine Systems, 166 Boulder Dr., Fitchburg MA 01420  
Kahlenberg Bros. Co., P.O. Box 358, Two Rivers, WI 54241  
Krupp MaK, 7555 Danbro Crescent, Mississauga, Ontario, CANADA L5N 6P9  
Mapeco Products Inc., P.O. Box 6, 725 Glen Cove Ave., Glen Head NY 11545  
Marine Gears, Inc., P.O. Box 689, Greenville MS 38707  
Marine Systems Inc., 2032 Atlantic Ave., Chesapeake VA 23324  
Markisches Werk, P.O. Box 1442, D-5884 Halver GERMANY

MAN B&W Diesel, 17 State St., New York, NY 10004  
MAN B&W Diesel A/S, Ostervej 2, DK 4960 Holeby, DENMARK  
MAN B&W Diesel A/S, Alpha Diesel, Niels Juels Vej 15, DK-9900 Frederikshavn DENMARK  
MAN B&W Diesel GmbH, Stadtbachstrasse 1, D-8900 Augsburg 1 GERMANY  
MKW Power Systems, 301 S. Church St., Rocky Mount, NC 27801  
MTK Magnetek Inc., 11150 Santa Monica Blvd., Los Angeles CA 90025  
New Sulzer Diesel, Ltd., CH 8401, Winterthur, SWITZERLAND  
Northwest Marine Services Corp., 6452 So. 144th St., Tukwila WA 98168  
Nylands Marine Service A/S, P.O. Box 130, N 4818 Faervik, NORWAY  
Omnithruster Inc., 9515 Sorensen Ave., P.O. Box 2144, Santa Fe Springs, CA 90670  
Ovako Steel Couplings AB Sweden, S 813 00 Hofors SWEDEN  
Propulsion Systems, 1441 N Northlake Way, Seattle WA 98103  
Rolla SP Propellers SA, Via Silva 5, P.O. Box 251, 6828 Balerna SWITZERLAND  
Rolla SP Propellers USA, 4030 Mustang Road, Melbourne, FL 32934, USA  
Karl Senner Inc., 25 W Third, Kenner LA 70062  
Schottel-Werft, D-5401 Spay, GERMANY  
Stewart & Stevenson, 1400 Destrehan, P.O. Box 8, Harvey LA 70059-0008  
Sulzer/Escher Wyss, Ravensburg GERMANY  
Textron Locomotive, 550 Main St., Stratford, CT 06497  
Ulstein International, A/S, N-6065 Ulsteinvik, NORWAY  
J. M. Voith GmbH, Marine Division, Postfach 1940, D-7920, Heidenheim/Brenz, GERMANY U.S. Rep: Voith Schneider America Inc., 121 Susquehanna Ave., Great Neck, NY 11021  
Oy Wartsila Ab, Vasa and Abo Divisions, P.O. Box 244, SF65100 Vasa, FINLAND  
Oy Wartsila, Stork Division, P.O. Box 244, SF 65100 Vasa, FINLAND  
WesTech Gear Corp., 2600 E. Imperial Highway, Lynwood, CA 90262  
ZF of North America, Marine Sales, 500 Barclay Blvd, Lincolnshire IL 60069

**PROTECTIVE WRAPS**  
FANA (Film Applicators of North America), 1260 E Woodland Ave., Springfield PA 19064

**PUMP—Repair—Drives**  
Coffin Turbo Pump, Inc., 326 S. Dean Street, Englewood, NJ 07631  
Del Gavio, 619 Industrial Rd., Carlstadt, NJ 07072  
Golten Marine Company Inc., 160 Van Brunt Street, Brooklyn, NY 11231  
Houser Marine, Lario Division, 1713 S McKenzie St., Foley AL 36535  
Jim's Pump Repair, 48-55 36th St., Long Island City NY 11101  
Megator Corporation, 562 Alpha Drive, Pittsburgh, PA 15238  
Vita Motivator, 99 W Hawthorne Ave., Suite 622, Valley Stream NY 11580  
Wilden Pump & Engineering Co., 22069 Van Burren St., P.O. Box 845, Colton, CA 92324

**REMOTE VALVE OPERATORS**  
Teleflex, Inc., 771 First Ave., King of Prussia, PA 19406

**ROPE—Manila—Nylon—Hawsers—Fibers**  
Allied Signal Inc., Fibers Division, 1411 Broadway, New York, NY 10018  
Columbian Rope Corp., P.O. Box 270, Guntown, MS 38849  
Dupont, Montgomery 403, 1011 Centre Road, Wilmington, DE 19805

**SANITATION DEVICE—Pollution Control**  
Jered Brown Brothers, 56 South Squirrel Rd., Auburn Hills, MI 48326  
Byrne, Rice & Turner, Inc., 1172 Camp Street, New Orleans, LA 70130  
Envirovac Inc., 1260 Turret Dr., Rockford, IL 61111  
FAST Systems, Inc., 3240 N. Broadway, St. Louis MO 63147  
Microphor, Inc., 452 E. Hill Rd., P.O. Box 1460, Willits, CA 95490  
Novatech, 820 Cormorant St., Victoria BC V8W 1R1, CANADA  
Red Fox Environmental Services, Inc., P.O. Box 53809, Lafayette, LA 70505-3809  
Research Products/Blankenship (Inciolet), 2639 Andjon, Dallas, TX 75220

**SCALE MODELS**  
Sturgeon Bay Model Shop, 187 N Ninth Ave., Sturgeon Bay WI 54235

**SCUTTLES/MANHOLES**  
L.S. Baier & Assoc., 7527 NE 33rd Dr., Portland OR 97211

**SHIPBUILDING EQUIPMENT**  
MAN—GHH, Sterkrade Werfstrabe 112 D 4100 Duisburg 18, GERMANY  
MAN—GHH, P.O. Box 110240, D 4200 Oberhausen 11, GERMANY  
NEI Syncrolift, Inc., 8970 S W 87th Ct., Miami FL 33176  
Offshore Industries, Inc., 144 Railroad Ave., Suite 206, Edmonds WA 98020

**SHIPBUILDING—Repairs, Maintenance, Drydocking**  
Astilleros Espanoles S.A., Padilla 17, 28006 Madrid, SPAIN  
Atlantic Marine, Inc., 8500 Heckscher Dr., Jacksonville, FL 32226  
Avondale Industries Inc., P.O. Box 50280, New Orleans LA 70150  
Bender Shipbuilding & Repair, P.O. Box 42, Mobile AL 36601  
Bethlehem Steel, Martin Tower, Bethlehem PA 18106  
Bethlehem Steel, Baltimore Marine Div., Sparrows Point Yard, Sparrows Point MD 21219  
Blount Marine, Box 368, Warren RI 02885  
Bollinger Lockport & Larose, P.O. Box 250, Lockport, LA 70374-0250  
Chris-Marine AB, P.O. Box 9025, S-2000 39, Malmo, SWEDEN  
Conrad Industries, 1501 Front Street, P.O. Box 790, Morgan City, LA 70381  
Curacao Drydock (USA), Inc., P.O. Box 3012, Curacao, Netherlands Antilles  
Equitable Shipyards Inc., Trinity Marine Group, Box 29266, New Orleans LA 70189  
Fincantieri SpA Cantieri Navali Italiani, Via Cipro 11, 16129 Genoa ITALY  
Freeport Shipbuilding, P.O. Box 417, Freeport, FL 32439  
Galveston Shipbuilding, 6800 Port Industrial Boulevard, P.O. Box 2660, Galveston, TX 77553  
Gulf Craft, Inc., 3904 Highway 182, Patterson, LA 70392  
Hall-Buck Marine, Inc., P.O. Box 3635, Baton Rouge, LA 70821  
Hitachi Zosen, 1-1-1 Hitotsubashi, Chiyoda-ku Tokyo 100, JAPAN  
Hobart Brothers, WP Div., 600 West Main, Troy, OH 45373  
Houston Ship Repair, 1621 Woods Dr., P.O. Box 489, Channelview, TX 77530  
In-Place Machining Co., 1929 N. Buffum Street, Milwaukee, WI 53212-3793  
Jacksonville, Shipyards, 750 E. Bay St., Jacksonville, FL 32202  
Jeffboat, Inc., P.O. Box 610, Jeffersonville IN 47130  
Kvaerner Fjellstrand, N-5632 Omastrand, NORWAY  
Lindenau Werft, Postfach 9060, D-2300 Kiel-Friedrichsort, GERMANY  
Lisnave, Apartado 2138, 1103 Lisbon, Codex PORTUGAL  
MAN GHH Sterkrade, P.O.B. 110240, D 4200 Oberhausen 11, GERMANY  
MIL Davie, Inc., P.O. Box 130, Lewis, Quebec, CANADA  
Marco, Inc., 2300 W Commodore Way, Seattle, WA 98199  
T. Mariotti, Calata Chiappella, 16126 Genoa (Port) ITALY  
Munson Manufacturing, 150 Dayton, Edmonds WA 98020  
Newport News Shipbuilding, 4101 Washington Ave., Newport News, VA 23607  
New York Shipyard Corp., One Beard St., Brooklyn NY 11231  
Norconsult Engineering Co., Inc., P.O. Box 529, 5785 Plantation Rd., Theodore, AL 36582  
Patti Shipyard, Inc., P.O. Box 271, Pensacola, FL 32507  
Protecno, Ltd., Rua Eugenio Castro, 13A/r/c, 2800 Almada, PORTUGAL, U.S. Rep: Walter Thorsen, Inc., 79 Oweno Rd., P.O. Box 755, Mahwah, NJ 07430-0755  
Quality Shipyards, Inc. (Zapata), 3201 Earhart Dr., P.O. Box 1817, Houma, LA 70361  
SeaArk, P.O. Box 210, Monticello AR 71655

Service Marine Industries, P.O. Box 3606, Morgan City LA 70381  
Skipperliner Shipyards, 621 Park Plaza Dr, Dept 21, LaCrosse WI 54601  
Steiner Shipyard, Inc., P.O. Box 742, Bayou la Batre, AL 36509  
Swath Ocean, 979 G Street, Chula Vista, CA 92011  
3 Maj Associates Shipbuilding Industry, P. O. Box 117, 51001 Rijeka YUGOSLAVIA  
Textron Marine Systems, 6600 Plaza Drive, New Orleans, LA 70127-2584  
Trinity Marine Group, Box 3029, Gulfport, MS 39505-3029  
Union Dry Dock & Repair, P.O. Box M1539, Hoboken, NJ 07030  
Zidell Explorations, Inc., 3121 S.W. Moody Street, Portland, OR 97201  
Zodiac of North America Inc., Thompson Creek Rd., P.O. Box 400, Stevensville, MD 21666

