

**MARITIME
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AND
ENGINEERING NEWS

OUTSTANDING WORKBOATS OF '93



Plus...Preview of International Workboat Show

**New Technology:
60-Knot Quadrimaran Debuts**

**PREVIEW:
UROPORT '93**

**PREVIEW:
MARICHEM '93**

NOVEMBER 1993

Every 5,000 hours this towboat makes a change for the future.

Changing oil every 5,000 hours instead of every 500 has made a world of difference to Crounse Corporation's single-screw towboat, the M/V *Sue Chappell*. Before the workboat switched to synthetic Mobilgard SHC 120 in its generator engine, it was changing oil every 500 hours and disposing of 112 gallons of waste oil each year.

For the environmentally concerned Crounse Corporation of Paducah, Kentucky, waste oil disposal was a problem that demanded a solution.

The synthetic solution. Crounse Corporation, Detroit Diesel Corporation and Mobil Oil Corporation conducted an 8,000 hour test of Mobilgard SHC 120 in the towboat's generator engine. The synthetic lubricant, with its chlorine level well below the most stringent regulations in effect today, yielded remarkable results.

Mobilgard SHC 120 significantly extended the towboat's oil drain intervals and reduced its annual volume of waste oil 90%. A single oil drain after 5,100 hours of continuous operation of the engine confirmed the oil effectively lubricated the Detroit Diesel 6-71 engine *10 times longer than mineral oil*. Annual waste oil was now just 11 gallons.

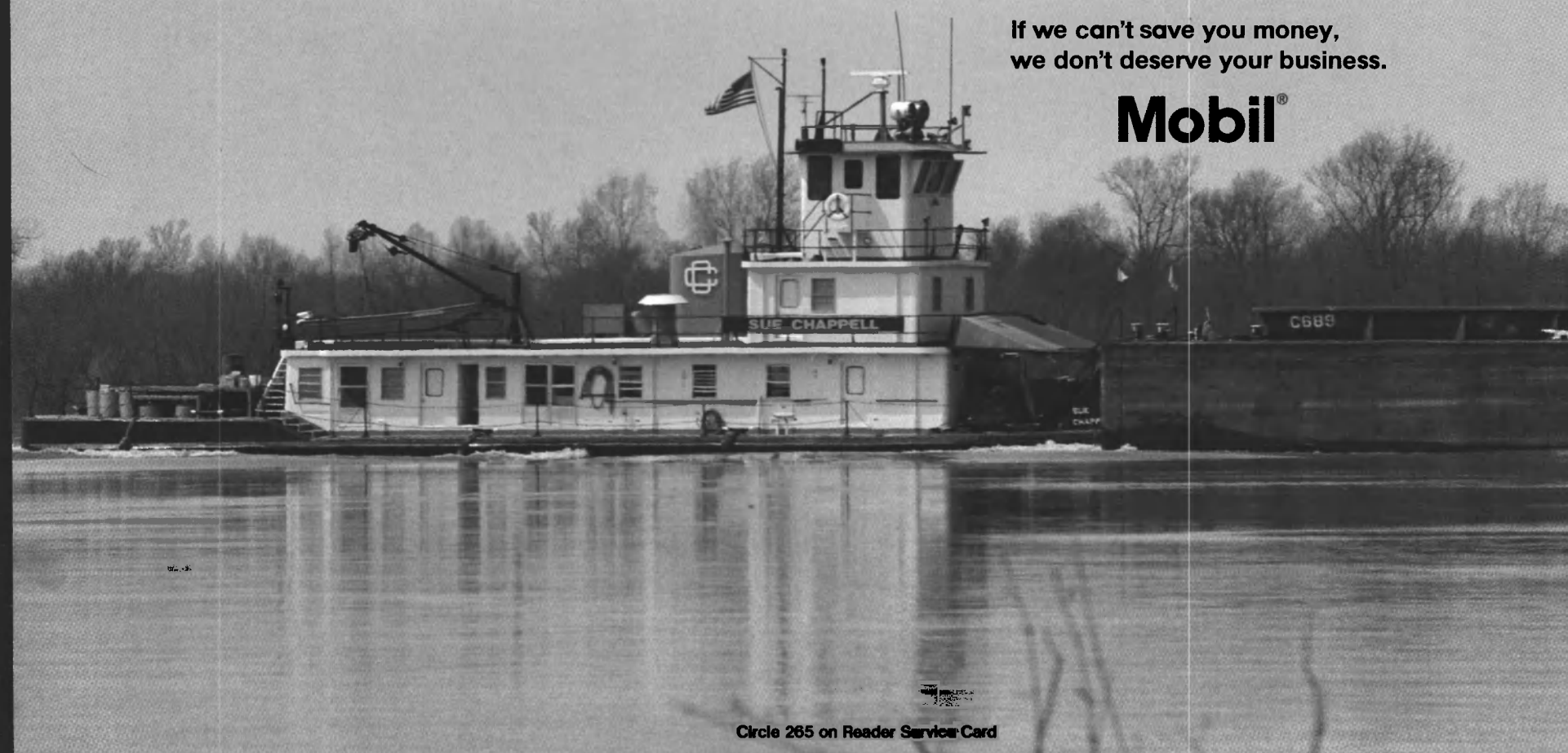
Mobilgard SHC 120 cut the engine's oil consumption by nearly 75%. The generator consistently used *only one quart* daily. Quite a difference from the one gallon of mineral oil it typically consumed.

Mobilgard SHC 120 reduced overall engine wear by almost 50%. When the towboat was overhauled, engineers found that the engine's piston rings and cylinder liners had only about half the normal wear rates. Time between overhauls is now projected to extend from 40,000 hours to 60,000 hours.

So take a good look at the synthetic lubricant that helped this towboat make a difference in the world. And a change for the future.

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ON THE COVER

This month's cover depicts the Vancouver, a Z-drive tug built by J.M. Martinac Shipbuilding Corporation, and one of our Outstanding Workboats of 1993 (feature starts on p. 30).

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Navy Awards Avondale \$257.5 Million Contract For LSD Ship

Avondale won a contract to build one dock landing ship (LSD) for the U.S. Navy for \$257.5 million, scheduled for delivery in early 1998. At its peak, the contract requires approximately 900 Avondale workers. The LSD will carry more cargo but fewer air-cushioned landing craft (LCACs) than the original LSDs, of which Avondale constructed five.

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Alpha Marine Wins \$21.4 Million Sealift Contract

The U.S. Navy's Military Sealift Command (MSC) has awarded a \$21.4 million contract for six new tractor tugs to Alpha Marine Services Inc. of Galliano, La. Alpha Marine Services will also furnish crews for the tugs, which will be used to tow Navy boats around San Diego, Calif. beginning Sept. 30, 1994. Tractor tugs have

power systems capable of applying nearly all engine thrust in any direction. The contract is for 17 months, with two additional 17-month options included in the contract amount.

German Shipyard Secures Cruise Ship Repair Contracts

Howaldtswerke-Deutsche Werft (HDW) Kiel, Germany, has secured repair and refurbishment contracts

for three cruise vessels: Maxim Gorkiy, Odessa and Fedor Dostoevskiy. All three ships will undergo annual repairs as well as refurbishment and maintenance of hull, machinery and cabins. Maxim Gorkiy, built in Hamburg in 1969 as the "Hamburg," with a capacity of 788 passengers, will receive a completely redesigned dining room/restaurant as well as overhaul of two 22,000 shp AEG steam turbines. Odessa, overhauled at HDW in 1990, will have the air conditioning

of the upper decks improved by the installation of three compressors of 900 kW each.

Fedor Dostoevskiy, built at HDW in 1986 as the "Astor," with 20,159 grt, will undergo refurbishment of public rooms and corridors.

After the recent conversion of the navy supply ship "Meersburg" by HDW, the German Navy also awarded HDW with a contract for refurbishment and maintenance work on the destroyer "Rommel." HDW's Repair and Conversion Division is represented in the U.S. by Roland Marine, Inc. For more information,

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The NUCLEUS Series offers five choices of displays, NUCLEUS 6000 A (ARPA), 6000 T (true motion) and 6000 R (relative motion) Color Radars with 26 inch display; and NUCLEUS 5000 T (true motion) and 5000 R (relative motion) Color Radars with 20 inch display. NUCLEUS features powerful X-Band and S-Band transmitters in different configurations.



Other standard features include

interswitching, dual preset Guard Zones; the NAVCARD for extended, customized map creation, storage, and retrieval; and an improved plotting facility. The ARPA also features a simulator for training and maintenance tasks.

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Corps Of Engineers Issues Invitation For Bids

The director of the U.S. Army Corps of Engineers' Marine Design Center has announced the issuance of Invitation for Bids number DACW61-94-B-0008 for the design, construction, testing and delivery of a floating crane for use by the Duluth Area Office of the U.S. Army Corps of Engineers Detroit District on the Great Lakes.

The proposed vessel is non-propelled, of steel construction with a ship-shaped hull and a duty cycle marine crane. The vessel will be approximately 150 feet long by 48 feet wide, with a depth of 11.6 feet and a draft of 7.4 feet. The vessel and crane will be classed by the American Bureau of Shipping (ABS). The bid package is a "Design and Build" type based upon a concept design prepared by the Marine Design Center. The contract will be conducted using the Marine Design Center's three phase contracting methodology. The bid package was available after October 29, with bid opening planned for late December 1993. For more information, contact: Commander and District Engineer, U.S. Army Corps of Engineers, Philadelphia District, Wanamaker Building, Philadelphia, PA 19107, Attention: CENAP-CT (TOTI), Reference: DACW61-94-B-0008.

Shell And BP Get Approval For \$1.2 Billion Gulf Project

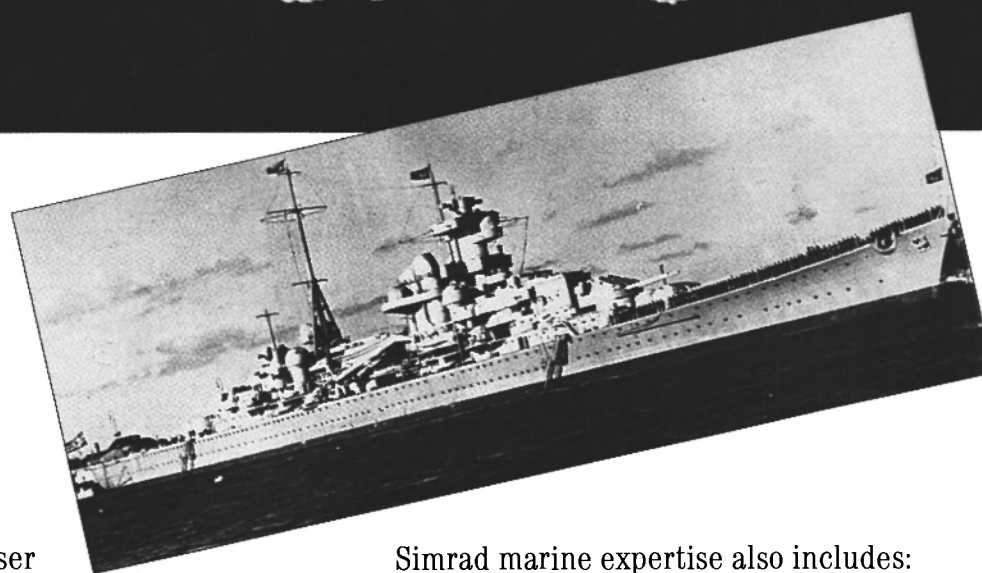
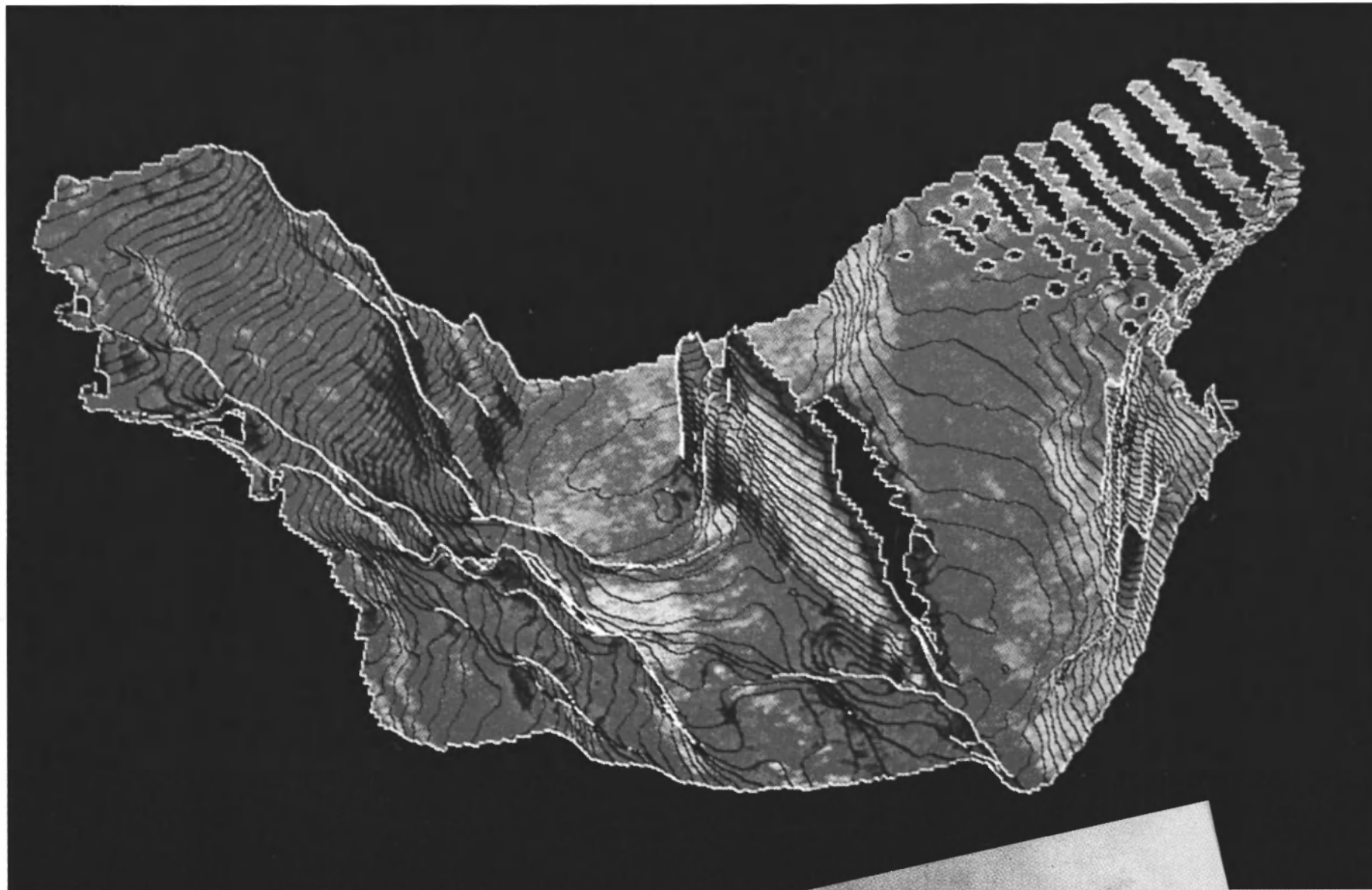
Shell Oil and BP Exploration have gotten the go-ahead for the \$1.2 billion first phase development of the Mars field, the largest find for two decades in the U.S. Gulf.

Mars was discovered in 1989 on Mississippi Canyon block 763. Mars reportedly holds recoverable reserves of 700 million barrels of oil equivalent (85 percent oil and 15 percent gas).

Approximately \$660 million will be spent on installation and fabrication of the Mars platform and pipelines. Another \$540 million will be spent on drilling and completion. The Mars platform will use 24 integral well slots and two subsea satellites. Belleli of Italy has won the contract for the hull, with McDermott in the U.S. building the deck. Shell Oil will hold a 71.5 percent stake in the field. BP will commit a total of \$340 million to the project. The Mars field will come on stream in late 1996.

Maritime Reporter/Engineering News

Soundtrack by Simrad



Sound made this seabed map of an area of the Oslo Fjord, Norway.

The wreck of the German heavy cruiser *Blücher*, lying keel upwards in 90 meters of water, is visible in the middle of the image. Contour lines show the depth whilst color codes register object hardness.

The image was produced by a Simrad EM 1000 Multibeam Echo Sounder passing just once over the area - an example of what to expect from Simrad instruments, based on more than 40 years experience in marine electronics.

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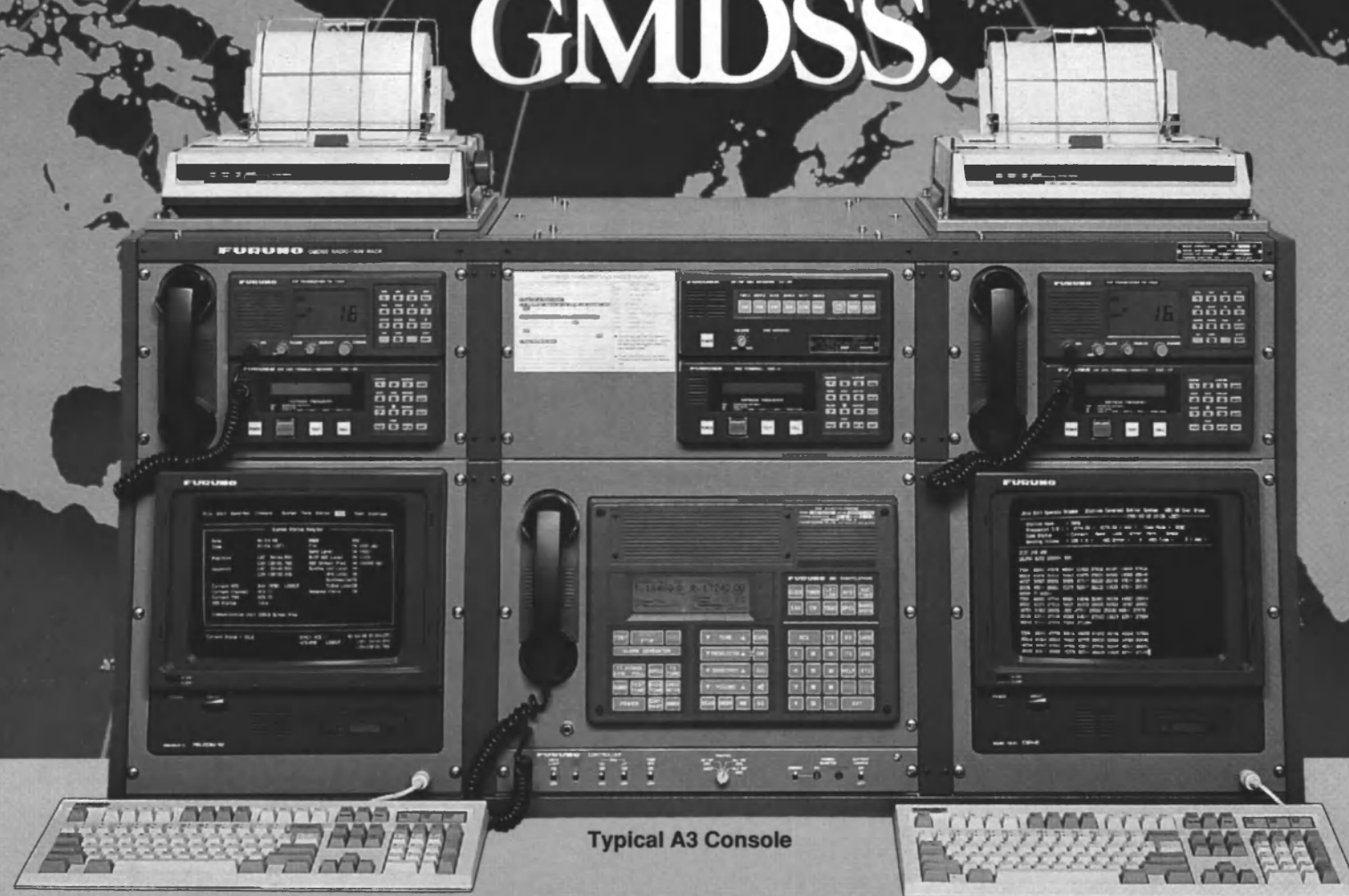
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THE PRESIDENT'S PLAN:

President Clinton Proposes How The Maritime Industry Can Convert From Defense To Commercial Production

"Strengthening America's Shipyards: A Plan For Competing In The International Market" is the title of a report prepared by President Clinton's National Economic Council. The following is excerpted highlights from the report giving an assessment of the market, as well as specifics on the action needed to bring commercial business to U.S. yards.

The Outlook

There are four possible markets for U.S. shipbuilders in the future: the commercial market (both domestic and international), U.S. naval vessels, foreign naval vessels and non-shipbuilding markets. Of these, the international commercial market offers the most significant prospect for expanding production.

The Commercial Market

The commercial market consists of both the domestic market (protected by the Jones Act) and the international market.

The Jones Act market is expected to remain small through this decade. Demand for new ocean-going vessels for the Jones Act fleet is estimated to be at most two to three

vessels a year. These numbers reflect a decline in demand for tankers due to a projected reduction in Alaskan oil shipments and changes in trading patterns. They take into account the requirement in the Oil Pollution Act of 1990 (Public Law 101-380) that single-hulled tankers be phased out beginning in 1995 according to a schedule based on age and capacity so that all tankers will have double hulls by 2015. By contrast, the already-sizeable demand for new vessels in the international commercial market is expected to grow significantly in the coming decade. Drawing on a variety of analyses, the Maritime Administration (MarAd) estimates that 7,300 to 9,900 large ships (of which half will be tankers) will be built between 1992 and 2001. Three-quarters of this new construction is expected to occur in the second half of this period. Most will result from the need to replace aging vessels, not to accommodate trade growth.

U.S. Naval Vessels

The U.S. Navy will continue to provide a market, albeit a much smaller one, for U.S. shipbuilders.

The Navy has about 100 ships on order or under construction, three quarters of which will be delivered after 1994. Although the details of the defense program for FY '95-FY '99 still are under review, the Department of Defense (DoD) projects that it will order on average eight new ships a year (including sealift ships) in those years. In the following decade, replacement of aging military vessels may require some modest increase in construction. DoD does not now plan any additional sealift procurement, however. Thus, while the total requirements remain uncertain, DoD does not believe that its annual need will increase significantly.

Foreign Military Vessels

The market for foreign military vessels probably will remain relatively small. Most countries with significant blue water fleets purchase naval vessels from their own yards, although nations with predominantly coastal fleets are likely to continue to purchase certain classes of small vessels abroad.

Non-Shipbuilding Markets

In slack periods, shipyards have engaged in non-shipbuilding

projects, including the construction of railroad cars, under-river tunnel sections, wind tunnels, prison barges, offshore oil rigs, and marine equipment. Quasi-shipwork projects including methanol plant barges and power plant barges (about 40 of which are now in operation) also present a potential source of business.

Competing Internationally: Leveling the Playing Field

Two steps will have to be taken for U.S. shipyards to compete successfully in the international market.

• **Step 1: Eliminate Subsidies:** Many foreign yards have benefited from substantial shipbuilding subsidies. In July of 1993, MarAd published a "Report on Foreign Shipbuilding Subsidies" describing current government programs for assistance to shipyards in 31 nations and the European Community, as well as indirect support, as exemplified by Japan's home credit schemes. Subsidies must be eliminated if there is to be a truly competitive international market in which U.S. shipbuilders can compete.

(Continued on page 11)



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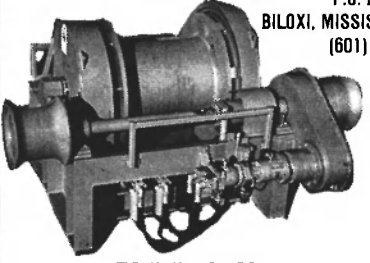

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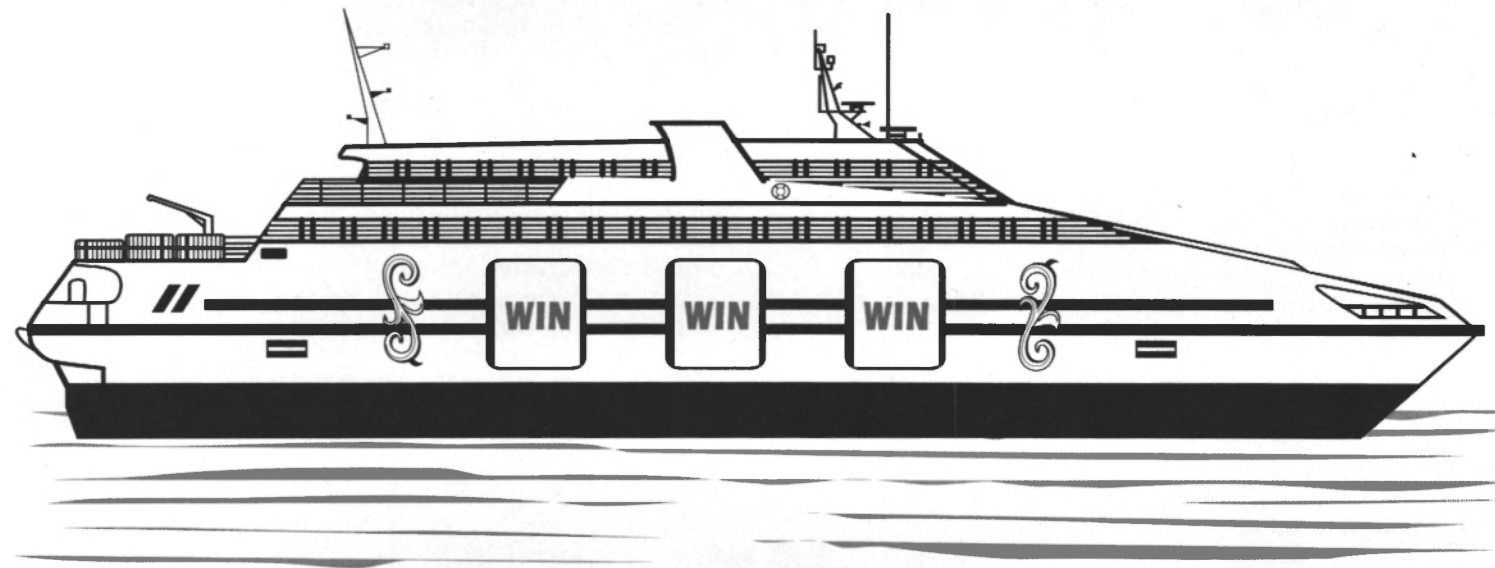
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The President's Plan

(Continued from page 9)

• **Step 2: Adapt Naval Skills To Commercial Applications:** U.S. shipyards have invested heavily in modern facilities and technology. Additionally, labor rates in U.S. yards are competitive, and U.S. shipyard workers are highly skilled.

However, U.S. yards have been building ships to order for the military requirements of the U.S. Navy and the sporadic demands of the Jones Act fleet. At the same time, foreign yards have been building ships in series from standard designs optimized for producibility as well as functionality, thereby benefiting from scale economies and learning efficiencies. Although the steps required to adapt to the demands of this commercial market vary among U.S. shipyards, in general yards must:

- Shorten the time required to develop a ship design in response to a specific demand by adopting modern design procedures and developing designs in advance of need;
- Strengthen relationships with suppliers to reduce the time required to procure materials and parts; and
- Fully employ modern technologies in the construction of ships including construction techniques such as modular construction, manufacturing processes, and process flow. The lay-out of at least some facilities may have to be revised to adopt these tools.

THE PLAN

Throughout the U.S., shipbuilders are focusing on the challenges of entering the international market for ocean-going vessels. Individually, yards are working to improve the technologies and production processes needed for building commercial ships. In addition, some yards have entered joint ventures or alliances with foreign yards to develop new designs and production capabilities. The Administration's plan is intended to assist industry efforts to compete internationally. Furthermore it is intended to be a transitional program, consistent with federal assistance to other industries seeking to convert from defense to civilian markets. The plan has five elements: ensuring fair international competition, improving commercial competitiveness with MARITECH, eliminating unnecessary government regulations, assisting with the financing of ship sales, and assisting with marketing efforts.

Ensuring Fair International Competition

The U.S. government is seeking to level the international playing field at the Organization for Economic and Cooperative Development (OECD). To this end, the Administration initiated international negotiations to end foreign subsidies. U.S. negotiators believe that there is a reasonable chance that these negotiations will be suc-

cessful. (November 1993 has been set as a target date for completion.)