**SIMULATOR TRAINING**  
Marine Safety International, Marine Air Terminal, LaGuardia Airport, NY 11371

**SILENCERS**  
Beard Industries Inc., P.O. Box 31115, Shreveport LA 71130

**SMOKE CURTAINS**  
HMS Marine Hardware, 333 W. Merrick Road, Valley Stream, NY 11580

**STABILIZERS**  
Naiaid Stabilizers, Van Dusen & Meyer Inc., P.O. Box 558, Shelton, CT 06484

**STAINLESS PLATE**  
Eastern Stainless Division, Cyclops Corporation, P.O. Box 1975, Baltimore MD 21203  
Williams & Company, Inc., 901 Pennsylvania Ave., Pittsburgh, PA 15233-1495

**STUFFING BOXES**  
Kahlenberg Bros. Co., P.O. Box 358, Two Rivers, WI 54241

**SURVIVAL EQUIPMENT**  
Schat Watercraft, P.O. Box 465, Ft of Industrial Rd., Farmingdale NY 07727  
Stearns Manufacturing, P.O. Box 1498, St. Cloud MN 56302  
Viking Life Saving Equipment, 1625 N Miami Ave., Miami FL 33136

**TANK CLEANING**  
Houston Ship Repair, 1621 Woods Dr., P.O. Box 489, Channelview, TX 77530

**TANK LEVELING INDICATORS**  
IMO Industries, Gems Sensors Division, One Cowles Rd, Plainville CT 06062  
MMC International, 60 Inip Dr, Inwood NY 11696  
Saab Marine Electronics AB, P.O. Box 13045, S 402 51 Goteborg SWEDEN

**TESTING**  
Barbee Valves, 205 W. 35th St., Suite A, National City, CA 92050  
Wyle Laboratories, 7800 Govern's Dr., SW, Huntsville, AL 35807

**TOOLS**  
Derbyshire Machine & Tool, Belfield Ave. & Wister St., Philadelphia, PA 19144-1788  
Ingersoll-Rand, Professional Tool Group, Allen & Martinsville Rd., Liberty Corner, NJ 07938  
LSP Industries, P.O. Box 5303, 2511-20th Street, Rockford, IL 61125  
San Diego Marine Hardware, 1660 Logan Avenue, San Diego, CA 92113

**TORSIONAL VIBRATION SPECIALISTS**  
T.W. Spaetgens, 156 W. 8th Ave., Vancouver, BC, CANADA, V5Y 1N2

**TOWING—Barges, Vessel Chartering, Lighterage, Salvage, etc.**  
Jack Faulkner, 2419 Caddy Lane, Flossmoor IL 60422

**TURBOCHARGERS**  
Cooper Industries, Energy Services Group, North Sandusky St., Mt. Vernon, OH 43050

**VALVES AND FITTINGS**  
Aeroquip Corporation, 3000 Strayer, P.O. Box 631, Maumee OH 43537-0631  
American Vulkan Corporation, P.O. Drawer 673, 2525 Dundee Rd., Winter Haven, FL 33882-0673  
Circle Seal Controls, Brunswick Corporation, P.O. Box 3666, 1111 N. Brookhurst St., Anaheim, CA 92803  
Cla-Vol Co., P.O. Box 1325, Newport Beach, CA 92663  
Cunico Corp., 214 N Hawaiian Ave., P.O. Box 306, Wilmington CA 90748  
Dolsley Ltd., 863 West 44th Street, Norfolk, VA 23508  
Elliott Manufacturing, P.O. Box 773, Binghamton, NY 13902  
Loeffler Machine, US #1 & Robbins Ave., Pennel PA 19047  
MMC International, 60 Inip Dr, Inwood NY 11696  
Marotta Scientific Controls, Inc., 78 Boonton Ave., P.O. Box 427, Montville, NJ 07045  
Stacey/Fetterolf, P.O. Box 103, Skippack, PA 19474  
Stanley G. Flagg Co., 1020 West High St., Stowe, PA 19464  
Zidell Explorations, Inc., 3121 SW Moody Ave., Portland OR 97201

**VIBRATION ANALYSIS**  
Alert Manufacturing & Supply Co., 1848 N. Wilmot Ave., Chicago, IL 60647  
DLI Engineering Corp., 253 Winslow Way West, Bainbridge Island, WA 98110  
T. W. Spaetgens, 156 W 8th Ave., Vancouver BC CANADA V5Y 1N2  
Vibranalysis Engineering Corp., 4380 S. Wayside, Suite 100, Houston TX 77087

**VIDEO—Training**  
Walport Wusa, 840 Bond St., Elizabeth, NJ 07201

**WASTEWATER TREATMENT**  
EES Corporation/Omnipure, An Eltech Systems Company, 12850 Bournewood Dr., Sugarland TX 77478

**WATER PURIFIERS**  
Alfa-Laval, Desalt A/S, Starnholmen 93, DK-2650 Hvidovre, Copenhagen, DENMARK  
Alfa-Laval Separation Inc., 955 Mearns Rd., Warminster, PA 18974  
Beard Industries Inc., P.O. Box 31115, Shreveport LA 71130  
Everpure, Inc., 660 N. Blackhawk Dr., Westmont, IL 60559  
Exstar International, 6502 Windmill Way, Wilmington, NC 28405  
Matrix Desalination, Inc., 3295 SW 11th Avenue, Fort Lauderdale, FL 33315  
Sea Recovery Corp., P.O. Box 2560, Gardena, CA 90247-0560

**WEATHER CHART RECORDERS**  
Alden Electronics, 40 Washington St., Westborough, MA 01581

**WELDING**  
American Durweld Sales, P.O. Box 850, Scituate MA 02066  
Welding Consultants USA, 10399 Paradise Blvd. #101, St. Petersburg, FL 33706

**WINCHES AND FAIRLEADS**  
Braden Carco Gearmatic, P.O. Box 547, Broken Arrow, OK 74013  
Jeamar Winches Ltd., 53 Maple Ave., Richmond Hill, Ontario L4C 6P3, CANADA  
MMC International, 60 Inip Dr, Inwood NY 11696  
Markey Machinery Co., 79 South Horton St., Seattle, WA 98134  
Nordic Machine Manufacturing, 4700 Ballard Ave., NW, Seattle, WA 98107  
Smith Berger Marine Inc., 516 S. Chicago St., Seattle, WA 98108  
Thern, Inc., 5712 Industrial Park Rd., Winona, MN 55987

**WINDOWS—Windshield Wipers**  
GEC-Marconi Electronic Systems Corp., 550 S. Fulton Ave., Mt. Vernon, NY 10550  
Marketec, Inc., P.O. Box 999, Pisgah Forest NC 28768

**WIRE AND CABLE—Rope, Cutting Equipment**  
Seacoast Electric Company, Station Plaza, Rye NY 10580  
Spurs Marine, P.O. Box 350246, Fort Lauderdale, FL 33315

# FOR MORE INFORMATION

## ON EQUIPMENT AND SERVICES ADVERTISED IN THIS ISSUE

CIRCLE THE APPROPRIATE NUMBER ON READER SERVICE CARD OPPOSITE

ADVERTISER	EQUIPMENT /SERVICE	CIRCLE NO.	ADVERTISER	EQUIPMENT /SERVICE	CIRCLE NO.
ACR ELECTRONICS	EPIRBS	209	LO-REZ VIBRATION	VIBRATION CONTROL PRODUCTS	334
AT & T, FIBER OPTIC	CABLES	285	LOMBARD SALES & MARKETING	TANKSYSTEMS	292
ALDEN ELECTRONICS	SATFIND-406/EPIRBS	333	LYNGSO VALMET	SHIPBUILDING	235
ALLIED SIGNAL	MARINE ROPES	204	McELROY	DECK EQUIPMENT	281
AMERICAN BUREAU OF SHIPPING	CLASSIFICATION SOCIETY	253	MAN B & W DIESEL	DIESEL ENGINES	294
AMERON	MARINE COATINGS	283	MKW POWER SYSTEMS	PROPULSION SYSTEMS	271
ASTILLEROS ESPANOLAS	SHIPBUILDING/REPAIR	350	MMC INTERNATIONAL	TANK GAUGING SYSTEMS	212
ATLANTIC MARINE	BOAT BUILDING	275	MARINE HYDRAULICS	HYDRAULICS	295
AVONDALE, HARVEY	SHIPBUILDING	202	MARINE INDUSTRIES	MARINE EQUIPMENT DISTRIBUTORS	243
BMT INTERNATIONAL	BOAT DESIGN/FLEET SIMULATION	273	MARINE SAFETY	SIMULATOR TRAINING	346
BAILEY REFRIGERATION	AIR CONDITIONING/REFRIGERATIONS	222	MARINE TRAVELIFT	SHIFLIFT SYSTEMS	241
BARTON MINES	GMA GARNET	219	MATRIX DESALINATION	WATER DESALINATORS	303
BEHA-HEDO	GALLEY EQUIPMENT	335	MAXON	SHIPBUILDING	242
BENDER SHIPBUILDING & REPAIR	SHIPBUILDING/REPAIR	322	METRITAPE	DECKMASTER GAUGING SYSTEM	245
BETHSHP	SHIPBUILDING	332	MICROPHOR	HEADS/SANITATION DEVICES	331
BIRD JOHNSON	PROPELLERS	321	MUNSON	BOAT BUILDING	265
BYRNE, RICE & TURNER	SEWAGE TREATMENT/PROPELLERS/NOZZLE	262	NAIAD STABILIZERS	STABILIZERS	244
CELLNET	CELLULAR TELECOMMUNICATIONS	263	NORCONSULT	SHIP REPAIR	311
COMSAT	COMMUNICATION SYSTEMS	213	NORDIC MACHINE	ANCHOR/WINCHES	231
COSPOLICH REFRIGERATOR	REFRIGERATORS	220	NOVATECH	BEACONS/FLASHERS	288
CRESCENT CITY MARINE	BUNKERING SERVICE	291	PATTI SHIPYARD	SHIPBUILDING	202
DEL GAVIO	MARINE HYDRAULICS	228	JOSEPH R. PRESS	ATTORNEY/LEGAL SERVICE	214
DIESEL AMERICA	DIESEL PUMPS	226	ROW TECHNOLOGY	VAPOR RECOVERY SYSTEMS	246
DIVERSIFIED MARINE BROKERAGE	BROKERS	215	S.S. WHITE TECHNOLOGIES	FLEXIBLE REACH RODS	217
DIVERSIFIED MARINE BROKERAGE	BROKERS	229	SEAWARD	MARINE FENDERS	252
DIVERSIFIED MARINE BROKERAGE	BROKERS	317	SERVICE MARINE	SHIPBUILDING	341
DIVERSIFIED TECHNOLOGIES	NAVAL ARCHITECTS/MARINE ENGINEERS	264	SKIPPERLINER	SHIPBUILDING	254
ELECTRO-MOTIVE, GM	DIESEL ENGINES SALES	300	SOLIDUR PLASTICS	DOCK FENDERING	282
ELLIOT MANUFACTURING	VALVE CONTROL SYSTEMS	312	SPECIAL FILMS	FLOOR/DECK PROTECTION SYSTEM	234
ESGARD	BALLAST/TANK COATINGS	193	SPURS MARINE	VESSEL LINE/NET CUTTERS	323
FERNSTRUM	KEEL COOLING	272	STEARNS	WEATHER GEAR	309
FURUNO	COMMERCIAL RADARS	266	STEINER SHIPYARD	SHIPBUILDING	248
L.F. GAUBERT	ELECTRICAL CABLES	236	STEWART & STEVENSON	PROPULSION EQUIPMENT	302
GLOBAL MARITIME	SHIP REPAIR	270	THAXTON	SYPHONS/EDUCTORS/EJECTORS	343
GLOBAL TECH	HULL COATING	240	THRUSTMASTER	BARGE/DREDGE PROPULSION UNITS	342
GULF CRAFT	BOAT BUILDING	305	TRINITY	SHIPBUILDING	313
HALL-BUCK MARINE	TERMINAL CONSTRUCTION	274	U.S. WEST FINANCIAL	EQUIPMENT FINANCING	325
HALL-BUCK MARINE	TERMINAL CONSTRUCTION & OPERATION	267	VESSEL INFORMATION SYSTEMS	INFORMATION SYSTEMS	284
CWF HAMILTON	MARINE JET PROPULSION	344	VIKING FENDER	MARINE FENDERING	216
HATCH & KIRK	DIESEL REPLACEMENT PARTS	221	VITA MOTIVATOR	EDUCTORS	293
HOBART BROTHERS	ARC WELDING SYSTEMS	301	J.M. VOITH	WATER TRACTOR	223
HOSE McCANN	HOSES	261	WATERCOM	TELECOMMUNICATIONS	225
IDB-AERONAUTICAL	COMMUNICATION SYSTEMS	324	WILLIAMS & COMPANY	METAL SUPPLIES	345
INVENTORY LOCATOR	PARTS LOCATORS	298	WILSON WALTON	P/V VALVES	247
JEAMAR WINCHES	WINCHES	232	WOOSTER PRODUCTS	SAFETY PRODUCTS	255
JIM'S PUMP REPAIR	PUMP REPAIR	233	G.J. WORTELBOER	ANCHOR/CHAINS	256
JOHN GILBERT & ASSOCIATES	NAVAL ARCHITECT/MARINE ENGINEERS	304	WRIGHT-AUSTIN	GAS/LIQUID SEPARATORS	314
KAHLENBERG BROS.	HORNS	315	ZIDELL	SHIPBUILDING	251
LITTON SPECIALTY DEVICES	SATELLITE EPIRBS	224			