The OECD draft agreement that is currently under negotiation is comprehensive in its coverage. It prohibits direct and indirect subsidies to shipbuilders in the form of loans, grants, debt forgiveness, tax benefits, and research funding above defined limits. It also bans export credit financing programs with terms more generous than agreed international terms.

Official regulations and practices such as those that allow anti-competitive arrangements or impose domestic build requirements and other discriminatory regimes are forbidden (although the U.S. has proposed a derogation for the Jones Act). The draft agreement also establishes an injurious pricing discipline for ships, similar to anti-dumping laws which do not apply to ships. Binding dispute settlement procedures are envisaged to enforce the

agreement. A target date of January 1, 1995 has been set for the elimination of subsidies and other distortive practices. While the Administration believes that a multilateral agreement provides the best way of dealing with the problem of foreign subsidies, it will work with Congress on legislation to bolster those efforts. Any such legislation should provide for the investigation

(Continued on page 12)

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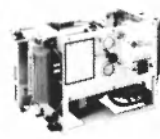
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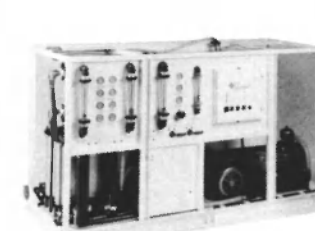
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The President's Plan

(Continued from page 11)

of the policies of nations toward their shipbuilding industries in response to specific complaints and the imposition of sanctions, at the President's discretion, where there are adverse effects on the U.S. shipbuilding industry.

Improving Commercial Competitiveness with MARITECH

Under MARITECH, DoD, through its Advanced Research Projects Agency (ARPA) will participate in an industry-driven program to accelerate technology transfer and process change. The principal thrust of this effort will be (1) to provide a near-term infusion of technology that would allow yards to be more cost-effective in the design and construction of ocean-going vessels and to enable entry into the commercial market by improving manufactur-

ing and information technologies for the design and production of ships and (2) to foster continuous product and process improvement through collective efforts.

ARPA will match funds from industry for research and development projects they propose in these areas. Yards will propose Focused Development Projects that determine an actual market need, develop an innovative design, and define a competitive construction approach

for filling that need. They will be encouraged to initiate partnerships with customers, suppliers, and technologists. Funds will be awarded competitively, and special consideration will be given to yards engaged in both DoD and commercial work. The goal of MARITECH is to:

- *Strengthen the ability to perform proactive product development and marketing* by encouraging firms to perform proactive market analysis and develop ready ship product designs for specific markets, thereby eliminating the need for time-consuming preliminary design work prior to bid submission.

- *Develop libraries of designs* enabling yards to respond to customer requests, using a library of designs tailored to the specification requirements.

- *Engage in continuous process and product improvement*, reducing the time it takes to produce a ship. This will help further lower both direct labor costs and financing costs, thereby leading to an overall reduction in price.

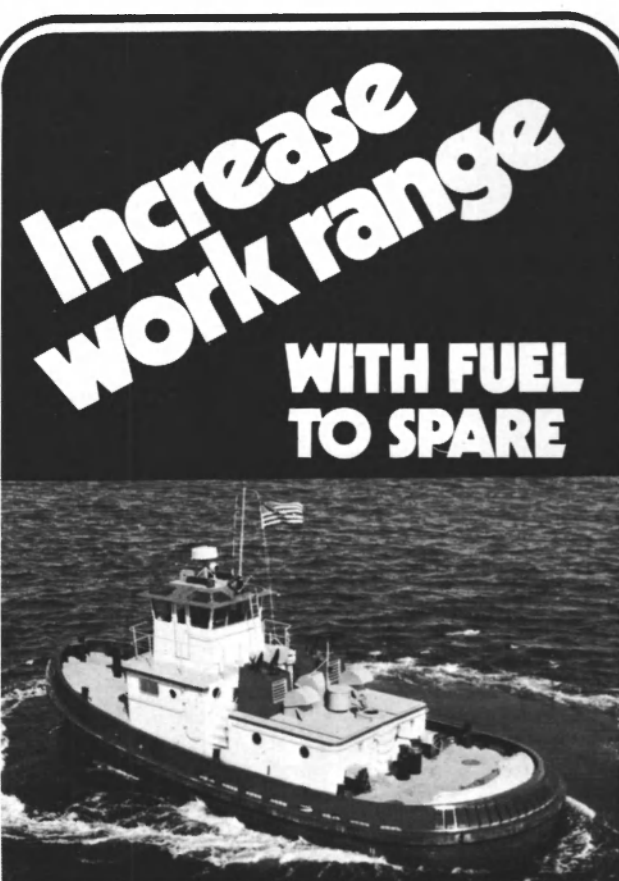
MARITECH will be funded at \$30 million in FY '94, \$40 million in FY '95 and \$50 million each year in FY '96 through FY '98 — a total of \$220 million over five years. With matching funds, it would thus generate \$60 million in new R & D investments in FY '94 and \$440 million over the period. In-kind matching would be allowed. ARPA will execute the program in collaboration with the Department of Transportation. The shipbuilding industry also will remain eligible to compete for funds in the Technology Reinvestment Program (TRP). The TRP is a collaborative inter-agency effort to support technology development and deployment. All proposals require 50 percent cost sharing. Shipbuilding infrastructure is one of 11 technology focus areas identified as TRP priorities. If an agreement is concluded in the ongoing international negotiations on subsidies, future spending under MARITECH and TRP would have to comply with its rules on the proportion of government matching funds allowed.

Eliminating Unnecessary Government Regulation

All government agencies having regulations that apply to the shipbuilding industry will review them and revise or eliminate any that impose unnecessary burdens on the industry. Major examples of agencies whose regulations affect this industry are the Department of Defense, the U.S. Coast Guard (USCG), the Occupational Safety and Health Administration (OSHA), and the Department of Justice.

- *Procurement Regulations.* Acquisition reform is being given high priority within DoD and is intended to reduce or eliminate barriers to the integration of military and commercial production, which will benefit shipbuilding along with other industrial sectors. Near term efforts that will benefit this industry include (1) removing legislative impediments to the purchase of commercial items, (2) prohibiting the

(Continued on page 16)



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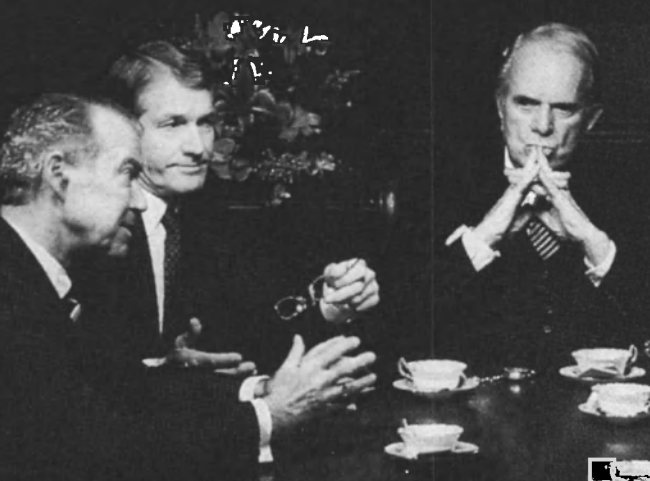
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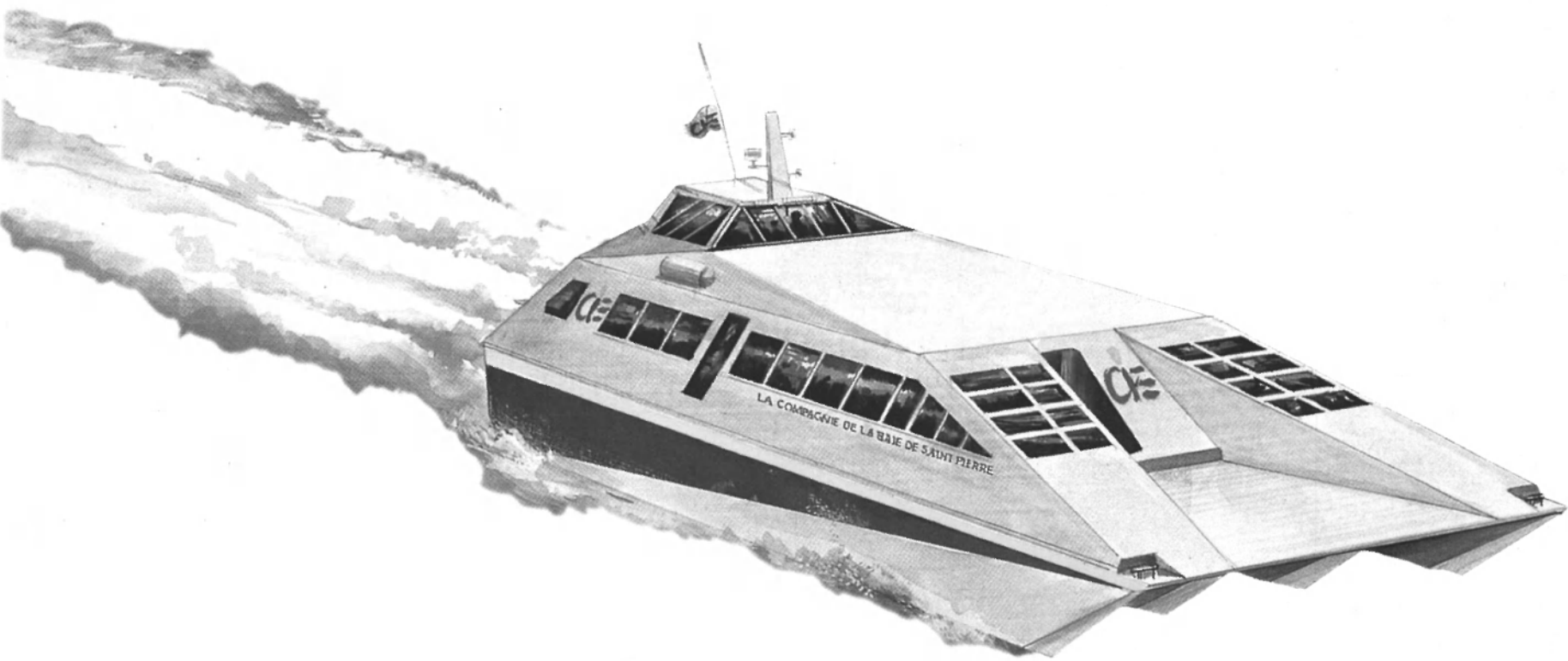
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NEW TECHNOLOGY



QUADRIMARAN:
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A new hull design has been developed and patented by a team of engineers, headed by **Daniel Tollet** of Quadrimaran Intl., which promises to greatly improved efficiency in speed, economics and environmental concerns, with no compromise in comfort and costs. While the design is most impressive based on early test results and manufacturer claims—one being that the design helps cut fuel consumption up to 50 percent and provides more stability than a SWATH design—the design is really just the half of it. Developers of the revolutionary vessel have taken an “aircraft industry approach” to building the vessels, offering a choice of seven models ranging in size from the 80-foot version to the 492-foot version, all capable of going 60 knots, said **Trond Conradi**, president, Baltimore Steam Packet Co., the organization which markets the revolutionary vessel to the North and South American markets. The vessels are built from the compilation of several modules, which are subcontracted out to the most competitive bidder.

For production of the prototype (two years ago) and two 80-foot versions for delivery to the Bay of Saint Pierre, Mr. **Conradi** and his associates were unable to find an established ship production facility which could build the vessels at a price the developer deemed competitive. So Quadrimaran purchased a facility

in Marseille, France, and in essence became its own contractor, subcontracting out the modules to be built.

The Quadrimaran is a high-speed, planing surface effect vessel which uses both hydrodynamic and aerodynamic forces to achieve safety, speed and economy in operation.

- **Unique Four-Hull Design**

The vessel uses four wedge-shaped hulls under a main deck structure to create a platform for a choice of different superstructures. When the vessel moves forward, a combination of surf effect and air over pressure in the three tunnels between the hulls lifts the platform, thereby reducing the displacement and the wetted surface, which means less resistance and hull friction. The air pillow between the hulls also acts as a shock absorber, helping to reduce vertical slamming in heavy seas.

The vessel is designed in accordance with the rules and regulations for high-speed light displacement crafts by Det Norske Veritas (DNV) and the International Maritime Organization (IMO).

- **Multi-Task Vessel**

Worldwide market research compiled by Quadrimaran predicts there will be a need for approximately 3,000 high speed vessels over the next decade. While the Quadrimaran design has all the earmarks of fast ferry, Mr. **Conradi** assures that the design was developed with many more uses in mind. The top five uses

for the vessel include: passenger vessel, freight vessel, utility vessel, government/army vessel and leisure vessel. Some of the main features of the vessel which allow it to be so versatile include: its stability and seakeeping at high speeds in heavy seas; its extreme shallow draft, and zero draft up front to allow the vessel to be easily beached; its high speed with low fuel costs; and its very low wake profile, a direct result of its very low displacement.

The Quadrimaran strategy supports a market-oriented product line

of capacity-based “quadrimaran platforms.” In essence, the owner gets what the owner needs. All of the models can accommodate various types of superstructures, making the modular and flexible design compliant to most situations.

- **Building Partners**

Market forces will eventually determine where the vessels are built, said Mr. **Conradi**. He and his colleagues are on the search for partner yards, with the facilities, good

(Continued on page 14)



Caterpillar diesel engines sit shrink-wrapped in back of the first Quadrimaran vessel to be built for a commercial customer at the Quadrimaran facility in France.

management and flexibility in work force needed to produce the vessels. He is hoping the U.S. market, in its conversion from defense to commercial work, will realize the promise of the Quadrimaran design. "There is no reason the yards in the U.S. can't build these vessels cheaper than anyone else," said Mr. **Conradi**, citing the relatively cheap cost of labor and materials. But beyond establishing yard, or subcontractor, networks to actually build the vessels, the company is also working to

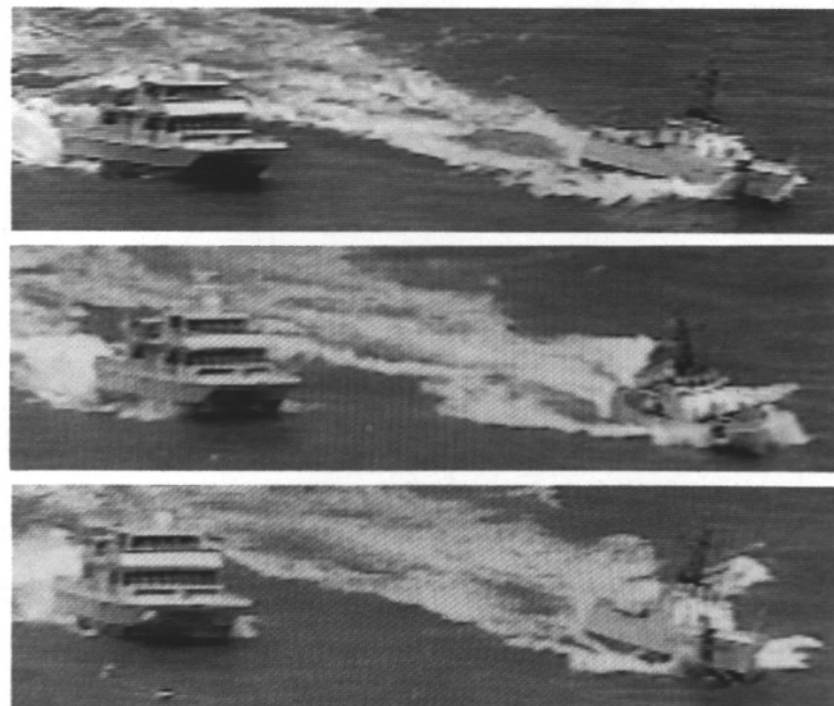
establish a "preferred supplier" network, in an effort to further streamline the process and contain costs. For example, Caterpillar diesels will be used to propel the first two commercial deliveries (due in December, 1993 and January 1994, respectively). He said the company is currently working on making Caterpillar and Deutz MWM the preferred engine supplier, while SeaCokpit (Norcontrol) has been tapped to supply the totally-integrated bridge and controls. Initially

selling a vessel which has been under development for six years, especially a vessel which seemingly packs so many performance advantages, is undoubtedly met with naysayers and skeptics. To help ensure the claims it makes, Quadrimaran backs its claims with data and performance records, and a performance guarantee which is supported by an insurance consortium. For more information,

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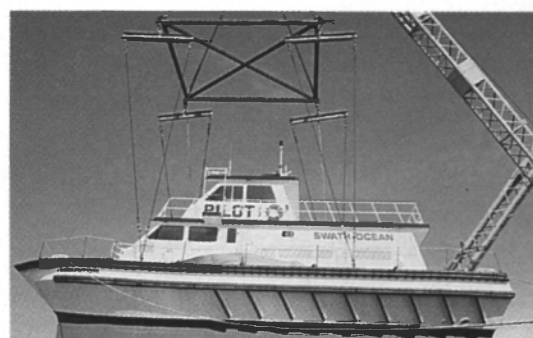
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SWATH vessel: "Chubasco"
built by SWATH OCEAN SYSTEMS
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Speed: 20 knots

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Westerman Debuts Navigational Aid Signal Lantern Monitor

The new NA-1910, a navigational aid designed to monitor the operation of navigational aid signal lanterns on offshore oil and gas rigs and various marine installations, was introduced by the Controls Div. of Westerman Companies. The NA-1910 has a lantern flasher power wire which is routed through the core of a current transformer. When the flasher's incandescent lamp is "on," the inrush current caused by the cold lamp filament triggers a one-shot timer that sends a .5-second pulse to the output, an output which is sensed by a Remote Terminal Unit that checks for a light flash every second. For more information on Westerman's new product,

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DMR Offers Complete Propulsion Solutions

Dieselmotorenwerk Rostock (DMR), one of the youngest enterprises in the Bremer Vulkan Corp. AG, is known as a manufacturer of complete marine propulsion installations. DMR customers are offered a complete package, starting with design and calculation, up to and through delivery and after-sales service. The core of the DMR marine propulsion installations are cross-head diesel engines which have been built for many years in the Rostock factory by license from New Sulzer Diesel. Apart from diesel engines, DMR delivers marine and special gear units being offered together with DMR-controllable pitch propeller units. For free information on the capabilities of DMR,

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Morgan Marine Receives Cranes Order

Morgan Marine of Santa Ana, Calif. has received a purchase order from Lien Ho Shipbuilding Co., Ltd. of Taiwan for three knuckleboom marine cranes to be installed on a Marco-designed S.O.R.T. Delivery is due for December 1993. For more information on Morgan Marine,

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Maritime Reporter/Engineering News

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The President's Plan

(Continued from page 12)

use of DoD specifications or process standards unless there is no practical alternative, and (3) removing the most serious impediments to doing business with the government that do not require legislative action.

• **USCG Construction Regulations.** The Secretary of Transportation will

direct the USCG to continue working with the International Maritime Organization to upgrade critical international standards and with the U.S. carriers and standards bodies to delete or revise regulations that add costs unnecessarily.

• **OSHA Regulations.** OSHA is currently working with the shipbuilding industry to review and revise its standards. The proposed revisions will continue to address the hazards to which workers are exposed, but

will do so by replacing specification-based provisions, which limit employer innovation, with performance-oriented provisions wherever appropriate. The proposed revisions also will update, reorganize, clarify, and simplify current rules.

• **Antitrust Regulations.** To facilitate various forms of cooperation in the shipbuilding industry, the Department of Justice will provide upon request an advisory opinion regarding proposed business con-

duct pursuant to its Business Review Procedure. Federal law enables shipyards to engage in a wide range of vertical and horizontal cooperative ventures. Existing antitrust laws enable firms to form legitimate joint ventures involving some risk sharing or integration. The National Cooperative Research and Production Act (15 U.S.C. section 4301 et seq) provides antitrust protection for firms engaging in joint research and development or pro-

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duction ventures. The Export Trading Company Act (15 U.S.C. section 4011 et seq) provides a limited anti-trust exemption for export trade and related activities. In evaluating joint conduct under the anti-trust laws, the Department of Justice will take into account efficiencies that the venture will produce as well as the existence of global competition in relevant markets.

Financing Ship Sales Through Title XI Loan Guarantees

Title XI now provides U.S. buyers of ships built in both major and second-tier yards with guarantees for long-term loans at fixed rates covering up to 75 percent of the loan value. In order to encourage foreign carriers to come to the U.S. to build ships, the Administration proposes to extend coverage to foreign buyers. Loan guarantees for foreign buyers would have to conform to OECD provisions governing export credits. While loans under these provisions are also available through the Export/Import bank, MarAd's greater expertise in shipping and shipbuilding justifies extending its involvement to the financing of the export of ships.

MarAd now charges a fee of .5 to one percent on the outstanding balance of the loan guarantee. To gain greater leverage from federal funds in this increasingly tight budget environment, that fee would be raised to the range of one to 1.5 percent, reducing the federal risk exposure. That level should provide an inducement to a substantial number of carriers to buy ships in U.S. yards.

In FY '93, \$48 million was appropriated, of which \$47 million remains available for commitment in FY '94 and beyond. The department of transportation will support additional funding of \$50 million in FY '95, \$30 million in FY '96, and \$20 million in FY '97. This could guarantee an additional \$2 billion in loans. Consistent with the Administration's intent to facilitate the transition to international competitiveness, any funds so appropriated and not spent within five years would expire. Consistent with the emphasis on the international commercial market, certification of military utility would no longer be required.

If an agreement is concluded in the ongoing international negotiations on subsidies, any conditions of the Title XI loan guarantee program that were inconsistent with the agreement would have to be modified or eliminated.

Assisting International Marketing

The Administration will use existing organizations to assist shipyards in their international marketing efforts (e.g., the U.S. Foreign Commercial Service, American embassy personnel, and MarAd) and to facilitate cooperative arrangements and allegiances between U.S. and foreign yards. Organizations that previously have not devoted much effort to the shipping market will increase their level of activity.

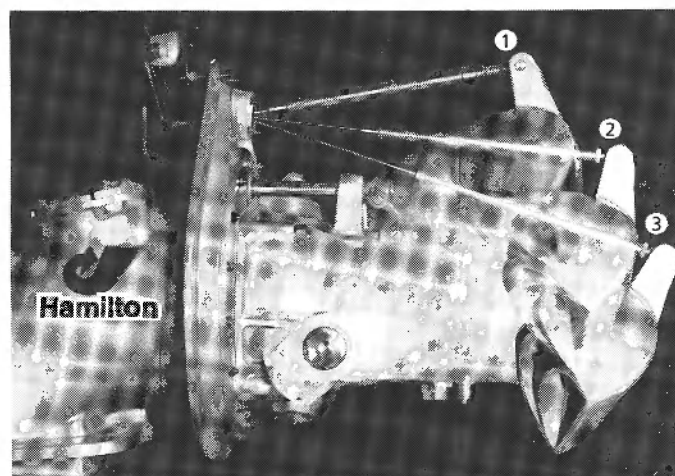
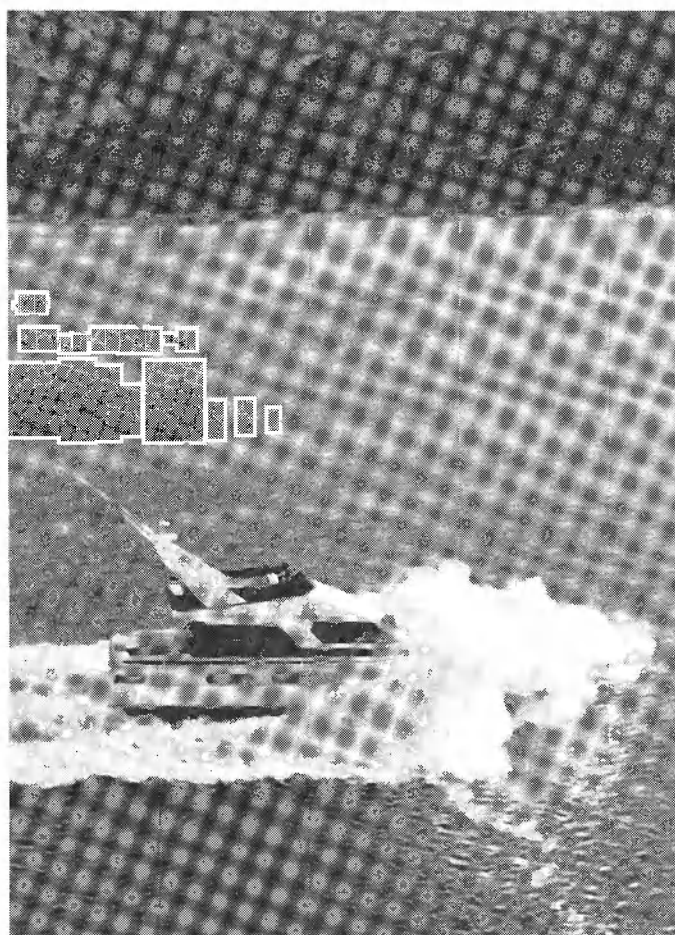
Challenge for the Industry

Shipbuilding and repair are inherently global in nature, and shipyards face fierce competition from

abroad. In the face of that reality, the Administration has developed a two-pronged plan to help American yards compete in this arena. The first prong is to insure fair treatment for the U.S. shipbuilding industry in the international marketplace. The second prong is to provide assistance to U.S. shipyards in the transition from dependence on defense contracts to commercial competitiveness. The Administration's plan provides important as-

sistance to U.S. shipyards as they prepare to take advantage of the significant opportunities provided by this decade's rapidly expanding international market. Yards will have to be -- and no doubt will be -- aggressive in their own efforts to develop competitive designs and market them world wide; to establish a stronger relationship with their suppliers; to improve productivity in order to drive down costs and shorten delivery times; to ob-

tain competitive labor packages and remain competitive in wages; and to seek private financing sources and joint venture partners here and abroad. Building on their recent success in military construction, there is every reason to believe that American ingenuity can meet these challenges. The Administration looks forward to working with Congress and the industry in establishing a basis for the industry to enter the international market place.



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MarAd Allows APL To Boost Feeder Vessel Service

The Maritime Administration has said it will allow American President Lines Ltd. (APL) to increase its number of foreign-flag feeder vessels operating on APL's Red Sea extension service to three. The action amends a waiver APL was granted by MarAd in 1991, to operate a foreign-flag vessel of up to 500-teu capacity between Colombo or Fujayrah and ports in the Red Sea (excluding Egypt and Ethiopia), Gulf of Aden, Oman.

Southern Holdings Gets Permission To Sell Drill Barge

Southern Holdings, Inc. New Orleans, La., received the Maritime Administration's permission to sell its 1,395-dwt drill barge Mr. T.M. to Cad-Drill to North Africa, Ltd., Grand Cayman, and transfer it to Cayman Islands registry.

Bethlehem Steel Wins Contract To Refit Ships

Bethlehem Steel Corp., Bethship, Sparrows Point, Md., has won a contract for almost \$24 million from the Maritime Administration for drydocking, reflagging, coating and preservation, repair and conversion and deactivation of the Cape Washington and Cape Wrath, two of 12 Ro/Ro vessels purchased by MarAd last year to upgrade the Ready Reserve Force (RRF). The work is expected to take 95 calendar days for each vessel.

Tacoma Port To Begin Dredging Project

The Port of Tacoma is launching an \$18.1 million dredging project aimed at combining environmental cleanup with other large-scale Port improvements. With more than 2.8 million cubic yards of material due to be moved, it is the largest Port of Tacoma dredging since the Blair Waterway was completed in 1965, and part of a broader Sitcum Waterway cleanup project, given federal approval after more than three years of planning and review. To date, the Port has spent about \$5 million on testing, design work and planning for the project. The project includes deepening the Sitcum and Blair Waterways to a minimum of 45 feet; construction of a 21-acre marine habitat on the Milwaukee Waterway; a 24-acre expansion of a marine terminal facility that also serves as a cap to seal in contaminated sediments; and the clean-up of metals.

Kvaerner Wins \$25.7 Million Finnyards Turbine Order

Kvaerner AS said it has received an order to deliver four gas turbines worth approximately \$25.7 million to the Finnish Shipyard Finnyards. The turbines are Kvaerner/General Electric gas turbines with a total effect of 60,000 kW. Delivery is expected to be complete by June, 1995. Finnyards has given Kvaerner the option to deliver main machinery for the building of a second Stena NSS catamaran ship. Kvaerner is currently contracted to deliver main machinery for the first catamaran. Both ships were ordered by Swedish ship company Stena AB.