The listing above are an editorial service provided for the convenience of our readers.

WINCHES  
CRANES

HATCH  
COVERS

## DEL GAVIO

### MARINE HYDRAULICS, INC.

**SALES • SERVICE • CONSULTING • PARTS**

Complete Repairs  
On All Types of Electro Hydraulic  
Steering Systems and Deck Machinery

**Hydraulic Pump & Cylinder  
Rebuilding & Testing**

24 Hour Service Worldwide  
619 Industrial Road, Carlstadt, NJ 07072  
Telephone: (201) 843-4700    Telefax: (201) 843-6470

Circle 228 on Reader Service Card  
August, 1991

## JIM'S PUMP REPAIR INC.

*Established 1974*

Jim Lagonikos  
President



Bob Mooney  
Sales & Service

Reconditioned Coffin & Pacific Pumps  
A-1 Condition  
TYPE•F-CG-DE-DEB-IND-T-DEB-22  
TBA•12 - 16 - 16 1/2

**Service 24 hrs. & Parts available**



**JPR**  
INCORPORATED

TEL 718-392-4444  
FAX 718-482-8372

TLX-TWX  
710-5824847 JPRNYK

48-55 36th Street, Long Island City, NY 11101

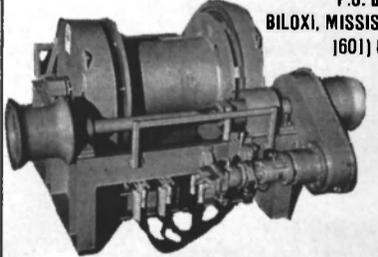
Circle 233 on Reader Service Card



### McELROY DECK EQUIPMENT

ENGINEERED TO PERFORM  
MANUFACTURED TO LAST

P.O. BOX 4454  
BILOXI, MISSISSIPPI 39535-4454  
(601) 896-3736



TOW WINCHES



CAPSTANS

McElroy is ready to design, manufacture  
and deliver any type deck equipment your  
requirements call for.

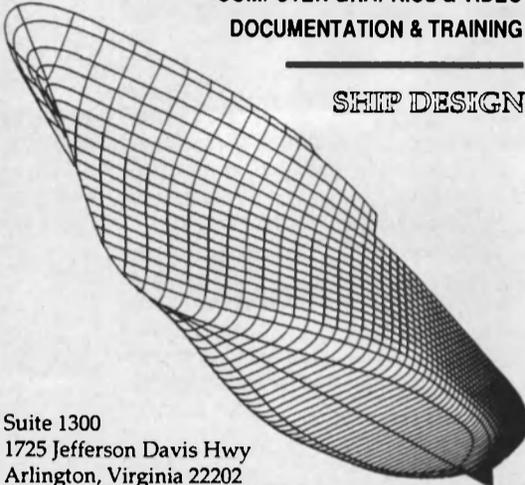
Circle 281 on Reader Service Card

# PROFESSIONAL

**advanced marine**  
ENTERPRISES, INCORPORATED

NAVAL ARCHITECTURE & MARINE ENGINEERING  
PROGRAM & PRODUCTION MANAGEMENT  
COMPUTER GRAPHICS & VIDEO  
DOCUMENTATION & TRAINING

**SHIP DESIGN**



Suite 1300  
1725 Jefferson Davis Hwy  
Arlington, Virginia 22202  
(703) 979 9200 Fax: (703) 553 0593

(718) 939-4422

**AERO NAV**  
LABORATORIES, INC.



14-29 112th Street, College Point, N.Y. 11356  
Navy-Hi Shock, Vibration & A.B.S. Testing

**Arctec Offshore Corporation**

- SHIP AND BOAT HYDRODYNAMIC MODEL TESTING
- OCEAN ENGINEERING MODEL TESTS
- SHIP AND OFFSHORE PLATFORM INSTRUMENTATION AND TRIALS
- COASTAL ENGINEERING
- ARCTIC ENGINEERING

578 ENTERPRISE ST. ESCONDIDO, CALIFORNIA 92025  
(619) 746-5511 FAX (619) 746-3035

**CAPTAIN ASTAD COMPANY INC.**  
SHIPBROKERS & MARINE CONSULTANTS  
SALE & PURCHASE—ANY TYPE VESSELS  
NEW CONSTRUCTION—CONVERSIONS  
OWNERS REPRESENTATIVE

P.O. Box 350486 2900 Energy Centre, 1100 Poydras Street  
Fort Lauderdale, Florida 33335 New Orleans, LA 70163-2900  
Phone: 305/462-2048 Phone: 504/585-7317  
Fax: 305/462-2153 Fax: 504/585-7301 TLX: 161733 9 (IIC)

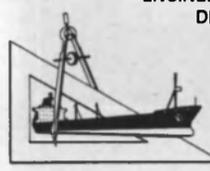
**Ocean Engineering Centre**  
SHIP-MODEL TESTING

- Resistance Tests • Flow Visualization
- Wake Surveys
- Towed Directional Stability Evaluations
- Seakeeping

For Information Contact:  
**B.C. Research**  
Ocean Engineering Centre  
3650 Westbrook Mall  
Vancouver, Canada V6S 2L2  
Telephone (604) 224-4331  
Telex 04-507748

**COI marine company**  
PROFESSIONAL • EXPERIENCED • RESPONSIVE

SUPPORTING THE MARINE INDUSTRY WITH:  
ENGINEERING SERVICES  
DETAILED DESIGN  
COMPUTER AIDED DESIGN  
TECHNICAL PUBLICATIONS  
LOGISTICS



JACKSONVILLE (904) 724-8700 PHILADELPHIA (610) 228-1555 NEWPORT NEWS (804) 345-0516 PORTSMOUTH (604) 397-6000 BREMEN/CT (603) 479-8620

**CT MARINE**  
NAVAL ARCHITECTS • MARINE ENGINEERS

- VAPOR RECOVERY
- TUGS
- TOWBOATS
- BARGES

18 Church Street, Georgetown, CT 06829  
Telephone: 203-544-8110  
FAX: 203-544-8210

**CHILDS ENGINEERING CORPORATION**  
WATERFRONT ENGINEERING • DIVING INSPECTION

BOX 333 MIDDLEFIELD, MA 02088 (508) 388-8848

**AutoSHIP - The Industry Standard**  
PC Based software for the marine industry. Fully integrated system from hull design to hydrostatics, stability analysis, plate expansion, NC cutting and construction. Over 450 installations in 32 countries.

**Coastdesign Inc.**  
12837 - 76th Avenue, Suite 201  
Surrey, B.C. Canada V3W 2V3  
Tel: (604) 599-1278 Fax: (604) 599-1287



**CRANDALL**  
DRY DOCK ENGINEERS, INC.  
Railway and Floating Dry Docks  
Waterfront Structures • Consulting  
Design • Inspection  
Dry Dock Hardware and Equipment  
21 Pottery Lane Dedham, MA. 02026  
Tel. (617) 329-3240 Telex: 924406

**crane consultants inc**

15301 1st Ave. So. Seattle, Washington 98148  
(206) 246-7962 FAX (206) 246-1010  
Crane hoist, materials handling specialists

**C. R. CUSHING & CO., INC.**  
NAVAL ARCHITECTS, MARINE ENGINEERS  
& TRANSPORTATION CONSULTANTS  
18 Vesey Street  
NEW YORK, N.Y. 10007  
TEL (212) 964-1180 CABLE CUSHINGCO  
TX: 752481

**ARTHUR D. DARDEN**  
INCORPORATED

NAVAL ARCHITECTS & MARINE ENGINEERS  
3200 RIDGELAKE DRIVE, SUITE 403  
METAIRIE, LOUISIANA 70002 (504) 832-3952

**DESIGN ASSOCIATES, INC.**  
M. KAWASAKI  
14360 Chef Menteur Highway  
New Orleans, Louisiana 70129

Naval Architects Marine Management  
Marine Engineers Transportation Consultants  
Phone: (504) 254-2012 TWX 810-951-5317

**DESIGNERS & PLANNERS**

TOTAL PROJECT SUPPORT  
DESIGN  
PRODUCTION  
SERVICE LIFE

As a member of the BMT Group of companies, we can now combine our 38 years of experience with access to one of the most advanced and comprehensive maritime research programs in the world.

Implementing cost-effective project support through state of the art technologies. . . .



DESIGNERS & PLANNERS, INC.  
2811 Jefferson Davis Highway  
Suite 3000  
Arlington, VA 22202  
Phone: (703) 418-3800

**DLI MARINE**  
ENGINEERING CORPORATION  
VIBRATION ANALYSIS  
NOISE CONTROL

253 Winslow Way West, Bainbridge Island, WA 98110  
(206) 842-7656

Measurement, recording and analysis of mechanical, structural and electrical phenomena.



**Dt DIVERSIFIED technologies**  
NAVAL ARCHITECTURE  
MARINE ENGINEERING  
SALVAGE ENGINEERING

812 Live Oak Drive Chesapeake, VA 23320 (804) 420-9532  
675 S. Washington Street Alexandria, VA 22314 (703) 739-8844

**DOLSEY LTD.**  
863 WEST 44TH STREET • NORFOLK, VIRGINIA 23508

Distributor of:  
**Mil-Spec Bronze Cupro Nickel**  
Valves Fittings Pipe  
Flanges Solder

Watts: 1-800-825-8379 VA: 804-423-3037  
Fax: 804-423-5568 FL: 904-249-1245

**INCON Management Incorporated**  
Marine Structures • Engineering Analysis • Marine Survey  
Project Management • Loss Prevention • Naval Architecture

P.O. Box 7760 • Beaumont, Texas 77726  
(409) 842-9181

BARGES - TUGS - TOWING  
CHARTERS AND SALES  
(708) 798-2419  
FAX (708) 798-1077

**Jack Faulstich**  
Tug & Barge Sales

PROCUREMENT AGENTS  
ON INLAND  
AND OCEAN TOWING



2419 Caddy Lane, Flossmoor, Illinois 60422  
"TOWING ANYWHERE THERE IS WATER"

**GIM**  
INDUSTRIAL MEASUREMENT  
CONSULTANTS

- Industrial Photogrammetry
- Theodolite Systems
- CAD Applications

P.O. Box 1836, Newport News, VA 23601 (804) 591-9244

**GIBBS & COX INC**  
NAVAL ARCHITECTS & MARINE ENGINEERS

50 West 23rd Street • New York, NY 10010  
(212) 366-3900

 Seattle, Washington  
Phone: 206-624-7850  
Fax: 206-682-9117

**THE GLOSTEN ASSOCIATES, inc.**  
CONSULTING ENGINEERS SERVING THE MARINE COMMUNITY

 MORRIS GURALNICK ASSOCIATES, INC.  
NAVAL ARCHITECTS MARINE ENGINEERS  
130 Sutter Street, Suite 400  
San Francisco, CA 94104  
(415) 362-1242

**C. Raymond Hunt Associates, Inc.**  
High Speed Powerboat Design  
69 Long Wharf - Boston, MA 02110  
Tel: (617) 742-5669/FAX: (617) 742-6354

 Consulting in Naval Architecture  
& Marine Engineering  
NavCad™ Marine Engineering Software

45 JAMES FARM - LEE  
PO BOX 865  
DURHAM, NH 03824  
603-659-2660  
FAX 659-6667

**HYDROCOMP, Inc.**

 **JJH Inc.**  
"NAVAL ARCHITECTS/MARINE ENGINEERS"

**"Quality First"**

AREA OFFICES	TELEPHONE
Cherry Hill, NJ	(609) 663-3020
Portsmouth, VA	(804) 399-4096
Crystal City, VA	(703) 920-3435
Bay St. Louis, MS	(601) 467-1511
New York Area	(201) 963-4178

 **R. D. Jacobs and Associates**  
Naval Architects • Marine Engineers  
Consulting Engineers

MARINE AND STATIONARY PROJECTS  
Marine Surveyors; Project Specifications and Designs;  
Energy Efficient Concepts

Owner Representation Services; Machinery  
Casualty Investigations;  
Practical Engineering Economics Analyses

11405 MAIN ST., ROSCOE, IL 61073 815-623-6760

**JAMES S. KROGEN & CO., INC.**  
NAVAL ARCHITECTS & MARINE ENGINEERS  
Tel. (305) 642-1368  
Fax (305) 642-9140  
1515 N.W. 7th St., Suite 124, Miami, FL 33125

 **RODNEY E. LAY & ASSOCIATES**  
NAVAL ARCHITECTS

NAVAL ARCHITECTS • MARINE ENGINEERS  
13891 Atlantic Blvd.  
Jacksonville, Florida 32225  
(904) 221-744 / FAX (904) 221-1363

**John J. McMullen Associates, Inc.**

 **JUMA**

Naval Architects • Marine Engineers • Transportation Consultants

New York, N.Y. • Arlington, Va. • Newport News, Va. • Houston, Tx  
Ventura, Ca. • Bath, Me. • Seattle, Wa. • Pascagoula, Ms

One World Trade Center/Suite 3000/New York, New York 10048/(212) 466-2200

 **MCA Engineers, Inc.**  
WHEN QUALITY IS IMPORTANT  
DESIGN - FEA - CAD - PROGRAMING

- NAVAL ARCHITECTURE
- MARINE/OCEAN ENGINEERING
- CIVIL/STRUCTURAL
- MECHANICAL

2960 Airway Ave., # 103A  
Costa Mesa, CA 92626  
(714) 662-0500 FAX: (714) 668-0300

 **Alan C. McClure Associates, Inc.**  
NAVAL ARCHITECTS • ENGINEERS  
2600 South Gessner • Suite 504 • Houston, Texas 77063  
(713) 789-1840 • (713) 789-1347 Fax

**MACPHERSON MARITIME SERVICES**  
Marine Transportation Consultants  
Shipping Economists  
Business Planners  
141 Jefferson Avenue  
Westfield, New Jersey 07090  
Telephone: 201/232-3636 Telex: 833231 (700)

 Speed & Propulsion Power Policy  
**FENDALL MARBURY**  
NAVAL ARCHITECT  
9 NEAL STREET  
ANNAPOLIS, MARYLAND 21401 (301) 266-8254

**MARINE DESIGN SERVICES INC.**  
OPERATING IN ALL COASTAL WATERS

- SHIP • DRYDOCK • SHORE FACILITIES •
- UNDERWATER VIDEO INSPECTIONS •
- DRYDOCK CERTIFICATION INSPECTION •
- DRYDOCK TRAINING PROGRAMS •
- COMPUTER AIDS •

HOME OFFICE: P.O. BOX 928  
BONITA, CA 92002  
(619) 427-4219

**MARINE DESIGN AND OPERATIONS, INC.**  
NAVAL ARCHITECTS • MARINE ENGINEERS  
PREINVESTMENT ANALYSIS • TECHNICAL MANUALS  
INTEGRATED LOGISTICS SUPPORT  
226 Chestnut Street, Roselle Park, NJ 07204  
TEL: (908) 241-5551 • FAX: (908) 241-5780

 **MPA ASSOCIATES**  
MARINE ENGINEERS

THE PROFESSIONALS  
Maintenance, Repair &  
Retrofit Specialists  
1010 Turquoise St., Ste. 217, P.O. Box 99546  
San Diego, CA 92109, (619) 488-7703

 **MMS**  
MARINE MANAGEMENT SYSTEMS, INC.  
SOFTWARE • HARDWARE • ENGINEERING SERVICES  
102 HAMILTON AVENUE • STAMFORD CT 06902 • (203) 327-6404  
TLX: 996483 • FAX: (203) 967-2927

**MARITIME DESIGN, INC.**  
NAVAL ARCHITECTS  
MARINE CONSULTING  
MARINE DESIGN



MARINE ENGINEERS  
CAD/CAM SERVICES  
MARINE SURVEYS

3020 HARTLEY RD. • JACKSONVILLE, FL 32257 • (904) 268-9137

**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

 **H. J. Merrihue**  
**DIVING**  
and  
**MARINE SERVICES**  
All Underwater Needs  
For Shipping  
**CRANE BARGE SERVICE**  
**ANCHOR & CHAIN RETRIEVAL**  
INSURED MARITIME  
**(504) 466-2800**  
NEW ORLEANS  
Telex 78 4294 FAX 504 466-9850

PHONES:  
(201) 984-2295  
(212) 943-7070  
NIGHT:  
(201) 538-1789  
TWX: 710-991-0290  
A/B MOWBRAY N.J.  
FAX: 201-984-5181

**MOWBRAY'S**  
**TUG AND BARGE SALES CORP.**  
35 DE HART STREET, MORRISTOWN, N.J. 07960



SPECIALISTS IN  
BUYING, SELLING  
AND RENTING  
TUGBOATS  
• BARGES  
CONTRACTORS  
FLOATING  
EQUIPMENT

YOUR MARINE CONSULTANTS

 **MULDOON MARINE SERVICES, INC.**

- Commercial Diving  
Welding, Hull Cleaning,  
Prop Polishing and Inspection.
- Nondestructive Testing  
Underwater/Topside.

**(213) 548-1822 • FAX (213) 548-0802**  
P.O. BOX 3221 • TERMINAL ISLAND, CA • 90731

**CRUISE SHIP SPECIALISTS**

 **NAUTICAL DESIGNS INC**  
NAVAL ARCHITECTS & MARINE ENGINEERS  
2101 S. ANDREWS AVE. FORT LAUDERDALE, FL 33316 (305) 463-2033

**NORTHERN MARINE**  
Naval Architecture - Marine Engineering  
Marine Surveying  
(616) 946-5959  
P.O. Box 1169 Traverse City, MI 49685

**OMSTEC MARINE SERVICES COMPANY**  
Division of **OLSEN MARINE SURVEYORS COMPANY LTD.**

Naval Surveyors & Safety Consultants.  
Marine Cas. Investigation. Worldwide.