Meyer Werft Delivers Passenger Vessel "Dobonsolo"



On October 10, Meyer Werft of Papenburg, Germany delivered the 12th passenger ship to the directorate general of Sea Communication, located in Jakarta, Indonesia.

The 14,610-gt new building, dubbed "Dobonsolo" (after a mountain in Irian Jaya, West New Guinea), is the second vessel in a series of five passenger ships for the Republic of Indonesia. Upon completion of this series, the yard will have built a total of 21 ships for Indonesia. The yard's orderbook also includes the 67,000-grt cruise vessel Oriana for P&O, and two 70,000-gt cruise vessels for Celebrity Cruises. The 480-foot Dobonsolo is propelled by a twin engine plant with reduction gear and controllable pitch propellers. Engines are MaK four-stroke diesels, type 6M 601C, resiliently-mounted. Each has an output of 6,400 kW (8,700 hp) at 428 rpm.

The engines are run through Renk Tacke gears, driving Lips propellers.

The Dobonsolo also features a Siemens Simos IMA 51 monitoring system, which is based on the Simatic S5.

The ship is divided into four fire zones, and a smoke and fire-detecting system is installed in the machinery spaces, cargo hold and air conditioning room. A CO₂ fire-fighting system is provided in the engine rooms and cargo holds, while a sprinkler system protects all other areas of the vessel. The interior of the ship is typically Indonesian and consists of incombustible material. All paints, pictures and other wall decorations were chosen by Indonesian architects. Most of the Indonesian decorations, however, were made in Germany. For more information on Meyer Werft,

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ELECTRONICS UPDATE

SPD Technologies Rolls With The Changes, Targets Civilian Specialty Market

SPD Technologies, a noted Philadelphia-based firm with roots going back to 1890 which builds, repairs, overhauls and services switchgears, is now targeting various commercial projects as a direct result of declining Navy work.

"We love specialty work," said **Dan Schuster**, SPD's vice president of marketing. "That is our niche. That is what we sink our teeth into because practically every Navy contract we worked on is what you could call a specialty job. And Navy contracts nearly always have very tough specifications and schedules to meet."

According to Mr. Schuster, the company is still "95 percent Navy," but the transition to commercial work, in the maritime and other markets, is well in motion.

SPD is currently in the process of talking with other manufacturers to discuss strategic alliances, in order to form an unbeatable team

to attack commercial markets.

With Navy work declining, SPD is increasingly focused on the world's non-military markets, and the company's "big gun" is its long and successful experience in specialty circuit-breaker work for the Navy.

Beyond that, SPD brings a formidable array of weapons to tackle the new markets. SPD was reportedly the first to develop an automatic battery monitoring system for submarines, and was involved in the breakthrough development of the first electronically-controlled 100 ampere military-spec circuit breaker. A recent example of SPD's work is exemplified by its work on the Seawolf-class submarines.

What Seawolf needed was switchgear that could pack more power distribution circuits into a smaller space, while at the same time lowering allowable temperature rise. This had to be accomplished without forced ventilation,



or even ventilation openings in the rear of the enclosure.

SPD approached this specialty job with innovation—engineering a shock-resistant unit easily accessible for installation and maintenance with a special fault detection system and single-weld structure that reduced parts and the unit's overall weight by 30 percent.

Founded in 1890 as Cutter Elec-

trical Manufacturing Company, and later called I-T-E Imperial Corp., SPD Technologies is known worldwide for its innovative approach to the manufacture of switchgear, and for the repair, overhaul and service of circuit breakers.

For additional information on SPD Technologies,

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Tranter Expands Applications Of Superchanger Heat Exchangers

Following years of extended testing, including vibration per MIL-STD-167, shock per MIL-S-901C, thermal, pressure drop and gasket sealability, Tranter Superchanger[®] plate and frame heat exchangers with designated marine features are now on 16 classes of U.S. Navy ships, particularly for electronic cooling.

This program is the result of Tranter's addressing the Navy's need for a cooler that would be resistant to corrosion and erosion by seawater. Years of tests in the fleet verified that plate heat exchangers with titanium plates are totally resistant to both of these conditions, even at elevated velocities. In many

cases, the only required maintenance has been periodic backflushing of the units. In addition, the high turbulence in the plate heat exchanger helps minimize biofouling and maintain high heat transfer conditions.

These findings have justified the replacement of numerous shell and tube electronic coolers with copper-nickel tubes that have failed on ships with Superchanger units.

Substantial experience with Superchanger units in these and

other applications has already been logged by Navy T-AO fleet oilers, commercial containerships and tankers, barges and dredges.

The newest applications for Superchanger exchangers have included engine cooling on the M/V Mississippi towboat owned by the U.S. Corps of Engineers, and the 224-foot wooden MCM-14 Countermeasure Ship "Chief" launched in June. Aside from being erosion and corrosion resistant, these titanium-plated heat exchangers reportedly offer other advantages, including: favorable price, space and weight specifications; ease of maintenance and repair; and resistance to fouling due to high turbulence. The units, which have recorded excellent test results in the fleet, comply fully with ABS and U.S. Coast Guard requirements. Tranter's model selection offers capabilities up to 16,000 gpm. Maximum design pressure ratings for the Superchanger frame configurations vary from 150- to 350-psig. Design operating temperatures fluctuate from -22 to 350°F based on the gasket material. For additional free information,

Circle 49 on Reader Service Card

NNS Joins Yards In Bid For Building Eight LNG Carriers

Newport News Shipbuilding (NNS) has joined with three other shipyards—IHI, Fincantieri and Sumitomo Heavy Industries—in submitting a joint budgetary proposal to build eight 138,000-cubic-meter LNG carriers for the Italian gas utility Snam. NNS also signed a formal license agreement with IHI that allows NNS to use IHI design technology to build LNG tankers. NNS now has obtained licenses for all four major LNG containment system designs. For free information on NNS,

Circle 97 on Reader Service Card

GE Marine & Industrial Appoint Cull And Bolsinger

GE Marine & Industrial Engines (M&IE) named **Richard Cull** president and general manager, M&IE Asia/Pacific Business Operations, General Electric Technical Services Co. (GETSCO). Located in Hong Kong, he is spearheading M&IE's power generation and marine activities in Asian markets. **Lorraine Bolsinger** was chosen to replace Mr. Cull. She will be responsible for developing opportunities for M&IE's power generation, oil and gas and marine technology markets other than those covered by Mr. Cull. She will also be responsible for world aeroderivative gas turbine sales.

Metro Machine Wins U.S. Navy's AEGIS Award

Metro Machine Corp. was honored by the U.S. Navy for demonstrating superior performance in quality, reliability, delivery and cost on the U.S.S. Ticonderoga (CG-47) overhaul, the first overhaul of an AEGIS cruiser. The Navy has recognized the Norfolk-based ship repair and modernization firm by awarding it its 1993 AEGIS Excellence Award.

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Intl. WorkBoat Show

Annual Show Set For Dec. 2-4, 1993, in New Orleans, La.

Thousands of workboat and marine trade professionals will gather at the New Orleans Convention Center December 2-4 to attend the 15th annual International WorkBoat Show. The show affords a unique opportunity for commercial marine industry insiders to connect with other qualified members of North America's substantial inland, offshore and coastal fleets.

The 1993 edition of The International WorkBoat Show looks to continue its long-standing tradition as North America's premier workboat trade show. More than 12,000 attendees will be on hand to buy, sell, sample and compare the latest products and services, keep up with industry trends, make new business contacts and re-establish old ones. Attendees will have access to more than 800 booths featuring the entire range of commercial marine equipment, services and supplies from across the U.S. and around the world.

Stephen McDonough of The International WorkBoat Show said, "The 1993 exhibitor base represents a dynamic cross-section of the integral parts of the commercial marine industry. Whether the attendees are looking to build, buy, service or supply, there will be something there for everyone - from electronics to engines and winches to windows. Whether it's for casinos or crew boats, barges or boom boats, it will all be there on display."

At scheduled seminars, industry experts will address key topics on the latest design elements and technologies that can make today's vessels more cost-efficient, including hull lines, materials and construction techniques; propulsion; and on-board computerized control systems. A special feature at this year's show will be the U.S. Coast Guard's

Seminar Schedule

Thursday, Dec. 2:

Session 1

2:00 p.m. - 3:30 p.m. - **Workboat Hulls: Designing for Efficiency**

Friday, Dec. 3:

Session 2

10:30 a.m. - 12:00 p.m. - **Power and Economy: Engine Advancements and Alternatives**

Session 3

2:00 p.m. - 3:30 p.m. - **Onboard Computerization: Taking the PC to the Limit**

(USCG) display and seminars about its Vessel of Opportunity Skimming System (VOSS) - a modern, high-performance side-fitted single ship oil recovery system designed to be used with a wide range of vessels that may be available to respond to an environmental emergency. In the event of a large oil spill, special vessels and highly-trained personnel are seldom available quickly or in sufficient numbers. The USCG has adopted the VOSS concept to meet the need for highly-effective, simple, durable and strong equipment which can be delivered to a spill site on a single truck or C-130 aircraft, and placed into action almost immediately to combat oil pollution effectively.

To obtain more information on the 1993 edition of The International WorkBoat Show, contact Diversified Expositions, P.O. Box 7437, Portland, Maine 04112-7437, tel: (207) 772-3005; fax: (207) 772-5059.

WorkBoat Show Exhibitor List (partial):

A

ACR Electronics Inc.
Alabama Shipyard Inc.
Alaska Diesel Electric
Alfa-Laval Marine & Power
Allied Shipyard Inc.
American Bureau of Shipping

American VULKAN Corporation
Ameron Marine Coatings Division
Appleton Marine Inc.
AT&T Maritime Services
Atlantic Marine Inc.
Atlantic Marine Inc. - Mobile
Avondale Industries Inc.

B

Barracuda Technologies Inc.
Bender Shipbuilding & Repair Co. Inc.
BF Goodrich Co.
Bird Johnson Co.
Blohm + Voss AG
Bludworth Bond Shipyards Inc.
BOATRACS Inc.
Rollinger Marine Shop & Shipyard Inc.

C

Carderrock Division
Caterpillar Inc.
Cato Oil & Grease Co.
Centrico Inc.
Chevron USA Products Co.
Coltec Indus. Inc. - Fairbanks Morse Eng. Div.

Show Hours

Thursday,
Dec. 2 10:00 a.m. - 6:00 p.m.

Friday,
Dec. 3 10:00 a.m. - 6:00 p.m.

Saturday,
Dec. 4 10:00 a.m. - 5:00 p.m.

Photo Credit: Brix Maritime

Maritime Reporter/Engineering News

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oper Bearings Co.
rn Island Shipyard Inc.
spolich Refrigerator Co.
hn Crane Marine USA
rmins Engine Co.

ere & Co.
etroit Diesel Corp.

lliott Bay Design Group
nvirovac Inc.
RL Inc.
ureka Chemical Co.
xon USA

alk Corp.
W. Fernstrum & Co.
Fleetguard Marine
Furuno USA Inc.

L.F. Gaubert & Co. Inc.
G.E. Drive Systems
Gems Sensors Division
German & Milne
Gilkes Inc.
Glamox Canada
Gulf Coast Fabrication Inc.

Hempel Coatings (USA) Inc.
Henschel Inc.
Holset Engineering Co. Inc.
Hopeman Brothers Inc.
Hyde Products Inc.

Ian-Conrad Bergan Inc.
ICOM America Inc.
In-Place Machining Co.
International Paint/Courtalds Coatings
Inventory Locator Service Inc.
ITT Electro-Optical Products Division

Jamestown Metal Marine Sales Inc.
Jastram Engineering Ltd.
Jotun Valspar Marine Coatings

Kahlenberg Brothers Co.

KaMeWa AB
Kobelt Manufacturing Co. Ltd.
Krupp MaK Diesel Inc.
Kvichak Marine Industries Inc.

LEEAC Shipyards Inc.

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MMC International Corp.
Mobil Oil Corp.

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Negron Marine Consultants
New England Trawler Equipment Co.
NMP Corp.
North American Marine Jet Inc.

Orkot Engineering Plastics Inc.
OmniTrust Inc.

Peterson Builders Inc.

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Rice Propellers
Robertson Marine Systems Inc.
Royal Chemical Corp.
The Royal Institute of Naval Architects

Samson Ocean Systems
Scale Reproductions
SeaFab Inc.
Karl Senner Inc.
Service Marine Industries Inc.
SGC Inc.
Sigma Coatings
Simrad Inc.
SI-TEX Marine Electronics Inc.
Sperry Marine Inc.
Spurs Marine Manufacturing Inc.

Stam Supply Inc.
Stan-Blast Abrasive
Standart Communications Corp.
Stewart & Stevenson Services Inc.

Texaco Lubricants Co.
Textron Marine Systems
Thrustmaster of Texas Inc.
Trimble Navigation Ltd.
Trinity Marine Group
Turbine Specialties Inc.
Twin Disc Incorporated

Ulstein USA Inc.
U.S. Army Corps of Engineers

Viking Fender Co.
Viking Life-Saving Equipment
Volvo Penta North America Inc.

Wartsila Diesel Inc.
Willard Marine Inc.
Williams Detroit Diesel-Allison

ZF Industries
Zodiac of North America

gratings, into the cargo holds. This helps in the transportation of both fresh and frozen cargo. For more information on Sapa,

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Lytron Series 6000 Heat Exchangers Designed For Water Cooled Applications

Designed for applications where water is the cooling liquid, Lytron Series 6000 heat exchangers offer the lowest cost and highest efficiency of all Lytron standard heat exchangers. The units offer performance-enhancing features such as all copper mechanically bonded fin-and-tube cores for superior heat transfer performance and all silver brazed joints for reliability. Lytron Series 6000 heat exchangers are stocked for off-the-shelf delivery. For free information from Lytron,

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Sapa Provides Reefer Gratings For Vessels

Sapa has won an order to supply 25,000 square meters of aluminum reefer grating to Gdansk Shipyards for four reefer vessels currently under construction for Dole Fresh Fruit of Costa Rica. Sapa has considerable experience in producing high-class aluminum reefer grating, and by the end of 1992 the company will have supplied more than 200,000 square meters of reefer grating to approximately 40 different vessels. Aluminum reefer gratings are used as floors in cargo holds in order to transport refrigerated air under the

NAVSEA Approves New Hydrasearch Line

Hydrasearch Co., Inc. received Naval Sea Systems Command (NAVSEA) approval on its new HS449 line of reusable end fittings for naval applications. The line complies with Military Specifications MIL-H-24135/4 and MIL-H-24135/10 for 2-, 2.5-, 3- and 4-inch reusable end fittings and hoses and will appear on Qualified Products Listing QPL 24135. These products represent an expansion of Hydrasearch's Marine Hose and Fitting Line. For more information on Hydrasearch,

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New Marine Propulsion Control Technology From Mathers Controls. MATHERS 860 CONTROL

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Canadian Firm Sells Vessel To Russian Buyers

White Pass Transportation of Whitehorse, Yukon, Canada, sold its 7,011-dwt combo container ship/tanker "Frank H. Brown" to Russian buyers. The Canadian-flagged Frank H. Brown, originally built by Canadian Vickers, Montreal in 1965, regularly traded between Vancouver, B.C. and Skagway, Alaska hauling con-

tainers and fuel, and is believed to be the only combination tanker/container ship operating on the coast. The sister vessel "Klondyke" was sold several years ago. The new owners plan to base the vessel near Vladivostok on the Russian East Coast.

Ulstein Verft Completes Series Of Seismic Vessels

The naming ceremony for the sixth

in a series of seismic vessels delivered from Ulstein Verft to Western Geophysical took place in the Geiranger Fjord October 16. The six seismic vessels are of three different sizes—the last two are 3,700-dwt, 256 feet long with a breadth of 56 feet. The trial speed was almost 16 knots. The major deliveries are main engines from Ulstein Bergen, propulsion systems from Ulstein Propeller, Ulstein high lift rudders, windlasses from Ulstein Norwinch and switchboards, alarm

systems, electronic remote control system, consoles and even more electronic equipment from Ulstein Marine Electronics. For more information on Ulstein Verft,

Circle 139 on Reader Service Card

COMSAT Introduces Fax Service For Mobile Link

COMSAT Mobile Communication announced the introduction of facsimile service for users of the Mobile Link Inmarsat-M digital satellite service. Group III fax service at 2.4 kbps is now available in the Atlantic and Pacific Ocean Regions through the COMSAT land earth stations at Southbury, Conn., and Santa Paula, Calif. It will be offered in the Indian Ocean Region when the new COMSAT land earth station opens at Kuantan, Malaysia during early 1994. For more information on COMSAT,

Circle 140 on Reader Service Card

Crowley Maritime Selects MCI For Global Communications Services To Latin America

Crowley Maritime Corporation announced it has selected MCI to provide its Global Communications Services (GCS) to Latin America under a new, five-year, multi-million dollar agreement.

MCI will install small satellite antennas, known as Very Small Aperture Terminals (VSATs), at approximately 40 Crowley Maritime locations in 14 countries in Latin America. The VSATs will connect the foreign locations to Crowley's data operations center in Miami for two-way interactive data communications. In April, 1992, MCI was the first carrier to announce a trans-Atlantic VSAT network between the U.S. and Europe through COMSAT via the INTELSAT satellite system.

Norway, Iceland Now Have Northern Lights

Alaska Diesel Electric, maker of Northern Lights generator sets and Luggers propulsion diesels, announces a new representative for Norway and new dealership in Iceland.

Lugger and Northern Lights will now be represented in Norway by Viteco Naval Consultants. Viteco, headed by Torgeir Evjen, is active in workboat, fishing boat and the offshore oil and gas markets. Viteco also consults with the Norwegian Navy on many state-of-the-art projects.

Viteco is setting up a network of service points along the traditional trade routes on the Norwegian coastline.

In other news, a dealer has also been appointed in Iceland. MD Velar h.f. will be selling and servicing Northern Lights generator sets and Luggers diesels throughout Iceland.

Maritime Reporter/Engineering News

Luggers are the Pro's Repower Choice

There are 11 Luggers, from 61 to 1300 HP. So if you want increased performance, lower fuel costs and long run reliability, see a Lugger repower dealer or boatyard now.



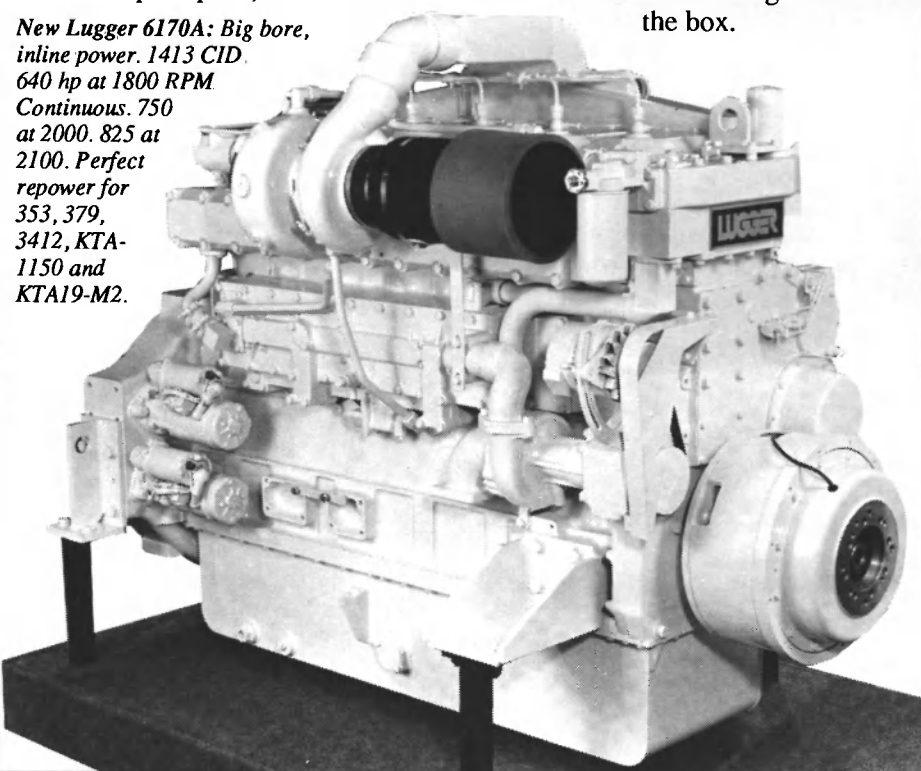
If your old engine is holding you back, replace it with a Lugger.

If you need more, usable power, a Lugger can give it to you. Up to 1300 high torque horses.

More power plus increased efficiency. All Luggers are four cycle diesels for better fuel economy, quiet operation and low oil consumption or leakage.

Large Luggers have unique fuel saving features such as cast iron pistons, to give you remarkable specific fuel rates (as low as 0.330 lbs-per-hp-hr.)

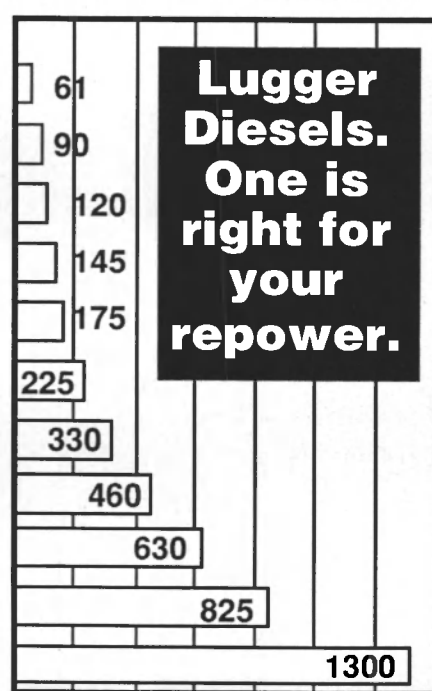
New Lugger 6170A: Big bore, inline power. 1413 CID. 640 hp at 1800 RPM. Continuous. 750 at 2000. 825 at 2100. Perfect repower for 353, 379, 3412, KTA-1150 and KTA19-M2.



Lugger's clean, simple inline designs make installation easy, even in vessels that had Vee engines before. One side service makes routine maintenance easier too.

Customize your Lugger. Choose front PTO's with electric clutches, pulleys, high output alternators, oil change pumps, multiple VDO panels and much more. We build your engine your way, to fit your vessel.

And since Luggers are dyno tested with the options installed, you know it's ready to give you years of reliable service right out of the box.



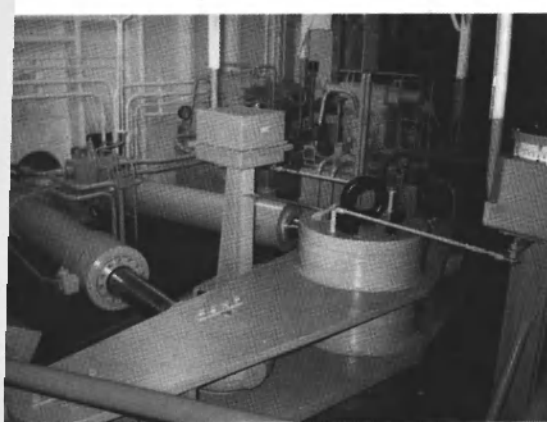
Send for a free brochure on a Lugger and the Northern Lights genset that's right for your vessel. Contact: Alaska Diesel Electric, Inc. Box 70543, Seattle, WA 98107. Seattle, WA: 206-789-3880. Anchorage, AK: 907-562-2222. Pompano Beach, FL: 305-946-7601. Boston, MA: 617-561-2800.

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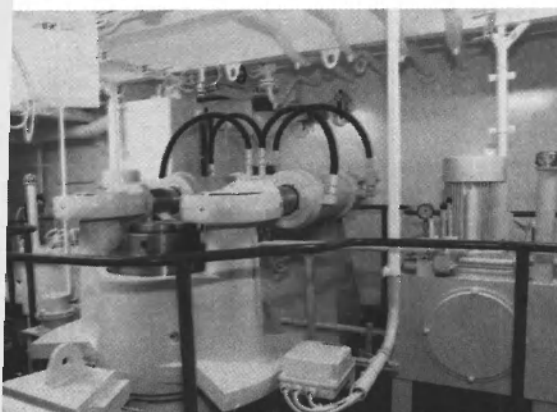


See Lugger and Northern Lights at the Work Boat Show booth 1209

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Steering gear - Type: RZ 234/35°

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One of two lagoon service vessels delivered by Marathon Marine to Grande Prairie, Alberta.

Marathon Marine Delivers Hatfield- Designed Lagoon Service Vessels

Marathon Marine Manufacturing Ltd. of Edmonton, Alberta delivered two aeration lagoon service vessels to Weyerhaeuser Canada Ltd. pulp mills in Grande Prairie, Alberta and Prince Albert, Saskatchewan.

The vessels measure 36 feet long, with 18-foot beams, three-foot depths of pontoons and four-foot depths of main hull, and are of all welded aluminum construction. The hull is of "tuning fork" configuration to enable nestling of the large aeration pump floats between the pontoon hulls forward for pump and motor servicing. The floats which support the pumps and associated motors are arrayed across the surface of the lagoons and individually anchored by four lines to the bottom, requiring a high degree of maneuverability of the service vessels

to enable them to effectively perform their work. Hinged and removable grating decks are fitted between the hulls for worker safety while servicing the aeration pumps and motors. A 3,000-lb. capacity deck crane is provided for lifting of the grating sections and for general lifting capability over the forward working area. The vessels are also fitted with mounts forward of the deckhouse to take large electric power cable reels used when laying and servicing the network of cables which are spread across the floor of the lagoon and connected to individual pump float motors. Additional work to be carried out by the vessels includes regular sampling of the effluent water quality and the positioning of flow control barriers within the lagoons.

Propulsion and steering is provided for each vessel by a 235-hp, 2,900-rpm continuous rated Star Power 444 TD/260 Marine Diesel engine, keel cooled, with ZF MPM IRM 50 I direct ratio reverse gear driving a Kodiak 403 Waterjet Propulsion Unit. A fully enclosed steering/control deckhouse is located on the after deck with access to the machinery compartment below. As well as providing the usual space for the stowage of tools and spare parts necessary for the work that is to be carried out, the deckhouse provides shelter and a place for operators to warm up when working on the lagoon in winter sub-zero temperatures. The service vessels were designed by Peter S. Hatfield Ltd., Naval Architects, Marine Engineers and Marine Consultants of Vancouver, B.C., which worked closely with **Greg Lancaster** of Weyerhaeuser in Grande Prairie, Alberta to develop the basic performance characteristics required.

For more information on Marathon Marine ,
Circle 1 on Reader Service Card

For more information on Peter S. Hatfield,
Circle 2 on Reader Service Card



One of the 26 USCG 82-foot patrol boats re-engined with Caterpillar V-12 diesels.

Ocean Technical Services Completes USCG Patrol Boat Re-Engine Project

A major engine changeout project, systems refurbishment and shell plate renewal was completed by Ocean Technical Services, Inc. (OTECH) on 26 East- and Gulf Coast-based 82-foot U.S. Coast Guard (USCG) WPCBs (patrol boats). Beginning in October, 1991, this repowering project consisted of replacing the existing Cummins engines with new Caterpillar V-12 800-hp diesels. The cutters were refitted four at a time with the entire project being completed eight months ahead of schedule.

There was a lot more to the project than changing out the engines. The entire drive train was rebuilt using the original base-line plans for the cutters. It was repositioned from the engine to the propellers. New foundations, engine beds, propulsion shafts, bushings and bearings were installed. Existing propellers were rebuilt to the correct diameter, realigned and repitched. Repiping, reinstallation of electrical fitting and the exhaust system were also completed. The cost to the USCG for this project averaged \$150,000 per cutter, not including the

cost of each new engine. For more information
on OTECH,

Circle 6 on Reader Service Card

SeaArk Delivers New USCG Boats

SeaArk Marine delivered six 21-foot welded aluminum patrol boats to the U.S. Coast Guard (USCG). The boats, which are SeaArk's "Commander" series, will be used by Marine Safety Units of the USCG throughout the Central U.S. This was the second order of similar sized vessels delivered to the USCG by SeaArk. Last December, SeaArk delivered eight 21-footers built to meet specific job applications. The USCG will use its trailerable boats for port safety and security, oil spill response, environmental monitoring and rescue missions. With its enclosed cabin, the boats are capable of year-round operations. The new boats have deep-V hulls and are noted for their smooth ride in choppy waters and excellent handling at higher speeds. Powered with twin 100-hp commercial motors and weighing 4,000 lbs. each, the "Commanders" exceeded 32 knots during builder's trials and were able to plane at 18 knots on a single engine. For more information on SeaArk Marine,

Circle 3 on Reader Service Card



One of six patrol boats delivered by SeaArk Marine to the USCG.