P.O. Box 283 Tel: (516) 928-0711  
Port Jefferson, New York 11777 Fax: (516) 928-0193

 **Q.E.D. SYSTEMS, INC.** VIRGINIA BEACH  
(804) 490-5000

MARINE ENGINEERS NAVAL ARCHITECTS  
LOGISTICS ENGINEERS

ARLINGTON LAKEHURST  
BREMERTON SAN DIEGO CHARLESTON  
JACKSONVILLE PHILADELPHIA SAN FRANCISCO

**SARGENT & HERKES, INC.**  
NAVAL ARCHITECTS AND MARINE ENGINEERS  
225 BARONNE ST., SUITE 1405  
NEW ORLEANS, LOUISIANA 70112  
TEL. 504-524-1612 FAX 504-523-2576

**M. ROSENBLATT & SON, INC.**  
NAVAL ARCHITECTS AND MARINE ENGINEERS

New York City  
350 Broadway  
New York, NY 10013  
(212) 431-6900

San Francisco  
620 Folsom Street  
San Francisco, CA 94107  
(415) 777-0500

Boston  
Philadelphia  
Washington, D.C.  
Newport News  
Charleston  
Norfolk

Bremerton  
San Diego  
Oxnard  
Bath

**M. ROSENBLATT & SON INC.**  
NAVAL ARCHITECTS AND MARINE ENGINEERS

**GEORGE G. SHARP, INC.**

SYSTEMS ANALYSIS  
NAVAL ARCHITECTS - MARINE ENGINEERS  
100 CHURCH STREET-NEW YORK, N.Y. 10007  
(212)732-2800 FAX (212)732-2809

WASHINGTON, D.C. (703) 891-4000  
VIRGINIA BEACH, VA. (804) 499-4125  
PHILADELPHIA, PA. (609) 772-0888

**UNIVERSAL MARINE ELECTRIC INC.**  
*Marine Electrical Contractors*

Custom Design Alarm & Control Panels  
Generators - Switch Boards - R.P.M. Indicators  
Motor Rewinding - Air Conditioning

Contact: *Chris Erfesoglou*  
5826 Cheswood Phone: (713) 643-6334  
Houston, TX 77087 Fax: (713) 643-6549

**DECK OFFICER COURSES**

USCG approved - RADAR OBSERVER COURSE  
USCG approved - FIREFIGHTING SCHOOL  
Also USCG Exam Prep Courses for CAPTAIN, MASTER, AB, ENGINEER, OMEI

**1-800-BEST-ONE** NATION WIDE

**STURGEON BAY MODEL SHOP**  
SHIP MODELS SINCE 1941

phone 414/894-2859  
414/743-2921  
414/744-3091

Wm. L. Herbst  
187 N. Ninth Ave  
Sturgeon Bay, WI 54235

DISPLAY & DESIGN MODELS

*VL Logistics, Inc.*

INTEGRATED LOGISTIC SUPPORT SERVICES  
APERTURE CARDS MICROFILMING  
SUPPLY SUPPORT, TRAINING

CONFIGURATION DATA MANAGEMENT  
RELIABILITY & MAINTAINABILITY STUDIES  
TECHNICAL PUBLICATIONS

3420 BIENVILLE BLVD., OCEAN SPRINGS, MS 39564  
PHONE: (601) 872-2766 FAX: (601) 875-6443

*Seaworthy Systems, Inc.*

MARINE ENGINEERS AND NAVAL ARCHITECTS  
COST EFFECTIVE INNOVATION

P.O. BOX 965  
ESSEX, CT 06426  
SAN FRANCISCO (203) 767-9061 FALLS CHURCH (203) 767-1263 SOLOMONS NEW YORK

*Trans-International Marine Services Corp.*

**TIMSCO**  
MAINTENANCE MONITORING SYSTEMS  
INVENTORY CONTROL SYSTEMS  
P.O. Box 91360  
Mobile, Alabama 36691 205/666-7121

**WELDING CONSULTANTS USA**

• WELDING ENGINEERS  
• DESIGNERS  
• TECHNICIANS

10399 Paradise Blvd., St. Petersburg, FL 33706 (813) 367-7067  
FAX (813) 360-9417

Milwaukee, WI • Houston, TX • Chicago, IL • Norfolk, VA

MECHANICAL, MAINTENANCE, REPAIR, TESTING, WELDING/MECHANICAL ENGINEERING SERVICES PROVIDED TO UPGRADE OR REPAIR OF SHIPS OR MARINE EQUIPMENT.

**T.W. SPAETGENS**  
TORSIONAL VIBRATION SPECIALISTS  
OUR 42ND YEAR SERVING INTERNATIONAL CLIENTS

156 W. 8th Ave. (604) 879-2974  
Vancouver, Canada V5Y 1N2 Telex 0455188  
FAX: (604) 879-6588

**R.A. STEARN INC.**  
NAVAL ARCHITECTS and MARINE ENGINEERS  
253 N. 1st Avenue  
Sturgeon Bay, WI 54235  
Phone (414) 743-8282 FAX (414) 743-9543

**VIBRANALYSIS ENGINEERING CORP**

- PREDICTIVE MAINTENANCE PROGRAMS
- VIBRATION ANALYSIS
- FIELD & SHOP BALANCE
- ACOUSTICAL CONSULTANTS
- COMPUTERIZED DATA COLLECTION
- MARINE APPLICATIONS

**VIBRANALYSIS ENGINEERING CORP** 800-553-1614  
4380 S. Wayside, Suite 100 713-643-1051  
Houston, TX 77087 Fax 713-643-6045

## CLASSIFIED AND EMPLOYMENT ADVERTISING

**HOW TO PLACE CLASSIFIED ADVERTISING:** Mail clearly written or typed copy to: MARITIME REPORTER, 118 East 25th Street, New York, NY 10010. Include any photos, drawings or logos if required. Specify size of ad and number of insertions . . . Classified Advertising - Per Issue Rate: Classified Advertising is sold at a rate of \$70 per column inch . . . MARITIME REPORTER'S classified section carries more advertising and sells more products than any other publication in the marine industry. Closing date for classified advertising is 25 days prior to the date of the issue. For further details, contact John C. O'Malley at (212) 477-6700 or (212) 254-6271 fax.

Michael R. Keough, CPC  
**KEOUGH & ASSOCIATES, INC.**  
P.O. Box 010990  
Staten Island, N.Y. 10301-0006  
PH. (718) 979-8698 FAX (718) 667-8347

Recruitment & Personnel Consultants to the Marine Industry

**MANAGEMENT OPENINGS!**  
**SHIPBUILDING-SHIP REPAIR**  
SHIPYARD PRESIDENT & CEO  
PRODUCTION MANAGER  
CHIEF ESTIMATOR  
SHIP SUPERINTENDENT  
PRODUCTION FOREMEN (PIPING, STRUCTURAL, ELECTRICAL, MACHINERY, PAINT)  
PLANT ENGINEER  
DOCKMASTER  
STRUCTURAL DESIGNER

QUALIFIED APPLICANTS ARE NEEDED NOW TO FILL NEW OPENINGS (EAST COAST, WEST COAST AND GULF COAST.)  
WE SPECIALIZE IN RECRUITING MANAGEMENT PERSONNEL FOR THE U.S. SHIPBUILDING-SHIP REPAIR INDUSTRY. SEND US YOUR RESUME AS QUICKLY AS POSSIBLE OR CALL MR. M.A. WEEKS AT 205-661-2294  
**WEEKS & ASSOCIATES MANAGEMENT CONSULTANTS**  
921 COTTAGEHILL AVENUE, MOBILE, ALABAMA 36693  
205-661-2294

**POSITION WANTED**

Executive with 20 years experience in the marine and aerospace manufacturing industry, M.S. degree, technically strong, effective motivator, sound business judgement, seeking suitable management position. For a copy of complete C.V. write to:  
**Maritime Reporter**  
Box 801  
118 East 25th Street  
New York, NY 10010

**Marine Surveyor**

Surveys marine vessel's condition of draft, hull, navigational aids, cargo hold and tanks, and cargo gear to evaluate safety of vessel as well as its crew, labor and cargo. Evaluate loading/discharging condition and supervise on-the-deck operation which requires compliance with US Code of Federal Regulations and various international regulations. Inspects underwater section of hull and above water line section of ship to ascertain condition that shows necessary repairs. Submits reports on survey conducted and recommend repairs. \$3,249.00/month. Requirements: B.S. in marine engineering; 3 yrs experience in job offered or as on board experience as vessel master. Must be fluent in spoken Korean. Apply at the Texas Employment Commission, Houston, Texas, or send resume to the Texas Employment Commission, TEC Building, Austin, Texas 78778, J.O. #6139112. Ad Paid For By An Equal Opportunity Employer.

**PORT ENGINEER**

Required for large Day Cruise Passenger Vessel with steam turbines, water tube boilers and medium speed diesel auxiliaries.

Send resume and salary requirements to:

**PORT ENGINEER**  
P.O. BOX 1199  
GALVESTON, TX 77553

**PORT CAPTAIN/MANAGER**

Strong "hands on" USCG licensed Master/First Class Harbor Pilot. Currently in top management with mature sales, communication, and people skills. Experience includes harbor pilot/tug, tug/barge, oil patch. Prefer permanent position in Northwest. Maritime Reporter, Box 802, 118 E. 25th St., New York, NY 10010.

**HIRING NOW!** Pilots, engineers, deckhands and tankermen. Call Boat Crews-U.S.A. at one of our locations. (Florida: 904-474-0990). (Louisiana: 504-362-8809). (Texas: 713-455-4200).

Engineers

## ATTENTION... MERCHANT MARINERS



MILITARY SEALIFT COMMAND, PACIFIC has an immediate need for:

- 3rd ASSISTANT ENGINEERS  
(motor unlimited)  
\$26,327/year

Overtime varies from ship to ship. However overtime can be estimated at 25% of base pay. Average pay for 3rd Assistant Engineers would be \$33,000/year.

Individuals interested in assignments aboard MSCPAC's diversified fleet of unrep ships, cable laying/repair and other ocean-going ships are encouraged to apply. Assignments aboard our ships offer the opportunity to build a career as a merchant mariner in the U.S. Civil service.

Applicants must have their U.S. Coast Guard License with the proper endorsements, a valid U.S. passport and be able to pass physical and security clearance requirements.