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Winninghoff Delivers Tour Boat



Operating on the upper Charles River in Waltham, Mass., the "Totem Pole" is the first river tour boat to operate on this section of river since 1889 when a 150-foot steam boat was forced out of operation by low bridges. While the low bridges still stand, Captain **John Connor** was determined to start a tour business that would take advantage of the Charles River's recent reclamation from polluted obscurity. Faced with shoal draft, low bridges and a need for wheelchair accessibility, Totem Pole Tours contracted with Winninghoff Boats to design and build a custom welded aluminum tour boat. Delivered this past summer, the 30-foot long passenger boat has a 9-foot beam. The vessel can carry 30 passengers and features a bow door/ramp for wheelchair access and a hydraulically-controlled roof to clear the low bridges. For more information,

Circle 45 on Reader Service Card

San Diego Utility Uses Workskiff Boat For Variety Of Survey Work



A 16-foot Workskiff-built boat chosen by San Diego Gas & Electric Company for survey work.

San Diego Gas & Electric Company chose Magnum Boat to build a 16-foot survey vessel for the California utility. Magnum Boat recently changed the name of its company and boats to Workskiff, Inc. **Richard A. Peterson**, a survey party chief for San Diego Gas & Electric Company, said that during an average work day, the boat carries two to four persons, an eight-foot tide gauge, hip waders, sledge hammers, a variety of flagging, tapes, stakes and other equipment. Among provisions in the boat are a center console with a custom wind screen that also mounts reflectors used for electronic distance measurement; dash-mounted marine radio; radio antenna; GPS navigation unit; recording fathometer with a through the hull fitting for the transducer; a holder for a company, hand-held radio; a compass; and a dual battery system with isolator switch.

For more information from Workskiff, Inc.,
Circle 46 on Reader Service Card

Westinghouse Awarded Contract

Westinghouse Electric Corp. has received a \$71 million contract from the U.S. Navy's Naval Sea Systems Command to produce 212 MK 50 lightweight torpedoes. Westinghouse will manufacture, integrate and test the torpedoes at its Naval Systems Division facility in Cleveland. The MK 50 is designed to counter changing submarine threats through the year 2000. It dives deeper and runs faster than previous torpedoes of comparable size and weight. For more information,

Circle 71 on Reader Service Card

Maritime Reporter/Engineering News

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ere have been many recent developments in the burgeoning gaming vessel market. Here is the latest news of press time. Turn to page 57 for *Maritime Reporter's* 18-page Gaming Vessel Supplement

Hilton Gets First La. License

Hilton Hotels Corp. announced today the Riverboat Gaming Division of the Louisiana Police voted unanimously to grant a riverboat gaming license to Hilton and its partner, New Orleans Paddlewheels, Inc. for operation of their Queen of New Orleans riverboat casino. This is the first license to be awarded in the state, and clears the way for the Queen of New Orleans to open on schedule on February 10, 1994. The Queen of New Orleans will accommodate 2,400 passengers and contain 30,000-sq.-feet of gaming area with 1,400 slot machines.

• Trinity Wins Bally Contract

Trinity Marine won a \$19.4 million contract to build a riverboat casino for Bally's Casino Holdings, Inc. Construction is due to start next year at Trinity's Equitable yard. The 266-foot by 77-foot vessel will accommodate 30,000-sq.-ft. of gaming space, and could be completed as early as August 1994. For more information on the casino vessel building capabilities of Trinity Marine,

Circle 124 on Reader Service Card

• Capital Signs With Bender

Capital Gaming International signed an agreement with Bender Shipyard Inc. under which Bender will build a 320-foot riverboat for Capital Gaming's proposed operation in New Orleans. Capital said it will pay \$21 million for the riverboat, subject to change based on final specifications. The boat is scheduled for delivery October 30, 1994. For more information on the casino vessel building capabilities of Bender Shipyard,

Circle 125 on Reader Service Card

• Skylink Buys Houma Boat

Skylink America Inc. announced it has entered into an agreement to purchase a riverboat gaming vessel from Kehl River Boats, Inc. The riverboat, which is 292 feet by 74 feet, is being built at Houma Fabricators and is currently 50 percent complete with delivery expected April 1, 1994. The vessel is intended for use in the St. Charles Parish, La. area. For more information on the casino vessel building capabilities of Houma,

Circle 126 on Reader Service Card

• Lady Luck Buys Mo. Vessel

Lady Luck Gaming Corp. has entered a definitive agreement to acquire the M/V Cajun Magic, a 320-foot by 96-foot gaming vessel. Lady Luck will reportedly pay \$4.7 million to acquire the incomplete boat, and expects to plunge an additional \$10 million to \$15 million into the completion of the boat. The company plans to operate the vessel at its proposed riverboat gaming project site to be located in Jefferson County, Mo. The company has recently applied for, but has not yet been granted, a Missouri gaming license.

North Atlantic Marine Wins Electronics Contract

North Atlantic Marine recently designed and installed all the electronic systems for the M/V Silver Seas, a reconfigured Canadian Coast Guard vessel. The Silver Seas, 110 feet long with a 20-foot beam, will combine research and treasure hunting. It has been outfitted with new navigational systems provided by

Furuno and includes two new radars (48- and 72-mile models), a Global Positioning System (GPS), Ioran "C", a color video sounder, recording paper sounder and a video sounder by Laser Plot. Also, a new communications system was provided by Icom for the single side band and Ray Nav. for the VHF. Interior communications are by Regency. For more information on North Atlantic Marine,

Circle 142 on Reader Service Card

Kvaerner Wins Statoil Sleipner Platform Contract

Kvaerner Group has won a \$4 million contract to modify Statoil's Sleipner 'A' platform in the Norwegian sector of the North Sea. The contract calls for an extension of the cooperation between Kvaerner and Statoil on Sleipner projects. The job, due for completion in 1996, will be carried out by two units of the Kvaerner group.



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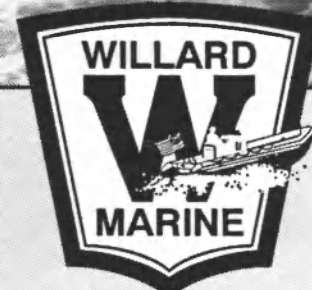


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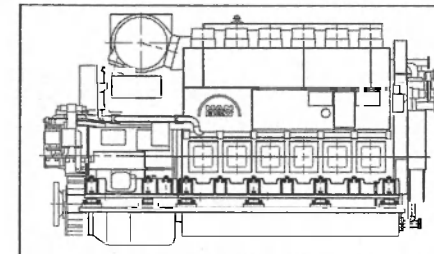
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Circle 308 on Reader Service Card

26

MAN B&W's Alpha Series: Power In A Compact, Resiliently-Mounted Design



MAN B&W's compact, low-noise Alpha engine design.

A recent test of the vibrational levels of MAN B&W's Alpha series of engines reportedly indicated a need for only 35 to 40 percent dampening as opposed to some engines' requirements of 90 to 95 percent. The Alpha series is designed to be compact, sturdy and well-balanced, keeping vibration induced by the combustion process to a minimum. For the in-line 23/30A engine series, reported vibration levels of 6-10 mm/s can be expected. The Alpha series engines are fitted with resilient mountings. In order to meet the moderate demands of ships with main engines below 1,500 kW in an economically sound, competitive way, MAN B&W performed testbed tests of a resilient mounting for its L23/30A (800 - 1,280 kW). The mounting retained compactness, short installation length, easy alignment and installation, and according to MAN B&W, costs 75 percent less than the conventional solution — mounting the engine on a self-supporting frame. The new flexible element was given a rather high degree of stiffness. There was a consequent loss of dampening, but that was easily made up by the engine's low vibrational level.

The flexible elements were bolted to brackets mounted on the engine foundation feet. Measurements on testbed with simulating 1.5 times maximum propeller thrust showed a relative dampening of 35 to 40 percent.

The dynamic deflections were kept down to plus or minus .1 mm vertically, and due to the propeller thrust, .5 mm longitudinally.

For more information from MAN B&W,

Circle 131 on Reader Service Card

Zidell Launches Brix-Owned Barge



Zidell Marine Corporation launched the BMC 26, a 270-foot by 42-foot by 16.5-foot well barge, at its Portland, Ore. location. The barge was purchased by Brix Maritime Company, to haul cargo on the Columbia River System.

Tidewater Elects Three Vice Presidents

Tidewater Inc. announced its board of directors promoted three marine executives. Elected vice presidents of Tidewater Inc. were **John P. (Peter) Laborde, Jr.**, **Van C. DeWitt**, and **Peter F. Fortier**. Tidewater Inc. owns and operates the largest fleet of marine vessels servicing the international offshore energy industry and owns and operates one of the largest fleets of natural gas and air compressors in the U.S.

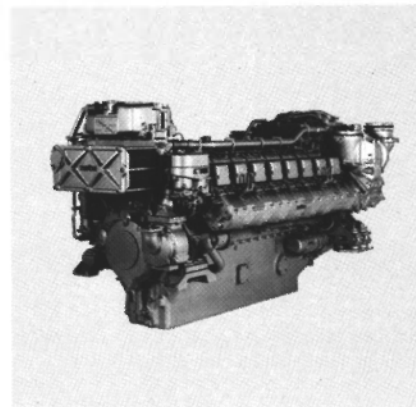
Maritime Reporter/Engineering News

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Circle 267 on Reader Service Card

Outstanding Workboats Of 1993



The Al Muthahda III from Bender.



The J.H. Simpson from SeaArk.



The Arctic Baruna I & II from Homeport Marine.



The Golden Gate from Gladding-Hearn.

The year 1993 was one in which some truly outstanding work was done in the field of workboat construction, despite depressed economic times.

The workboat selections this year include some firsts:

Halter Marine, a division of Trinity, built the Mississippi, the largest diesel towboat ever built in the U.S. for the U.S. Army Corps of Engineers; Gladding-Hearn built its first pilot boat, the Golden Gate, for The San Francisco Bay Pilots; and Marine Inland Fabricators built its most sophisticated workboat, the Robert E. Rowell, for New York City Sanitation.

Read on to discover how yards and suppliers teamed to create the most outstanding workboats for 1993.



The Safety Leader from Steiner Shipyards.



One of 12 OSRVs from Kvichak.



The Mississippi from Halter Marine (Trinity).



The Houston from SWATH Ocean.



The Aleutian Tern from Marco Pollution Control.



The Geological Survey 42' vessel from Munson Manufacturing.

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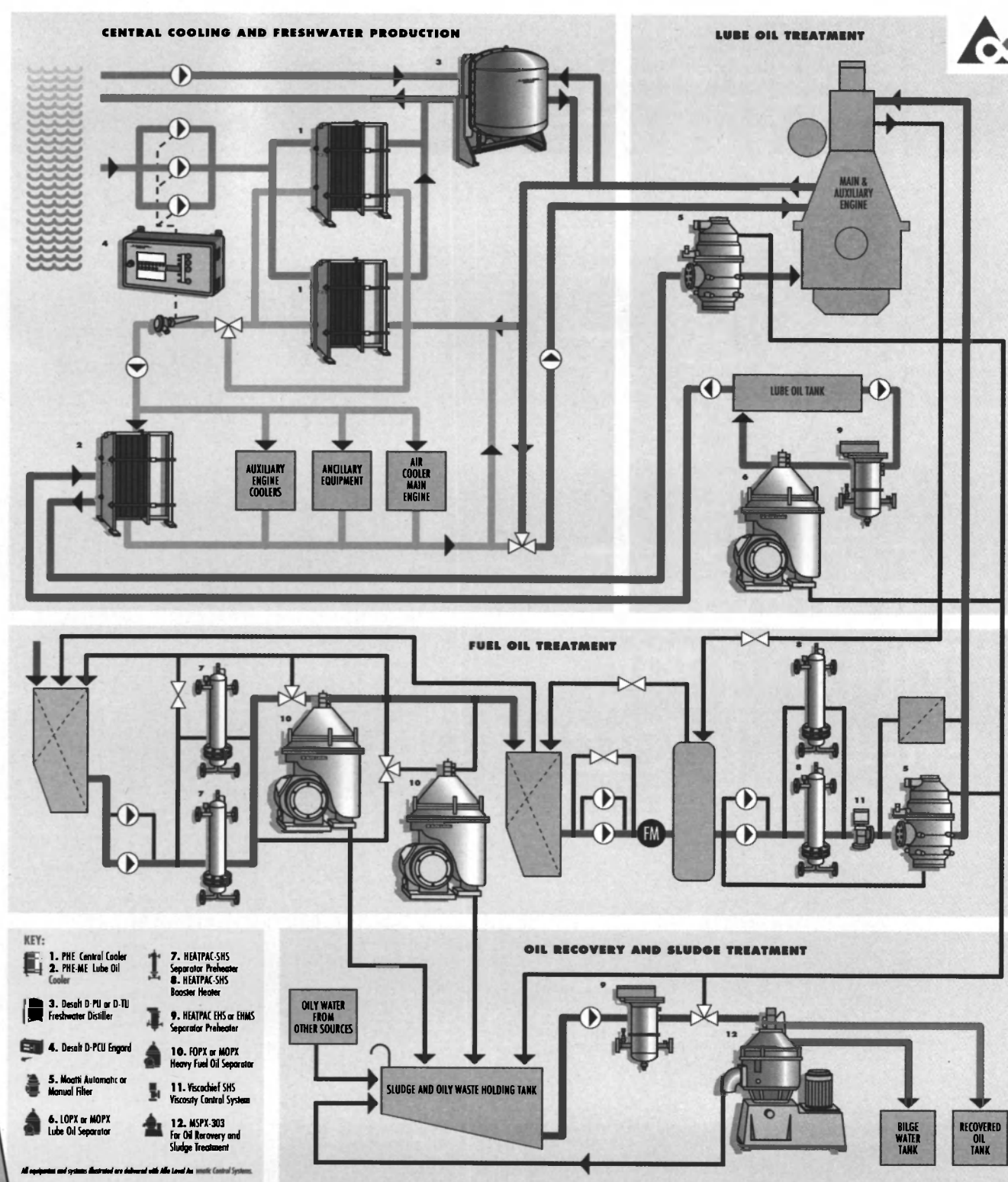
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Vessel: Al Mutaheda III
Type: Shrimper
Yard: Bender

Al Mutaheda III was the third of ten 83-foot shrimpers constructed by Bender Shipbuilding and Repair of Mobile, Ala., and shipped to the Port of Shaiba, Kuwait, but it was the first of the series delivered in 1993.

Bender built the vessels for United Fisheries and Bubiyan Fisheries, both Kuwaiti companies. The ships represent a new design, with double chine steel hull.

The ships, classified ABS, +A1 Fishing Service + AMS, have a beam of 24 feet and a fully-loaded draft of eight feet. They meet IMO regulations for fishing vessel stability, and for International Tonnage under 150.

Propulsion for each ship will be provided by a Caterpillar 3412T, providing 540 bhp at 1,800 rpm, with a Twin Disc MG-518 5:92:1 reduction gear, driving a four-blade Kaplan Manganese Bronze propeller, with diameter and pitch sized for trawling, operating in a Kort nozzle. Al Mutaheda III and its sisterships are equipped with electro-hydraulic steering. Electronics onboard include Robertson autopilot and various Raytheon instruments, including V82 color depth recorder and radar. The main winch on deck is a McElroy 620DD; the trynet winch is a McElroy 401E electric unit.

For more information on Bender,

Circle 109 on Reader Service Card

**AL MUTAHEDA III
EQUIPMENT LIST**

Main engine	Caterpillar
Propeller	Kaplan in Kort nozzle
Reduction gear	Twin Disc
Generator	Caterpillar
Autopilot	Robertson
Color depth recorder	Raytheon
VHF radio	Raytheon
SSB	Raytheon
Radar	Raytheon
GPS receiver	Raytheon
R.S.W. tank compressor	Carrier
R.S.W. tank motor starter	Nema
Deck machinery	McElroy

Vessel: Mississippi
Type: Towboat
Yard: Halter Marine (Trinity)

The U.S. Army Corps of Engineers has a new multi-purpose flagship, the \$21.8 million, 241-foot tow boat Mississippi, designed and built by Halter Marine, Inc., Moss Point, Miss., a subsidiary of Trinity Industries, Inc. The 7,000-hp tow boat is the largest diesel tow boat ever built in the U.S., and the fifth Corps of Engineers vessel to bear the name Mississippi. Most of the ship's time is spent moving barges, equipment and supplies on the Mississippi in support of mat sinking operations, but it also has a conference hall for 200 and a dining room than can accommodate up to 100.

The Mississippi has a 58-foot beam and a 12.5-foot depth. Design draft

November, 1993

is eight feet. The vessel is propelled using three Caterpillar 3606 diesel engines developing a total 7,000 hp, and has two "push-knees" at the bow. The ship can push up to 16 200-foot open hopper barges.

Col. Clinton W. Willer, Memphis District Engineer, said the vessel's construction had produced "phenomenal results in vibration and noise abatement." An observer reportedly noted at the Mississippi's acceptance trials that while the boat was near full throttle in

the Mississippi Sound, a small coin placed on edge at the base of the boat's stern capstan remained standing until it was toppled by the wind. The Mississippi's sophisticated computer system provides visual data on the waterways system, such as water flow, currents, vessel locations, etc., and its command control center provides instantaneous communications with Corps of Engineers land-based facilities.

The Mississippi also carries two 18-foot rigid hull inflatable boats for

use by inspection teams.

For more information on Trinity,

Circle 110 on Reader Service Card

Vessel: J.H. Simpson
Type: Survey
Yard: SeaArk

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delivery of a state-of-the-art survey vessel constructed by SeaArk of Monticello, Ark., the "J.H. Simpson."

The new 42-foot aluminum boat will be used on the Middle Mississippi River and play a key role in the Corps' award-winning Bendway Weir Project.

The new high-tech vessel utilizes satellite and sophisticated software not only to measure bottom depths, but river velocity and bottom sediment content as well.

The J.H. Simpson reportedly produces 100,000 times more data than previously-used equipment.

The survey boat is a 42-foot Dauntless Class vessel of all-welded aluminum, featuring a deep-V hull designed by C. Raymond Hunt Associates of Boston.

Power is provided by twin 8V-92TA Detroit Diesels, each producing 500 hp. Electrical power comes from a 12.5-kW Onan generator.

Both propulsion and generator systems use Fernstrom closed cooling systems to combat the increasing problem of Zebra Mussels blocking cooling passages.

Electronics, hydraulics and boom transducer arms were developed by Ross Laboratories, with SeaArk as the installation contractor.

The J.H. Simpson did double duty recently during the Mississippi River flood, using its transducer channel sweep system to survey breached levees, reportedly speeding up the repair process greatly.

For more information on SeaArk,

Circle 111 on Reader Service Card

OUTSTANDING WORKBOATS OF 1993			
VESSEL	TYPE	YARD	ENGINE
Al Muteheda III	Shrimper	Bender	Caterpillar
Mississippi	Towboat	Trinity	Caterpillar
J.H. Simpson	Survey	SeaArk	Detroit Diesel
The Houston	Pilot	SWATH Ocean	Caterpillar
Arctic Baruna II	Trawlers	Homeport Marine	Cummins
Safety Leader	Towboat	Steiner	Caterpillar
Aleutian Tern	OSRV	Marco	Perkins
Golden Gate	Pilot	Gladding-Hearn	Caterpillar
—	OSRV	Kvchak	Caterpillar
—	Geo-Survey 42'	Munson Manufacturing	Detroit Diesel
Robert E. Rowell	Workboat	Marine Inland Fabricators	Detroit Diesel
Vancouver	Tug	J.M. Martinac	Detroit Diesel

J.H. SIMPSON EQUIPMENT LIST

Main engines Detroit Diesel
Propeller Nibral
Reduction gear Twin Disc
Generator engine Onan
Engine controls Morse
Steering controls Teleflex Hydraulic Sea Star II
Shafting Aquamet
VHF radio Raytheon
Radar Raytheon
Compass Ritchie
Other electronics Ross
Air conditioning Coleman

Vessel: Houston

Type: Pilot

Yard: SWATH Ocean

SWATH Ocean's 2000 Class coastal pilot boat is reportedly the first use of SWATH (Small Waterplane Area Twin Hull) technology, originally developed for U.S. Navy use, for offshore pilotage. At 67 feet long with a beam of 37 feet and a load draft of eight feet, it has a maximum intermittent speed of 27 knots and a maximum range of 2,000 nautical miles. Because of its

twin displacement hulls and separation of propellers, the craft can "come along side" ships at speed for the transfer of pilots. Overcoming the suction encountered alongside a ship and pulling off is easily accomplished by the SWATH pilot.

Directional stability, maneuverability and design that is becoming widely accepted as a stable operational platform all combine to produce a craft ideally suited to the rigors of pilotage, reflecting lessons learned over two decades of research and development.

For more information on SWATH,

Circle 112 on Reader Service Card

HOUSTON EQUIPMENT LIST

Main engines Caterpillar
Generator Caterpillar
Engine controls Micro Command
Steering controls Maritime Dynamics/SWATH
Shafting Aquamet
Coatings Proline
VHF radio Standard
Radar Furuno
Compass Fluxgate
Fendering Johnson Duramax
Deck machinery Koleststrand Windlass bow

Vessel: Arctic Baruna II

Type: Trawler

Yard: Homeport Marine

Homeport Marine Services of Moss Point, Miss. launched the sec-

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and of two 327-gt stern trawlers to be owned and operated by Arctic Alaska Fisheries Corp., the Arctic Baruna II. The first was its sistership, the Arctic Baruna I. The vessel was designed by A.S. Designers and classed by the American Bureau of Shipping (ABS) for open ocean bottom trawling for shrimp and fin fish. At 113.6 feet long, it has a beam of 30 feet and a 13-foot draft, and will have a crew of 15. The vessel is powered by two Cummins KTA19M1 six-cylinder diesel main engines, totaling 1,000 hp with 6:1 ratio Twin Disc reduction gears turning Rice five-blade propellers in Kort nozzles to a top speed of 10 knots. Electrical power is furnished by 1,800-rpm Cummins NT855-MG2 diesel generator sets with 175-kW Kato generators. Hydraulic power is supplied by a Cummins NT855M2 320-hp diesel engine driving two Dennison 75/30, 75/10 GPM hydraulic pumps through a remote-controlled Bevis dual hydraulic pump drive. One main engine is equipped with an identical drive for 100 percent back-up capacity. The trawler is equipped with the latest technology in automatic hydraulic trawl winch systems, electronics for fish detection, and satellite navigation and communications systems. The product will be graded, boxed and frozen aboard. The vessel has a freezing capacity of 8,000 lbs. of product per day, which will be stored in the 150-ton freezer hold at -20 degrees F. For more information on Homeport Marine,

Circle 113 on Reader Service Card

ARCTIC BARUNA II EQUIPMENT LIST

Main engines	Cummins
Auxiliary engines	Cummins
Reduction gear	Twin Disc
Propellers	Rice
Generators	Kato
Engine room monitoring system	EMI
Steering system	Lund
Autotrawl system	Cosmo
GPM Hydraulic pumps	Dennison
Net reel	Aurora
Hydraulic pump drive	Bevis
Winches	McElroy, Pullmaster, Aurora
Winch & Net reel motors	Hagglunds
Processing/refrigeration systems ..	Grasso, Banks, Dole, Northstar
Deck crane, anchor winch	Aurora
Radars	Furuno
SSB radiotelephone	Raytheon
VHF radio	Sailor
Satcom "C" terminal	Thrane
Autopilot, Steering panel	Robertson
Magnetic compass	Robertson
Echosounder	Simrad
Color video sounder	Furuno
GPS receiver	Trimble
Color video plotter	Raytheon
Radio monitoring alarm	Bridgewatch
Sea temperature indicator	Dytek
EPIRB	Karnad
Inmarsat satcom system	JUE
Batteryless intercom	Vingtor
Weather fax	Furuno
Air conditioning	Carrier
Water maker	Sea Recovery
Galley range	Toastmaster

Vessel: Safety Leader

Type: Towboat

Yard: Steiner Shipyard

Steiner Shipyard of Bayou La Batre, Ala., delivered the harbor/towboat Safety Leader to the American Electric Power Service Corporation of Columbus, Ohio, which operates it on the Ohio River in Lakin, W. Va. Design and engineering assistance was provided by Ed Shearer of Shearer & Associates. The vessel, delivered in June, has a length of 66 feet, a beam of 24 feet, and draws about 6.5 feet. The main engines are two Caterpillar 3412Ts, each providing 503 hp, driving two 60-inch, four-blade Michigan Wheels

November, 1993



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propellers through Twin Disc MG-514 5.92:1 reduction gears. Engine control is provided by a Wabco twin engine station pneumatic propulsion control. Electrical power comes from two Caterpillar 65 kW generator sets. Designed for a combination of towing and engineering tasks, Safety Leader is equipped with two WW Patterson 20-ton deck winches and one capstan. For more information on Steiner,

Circle 114 on Reader Service Card

SAFETY LEADER EQUIPMENT LIST

Main engines	Caterpillar
Propeller	Michigan Wheels
Reduction gears	Twin Disc
Engine controls	Wabco
Generator	Caterpillar
Shafting	Aquamet
Coatings	Devco
VHF radios	Icom
Radar	Furuno
Pumps	Crown, Flomex
Deck machinery	WW Patterson winches, Schoellhorn-Albrecht capstan
Air compressor	Gardner Denver

Vessel: Aleutian Tern
Type: OSRV
Yard: Marco Pollution

Marco Pollution Control delivered the Aleutian Tern, a 42-foot U.S. Coast Guard (USCG) certified oil spill response vessel (OSRV) to Clean Sound Cooperative of Edmonds, Wash. Clean Sound is an organization made up of oil and oil transportation companies in Wash-

ington State whose goal is to provide more effective regional control of oil spills.

The Aleutian Tern is a new Marco model Coastal 42, with an overall length of 42 feet, a beam of 15 feet and an operating draft of three feet. It carries a two-person operating crew and its two Perkins 250-hp engines, driving four-blade Osborn propellers through Twin Disc 2.47:1 reduction gears, give it response speeds in excess of 12 knots.

The Aleutian Tern is configured to handle and store volatile Grade B cargoes and incorporates measures for gas hazard and ignition source control. This Coastal 42 utilizes Marco's unique Filterbelt oil and debris recovery system. Marco claims its Filterbelt, effective on all types of oils and in a variety of spill conditions, is the most versatile technology for removing oil and debris from open water, designed to recover more than 1,200 barrels an hour for persistent oil. Built and inspected for full compliance with USCG regulations, the Aleutian Tern is believed to be the first vessel built to receive certification under the USCG 03-92 guidelines for small recovery vessels.

For more information on Marco,

Circle 115 on Reader Service Card

ALEUTIAN TERN EQUIPMENT LIST

Main engines	Perkins
Reduction gears	Twin Disc
Propellers	Osborn
Steering controls	Hydraulic
Generator engine	Lugger
Generator	Northern Lights
Engine controls	Mathers
Radar	Furuno
Compass	Ritchie
Deck machinery	Hiab, Pullmaster
Pumps	Degmii

Vessel: Golden Gate
Type: Pilot
Yard: Gladding-Hearn

Gladding-Hearn, The Duclos Corp. delivered its first-ever pilot boat, the Golden Gate, to The San Francisco Bar Pilots. The boat will run to station boats located 11 miles west of the Golden Gate Bridge, operate as a standby station vessel, and run inside the Bay between anchorages and nearby Oakland.

Designed by the Somerset, Mass. shipyard and C. Raymond Hunt Associates of Boston, the 67-foot vessel's deep-V hull allows speeds of 25.5 knots, while offering superior handling capabilities and arrangements, complete with galley and seating for six in the wheelhouse. The twin-screw, all-aluminum vessel, which measures 18 feet across and draws six feet, is an all-weather boat powered by Caterpillar diesel 3412-DITA engines, each rated 764 bhp at 2,100 rpm. The engines drive two 36-inch nickel-bronze propellers via ZF 2.5:1 reverse/reduction gears and Aquamet 17 shafts.

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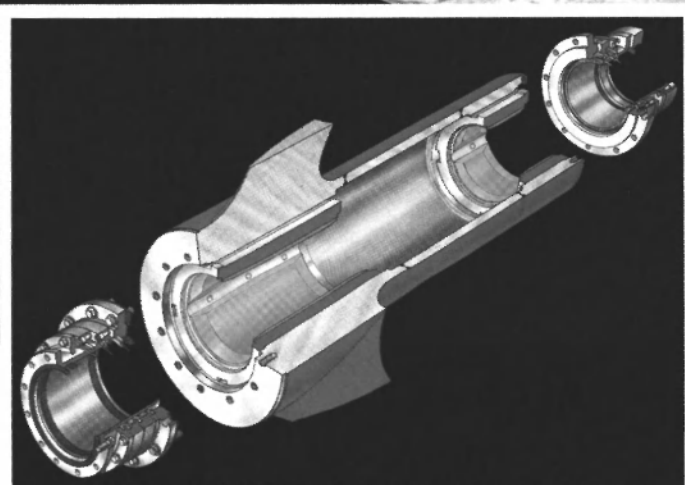
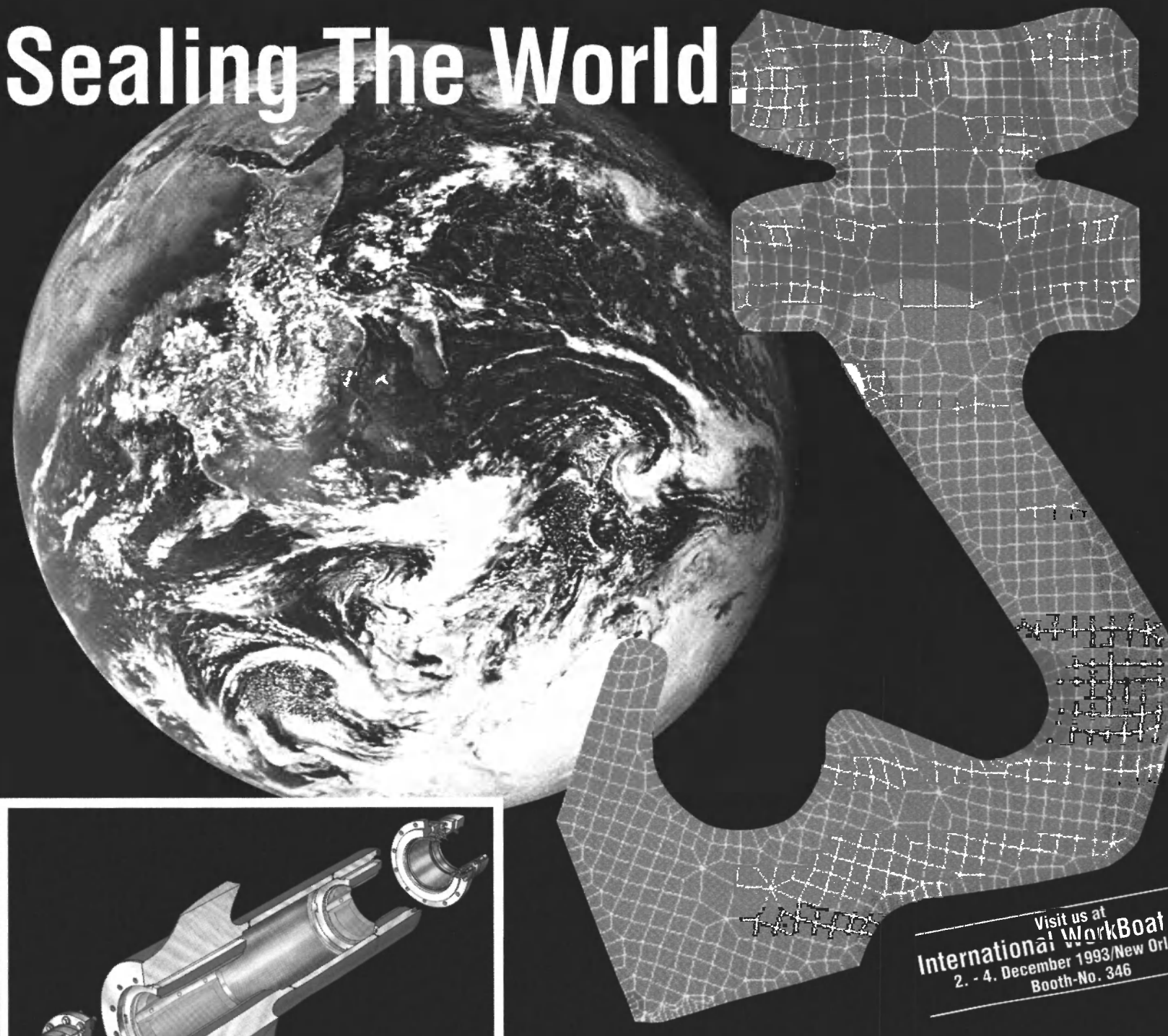


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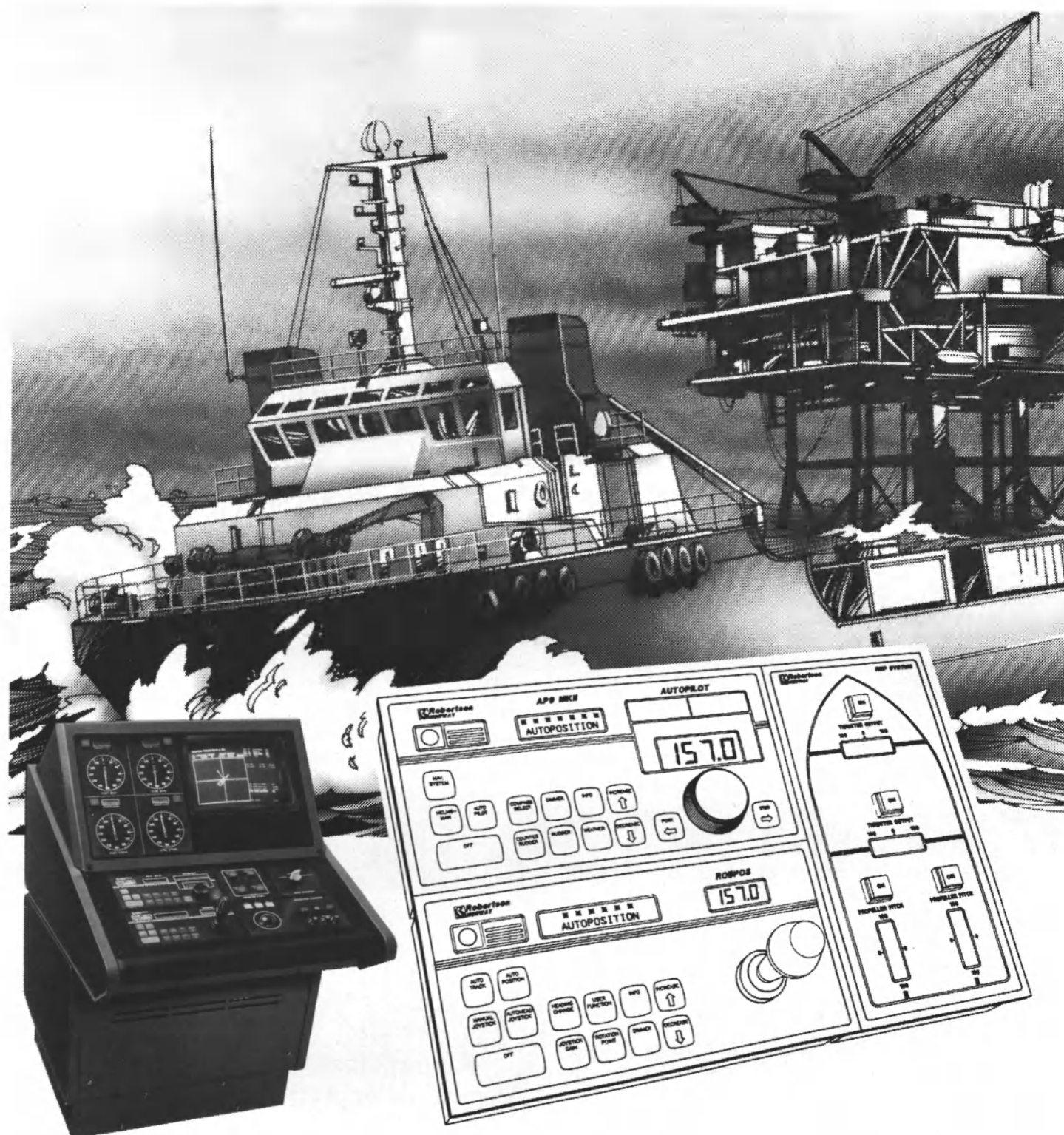
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traditional sea water piping, heat exchangers and keel-cooled main engines prevent sea-water corrosion by eliminating thru-hull fittings. A 1,000-gallon, remote-controlled ballast tank increases the vessel's stability in extreme sea conditions.

The vessel also features aft-station steering and control for greater visibility in the case of a person overboard, and water-level rescue steps recessed into the transom.

For more information on Gladding-Hearn,

Circle 116 on Reader Service Card

**GOLDEN GATE
EQUIPMENT LIST**

Main engines Caterpillar
Propellers Hall & Stewart
Reduction gears ZF
Engine controls Kobelt
Keel coolers Fernstrom
Gensets Lister
Generator control panel . Industrial Power Systems
Auto pilot Sperry
Radar Furuno
VHF Icom
Loran GPS Furuno
Depth sounder Datamarine
Compass Baker, Lyman & Co.
Loud hailer Icom
Galley equipment Sears
Sewage system Microphor

Vessel:—

Type: OSRV

Yard: Kvichak

Kvichak Marine Industries has built 12 OSRVs for the National Response Corporation (NRC).

During sea trials for the first boat which were conducted in June, NRC National Equipment Manager **Bob Governale** said, "We specified a boat that was cost-effective, yet safe and functional for multi-tasking, and expected a compromise as a result. Much to our surprise and delight, though, we have a vessel that ... exceeds expectations."

The all-aluminum handling/skimmer support boat is 28 feet long, with a beam of 11 feet and a depth of approximately six feet. It is powered by a 300-hp Caterpillar 3116 diesel, driving a 28- by 24-inch four-blade stainless propeller through a Twin Disc MG 5061 2.43:1 reduction gear. In addition to a speed of about 16 knots, the vessel achieves a bollard pull rating in excess of 4,500 lb. Other features of the Kvichak design include a fully-enclosed pilot house for all-weather operations, a mechanical davit with winch, a tow post, push knees and full-perimeter, four-inch D-rubber. Construction is of marine-grade aluminum throughout, with 1/4-inch hull and side plating, 3/8-inch chine plate, and 3/16-inch decking. "We're very proud of this vessel and the way it performs," commented Kvichak Vice President **Keith Whittemore**. "Working with the NRC people has been a real pleasure. They knew what they wanted and they've worked very professionally with us to achieve their goals."

For more information on Kvichak,

Circle 117 on Reader Service Card

November, 1993

OSRV EQUIPMENT LIST	
Engine	Caterpillar
Reduction gear	Twin Disc
Propeller	Kruger & Sons
Shaft	Aquamet
Batteries	Interstate
Navigation lighting	Aqua Signal
Halogen floodlights	Jasco
Exhaust muffler	Harco
Keel coolers	Walters
Controls	Morse
Steering controls	Hynautic
Hydraulic pump	Cessna
Fuel filter/heater	Racor
Halon system	Fire Boy

Vessel: —

Type: Survey Vessel

Yard: Munson Mfg.

The U.S. Geological Survey division, located in St. Petersburg, Fla., needed a vessel to fit its specific geological survey requirements. That boat was designed and built by Munson Manufacturing, Inc. of Edmonds, Wash.

The Geological Survey 42 will

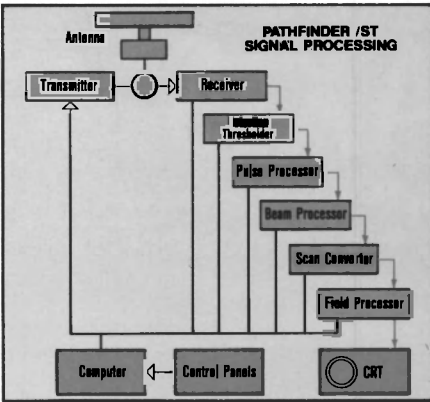
allow the survey teams to operate in both deep sea and shallow draft areas with live-aboard capabilities. It is outfitted with three 6V53TI 400-hp, 2,800-rpm Detroit Diesel engines with Twin Disc gears, three Hamilton 291 jets, Hynautic dual station triple controls, and a 400-gallon fuel capacity. Other equipment aboard includes a Hiab SEA 60 crane, Vickers 12.0 GPM pump, two 12 kW Onan generator sets with paralleling circuit panels, computer test work benches, removable aft

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Using increased signal-to-noise levels, high dynamic range, precisely matched pulse bandwidths, and exclusive Rain Rate circuits, PATHFINDER/ST receivers faithfully capture target returns even in severe clutter.

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PATHFINDER/ST Radars satisfy a very wide range of installation and operating requirements. Signal multiplexing reduces connections between PATHFINDER/ST receivers and displays. This, combined with electronic interswitching for dual systems, the ability to mount transceivers "up" in antenna pedestals, or "down" in separate cabinets, and keyboard entry of all set-up parameters, makes any installation straightforward, simple, and economical. In addition to having the optional IMO-required, antenna-mounted performance monitors, PATHFINDER/ST Radar software provides menus for extensive self-testing of virtually every function.

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Combined with higher performance transmitters and receivers, and the latest raster displays, ST provides performance levels never before available. Now, with PATHFINDER/ST, your vessels—and their crews—can have an important extra measure of safety and efficiency, including a

unique Safety-Coded CPA Circle, which shows course selections for safest CPAs. PATHFINDER/ST is available as an ARPA or a True Motion/Relative Motion display with Electronic Plotting. These displays can easily retrofit the displays in older Raytheon Bright Display Radar Systems, and can be high-performance repeaters for radars of most other manufacturers.

Comparison Tests Prove PATHFINDER/ST Radars See What Other Radars Can't.

In side-by-side comparison tests, a PATHFINDER/ST display and a conventional radar display were connected to the same radar system. *PATHFINDER/ST consistently displayed targets not detected by the conventional display*

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deck railings, custom survey transducer wells, and removable flybridge. Cabin outfitting includes Cruisare 30,000-BTU air conditioning, a Sperry Mark 37 gyrocompass, Sealand Traveler 510 head with SX12 level gauge, F12 Sealand pump, Norcold DE251 dual voltage refrigerator, fresh water system with Torrid MV20 hot water tank with accumulator, Polar P13-1 stainless steel sink, and Princess Seward P2001 650-watt marine grade microwave oven. Interior lights are AC/DC and V-berths are forward.

For more information on Munson,

Circle 118 on Reader Service Card

MUNSON GEOLOGICAL SURVEY 42' EQUIPMENT LIST

Main engines	Detroit Diesel
Waterjets	Hamilton
Reduction gears	Twin Disc
Steering controls	Hynatic
Generators	Onan
Compass	Sperry
Pumps	Vickers, Sealand
Air conditioning	Cruisare
Deck machinery	Hlab

Vessel: Robert E. Rowell
Type: Workboat
Yard: Marine Inland Fabricators

Marine Inland Fabricators of Panama City, Fla., delivered the Robert E. Rowell, an ABS-classed workboat, to the Department of Sanitation of New York City on Staten Island.

The Robert E. Rowell is the most sophisticated boat Marine Inland has built to date.

The vessel is 25.5 feet long with a 14.5-foot beam and a 4.5-foot draft, powered by a single Detroit Diesel 8V-71 engine working a 35-inch by 34-inch four-blade bronze propeller through a Twin Disc MG-509 reduction gear.

Twin flanking rudders improve maneuverability dramatically. The boat will be used primarily to tow a floating boom with a 15-foot skirt that closes off the Fresh Kills garbage unloading facility from New York Harbor. Because the boom must be opened and closed frequent-

ly to allow passage of the garbage barges and their tugs, one of the requirements of the vessel was to have minimum downtime for maintenance. The engine room has two stainless steel, removable fuel tanks and all stainless steel cooling water and hydraulics systems.

Assisting in the design and preparation of the drawings was D.S. Industrial and Marine of St. Paul, Minn. The project manager was naval architect and professional engineer **John R. Bond** of John R. Bond and Associates of Panama City.

For more information on Marine Inland Fabricators,

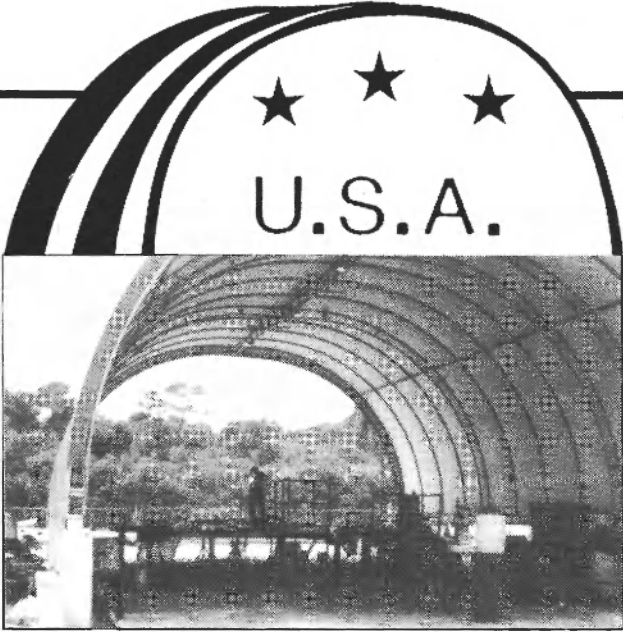
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ROBERT E. ROWELL EQUIPMENT LIST

Main engine	Detroit Diesel
Propeller	Michigan Lohrel Co.
Reduction gear	Twin Disc
Generator/inverter	Vanner
Engine control	Morse
Steering controls	Marine Inland Fabricators hydraulic
Coatings	Product Research Services
VHF Radio	Horizon
Compass	Danforth
Pumps	Rule, Atwood

Vessel: Vancouver
Type: Tug
Yard: J.M. Martinac

This year Shaver Transportation Company of Portland, Ore. took delivery of its new 76-foot, 3,000-hp ship assist tug Vancouver from J.M. Martinac Shipbuilding Corporation of Tacoma, Wash. The Vancouver will be an important addition to, and a significant upgrading of, ship assist capability in the Port of Portland, and on the lower Columbia River. The new 12-knot tug was designed by Robert Allan Ltd. of Vancouver, B.C., Canada, and was based on the familiar Z-30 design developed by that firm for C.H. Cates & Sons Ltd. of North Vancouver. It has a beam of 28 feet and a draft of 12 feet. The tug is powered by a pair of Detroit Diesel marine diesel engines driving Z-drive rudder/propellers, Niigata Model ZP-2As, through a reduction gear and torsional coupling. The propulsion system was supplied by IMPEG of Vancouver, which represents Niigata Engineering Company Ltd.




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in Western Canada and the U.S. Northwest. The engines of the tug are mounted on Lo-Rez spring isolators, and the engine is connected to the gearbox through a Lo-Rez Type F/HF/8HLF flexible coupling. The Z-drive gives this tug a full 360 degrees of thrust. Electrical power is provided by two Cummins 6CT8.3 460v, 3-phase diesels which produce 115 kW at 1,800 rpm. For more information on J.M. Martinac,

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VANCOUVER EQUIPMENT LIST

Main engines	Detroit Diesel
Propellers	Nigata with Kort nozzles
Generator engines	Cummins
Reduction gears	Nigata
Steering controls	Mechtronics
Coatings	International
Radar	Furuno
Compass	Ritchie
Loud hailer	Standard
Pumps	Cascade Machinery and Electric
Deck machinery	Burrard, Bege, Atlas

CACI Awarded \$20 Million Navy Subcontract

CACI International Inc., an international information systems and high technology services corporation, announced the award of a competitive subcontract in support of the U.S. Navy Intra Supply Support Operations Program (ISSOP) for the Fleet Operations Supply Support Assistance Center (FOSSAC) in

Norfolk, Va. CACI's share of orders issued under the subcontract is expected to be approximately \$20 million over a three-year period of performance. Under the contract, CACI will perform as a subcontractor to Management Consulting Inc. to provide logistics support services, including material handling, distribution, stowage, inventory management, and inventory reconciliation to increase supply readiness throughout the fleet, located along the U.S. West Coast and the Pacific Ocean area. Since 1987, CACI has provided program support to FOSSAC, including fleet assistance, analysis, inventory reconciliations, and troubleshooting for the Navy's automated information systems. CACI also provides support to FOSSAC in identifying opportunities to reduce costs through hands-on engineering and empirical data analysis, a distinctive methodology called "should cost" analysis. According to **Jack London**, CEO of CACI, "By providing supply support to valued customers such as FOSSAC, we continue to demonstrate CACI's expertise in automated technologies and our commitment to resolving the Navy's challenges cost-effectively."

Fincantieri, Burmeister & Wain Cooperate To Win Orders For Seven Panamax Bulk Carriers

The Italian shipbuilding company Fincantieri Cantieri Navali Italiani S.p.A. and Burmeister & Wain Skibsvaerft A/S from Denmark have, in a joint effort, succeeded in securing orders for seven Panamax bulk carriers. The ships will all be delivered in 1995 to:

- Fratelli D'Amato - two vessels from Fincantieri, to be built at Marghera Shipyard in Venice,
- Deulemar - three vessels from Fincantieri, to be built at Castellammare Shipyard in Naples,
- Bottiglieri Navigazione S.p.A. - two vessels from Burmeister & Wain Shipyard in Copenhagen.

The orders are all based on the new Panamax bulk carrier design from Burmeister & Wain, Mark V, equipped with the main engine designed by New Sulzer Diesel, of which Fincantieri is a major shareholder. The deal may be seen as the first step in a cooperation between the two companies based on this design. For more information on Fincantieri,

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For more on Burmeister & Wain,
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ASRY Offers Brochure On New Modern Facilities

Arab Shipbuilding & Repair Yard (ASRY) is offering a brochure detailing the yard's 1992 production activity, history and facilities. For more information on ASRY,

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Proposed Sale Of Philippine Shipyard Sparks Foreign Interests

State-owned Philippine Shipyard Engineering Corp. (Philseco), the Philippines' largest shipyard facility, has attracted bids from several foreign companies. Sabah Shipyard Sdn. Bhd. of Malaysia; Keppel Corp. of Singapore; Sembawang Shipyard, Ltd. of Singapore; Jurong Shipyard Ltd. of Singapore; and Samsung Co., Ltd. of South Korea were among those interested in the shipyard during the pre-bidding conference.

The government reportedly wishes to sell 87.6 percent of its holdings in the shipyard for \$36 billion. Philseco's facility, located near Subic Base (a former U.S. naval base), can accommodate 300-ton vessels.

AWO Forms Jones Act Steering Group

American Waterways Operators (AWO), acting on the authorization by its board of directors, has formed an 8-member steering group to guide the association's efforts to combat administration and private sector initiatives to eliminate the Jones Act. The Jones Act could possibly be eliminated, along with a number of maritime promotional programs, as is called for in Vice President **Al Gore's** National Performance Review. The AWO steering group met in Washington, D.C. in order to define its objectives and develop an action plan for its work, which is aimed at building a case for the preservation of the Jones Act. The steering group must convince the public, Congress and the **Clinton** Administration to reject the elimination of the law.

The group's plan consists of a consultant analysis which authoritatively supports maintenance of the Jones Act; a comprehensive advocacy program in both Congress and the Executive Branch; media and grassroots campaigns in support of the lobbying effort; and the development of a coalition of like-minded organizations to join forces with AWO in defense of the Jones Act.

Autronica Marine Offers Fixed Fire Detection System

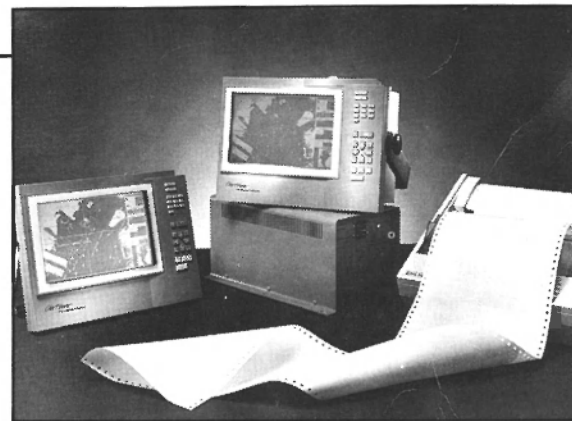
Autronica Marine, Oslo, Norway, possessing 30 years of experience in fire engineering and marine system design, offers various types of marine fire detectors, technically advanced control units and marine repeater panels. Fixed fire detection systems are developed and manufactured by Autronica according to SOLAS, classification societies' and marine authorities' requirements.

According to the company, the DYFI technique, correctly combined with Autronica's advanced fire detectors, minimizes the rate of false alarms and speeds up the detection of smoldering fires.

The Autronica system, possessing the DYFI technique, represents the "state-of-the-art" in marine fire detection. A reliable warning is given during the starting phase, or early smoldering phase of the fire. The company claims that most competitive systems are normally not able to detect a fire until it has reached the flame phase. More than 9,000 ships carry Autronica equipment, reflecting the confidence and trust shipowners, shipyards and engine manufacturers have in the company's products. Autronica offers:

- System design
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Conference In Cyprus Stresses Safety

Maritime Cyprus 1993 was held October 4-6, 1993, at the International Conference Center in Nicosia, Cyprus. Under the theme of "Fleet Replacement," keynote issues discussed included protection of the marine environment, the role of insurers and bankers in fleet replacement, and the function of owners and shipmanagement companies in

helping to reduce the age of ships. A pre-conference reception was hosted by the president of the Republic of Cyprus, **Glafkos Clerides**, on Sunday, October 3.

Distinguished speakers to address the conference included the secretary-general of the International Maritime Organization (IMO), **William A. O'Neil**; the chairman of the International Association of Classification Societies (IACS), Dr. **Nicola Squassafichi**; and leading marine underwriters, bankers and

shipowners. Speakers at the conference said violation of international regulations by shipowners and classification societies resulted in record insurance losses in recent years. A cause for the heavy losses was the use of older ships. On the second day of the conference, an underwriter told the 1,030 delegates from 33 countries that 34 percent of bulk and combination vessels afloat in 1992 were 15-24 years old. That 34 percent reportedly accounted for 93 percent of marine losses in that

year. The underwriter complained that shipowners have taken to hiring cheap, less experienced crews, often from developing nations, in order to reduce costs. International shipping classification societies were also accused of failing to do their duty to verify the seaworthiness of vessels. A legal workshop was open to all Maritime Cyprus '93 participants on October 7, 1993. Eminent lawyers from the U.S. and Europe discussed the issue of corporate liability of shipowners in cases of oil pollution damage.