We encourage you to contact MSCPAC immediately. Selectees will be reimbursed for airline transportation to Oakland, CA for pre-employment processing. Reimbursement is contingent upon current MSC requirements.

Send a brief qualifications summary sheet with photocopy of your License to: Code N-123, Military Sealift Command, Pacific, Oakland, CA 94625-5010, or call toll free 1-800-835-6659. Please refer to Ad#T3 Pac Maritime when responding. EOE.



### AALBORG CISERV INTERNATIONAL A/S

- total worldwide service concept - comprising of 25 companies around the world, has a turnover of 200 mill. USD per year and a staff of 1700 employees world-wide. The ACI-Group offers service, repair and conversion of all kinds of steam, engine and energy installations and engineering, sale and supply of boiler and engine plants.

AALBORG CISERV HOUSTON, INC.  
Seeks following:

#### FIELD SERVICE ENGINEER

with at least seven (7) years experience on 2-stroke engines and willing to relocate to Angleton, TX.

#### SERVICE MANAGER

with at least seven (7) years experience on diesel engines and turbo chargers and willing to relocate to Angleton, TX.

For more information, please contact: Bo Holmqvist at 1-800-535-7651 or send resume to:

AALBORG CISERV HOUSTON, INC.  
P.O. Box 906  
Angleton, TX 77516

### NAVAL ARCHITECT ARTEC OFFSHORE CORPORATION

is seeking a person with technical skills to perform Physical Model Testing Programs. Candidate will be responsible for performing Ship and Ocean Engineering Projects in towing and seakeeping model basins. Successful Candidate will have a degree in Naval Architecture. Experience in a model testing facility desirable. Senior and Entry Level positions available immediately. Contact Mike Musatow, Artec Offshore Corp., 578 Enterprise St., Escondido, CA 92029, Phone: (619) 746-5511, FAX: (619) 746-3035.

## SERVICE ENGINEER

U.S. Branch office of CARGO ACCESS EQUIPM. MANUFACT. seeks exp. Service Eng. Responsibilities; trouble Shooting & servicing of all types of Cargo Access Equipm. on Ocean going Vessels. Comprehensive knowledge of Hydr. & Elec. systems, structural steel repairs. Strong customer contacts with U.S. shipyards, Domestic & Foreign Shipowners. Location NY, NJ. Extensive Domestic & International travel required. Sent complete resume to: P.O. Box 701, Maritime Reporter, 118 East 25th Street, New York, NY 10010.

## FOR SALE

### Surplus Equipment

Approximately 20,000 used container twistlocks  
Vulkan Steel Foundry model 3V8  
MBS tension 44.6 LT, SWL tension 25 LT

### New Zodiac Hurricane Model 530 OB

Twin 40HP jet drives  
Never used

For detailed specifications and quotation package,  
please contact:

John Dabbar  
AMERICAN PRESIDENT LINES  
1111 Broadway, Oakland, CA 94607  
Fax (415) 272-8927

### West Coast Valve Services Celebrates 10th Anniversary

West Coast Valve Services, a service oriented company, provides in-shop and field service marine valve repair. Ron Calkins, President reports that the company's move to its new facility at 1758 Hayes Avenue, Long Beach, Calif. has greatly increased service and productivity.

West Coast Valve Services has the capability to repair, rebuild, vulcanize, pattern cast and/or fabricate valves of nearly any kind, be it Gate, Globe, Check, Ball and Safety Relief Valves\*. Specializing in Butterfly Valve revulcanizing.

\*United States Navy Safety Valve contract extended through July 1992.

West Coast Valve Services has in stock many hard to find or obsolete Mosser, Pratt, Demco, Keystone and Norriseal valves and valve parts. It's rubber lined call Ron or Ursula at 213-432-0981 or fax 213-436-2505.

### IC<sup>3</sup> MEASURE—MONITOR—INTERFACE

- HORSEPOWER
  - TORQUE
  - R.P.M.
  - THRUST
  - R.P.M. TOTALIZING
  - R.P.M. MANUEVERING
- INSTRUMENTS, COMPUTERS & CONTROLS, CORP.  
HOUSTON, TEXAS  
713-463-2009

## SHIPYARD ENGINEERS

Bender has openings for the following degreed engineers:

- Naval Architecture
- Marine Engineer
- Electrical Engineer
- Civil/Mechanical Engineer

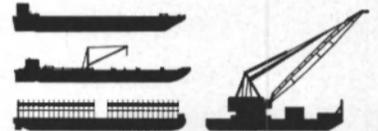
Applicants are required to have 3 to 5 years of design experience directly related to Shipyard production. The position will require the ability to perform engineering calculations and direct CAD designers. Responsibilities will be at the project level within each engineering discipline.

We offer a congenial working atmosphere, competitive wages and benefits.

For consideration to this opportunity, submit your resume in confidence.

Attention: Personnel Department  
BENDER SHIPBUILDING & REPAIR CO., INC.  
P.O. Box 42  
Mobile, AL 36601

Equal Opportunity Employer



### Specializing in

- Water Transportation of General Cargo, Chemicals and Bulk Petroleum
- Sales, Charters and Brokerage of Marine Equipment and Vessels
- Vessel Design, Construction and Repair



ZIDELL  
MARINE GROUP

3121 SW Moody Avenue, Portland, Oregon 97201  
(503) 228-8691/(800) 547-9259  
RCA Telex 283985/FAX: (503) 228-6750  
Ask for Bill Gobel or Jack Breshears

## SERVICE • REPAIR • PARTS CONSULTING • DESIGN

### CUNNINGHAM MARINE HYDRAULICS CO., INC.

201 Harrison St. • Hoboken, N.J. 07030  
(201) 792-0500 (212) 267-0328  
FAX # (201) 792-7716

JACKSONVILLE, Florida 32202  
(201) 792-0500  
TWX 710-730-5224 CMH Hoboken, NJ



### SALES AGENT

Established International Marine Manufacturer seeks Regional Sales Representative for East, Gulf Coast and West Coast areas. Also International Markets Available. Applicants should have Background/Experience in Commercial Marine Marketing and Sales. Please send resume to: Box 601, Maritime Reporter, 118 East 25th Street, New York, NY, 10010.

### DIESEL SERVICE ENGINEERS

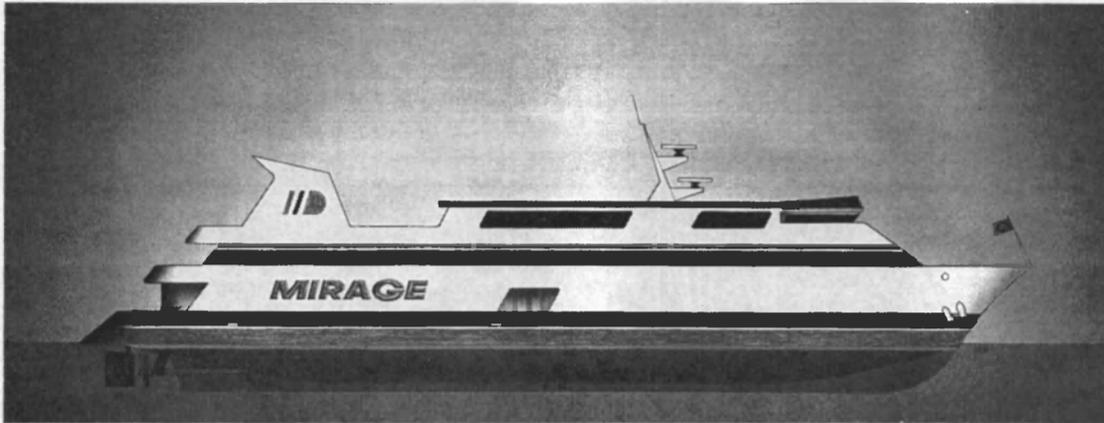
Established Distributor and Service-Center, located in Fort Lauderdale, FL seeking individual(s) with 5 years experience on DEUTZ/MWM and MaK engines. Degree or Technical Schooling preferred. Reply to:

Motor-Services Hugo Stamp, Inc.  
3131 S.W. 2nd Ave.  
Ft. Lauderdale, FL 33315

## FOR SALE

- Passenger vessel
- Excursion boat

- Casino boat
- Yacht



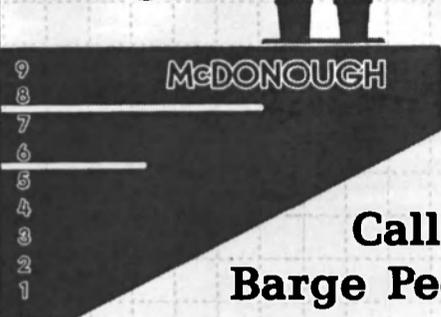
MV Mirage - U.S. Flag

- U.S. Coast Guard Approved • 450 plus passengers
- Three passenger deck levels • 190' x 38' x 14'
- Interior and casino details to suit.

Steiner Shipyard, Inc.  
P.O. Box 742  
Bayou La Batre, AL 36905

(205)824-4143  
(205)824-4884 FAX

## Barges for Rent



Call the  
Barge People.

### INLAND AND OFFSHORE

DECK BARGES 110' x 30' to 250' x 72'

ALSO CRANE, HOPPER, TANK, AND SPECIALTY BARGES

New Orleans (504) 949-7586  
2300 Surekote Rd  
New Orleans, LA 70117

Parkersburg (304) 485-4494

St. Louis Houston



## FOR SALE

### NEW 7" RADIUS PANAMA CHOCKS (MEET PANAMA REGULATIONS)



14" x 10" CLEAR OPENING. With extended legs for welding to deck. 14" wide on base - length 28" - height 27 1/4". IMMEDIATE DELIVERY FROM STOCK.

### ALL DOORS - FACTORY NEW IMMEDIATE DELIVERY



### ABS 6 DOG WATERTIGHT DOORS 1/4" Panel - 5/16" Frame-Radius Corners - Clear Opening

26"x66" - RH & LH - \$667  
26"x60" - RH & LH - \$635  
30"x54" - RH & LH - \$685  
30"x60" - RH & LH - \$675

### 4 DOG LIGHTWEIGHT-STANDARD DOOR 3/16" Panel-1/4" Frame-Suitable for Tugs, Barges, Workboats, Fishing Vessels, Inland Bays & Rivers.