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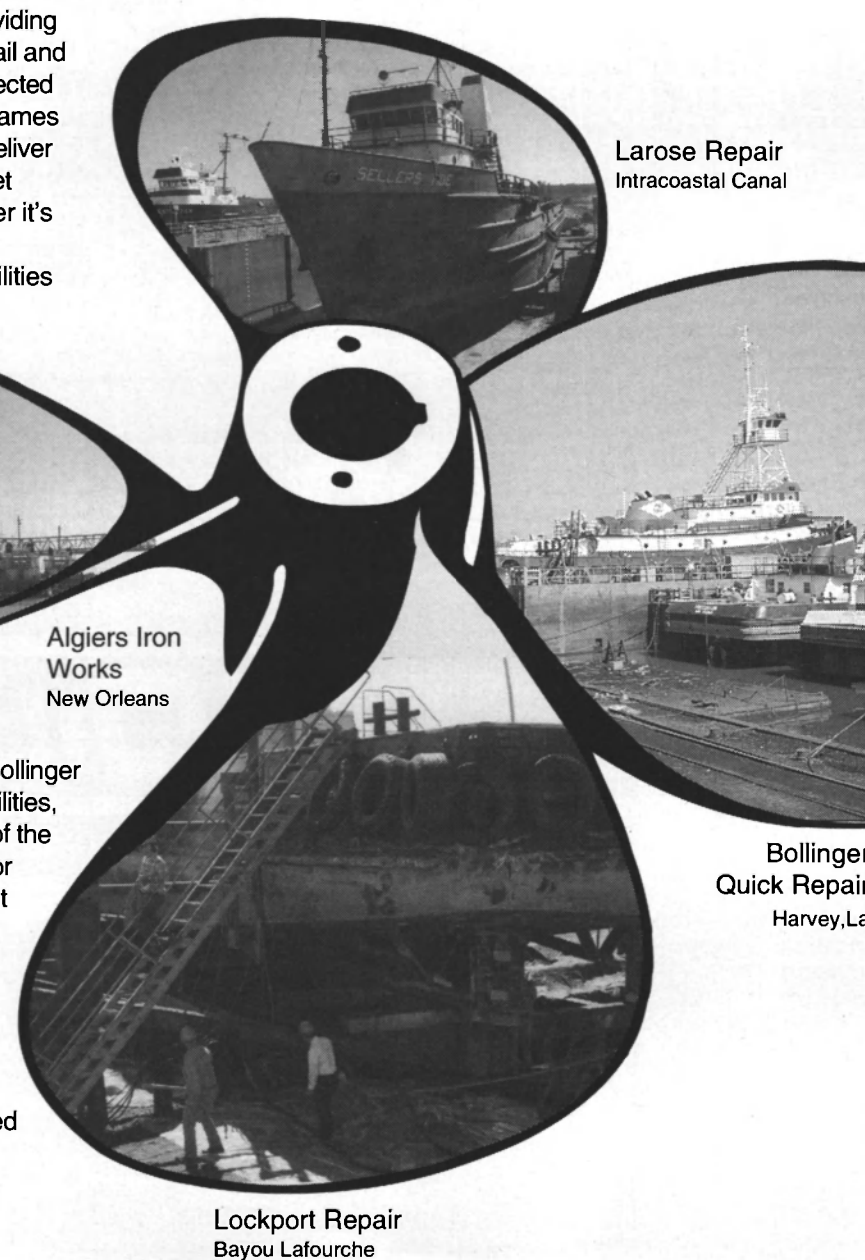
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U.K. Firm Develops "Traktakat" Range Of Oil Spill Response Workboats



The Traktakat 30, a larger version of the Traktakat range of catamaran workboats, is principally aimed at the fish farming industry.

Marshall Branson Marine Limited announced that construction will begin on a Bravo 120 Oil Spill Response Craft ordered by Caltex Services for use at the BAPCO Oil Refinery in Bahrain.

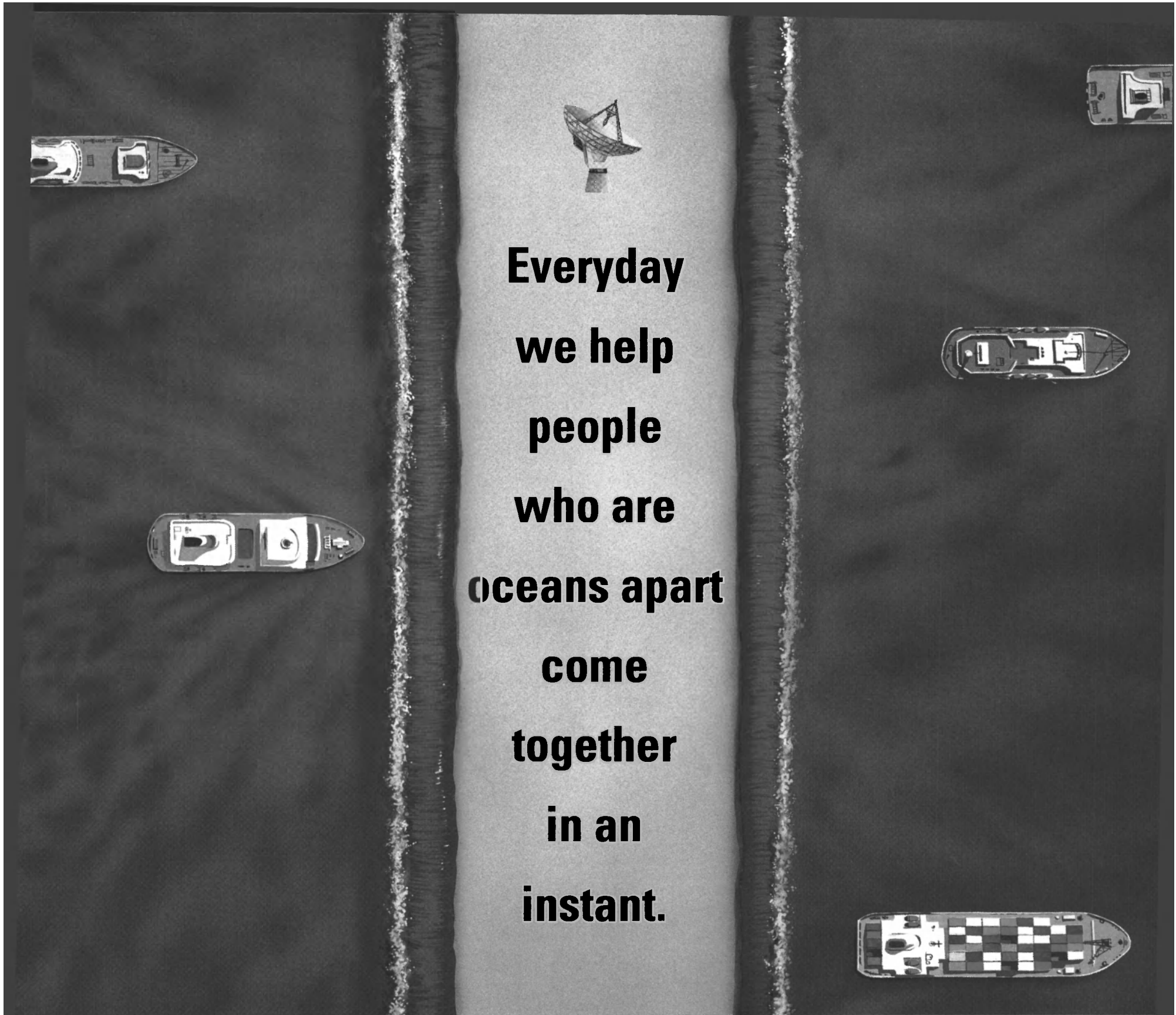
The craft will be required to take part in local Arabian Gulf oil spill exercises as part of the Gulf Area Oil Companies Mutual Aid Organization, and also serve as a maintenance, logistics and dive support boat.

The shallow draft 44-foot landing craft-type vessel has a beam of 14 feet and is capable of carrying a payload of eight tons in addition to a complement of 13 crew. Propulsion is by twin Caterpillar 3116 turbo charged marine diesels driving twin three-blade propellers. This gives a continuous speed light of 25 knots with a range of 190 nautical miles. The craft, with full American Bureau of Shipping (ABS) classification, is scheduled for delivery to Bahrain in January, 1994.

Marshall Branson Marine Limited of Amble, previously a subsidiary of a Newcastle-based plant hire company, has recently been the subject of a management buy-out, but will continue to develop and manufacture its established ranges of aluminium alloy craft.

These consist of the Bravo range of fire/rescue and landing craft, the Traktakat range of fish farming vessels and crane barges, as well as the Bravo Bullet fast interception patrol craft and medium range lifeboats. For more information on Marshall Branson Marine Limited,

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Crounse Corporation's single-screw towboat, the M/V Sue Chappell, completed the first operational experience of a synthetic marine lubricant in the U.S.

Mobil's Synthetic Oil Increases Boat's Oil Drain Interval To 5,000 Hours

M/V Sue Chappell Enjoys 90 Percent Less Waste Oil, More Time Between Overhauls

Laden with coal, Crounse Corp.'s M/V Sue Chappell's barges traverse the Ohio River and its branches. With an eye on the bottom line and a vision for the future, Crounse Corp., of Paducah, Ky., confronted the issue of waste oil disposal by taking a proactive approach to engine maintenance. With help from Mobil Oil, the towboat company found a synthetic solution to the problem of rising costs: an environmental lubricant with a chlorine content level well below the most stringent regulations in effect today—Mobilgard SHC 120. For the M/V Sue Chappell, the product didn't just cut waste oil disposal costs. Mobilgard SHC 120 significantly extended the vessel's oil drain intervals and reduced its annual waste oil disposal volume 90 percent. It also substantially

Mobil Oil Corp. began an 8,000-hour (equivalent to one full-year of operation) evaluation of Mobilgard SHC 120 in the towboat's generator engine. When continuously operating, the Detroit Diesel 71 series engines typically consume up to a gallon of mineral oil daily. With synthetic Mobilgard SHC 120, the towboat's chief engineer found that the engine consistently used only one quart of oil each day, nearly a 75 percent reduction in oil consumption.

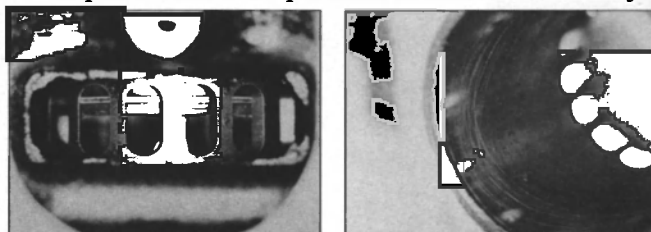
Throughout the 8,000-hour test, Crounse, Detroit Diesel and Mobil monitored the condition of the oil and the engine's oil consumption, cleanliness and wear rates. Every 250 hours, oil samples were taken from the generator engine and analyzed at Mobil Oil's Technical Service Laboratory in Princeton, N.J. An oil drain performed after 5,100 hours of continuous operation reportedly showed conclusive evidence that the Mobilgard SHC 120 had lubricated the engine 10 times longer than mineral oil. Crounse and Mobil changed the lubricant a second time, after 8,000 hours, when the engine was torn down for inspection. Reportedly the Detroit Diesel 6-71's cleanliness was exceptional, with the piston rings and cylinder liners showing approximately half the normal wear rates.

"We were impressed with the results achieved with Mobilgard SHC 120," said Roy Sullivan, port engineer for the Paducah division of Crounse. "Our extended oil intervals did not increase engine wear. In fact, it is better than what we normally see on these engines."

As a result, the approach to save waste oil also is saving the operator money. Although the initial cost of Mobilgard SHC 120 is more than mineral oil, the company has found the direct benefits—extended drain intervals, reduced waste oil disposal, and reduced consumption—have resulted in

substantial savings; savings which will be magnified as the industry's costs of waste oil disposal escalate. Mobilgard SHC 120 was specifically developed by Mobil Oil to address the performance needs of distillate-fueled, high reliability, high power concentration diesel engines. The lubricant is already proving its value in European workboats, the manufacturer claims. Mobilgard SHC 120's special synthetic base stocks and additive technology reportedly allow it to function like a true SAE 40 lubricant. At the same time, it flows at low temperatures like an SAE 15W product, sans the use of viscosity index improvers. For more information,

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After 8,000 hours, the M/V Sue Chappell's airbox (left) and cylinders (right) remained remarkably clean due to synthetic Mobilgard SHC 120. The piston ports on the airbox are completely clear of deposits. The cylinder's honing cross-hatch marks are visible throughout, including the ring reversal area.

reduced the towboat's generator engine wear rates and decreased its oil consumption by as much as 75 percent.

Before Crounse Corp. switched to a synthetic marine lubricant, the company's single-screw river towboat, the M/V Sue Chappell, changed generator engine oil every 500 hours and disposed of 112 gallons of conventional waste oil annually. This amount is reportedly not uncommon for vessels using Detroit Diesel 6-71 engines. With routine 500-hour oil and filter changes, this engine type normally generates in excess of 100 gallons of waste oil per year. In an effort to safely extend the oil drain intervals and decrease the waste oil, Crounse Corp., Detroit Diesel and



The M/V Sue Chappell generator's waste oil disposal dropped from 112 to 11 gallons annually.

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LEGISLATION UPDATE



Proposed Barge Safety Legislation Result Of Amtrak Tragedy

New Equipment Rules To Come?

Taking what they learned about gaps in barge safety, the bipartisan leadership of the House Merchant Marine and Fisheries Committee introduced legislation to improve safety on the nation's inland waterways.

The bill, H.R. 3282, the Towing Vessel Navigational Safety Act of 1993, will require all inland towing vessels to carry appropriate charts and navigational publications, and navigational equipment including a compass, radar and fathometer. In addition, the bill requires towboat operators to demonstrate that they know how to use this equipment.

To avoid delays, the bill requires that the U.S. Coast Guard (USCG) be notified "as soon as practicable" after an accident. It also directs the Secretary of Transportation to submit to Congress a report on the adequacy of staffing and licensing requirements for vessels on the inland waterways and the feasibility of adapting a satellite positioning system for use on the waterways.

Coast Guard and Navigation Subcommittee Chairman **Billy Tauzin** (D-LA) was joined by the chairman of the full Committee on Merchant

Marine and Fisheries, **Gerry E. Studds** (D-MA), and the ranking minority members of the two panels, **Jack Fields** (R-TX) and **Howard Coble** (R-NC), in introducing the legislation. This bill will be discussed at a November 12, 1993, hearing the Subcommittee has scheduled in Baton Rouge, La., on navigational safety and the proliferation of gaming vessels on the Mississippi.

"The Amtrak Sunset Limited derailment was primarily caused by the human error of an individual towboat operator. Legislation can never eliminate the possibility of human error. We all make mistakes.

"However, this tragic accident was also caused by a system that failed to minimize the probability of human error.

"The Towing Vessel Navigational Safety Act of 1993 attempts to address the areas where the system failed, so that we might avoid a similar tragedy in the future," said Mr. **Tauzin**.

"We must learn from the horror that occurred in Mobile last month," said Mr. **Studds**. "It is incomprehensible that anyone operating any vessel of any size would not have a chart onboard or

be unable to differentiate between the radar images of a barge and a bridge. The bill we have submitted today is a good start towards improved safety, but it is only a first step. We must take a good hard look at navigational procedures on our increasingly crowded inland waters, and at manning and licensing requirements on inland towboats. We must close all the loopholes and fill all the gaps we find."

"As these accidents show, safety on the waterways is important to protect not only the lives and crew members who work on the water, but also the lives of individuals travelling on bridges and other areas around the water. We must increase safety standards to prevent fatal accidents of this type from occurring again," said Mr. **Fields**.

"I believe that this bill will correct the deficiencies in inland barge safety which were brought to light by the tragic derailment of the Sunset Limited in Alabama. Our October 12 hearing on Capitol Hill proved that all towboats should have minimum navigational safety equipment, including navigational charts, compasses and radar," said Mr. **Coble**.

Other News From Capitol Hill

Breaux, Studds Report White House "Encouraging" On Maritime Reform

Following a morning meeting with President **Bill Clinton**, Senator **John Breaux** (D-LA) and Rep. **Gerry E. Studds** (D-MA) said they believe the President is personally committed to revitalizing the U.S. maritime industry. Mr. **Breaux** and Mr. **Studds** released the following joint statement: "We are extremely encouraged by our discussion with President **Clinton**.

"This is the first President in more than two decades who understands and supports the reforms we know are essential to keeping the American maritime and shipbuilding industry not only alive, but well."

Thirty-Six States Apply For "Potty" Funds

Thirty-six states have submitted nearly \$13 million in applications for a new program to provide pumpout stations for marine sanitation devices (MSDs); i.e. \$13 million to clean out boat toilets.

Currently, many boaters simply dump their MSDs into coastal waters, having serious ramifications for water quality and human health. Enter the Clean Vessel Act. Introduced last Congress by House Merchant Marine and Fisheries Committee Chairman **Gerry E. Studds** (D-MA), the so-called "potty bill" earmarked a small sum of money collected from taxes paid by boaters to make grants to states to build and run pumpout stations. The application period for the first year's grants closed August 31.

"The response to this program has been tremendous," said Mr. **Studds**. "Our coastal areas are

valuable assets. When water quality declines, so too do tourism dollars, fisheries landings and recreational opportunities. For coastal states, clean water is not a luxury, it is a necessity."

There were a total of 45 applications from 36 states for \$12.8 million in grants to fund the construction, operation and maintenance of pumpout stations, porta-potty dump stations, education programs and needs surveys. The U.S. Fish and Wildlife Service (FWS), Department of the Interior, which administers the program, has \$12.5 million available for the program, and award announcements are expected around Nov. 1.

Senate Panel Approves New Maritime Commission-Creating Bill

The Senate Commerce Committee approved by voice vote legislation (S. 1432) which would

establish a commission to examine the economic problems facing the U.S. Maritime Industry. The legislation was introduced by **Ernest F. Hollings** (D-SC), **John B. Breaux** (D-LA), **John Kerry** (D-MA), **Charles Robb** (D-VA), and **Barbara Mikulski** (D-MD). The bill would charge the National Committee to Ensure a Strong and Competitive U.S. Maritime Industry with investigating impediments to the competitiveness of U.S.-flagged commercial vessels. The panel would also focus on problems that have shrunk the domestic shipbuilding industry. The commission would examine whether the merchant marine can fulfill the demand for cargo hauling in wartime. It would also address the factors that prevent U.S.-flag carriers from being globally competitive in ship operating and shipbuilding. It would have 60 days after appointments are made to report recommendations.

Committee Approves USCG Authorization Act

The Senate Commerce Committee approved a substitute amendment to S. 1052, the Coast Guard Authorization Act of 1993. The substitute authorizes appropriations for the U.S. Coast Guard (USCG) for fiscal year (FY) 1994 and FY 1995, covering six appropriations accounts: operating expenses; acquisition, construction and improvement of equipment and facilities; research and development; retired pay; alteration and removal of bridges; and environmental compliance and restoration. The substitute also authorizes end-of-year military strength and training loads, standardizes safety requirements for passenger vessels, and makes other changes to existing law. The administration budget proposal for FY 1994 calls for USCG funding of \$3.8 billion, approximately a four percent increase over 1993 levels.

Clinton Delays Sanctions On Norway For Whaling

President **Clinton** delayed trade sanctions against Norway for its commercial whaling ventures, a move which reportedly sparked criticisms in Congress. To keep the pressure on, President **Clinton** said he will instead issue a list of Norwegian seafood products that could face trade sanctions if Norway continues to catch whales in violation of international treaties. He said he wanted to persuade the country to follow agreed conservation measures before imposing sanctions.

Kitsos Appointed Chief Counsel Of Committee

Merchant Marine and Fisheries Committee staff veteran **Thomas R. Kitsos** has been appointed chief counsel of the Committee by chairman **Gerry E. Studds** (D-MA). Mr. **Kitsos** fills the spot left vacant by

the departure of **William W. Stelle, Jr.** to the White House Office of Environmental Policy, where he is now associate director for Natural Resources. Mr. **Studds** also announced that Committee staff director **Jeffrey R. Pike** will assume the new title of chief of staff. Mr. **Pike**, a long-time **Studds** staffer, has served as the committee staff director since Mr. **Studds** became chairman. He is a former Massachusetts commercial fisherman. "He brings

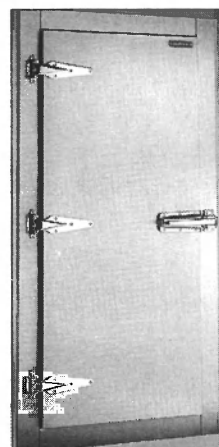
to this new challenge a wealth of experience and knowledge about marine policy as well as a keen understanding of the institution of Congress," said Mr. **Studds**.

Marine Mammal Legislation Delayed Six Months

With time running out to enact a new law governing the interactions

of the commercial fishing industry and marine mammals, the House Merchant Marine and Fisheries Committee voted to extend the deadline for an additional six months. Also, the Committee approved two other bills. H.R. 2961 authorizes the construction and operation of the Walter B. Jones Center for the Sounds as an educational and interpretive visitor center at the Pocosin Lakes National Wildlife Refuge in North Carolina. The designation

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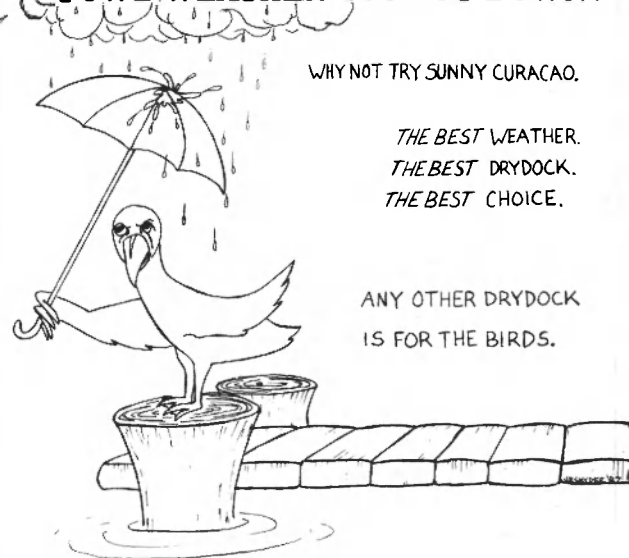
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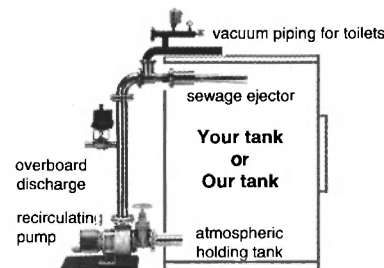
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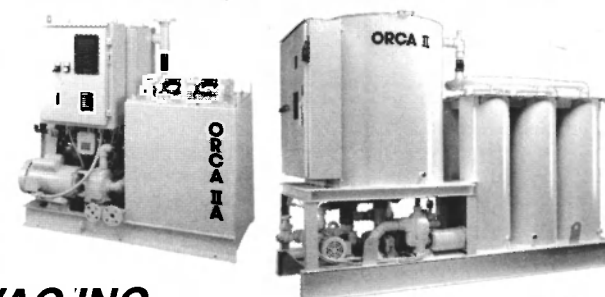
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would honor the memory of the late chairman of the Merchant Marine and Fisheries Committee who died last year. The measure passed 425 to 0. Finally, H.R. 2604 authorizes the establishment of a Wetlands Policy Center at the Port of Brownsville, Texas. The measure passed 360 to 64.

Coalition To Ensure Strong U.S.-Flag Fleet Formed

Recently the United States Maritime Coalition met for the first time. The coalition, consisting of more than 100 shipping companies, maritime industry businesses, unions, shipyards, citizen groups and patriotic organizations, was formed to maintain the U.S. stature as a vital maritime force in commerce, as well as on behalf of the nation's defense interests. The group has pledged to promote the U.S.-flag ocean-going and Great Lakes ships, as well as the American tug and tow fleet, which together employ more than

100,000 and generate billions of dollars for the U.S. economy. The group named **James Henry**, president of the Transportation Institute, to serve as its chairman.

Senators Introduce Bill To Tighten Vessel Pollution Laws

S. 1459 is a bill introduced by New Jersey Democrat Senators **Frank R. Lautenberg** and **Bill Bradley** which is geared to tighten vessel pollution statutes. Specifically, the measure is designed to increase the U.S. Coast Guard's responsibility under the Act to Prevention Pollution from Ships to include more responsibility for such prevention mandated to port facilities and terminals.

Maritime Security Fleet Program Tops Agenda

The House of Representatives is

expected to begin consideration of H.R. 2151 to establish the Maritime Security Fleet Program.

It would create a fleet of vessels to maintain U.S. economic and national security.

It would also start the Series Transition Payment Program, a program which is devised to help the U.S. shipbuilders in the transition from navy to commercial work.

Yim Calls For Cooperation, Advancement In Speech To Grain Association

Emphasizing that the Maritime Administration is "open to new ideas and dialogue, all with the goal of making our system of delivering your commodities overseas work better," **Joan B. Yim**, deputy maritime administrator, recently addressed the North American Export Grain Association.

"President **Clinton** was elected to bring about change," Ms. **Yim** said. "Our new Maritime Adminis-

trator, Adm. **Albert Herberger**, and I are committed to that as well.

"The commitment to change has resulted in what I believe to be a very positive development, the creation of a USDA/AID/MARAD working group whose goal is to improve the efficiency and effectiveness of cargo preference shipments."

Ms. **Yim** also stressed the importance of shipper's understanding the MarAd calculations in determining fair and reasonable rates.

"The fair and reasonable guideline rate...is not meant to be a determination of what is 'fair' or what is 'reasonable' relative to a world rate," Ms. **Yim** said.

"Rather, it is what is fair and reasonable relative to a particular vessel, based on the capital and operating costs of that individual ship."

She went on to explain that the rates are adjusted according to factors such as ship age and manning requirements (making them less cost efficient), and emphasized that a major MarAd objective is maritime revitalization, providing incentives for modernizing the fleet to bring about greater efficiency.

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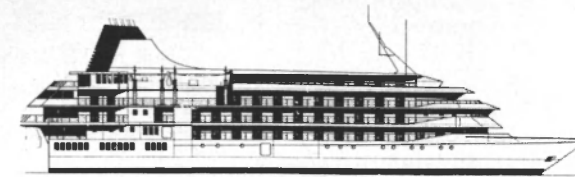
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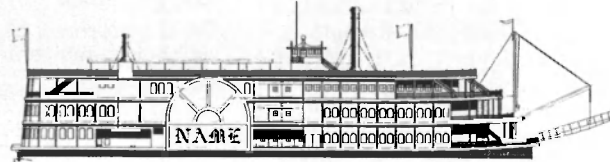
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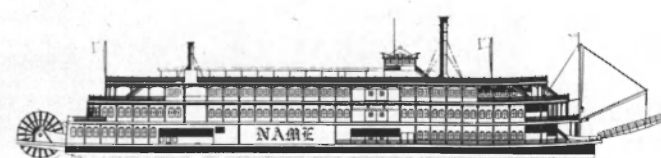
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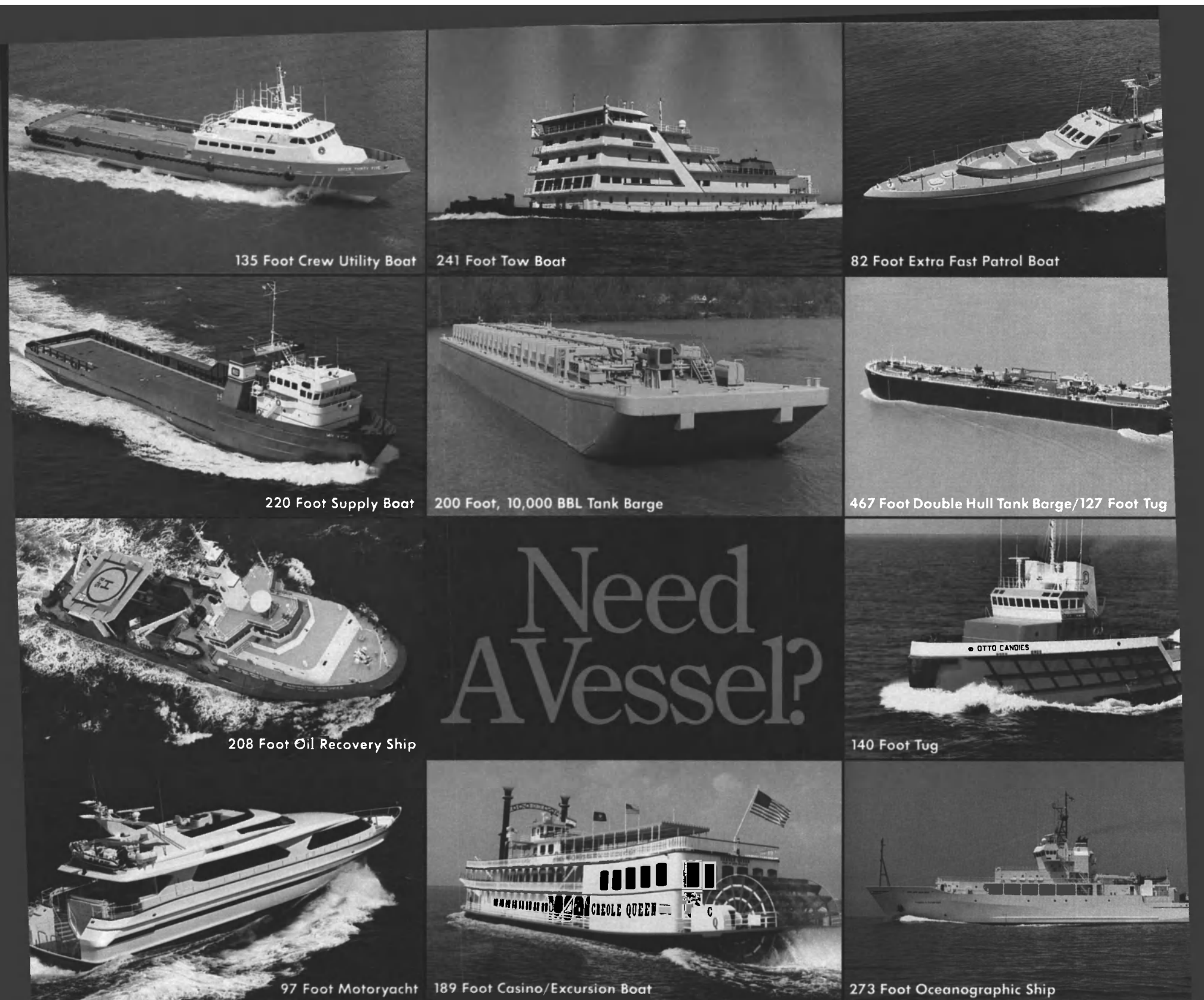
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Overview of SSE's new Tuas Yard.

Ground-Breaking Ceremony Of SSE's New Yard In Tuas

Singapore Shipbuilding & Engineering Limited (SSE), the marine arm of Singapore Technologies, will be commencing major civil work on its new shipyard at Tuas. The ground-breaking ceremony for the yard was officiated by Commodore **Teo Chee Hean**, minister of state for finance and communications, on September 21, 1993. The new site occupies a land area of 16 acres and a waterfront of more than 1,771 feet. It will provide very significant additional capacity to what SSE already has at its present 30-acre yard at nearby Benoi Road.

Targeted to be ready for operations by April, 1994, the Tuas yard will extend the range of SSE's shipbuilding and shiprepairing services. Construction of a new 17,000-ton lifting capacity floating dock has already started and is scheduled for operation in April, 1994. This new yard is an integral part of SSE's strategy to strengthen its position in the shipbuilding and shiprepairing industry. With this expansion, SSE now has the capability to repair vessels of up to 40,000 dwt - a significant increase from the present 10,000-dwt capability at the Benoi site. There will also be two building berths at this site capable of building ships of up to 30,000 dwt, more than double the current capability. The new yard will harness SSE's core competence in marine and heavy engineering project management and technical capability using state-of-the-art computer-aided design and manufacturing system. With the completion of the new yard, SSE will be able to effectively enlarge its customer base beyond the region, and at the same time enhance its services to its current clientele. A worldwide network of sales agents has already been established to actively market the new site. Some of the projects secured for SSE's current order book include: a contract for a military customer for the design and construction of 12 patrol craft worth more than \$248 million; outfitting of three mine-countermeasure vessels worth more than \$37 million; and two floating docks and two landing craft worth \$17 million. For more information,

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High Seas Maritime Services Named Pentow's U.S. Rep

Captain **Dai Davies**, managing director of Pentow Marine, Ltd. and **Jim P. Stevens**, president of High Seas Maritime Services, Inc., announced the appointment of High Seas as its U.S. representative.

Pentow specializes in various international marine services, including towage, salvage and oil pollu-

tion abatement and control. Included in Pentow's fleet are two of the world's largest ocean towage and salvage tugs, the John Ross and the Wolraad Woltemade.

Runyan Yard Expands; Lagarde Appointed VP

Kevin Lagarde was appointed vice president of production and

engineering of Runyan Shipyard, Inc. of Pensacola, Fla. **Mr. Lagarde** was most recently project manager for Trinity Marine Group, Gulfport, Miss., where he was responsible for the construction of the U.S. Army Corps of Engineers' dredge Hurley and towboat Mississippi. His career includes work at Avondale Industries; John J. McMullen Associates; Champion/Swiftships, Inc.; and Halter Marine, Inc. **Mr. Lagarde** holds a BS in Marine Engineering Tech-

nology/Naval Architecture from Mississippi State University.

The new Runyan Shipyard, Inc. complex with its three marine railways and extensive machine shops encompasses more than 15 acres on the north bank of the Bayou Chico. The facility is expected to revitalize and expand Runyan's traditional ship repair and machine shop businesses to include new vessel and barge construction.

For more information on Runyan Shipyard,

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Marco Appoints O'Grady Manager Of Sales And Customer Service

Marco Shipyard Seattle has appointed **Spencer O'Grady** to the position of manager of sales and customer service. **Mr. O'Grady** comes to Marco from 15 years at Western Pioneer, Inc., where as chief port engineer he was responsible for the maintenance of all the vessels in its fleet. He was also project manager for the company during the conversions of several of its vessels to refrigerated cargo ships in Puget Sound area shipyards.

For more information on Marco,

Circle 24 on Reader Service Card

Brazilian Container Service Plans New Fleet

Rio de Janeiro-based Transroll Navegacao SA is currently developing design proposals and investigating construction costs for a fleet of purpose-planned, 3,000-teu containerships.

Five or six vessels are under consideration for operation on its well-established services between Brazil/North America (Transroll/Sea-Land joint service) and Brazil/Europe (as a member of the Joint Container Service). The first vessel would be required for delivery in mid/late 1996.

"This represents a potential investment of over \$400 million," states **Washington Barbeito de Vasconcellos**, president of expansion-minded Transroll. Design proposals and specifications have been developed for Transroll by both Bureau Veritas — which already classifies its recently-built "B"-class containerships — and *Lloyd's Register*. They were completed and submitted for discussion with Transroll in late September and are very close to being finalized. Principal design criteria for these new 50,000- to 60,000-dwt post-Panamax containerships include capacity for 3,000 teu's, hatchless operation, and about a 32-foot shallow draft to suit a range of South American ports. They will also feature service speeds of between 23 and 24 knots, resulting in the potential of a "lean" fleet (of five rather than six vessels) able to sustain a weekly-frequency service on Transroll's key routes.

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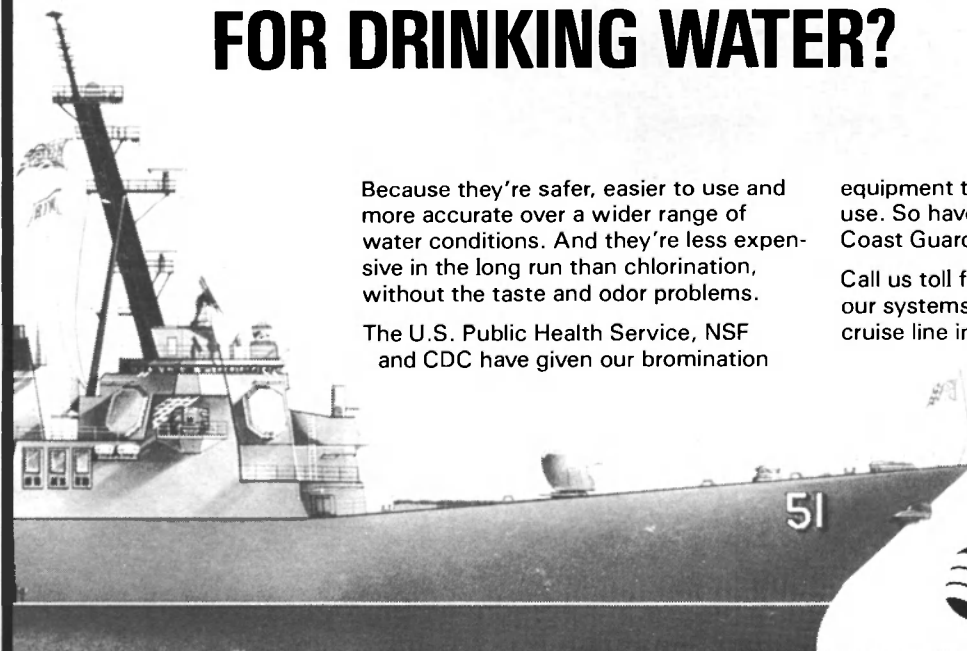
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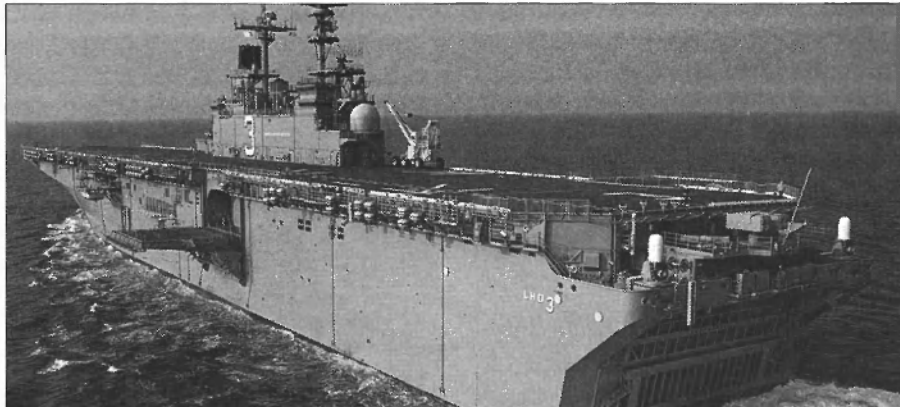
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USS Kearsarge (LHD 3) and her sister LHDs, built for the U.S. Navy by Ingalls Shipbuilding division of Litton, will serve principally as the centerpiece of an Amphibious Ready Group - transporting, deploying, commanding and supporting all elements of a Marine Landing Force in assaults by air and amphibious craft.

Navy's Newest Amphibious Assault Ship Commissioned At Ingalls

The U.S. Navy's newest Wasp Class multipurpose amphibious assault ship was commissioned USS Kearsarge (LHD 3) during ceremonies October 16, 1993 at Ingalls Shipbuilding division of Litton in Pascagoula, Miss.

Gen. **Carl E. Mundy, Jr.**, USMC, Commandant of the U.S. Marine Corps, delivered the principal address for the ceremony, during which LHD 3 officially joined the U.S. Atlantic Fleet.

Gen. **Colin L. Powell, USA** (Ret.), recently retired chairman of the Joint Chiefs of Staff, placed the new ship in commission. Gen.

Powell was principal speaker at USS Kearsarge's christening at Ingalls last year, while his wife, **Alma**, who also attended the commissioning ceremony, sponsored and christened LHD 3.

Also participating in the commissioning were: Vice Admiral **J. Paul Reason**, USN, Commander, Naval Surface Force, U.S. Atlantic Fleet; Captain **Joseph A. Carnevale**, USN, Supervisor of Shipbuilding, Pascagoula; **John M. Leonis**, senior vice president, Litton Industries; and **Jerry St. Pe**, president of Ingalls Shipbuilding and senior vice president of Litton.

The 40,500-ton ship is 844 feet long, with a beam of 106 feet. Two steam propulsion plants, developing a combined 70,000 hp, will drive LHD 3 to speeds in excess of 20 knots. Outfitted for her primary mission, USS Kearsarge will carry a mix of assault helicopters, plus six to eight Harrier jets. The ship will be fully capable of maintaining its aircraft and landing craft, as well as supporting the embarked landing force squadron. LHD 3 will have more than 100,000 cubic feet of cargo space. Accommodations for nearly 3,000 troops and crewmembers are provided in the ship's living areas. For combat support, as well as humanitarian missions, LHD 3 will have six fully-equipped medical operating rooms, four dental operating rooms and hospital facilities capable of caring for 600 patients.

For more information on Ingalls,

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The christening of the USS Kearsarge (LHD 3) at Ingalls Shipbuilding division of Litton. From left to right: Matron of Honor Eleanor Knott; U.S. Senator Trent Lott of Mississippi; sponsor's husband General Colin L. Powell, USA (Ret.), former chairman of the Joint Chiefs of Staff; and ship's sponsor Alma Powell.

Allison Gas Turbine And Precision Engine Controls Enter Into Joint Agreement

Allison Gas Turbine Div. (AGTD) of General Motors (Indianapolis) and Precision Engine Controls Corp. (formerly Bendix Engine Controls Div. of Allied Signal) have recently signed an agreement where Precision Engine Controls Corp. (PECC) will supply its digital turbine control system (TCSD) as an OEM supplier for AGTD's line of 570/571

industrial turbine engines.

PECC has been the prime supplier of Bendix Fuel Metering Valves for AGTD's line of 501K and 570/571K series industrial engines for several years. PECC is located in San Diego and produces a complete line of industrial engine ignition controls and accessories for both turbine and reciprocating engines throughout the world. For more information on the products and services of Precision Engine Controls Corp.,

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November, 1993

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Solar Turbines Appoints Ings President

Don M. Ings has been appointed president of Solar Turbines, Inc., the San Diego-based subsidiary of Caterpillar, Inc. that manufactures industrial and marine gas turbines and turbine-driven compressor sets, generator sets and mechanical-drive packages. Mr. Ings, who was also elected a Caterpillar vice president, most recently had been manager of



Don M. Ings

Precision Barstock Products at Caterpillar's York, Pa. facility. Mr. Ings succeeds **James W. Owens**, who was selected to become vice president of Caterpillar's corporate services division and chief financial officer for the Peoria, Ill.-based manufacturer of earthmoving equipment and engines.

Mr. Ings was associated with Solar Turbines previously, having joined the company in 1970 and served in various engineering management positions. He was named

operations manager at Solar's Kearny Mesa manufacturing and test facility in 1982 and became Solar's vice president of manufacturing in 1984. He was appointed York plant manager by Caterpillar in 1989.

Mr. Ings, 45, is a graduate of Rose-Hulman Institute of Technology and holds a degree in mechanical engineering.

Solar's gas turbine products cover a range from 1,000 to 10,515 kW (1,340 to 14,400 hp). The company has manufactured some 9,000 industrial gas turbines for customers in 75 countries. For more information on Solar Turbines, Inc.,

Circle 26 on Reader Service Card

Shipbuilders Council Of America Elects Newport News CEO Board Chairman

W.R. "Pat" Phillips, president and CEO of Newport News Shipbuilding, was elected board chairman of the Shipbuilders Council of America board of directors' quarterly meeting.

Mr. Phillips replaces **Richard A. Vortmann**, president and CEO of National Steel and Shipbuilding of San Diego, Calif. The board's vice chairman is **Thomas P. Jones, Jr.**, vice president of Atlantic Marine, Jacksonville, Fla.

Racal Supplies VTMS To Antwerp Harbor

The installation of an advanced Vessel Traffic Management System (VTMS) for Antwerp has been completed by Racal Avionics, following the introduction of three new radar systems at Delwaide Dock and at Samga and Sibelco quays. These follow the successful first phase which introduced VTMS to Antwerp with two Racal radar systems at Zandvliet and Boudewijn quays. All of the radar sites now combine to provide detailed coverage of the complete right bank of the Port, enabling the harbor authorities to monitor shipping movements in one of Europe's busiest storage and transshipment centers.

As well as improving safety coverage within the harbor, the new VTMS will enable the port authority to closely monitor traffic passing through its locks and to identify any vessels involved in collisions with other craft or harbor structures.

The system's Operations Center at Zandvliethuis, which receives data transmitted by cable from the five remote radar sites, uses the latest digital scan conversion technology, employing a new generation of software together with a new map generation system. The Racal VTMS Series 3 transceivers have been developed with a new modulator, low noise front end and integral power supplies.

For more information on Racal,

Circle 93 on Reader Service Card

Call for Papers

"Ship Design and Operation in Harmony with the Environment"

A Symposium to be held in conjunction with The 1994 Annual Meeting

The Society of Naval Architects and Marine Engineers will hold its first Annual Meeting of its second century in the colorful and busy port of New Orleans on November 16-19, 1994 at the Fairmont Hotel.

The theme of the meeting will be "Ship Design and Operation in Harmony with the Environment." In addition to the presentation of detailed papers on this subject, a symposium of designers, operators and builders will address design, retrofit and operations of ships from the environmental standpoint.

The Annual Meeting of the Society of Naval Architects and Marine Engineers, a leading maritime professional society, is known as a prestigious international forum for the presentation and discussion of technical papers on a variety of subjects in naval architecture and marine engineering. A program reflective of this tradition will be offered in 1994.

You are encouraged to participate in the Technical Program of the 1994 Annual Meeting by preparing a 400-500 word proposal, plus a tentative outline, by December 15, 1993. (This is an extension of the original deadline of October 15, 1993.) Please include paper title, authors name, address, phone and fax number. Material should be sent to the Publications Coordinator, SNAME, 601 Pavonia Avenue, Jersey City, NJ 07306. Telephone 201-798-4800; fax 201-798-4975.

Deadlines are:

December 15, 1993: Abstract due

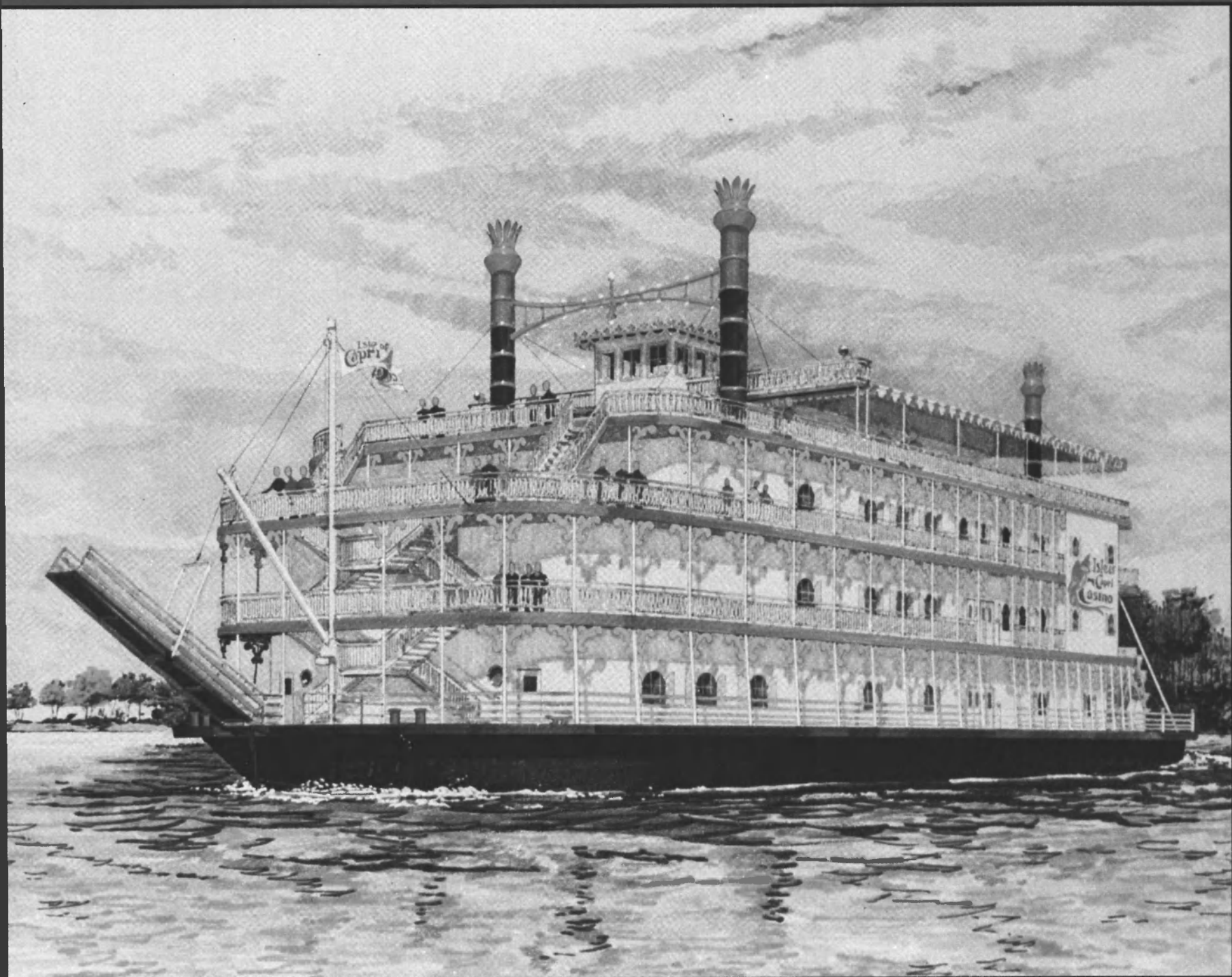
May 15, 1994: Smooth draft due for Papers Committee approval

August 15, 1994: Camera-ready copy for publication due



Maritime Reporter & Engineering News'

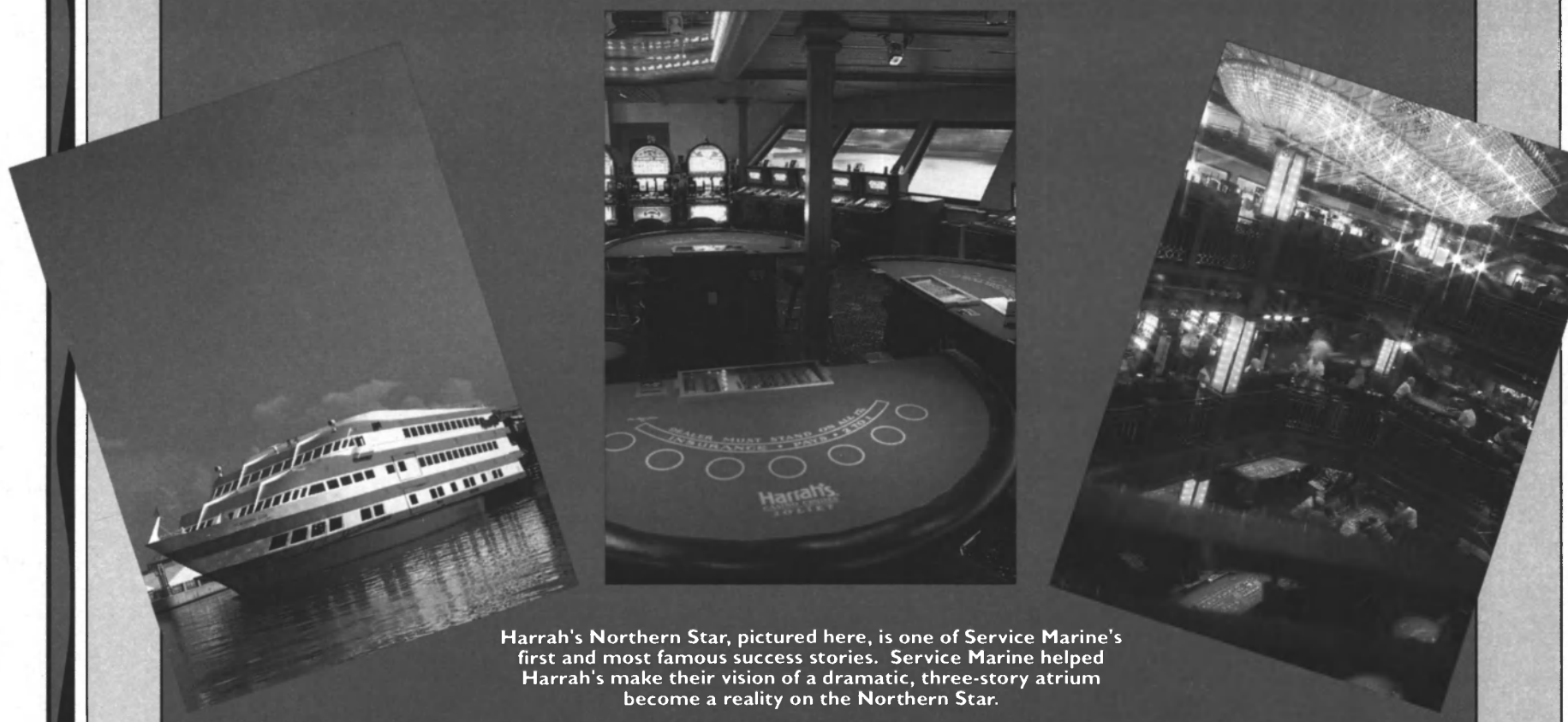
CASINO RIVERBOAT
QUARTERLY



Information-Packed Supplement Details The
Markets' Latest Happenings

- Buying Trends pg. 59
- Review Of Interior Suppliers pg. 66
- Indiana Flooded With Applications pg. 68
- Updated List Of Vessels On Order pg. 69
- State-By-State Legislative Update pg. 70

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A concept design from Rodney E. Lay & Associates, this Casino Cat™ is reportedly designed with improved seakeeping abilities to handle the Great Lakes' waters.

Gaming Vessel Market

Vessel Builders, Owner/Operators Promise Best Is Yet To Come

by Greg Trauthwein, managing editor

As the reality of the gaming vessel market as a viable source of work for U.S. yards grows stronger—by steady orders for new vessels—the focus shifts to “how” and “when:” as in, how big will it become and when will it end?

Following interviews with casino vessel builders, designers and owner/operators, the answer to both questions is an emphatic “very” and “not soon,” respectively.

“Right now, it’s a major part of our business,” said **Larry Hairston**, director of marketing and sales for Bender Shipbuilding & Repair Co., Inc., which, including its Braithwaite, La. yard, has seven vessels currently under construction.

“It represents a pretty good percentage of our work, probably 30 percent overall in 1993.” Bender is not alone in its enthusiasm for the market place, as many builders have seen the virtue of building these floating entertainment palaces.

The Market

“The casino riverboat business is

in phenomenal growth right now,” said **Steven Norton**, president, Argosy Gaming Co. (Alton, Ill.).

“We expect a number of states to come on line with cruising riverboats and permanently-moored vessels.”

To back this claim are not only the words, but the actions of others involved in the industry. Indiana,

which voted to legalize riverboat gaming just over a month ago, at press time had received 28 applicants for the state’s 11 gaming vessel licenses (see related story, page 68).

Both owners and builders are hovering over Indiana as if the first vessel sets sail tomorrow, but by the estimation of a spokesperson for

the recently formed Indiana Gaming Commission, the first *license* may not be issued until next fall.

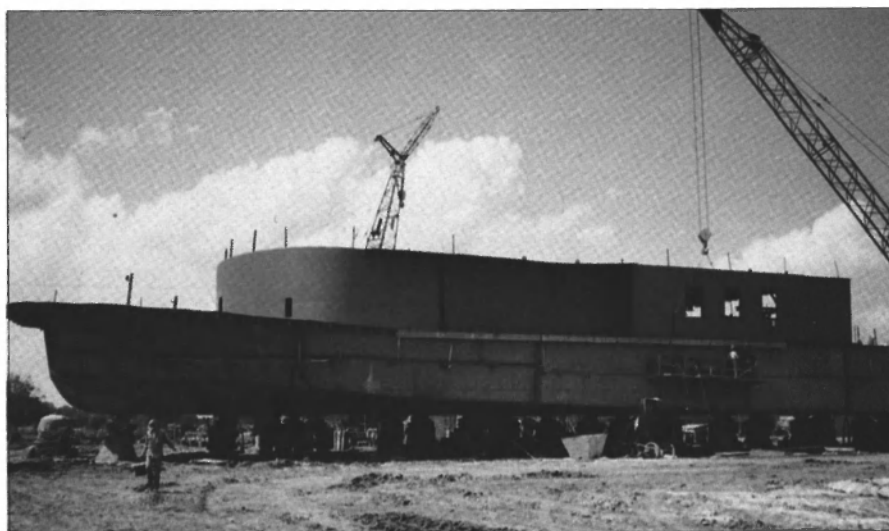
Undeterred, applicants are busily shaping plans and pitching their individual projects.

The Indiana situation is simply the latest and best example of how fiercely competitive the market has become in such a short time.

Builders and suppliers are expected to meet breakneck schedules in order to get vessels on-line at the earliest possible date, and owner/operators must prove to state officials and commissioners how their projects will best economically and sociologically impact the local area.

Mr. Norton, a former executive vice president with Resorts International, has actually helped individual states write and pass casino legislation, and in his own estimation is continuously on the road meeting with investors and legislators.

He expects markets with a good population density to prosper, while predicting that established vessels in areas with less populated areas



The Queen of New Orleans' hull and beginning of the first deck, under construction at Halter Marine, a division of Trinity Industries.

(Continued on page 60)

GAMING VESSEL MARKET: Best Is To Come

(Continued from page 59)

will be hurt as more vessels and states come on line.

"Riverboat casino gaming is a growth part of our business," said **Marc Grossman**, vice president of corporate communications at Hilton Hotels Corp. (Beverly Hills, Calif.). According to Mr. **Grossman**, the Hilton philosophy on the market is not to just plunge into any and all markets, but rather to be selective, looking at all of the opportunities available, particularly those in or near major population centers.

The company is slated to open operation in Kansas City in the spring of 1994.

On the future of the market, he said, "It will continue to grow for the next few years, but at some point there will be a shake-out. We are trying to pinpoint the locations that will provide us with long-term possibilities and returns. We are taking a long-term approach...we may not have the biggest navy, but

we believe we will have the best."