22"x60" - RH & LH - \$447  
24"x60" - RH & LH - \$483  
24"x54" - RH & LH - \$495  
26"x54" - RH & LH - \$475  
30"x60" - RH & LH - \$568

### Call Harold Chait MARITIME POWER CORPORATION

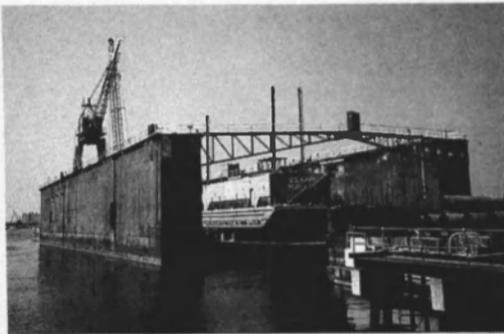
200 HENDERSON ST.  
JERSEY CITY, NJ 07302  
PHONE:(201)433-0870 FAX:(201)433-9287

Heavy duty commercial grade steel structures. Portable series and several sizes available at factory direct prices. Call now for more information. 1-800-341-7007 or 1-804-422-6800.

**STEELMASTER®**  
ARCH-TYPE STEEL BUILDINGS

### WANTED

Twinscrew steel hull tug with fuel capacity 60,000 to 90,000 gallons for ocean towing (no riveted hull) No engines. Call Jack (708) 798-2419 or Fax (708)798-1077



## FOR SALE - DRYDOCK

Dimen. LOA 378', width-96', width overall-124', height overall-56'. Fully self-contained. Complete electrical and mechanical overhaul as well as some structural work. Completed in Feb. 1990. Over 2.5 million spent. Ocean towable. Located E. Coast.

**PRICE 2.5 MILLION**

IF INTERESTED PLEASE CALL  
JOE KENNEDY AT:  
(1-617-569-6611)

Decca 752 Autopilot, console mount. New/in factory crate \$5000.00 RF 230/231 new \$2500.00 ea. Furuno FE881 MKII new \$1800.00 Decca 914/916 many displays and antenna/TR units. Large stock of new Decca spares. Also Harris, Motorola — List on request. Baytex Marine 713-334-0561



Seamark III 110' x 26'  
Rebuilt in 1991 ABS Loadline  
Other utility boats available  
100' to 125' Crewboats  
165' to 200' Supply Boats-Tugs

**Coil Services, Inc.**  
504-384-9700 Fax 504-384-0817

## FOR SALE CLYDE DERRICK & HOIST



Derrick: Model 60103 Stiffleg  
110 ft. Boom Mounted on 25 ft.  
Pedestal Frame Remote Cab

Hoist: Model Frame 9  
Electric Powered Omega Drive  
3 Drum  
Independent Swing

**MAFCO EQUIPMENT CO.**  
P.O. Box 11046  
Cincinnati, OH 45211  
(513)367-2151 phone (513)367-0363 fax

## 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 KEVELS** ◆  
All Sizes Available, New & Used
- ◆ **FENDERS PNEUMATIC** ◆  
For Rent or Sale  
All Sizes,  
New & Used

SERVING  
THE MARINE & OIL INDUSTRIES  
FOR OVER 35 YEARS  
WE ARE  
DIRECT FACTORY  
DISTRIBUTORS & IMPORTERS

P.O. BOX 596  
WILMINGTON, CA 90748  
(800) 322-3131  
FAX (213) 495-1045

**WATERMAN**  
SUPPLY CO., INC.

### OCEAN ABS BARGES FOR CHARTER

located San Francisco Bay, CA

Derrick barge Cynthia 150x50x12 Clide 24 4 anchors 4 drum winch 2 drum winch 2 hyd. winches gen. comp. etc.  
FLAT BARGE 200x45x15

GLANVILLE, 2657 Darius Way, San Leandro, CA 94577, (415) 483-1066

## FREE! JAMESTOWN DISTRIBUTORS

200 PAGE BOATBUILDING SUPPLY CATALOG

- WEST SYSTEM
- FASTENERS
- ABRASIVES
- ADHESIVES

**800-423-0030**  
\*Dealer Inquiries Invited

- FULLER BITTS & COUNTERSINKS
- MARINE PAINT & VARNISH

<p>JAMESTOWN, RHODE ISLAND 28 Narragansett Ave. P.O. Box 348 Jamestown, RI 02835 Local 401-423-2520 Fax 401-423-0542</p>	<p>BEAUFORT, SOUTH CAROLINA Junction Hwy 17 &amp; 21 Rt. 1 Box 375 Seabrook, SC 29940 Local 803-846-9500 Fax 803-846-9005</p>
--	---

**SALE—TWO IDENTICAL 70' x 28' x 10' PUSH-BOAT HULLS**—Hulls blasted and primed. Located on building ways.—Hwy. 24, Bourg, Louisiana. Colored Photographs Available. For information, write or call collect: **JAY GLAZER, GLAZER STEEL & ALUMINUM**, P.O. Box 50867, New Orleans, LA 70150.  
**PHONE: 504-529-2761**

### Vapor Corporation Offers Free Literature On Thermal Products

Vapor Corporation, Thermal Products Group, Chicago, Ill., which specializes in serving the thermal products markets worldwide, is offering free literature on the product lines it markets.

At this time the Thermal Products Group consists of two product lines, as follows: Va-Power Products ... fossil fuel fired; and HSI, Hydro Steam Industries ... electric fired.

Two lines of steam generators are available from the Va-Power Products Group. The Modulatic is a once-through type steam generator with eight models from 18 bhp to 300 bhp

with design pressures up to 3,100 psig. The Circulatic is a recirculatic type steam generator with nine models from 75 bhp to 600 bhp with design pressures up to 530 psig.

Va-Power also has a line of hot oil heaters up to 20,000,000 btu/hr for the barge and process industries.

The Hydro Steam Industries Group is a leading supplier of electric boilers worldwide. The product includes high voltage electrode boilers capable of producing up to 167,000 lb/hr of steam, superheaters with outlet temperatures of up to 1,400 F, and a standard line of electric steam and hot water boilers. Steam boilers are available with up to 1,635 psig design pressures.

For further information and copies of the free literature on thermal products from Vapor,

Circle 55 on Reader Service Card

## CORROSION & WALL THICKNESS GAUGE



TI-10 measures metal wall thickness and corrosion from one side—ultrasonically!

- Ships hulls and bulkheads
- Storage tanks
- Metal plates
- Pipes

Range: 0.060-3.000"  
(1.5-80.0mm)  
Accuracy: ± 0.5%

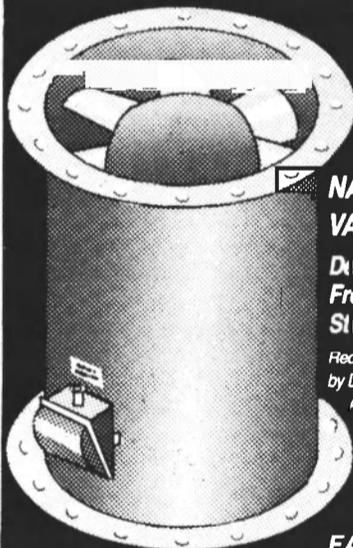
**Call Toll Free 1-800-645-4330**

For details contact: ELECTROMATIC Equip't. Co., Inc.  
600 Oakland Ave., Cedarhurst, NY 11516  
Tel. (516) 295-4300 • Telex 645561 • FAX (516) 295-4399  
Dealer inquiries welcome!

**CHECK-LINE**  
BY ELECTROMATIC

## JON M. LISS ASSOCIATES, INC.

411 BOREL AVENUE, SUITE 505 • SAN MATEO, CALIFORNIA 94402



### NAVY STANDARD VANEAXIAL FANS

Delivery From Stock

Reconditioning and Rewinding by Dahl Beck Electric. Available with Warranty.

**(415) 573-9191**

FAX (415) 572-8458

# CONRAD Industries, Inc.



P.O. BOX 790 MORGAN CITY, LA 70381

QUICK REPAIRS—2 SHIFTS  
FOUR DRYDOCKS 2,400 TON  
SPECIALISTS IN BARGE AND  
DRYDOCK CONSTRUCTION

..... SINCE 1948 .....

**PH. 504-384-3060      FAX 504-385-4090**

### FOR SALE OR CHARTER CARGO DECK BARGE

*Barge Dimensions:* Length 250 ft, Width 72 ft, Height 15 ft 6 in

*Gross Registered Tonnage:* 2238 ton

*Maximum cargo capacity:* 5500 ton

*Location:* Bourg Dry Dock, Bourg, La

*Availability:* Immediate

*Charter Rate:* Negotiable depending on duration, use, and location.

Contact: MARINER TOWING LTD.

169 Pope Road

Summerside, P.E.I. Canada, C1N 5C6

Phone: (902) 436-5967

Fax: (902) 436-6944

**NAVAL & MARINE HIGH PRESSURE GAUGE GLASSES**  
TUBULAR AND FLAT

MODEL NO. 581 RED      EEP/CA PLAIN      EEP/RB REFLEX

Other EEP Products: High Gauge, Liquid Level 5000 P.S.I. at 100°F, High Gauge, High Pressure, High Temperature, up to 100,000 P.S.I.

**EUGENE ERNST PRODUCTS CO.** SEND FOR CATALOG

P.O. BOX 427 or SOUTH MAIN STREET  
FARMINGDALE, NEW JERSEY 07727-0427 U.S.A. **79-B**

### Kockumation Sets Up New Computer Training Center At Malmo Headquarters

Swedish Marine computer systems specialists, Kockumation AB, have set up a special training center at its Malmo headquarters to train deck officers and chief engineers.

Initially, the new training center will concentrate on two specific products—Loadmaster, Kockumation's ship stability checking system, and Chiefplan-MASP, its computerized maintenance and spare parts control system.

The training courses are four to five days duration and are designed to give participants a full grounding on the use of the two systems.

Loadmaster is currently in use onboard some 500 ships worldwide,

while Chiefplan-MASP is being used onboard some 100 ships.

A spokesman for Kockumation said that with the new training center, an owner wishing to upgrade his systems can now safely do so, knowing that he can send his officers to the center to learn how to use the new systems efficiently.

The Loadmaster courses include training on the basic Loadmaster program, Loadmaster plus its container program, Loadmaster plus its tanker option and the direct damage stability program.

The Chiefplan-MASP course covers the automatic requisition of spare parts and consumables, stock taking, maintenance routines, and preventive maintenance.

For more information and free literature from Kockumation,  
Circle 99 on Reader Service Card

**MARITIME  
REPORTER**  
AND  
ENGINEERING NEWS

118 East 25th Street  
New York, NY 10010  
(212) 477-6700  
(212) 254-6271 Fax

## ADVERTISE IN THESE SPECIAL ISSUES

World's Largest  
Total Circulation  
For More Marine Sales in 1991



# OCT

AD CLOSING  
Sep 4

- FISH EXPO '91**
- EUROPORT '91  
WORLDWIDE EQUIPMENT SHOWCASE**  
Deck Machinery & Cargo-Handling Equipment Review

### BONUS DISTRIBUTION

- FISH EXPO '91  
Seattle, WA  
October 16-19
- EUROPORT '91  
November 12-16
- A.S.N.E. Symposium - Fleet  
Maintenance In The 21st Century  
Virginia Beach, VA  
October 22-24

### ACTION CARD MAILING

# NOV

AD CLOSING  
Oct 1

- SNAME - 10th ANNUAL INTERNATIONAL  
MARITIME EXPOSITION**  
The Most Important U.S. Marine Industry Show.  
The November Issue of MARITIME REPORTER will  
contain full details covering the entire technical program  
as well as the exposition.
- INTERNATIONAL WORK BOAT SHOW**
- OUTSTANDING WORKBOATS OF 1991**  
A Review

### BONUS DISTRIBUTION

- SNAME SHOW  
New York, NY  
November 13-16
- WORK BOAT  
New Orleans, LA  
December 5-7
- MARICHEM '91  
West Germany  
December 3-5

# DEC

AD CLOSING  
Nov 5

- WORLD SHIP/BOATBUILDING & REPAIR ANNUAL**  
Latest Trends and Predictions by Marine Industry Leaders  
for the Commercial and Naval Shipbuilding, Boatbuilding and  
Vessel Repair, Marine Equipment, Cruise Industry, and Inland  
and Offshore Markets. Year-End Statistics and Data.
- NAVAL TECHNOLOGY & SHIPBUILDING  
(SPECIAL PULL-OUT SUPPLEMENT)**  
Final U.S. Navy Funding - \$Billions - Latest Details -  
Where It Goes - Changes - Additions - The Final Score
- ANNUAL OUTSTANDING OCEANGOING SHIP  
REVIEW AND AWARDS**  
Awards for Builders and Equipment Suppliers

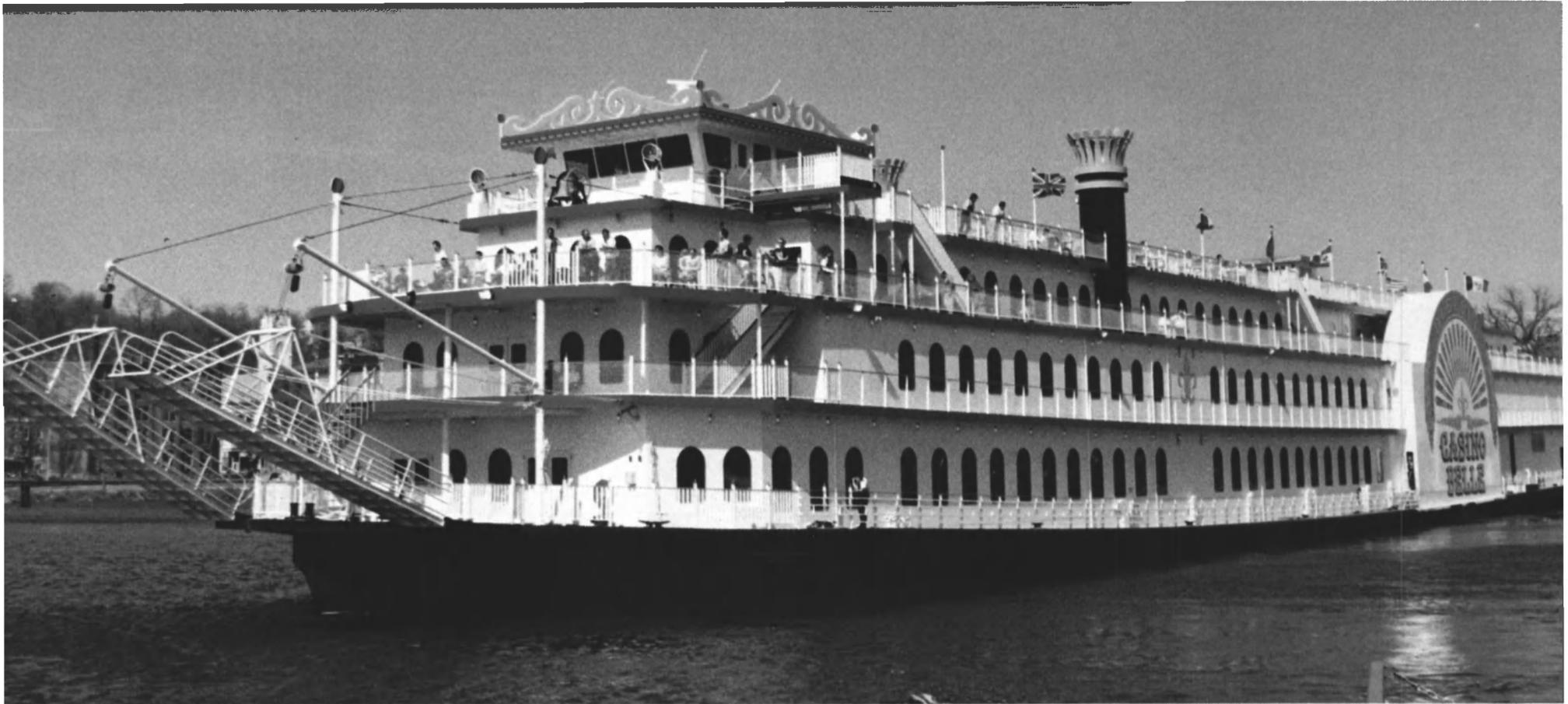
**1992  
MARINE  
EQUIPMENT CATALOG**  
Closing Date  
**December 14**



## Most Sales Leads For Advertisers

Advertisers report MARITIME REPORTER produces more sales leads than any other marine magazine in the entire world . . . two times to five times more sales leads than the next nearest marine publication.

## The Best Circulation Produces The Best Results



## DUBUQUE CASINO BELLE

Designed for owners Robert and Ruth Kehl of Roberts River Rides by Patti Shipyard to be reminiscent of the elegant sidewheelers of yesterday, the Dubuque Casino Belle is the largest riverboat casino on the Mississippi and was the first American-flagged vessel to receive a gambling license.

The Dubuque Casino Belle joins three other Patti-built vessels in the Roberts River Rides fleet and, like her sisters, is another example of boatbuilding excellence by which other vessels are judged.

Patti is proud of the satisfaction and confidence shown by owners Robert and Ruth Kehl in again choosing Patti as the builder of this award-winning fourth vessel in their fleet.

Longer than a football field at 387 feet, the Dubuque

Casino Belle offers her 2,000 passengers the spaciousness of four decks, with three large casinos featuring 700 gaming devices, a theater lounge with headline entertainment, a children's activities center and a souvenir gift shop. Additionally, her two elegantly appointed 650-person dining rooms are served by full galley facilities, where sumptuous meals made famous by Roberts River Rides are prepared.

The centerpiece of the Dubuque Casino Belle is a 30-foot-high grand lobby outfitted with faux marble columns, rich-textured carpeting and charming lampposts nostalgic of a bygone era.

The Dubuque Casino Belle marks a milestone in construction excellence and design elegance that sets a new industry standard.



Patti Built ... The Best Built



*Patti  
Shipyard  
Incorporated*

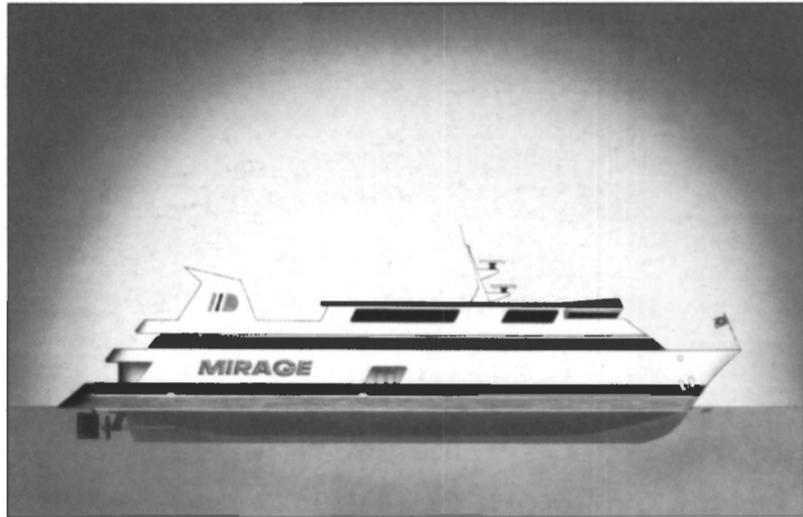
306 S. Pinewood Lane  
P.O. Box 271  
Pensacola, FL 32592-0271  
Telephone 904/453-1282 • FAX 904/453-8835

Circle 306 on Reader Service Card



*Move Your Passengers...*

## **STEINER STYLE!**



**For Sale or Lease**

### **M/V Mirage**

190' x 38' x 14'

#### **Casino Boat/Passenger Vessel/Excursion Boat**

First born to serve the oil patch, the Renaissance of the Mirage is underway at Steiner. When she is complete, the Mirage will accommodate 450 passengers, with full gaming equipment, lounges, bars, food preparation and serving areas.



### **M/V Laura**

104' x 24' x 8'2"

#### **Aluminum High-Speed Passenger Vessel**

Built to transport 349 passengers for a construction project in Boston, the 104-foot "Laura" is a 23-knot, all-aluminum passenger ferry. Other versions of this hull configuration, with different superstructures, are available for the dinner and cruise sightseeing markets.

*From the Bayous of Alabama to the Rivers of Chicago*



### **CHICAGO'S FIRST LADY**

96" x 22" x 9"

#### **Dinner Cruise/Excursion Boat**

"Chicago's First Lady" owned and operated by Holly and Bob Agra of Mercury Yacht Charters, Inc., offers the ultimate experience in elegant lake and river cruise dining. Although reminiscent of the 1920s steam-powered Presidential yacht "Sequoia," the 96-foot, \$1.2 million luxury charter boat is a truly modern lady, providing all the amenities passengers have come to expect in the 1990s. Her climate-controlled main cabin, furnished with a piano and U-shaped bar, offers formal dining for 104, or casual dining or 250, while providing charming, natural light through its skylight. So wherever you move your passengers, move them the right way. Move your passengers...Steiner Style!



P.O. BOX 742, BAYOU LA BATRE, AL 36509  
(205)824-4143 (205)824-4884 FAX

RUSSELL R. STEINER, PRESIDENT