The Yards

"This is a very exciting area for us right now, as there is activity in numerous states," said **Gary Lipely**, sales and marketing, Trinity Marine Group. "We are definitely pursuing the Missouri and Indiana market, as well as the boats left in the Louisiana market without a builder yet."

Trinity Marine Group, which operates 13 shipyards (five in Louisiana) and has built more than 14,000 vessels in its history, is currently building five casino vessels, including the much anticipated Queen of New Orleans currently under construction at Halter Marine, a division of Trinity, for Hilton, and the recently announced boat for Bally. Mr. **Lipely** firmly believes it is that experience, as well as the yard's ability to provide on-time, within-budget deliveries, that will help Trinity Marine Group

prosper in the gaming vessel market.

"In Trinity we have an outstanding supplier," said Mr. **Grossman** of Hilton Hotels Corp. "They are providing us with a tremendous product at a good price." Hilton has four vessels under construction at Trinity.

Avondale's Boat Division currently has two casino gaming vessels under construction, the Catfish Queen and the Boomtown Belle.

"These are our first gaming vessels, and we feel that we're positioned well enough in the market to predict that we'll get more contracts," said **Curt Chatelain**, sales manager, Avondale Industries Inc., Boat Div.

Based on early response from Jazz Enterprises, Inc., the Baton Rouge, La.-based corporation formed solely to develop a land-based development/casino gaming vessel package for the area, Avondale will indeed prosper in the market.

Besides coming in with the most competitive bid to build the Catfish Queen (which will be operated by

Argosy Gaming), Jazz Enterprises vice president of operation/general manager **Mark Bradley** for Avondale to be a supplier ready please. "From the beginning they have respected deadlines as worked with us extensively (Throughout the process) we met weekends and at night, and they showed us something."

"They gave us the same courtesy and respect as they would large contracts," said Mr. **Bradley**. The Rodney E. Lay & Assoc.-designed vessel is due for May 1994 delivery.

Service Marine, another strong competitor in the casino vessel market, has found its 30,000-sq.-ft. casino paddlewheel gaming boat becoming very popular.

The company has recently been awarded a contract to build a 254 foot vessel for Harrah's Maryland Heights, Mo. casino, which marks

(Continued on page 62)

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Atlantic Marine Launches Empress II



A 150-foot gantry crane sets the forward section of the superstructure on the gaming vessel Empress II, built at Atlantic Marine.

On October 8, Atlantic Marine Inc. launched the Empress II, a triple-deck gaming vessel with the capacity for 1,500-passengers. The 238-by-66-foot vessel is being built for Empress River Casino Corp. of Joliet, Ill., and is scheduled to be delivered in December. The Empress II is the second vessel built for this customer.

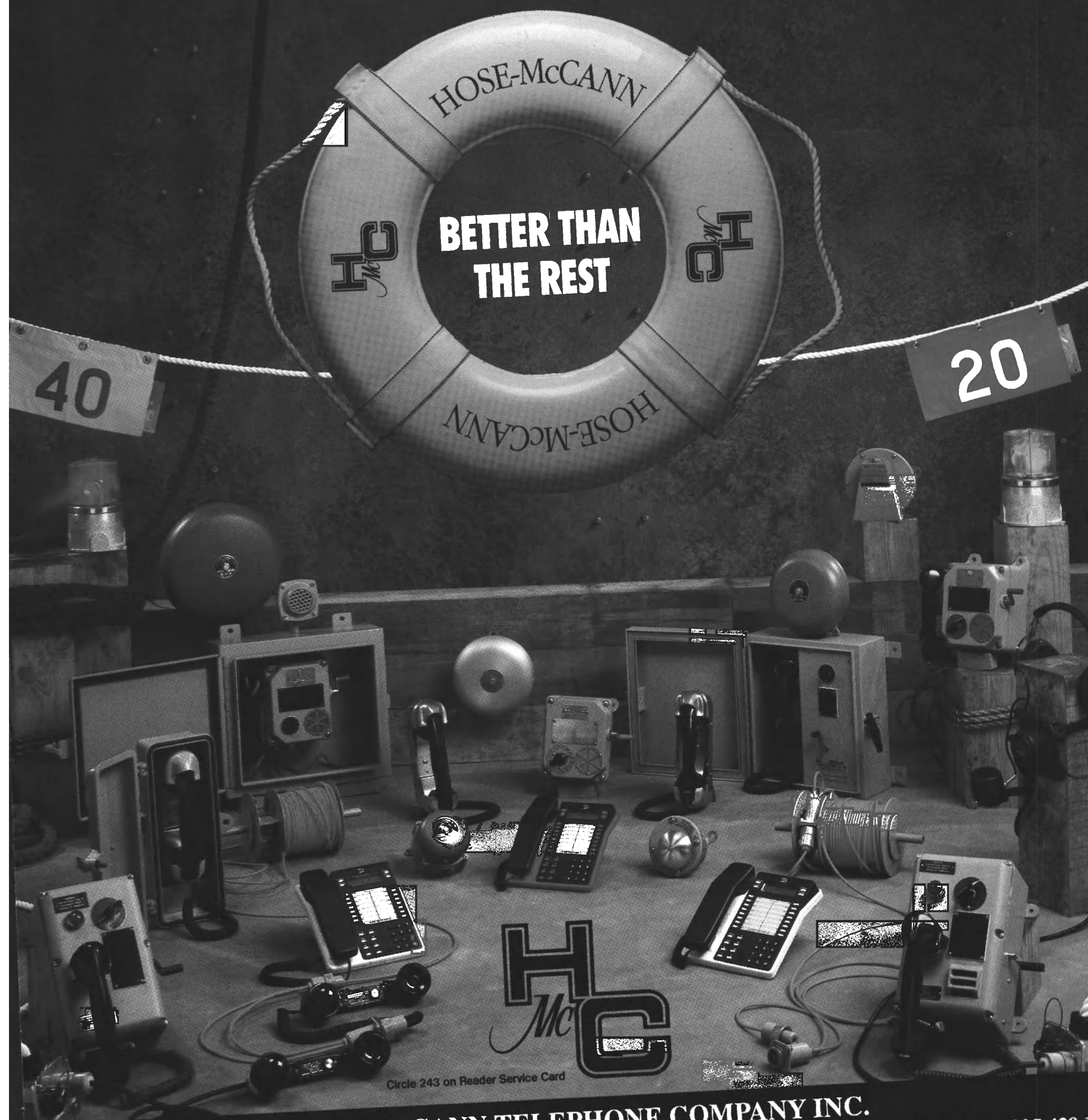
Designed by Rodney E. Lay & Associates, Inc. of Jacksonville, Fla., the vessel is powered by two Caterpillar 3412TA marine engines with Twin Disc reduction gears. Caterpillar also supplied two 3508, 715 kW generator

sets for shipboard electrical service; a 3208, 160 kW generator set for emergency power and a 3208TA engine to power the bow thruster. A sophisticated heating, air conditioning and ventilation system will be provided for year-round passenger comfort.

The three ballroom-size casinos on the main and upper decks, with an area of approximately 26,000-sq.-ft., will have 1,200 gaming positions, including 850 slot machines. For more information on the capabilities of Atlantic Marine,

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GAMING VESSEL MARKET: Best Is To Come

(Continued from page 60)

the fourth casino boat that Service Marine has built for Harrah's.

According to **Tom Hensley**, vice president of marketing for Service Marine, the company is currently building two of these large boats for Boyd Gaming Corp. and one for Ca-

sino America.

He said that "customers are attracted to the boats nearly 200-feet long, and, 71-foot wide cabins which also have high ceilings. We have also developed an air conditioning system which leaves the cabins virtually

smoke free."

Bender Shipbuilding is currently building seven vessels for seven separate owners, a feat possible because of the company's strong internal engineering staff (numbering 100+ strong) and its array of 25 standard riverboat designs, which a potential owner can easily browse through to select the vessel to meet certain needs, said Mr. **Hairston**.

But beyond all the support and amenities, Mr. **Hairston** said sway-

ing a casino vessel owner boils down to one thing: time. "The shorter delivery time you have, the better chance you have at getting a contract."

Mr. **Hensley** of Service Marine concurs, saying that "mass production assembly line methods" were employed in the construction of the recent newbuilds for Harrah's, which resulted in "very fast delivery."

More Than Just A Boat

While the business for all yards involved in building casino vessels has indeed been welcome work, many view the market as doing far more than keeping a handful of yards busy. Many potential owner/operators are expected to give something back to the community, via urban renewal along the shorefront where the casino vessel is based.

For example, Jazz Enterprise is charged with far more than contracting for the 19th century-style paddlewheeler Catfish Queen.

The corporation, which was just formed in mid-1992, is currently in the process of revitalizing the formerly industrialized "Catfish Town." The Catfish Town site will be a huge entertainment complex, stretching 100 yards off of the river, which will be complimentary to the riverboat.

According to Mr. **Bradley**, Jazz Enterprises would be interested in building numerous additional vessels for the Baton Rouge site, should the legislation in Louisiana change to allow it.

Another ancillary benefit is exemplified by Bender acquiring the Braithwaite, La. yard in February of this year. In an incredibly short period of time, a shipyard which had sat dormant for more than seven years by Mr. **Hairston's** calculations, is currently building three vessels and employing 500.

According to **Steven Norton**, president of Argosy Gaming Co. in Alton, Ill., a company which was the first company to file and go into the business in Illinois back in 1991, local partnership and proposed development is a key to getting the permission necessary to build riverboat casinos in the first place. Mr. **Norton** cited several locales, including the Baton Rouge, La. Catfish Queen project with Jazz, where Argosy is working with local and state governments to help develop riverboat gaming sites.

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For additional free information on the casino vessel builders mentioned in this story, please circle the appropriate number on the Reader Service Card bound in this issue.

Avondale Industries, Boat Div.	105
Bender Shipbuilding & Repair	103
Service Marine	106
Trinity Marine Group	104

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Place Your Bets on the Nation's Top Builder of Riverboat Casinos

In the high-stakes business of riverboat gaming, it pays to place your bets on a winner. From the very beginning of the riverboat casino boom, Bender Shipbuilding has delivered boat after boat — on time and on budget. With five riverboat projects completed and ten under construction, Bender is the nation's top builder of casino riverboats and dockside casino barges.

When Illinois river waters opened to gaming, Bender's swift 90-day conversion raced the *Alton Belle Casino* to this market far ahead of its competition.

Since this record-breaking beginning, Bender has set the industry standard for rapid delivery in a business where time means everything.

Bender's conversion of the sleek casino riverboat *Silver Eagle*, operating in Galena, Illinois, was completed in less than 45 days. *Splash*, a 400-foot casino/restaurant barge operating south of Memphis in Tunica, Mississippi, was converted by Bender in less than 120 days. Bender recently

completed the first riverboat casino projects in Vicksburg and Greenville, Mississippi. Before the end of 1993, Bender will complete the first two riverboat casinos in the state of Louisiana.

Bender has casinos under construction for Louisiana, Illinois, Mississippi, Missouri and Iowa, and is developing markets in Indiana.

With this impressive track record, Bender offers you turn-key entry into the river casino business. Our experienced staff is fully knowledgeable in gaming regulations in all states and can serve as

your guide through all the red tape. From initial design and concept, we can assist you with site development, securing financing, interior design, food and beverage planning, land-based support facilities — everything you'll need to get you to opening day.

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GAMING VESSEL UPDATE

Specifying The Equipment: The Builder And The Owner

Perhaps as debated as "which came first, the chicken or the egg," there seems no consensus on who specifies the marine machinery built into new gaming vessels. After asking interviewees point blank "who chooses the equipment for the vessels?," there is still no consensus, but some interesting replies.

• Owners typically are not marine related, and they are looking to get a casino on a boat. It is no doubt that the level of the interior is far and above anything, including dinner excursion boats. They have interior designers that go all out to make them look very plush and appealing. The (four) Hilton boats (currently under construction) were designed in-house; we developed the specs and they were owner-approved. — **Gary Lipely**, sales and marketing, Trinity Marine Group.

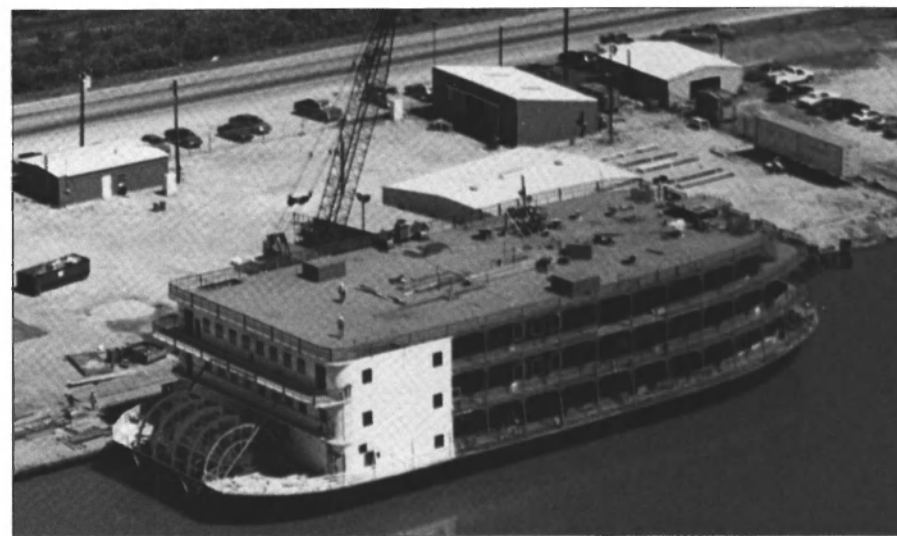
• We basically decide what we need to have, equipment-wise, to have a competitive boat.

We have a lot to do with the selection of the various equipment, as we have a good feel for it because of our experience. Our naval architects have a say, but the final decision on ship machinery is Argosy's. — **Steven Norton**, Argosy Gaming Co.

• If they've done their homework and have their own naval architects, they specify the equipment. In our experience with conversion and new construction, we have specified equipment I'd say 90 percent of the time. We make equipment choices easy, as we have 25 standard riverboat designs they can go through and pick out relative to their needs. — **Larry Hairston**, director of marketing and sales, Bender Shipbuilding & Repair Co. Inc.

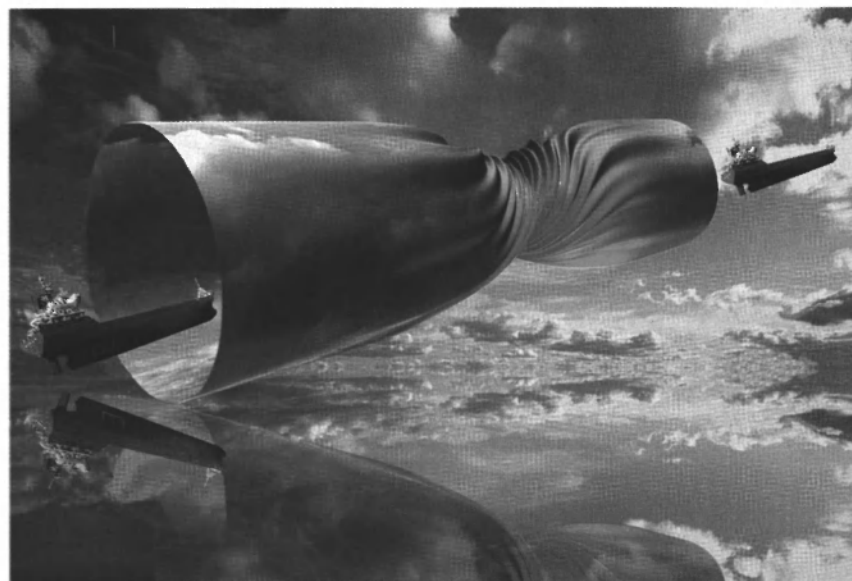
• We look to them for their expertise... Hilton Hotels is not a shipbuilder. — **Marc Grossman**, vice president, corporate communications, Hilton Hotels, Co.

SMI Preps Southern Star



The 210-foot Southern Star, being built for Harrah's Joliet by Service Marine.

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GAMING VESSEL UPDATE -- Interior Decorating

Dressed To Thrill

Not to reiterate the obvious, but the interior of gaming vessels require a bit more detail than, say, the interior of a towboat. The following companies represent a smattering of the vendors currently vying for business in the burgeoning gaming vessel market.

Gasser Sitting Pretty In Gaming Vessel Market

The Gasser Chair Co. has more than 47 years experience in manufacturing commercial contract seating for the hotel, restaurant, gaming, riverboat and cruise ship indus-

tries. Gasser was reportedly the first to fully develop the concept of aluminum frame construction for the hospitality and entertainment industry. This helped eliminate the weight and maintenance problems inherent in steel frame seating, and resulted in a product which is lighter, and reportedly stronger and more durable.

The company's complete range of seating includes armchairs, sidechairs, barstools, settees and stackable chairs; available in hundreds of styles or custom-designed to meet customer requirements. For free information on Gasser Chair,

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P&H Systems Offers Coinless Card System

P&H Systems of Mountain View, Calif. offers gaming vessel operators a system to simplify operations and eliminate the use of coins.

The coinless card system offers complete electronic control, so competitor's cards will not work in other machines. The system is installed in 20 to 30 minutes, and comes complete with re-usable cards.

The system also allows an instant readout of activity, allowing operators to quickly compare game-to-game play. For more information on the system from P&H Systems,

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Durkan Brochure Presents Carpeting Options

Durkan, one of the largest suppliers of patterned carpet to casinos, offers casino vessel operators one of the industry's largest selections of patterns and borders.

Custom patterns and colors are reportedly available quickly, and the company claims a low minimum order requirement. For Durkan's free four-color brochure on its line of carpeting solutions,

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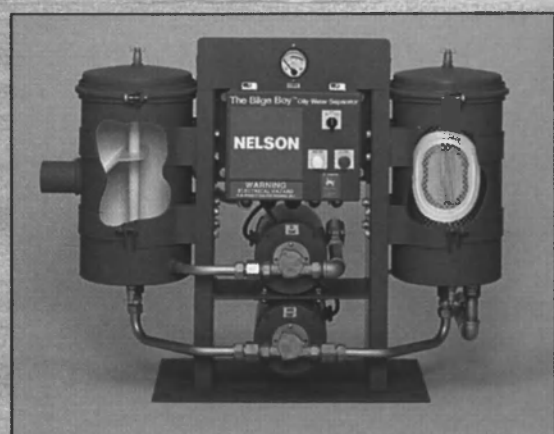
Zerodec Allows Endless Design Options

The concept of combining fiberglass and plaster to produce strong but lightweight decorative architectural products began with two designers in England nearly 20 years ago, and evolved into the introduction of Zerodec in 1976.

Zerodec reportedly does not burn, melt, smoke or have any toxicity.

The product, being marketed to casino vessel owners who are always attempting to control vessel weight, can reportedly be fabricated with an unequalled strength/weight ratio, with a finish like silky marble

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Fenco Brochure Details Teller Counter Options

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November, 1993

Station Casinos One Of First To File For Missouri License

Station Casinos, Inc. announced that its subsidiary, St. Charles Riverfront Station, Inc. has filed its application with the Missouri Gaming Commission for a license to operate riverboat gaming in St. Charles, Mo. September 20 was the first day set by the commission for applicants to file for licenses in Missouri.

In its application, St. Charles Riverfront Station is proposing an operation which includes both cruising riverboat gaming excursions and continuously docked gaming. The company owns the Casino St. Charles, the former Dubuque Casino Belle, which will provide gaming cruises from St. Charles. The

vessel can carry 2,100 passengers, and will offer approximately 1,200 gaming positions. Reports also indicate the company is building another entertainment vessel, which will be continuously docked and offer restaurants and about 1,400 gaming positions, contingent on approval from the Missouri Gaming Commission.

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GAMING VESSEL UPDATE

INDIANA: The Next Frontier

Perhaps nothing better exemplifies the fervor over the casino vessel market than the number of applications received by the state of Indiana, which has already been flooded with 28 applications for its 11 licenses.

Here's the list of potentials (Company, followed by area applied for).

1] Gold Strike Resorts d/b/a Gold Strike Resort Casino, Jean, Nev. (**Vanderburgh County**)

2] Circus, Circus Enterprises, Inc., Las Vegas, Nev. (**Porter County**)

3] Lake Michigan Charter Ltd., Hammond, Ind. (**Hammond (Lake County)**)

4] Mirage Riverboats of Indiana, Las Vegas, Nev. (**Hammond (Lake County)**)

5] Michigan City Casino & Lodge, Inc., Indianapolis, Ind. (**Michigan City (LaPorte)**)

6] Riverboat Corp. of Indiana, Inc., Biloxi, Miss. (**LaPorte County**)

7] Harrah's Southern Indiana Riverboat Partnership, Memphis, Tenn. (**Clark County**)

8] Ogden Riverboat Associates L.P., New York, N.Y. (**Clark County (Jeffersonville)**)

9] Player's International, Calabasa, Calif. (**Vanderburgh County**)

10] Alpha Rising Sun, Inc., Rising Sun, Ind. (**Rising Sun (Ohio County)**)

11] Jumer's of Evansville, Inc., Peoria, Ill. (**Vanderburgh County**)

12] Eldorado Riverboat Ltd. Liability Co., New Albany, Ind. (**New Albany, Floyd County**)

13] Indiana Gaming Company, LP, Lawrenceberg, Ind. (**Dearborn County (Lawrenceberg)**)

14] Aztar Indiana Gaming Corp., Indianapolis, Ind. (**Vanderburgh County**)

15] Showboat Marina Partnership, East Chicago, Ind. (**Lake County (East Chicago)**)

16] Jackpot Indiana Riverboat, Inc., New Albany, Ind. (**Floyd County**)

17] Ameristar Casinos Inc., Jackpot, Nev. (**Warrick County**)

18] Grand Casinos Inc., Plymouth, Minn. (**Floyd County (New Albany)**)

19] Boyd Indiana Inc., Las Vegas, Nev. (**Hammond (Lake County)**)

20] Mount Albany Grand Casinos Inc., Indianapolis, Ind. (**Floyd County**)

21] Pinnacle Gaming Development Corp., Denver, Colo. (**Switzerland County**)

22] New Albany Landing Co. LLC, Chicago, Ill. (**Floyd County**)

23] Riverfront Station, Inc., Las Vegas, Nev. (**Vanderburgh County**)

24] Joint Venture Between Hilton Michigan City Corp. & Caesar's Indiana Resorts Corp., Merrillville, Ind. (**LaPorte County**)

25] Summit Riverboat Casinos - Indiana Inc., Reno, Nev. (**Lake County (East Chicago)**)

26] Schilling Casino Corp., Fort Wright, Ky. (**Dearborn County**)

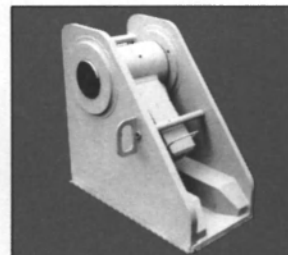
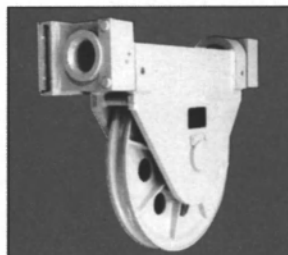
27] Fred Collins d/b/a Fred Collins Gaming Co., Greenville, S.C. (**Gary**)

28] Trump Hotels & Casinos Resorts, Inc., New York, N.Y. (**Gary**)

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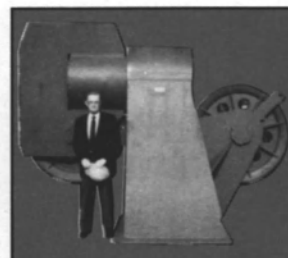
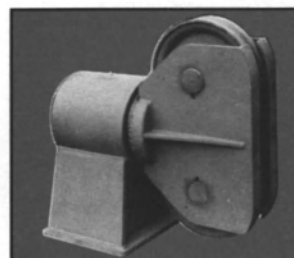
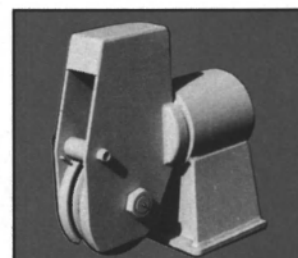
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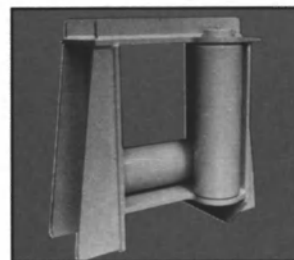
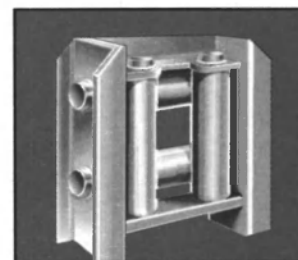
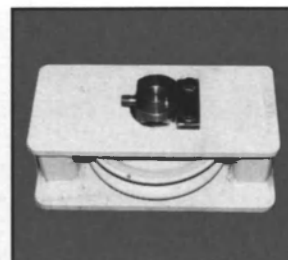


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MARINER CLASS GUIDE SHEAVES

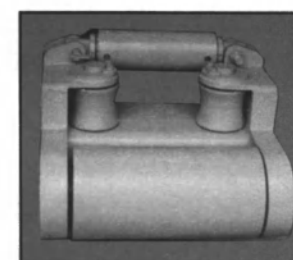
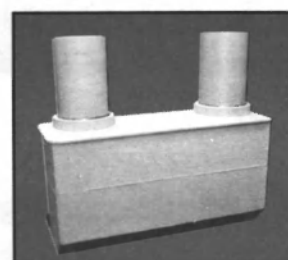
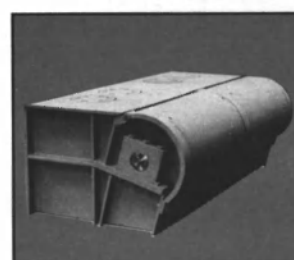
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CURRENT CASINO VESSEL CONSTRUCTION

Yard	Vessel Name	Designer	Dimensions	Engines	Owner	Delivery
AVONDALE Boat Div.	Catfish Queen	Rodney Lay & Assoc. Avondale	266 x 77 x 12.5	Detroit Diesel Caterpillar	Argosy Boattown	Spring 1994
	Boattown Belle		250 x 72 x 12			Spring 1994
ATLANTIC MARINE	Empress II	Rodney Lay & Assoc. Rodney Lay & Assoc.	238 x 66	Caterpillar Caterpillar	n/a n/a	8/93
	Par-A-Dice		240 x 66			6/94
BENDER SHIPBUILDING & REPAIR CO., INC.	Star Casino	GP & Associates GP & Associates R.A. Stearn, Inc. R.A. Stearn, Inc. GP & Associates GP & Associates GP & Associates	260 x 78	Caterpillar Caterpillar MTU Caterpillar Caterpillar Caterpillar Caterpillar	Star Casino Treasure Chest, Inc. Horseshoe Entertainment Promus Co. La. Casino Cruises, Inc. Lady Luck, Inc. Nevada Landings/Hyatt	10/93
	Treasure Chest Casino		260 x 78			1/94
	Horseshoe		295 x 78			2/94
	Harrah's Kansas City		295 x 78			5/94
	Casino Rouge		260 x 78			6/94
	Lady Luck		320 x 78			8/94
HOUMA FABRICATORS A Div. of L.O.R., Inc.	Elgin Lady		400 x 114			10/94
	n/a	Houma Fabricators Houma Fabricators Houma Fabricators Houma Fabricators	292 x 75	Cummins Cummins n/a n/a	n/a n/a n/a n/a	4/94
	n/a		292 x 75			4/94
	n/a		n/a			1994
	n/a		n/a			1994
SERVICE MARINE INDUSTRIES, INC.	Southern Star	Service Marine Service Marine Service Marine	210 x 78	Caterpillar Caterpillar Caterpillar	Harrah's Harrah's Casino America/ Louisiana Downs	12/93
	Isle of Capri		210 x 78			--
	Bossier City		254 x 78			2/94
	n/a	Service Marine Service Marine Service Marine	254 x 78	Caterpillar Caterpillar Caterpillar	Boyd Gaming Corp. Boyd Gaming Corp. Harrah's	8/94
	n/a		254 x 78			10/94
	n/a		254 x 78			8/94
TRINITY MARINE GROUP	Two (2) Paddlewheelers	Rodney Lay & Assoc. Trinity Marine Rodney Lay & Assoc.	245 x 62	Caterpillar Caterpillar Cummins	Hilton/New Orleans Paddlewheel Hilton/New Orleans Paddlewheel Bally	2/94
	Paddlewheel		322 x 90			11/94
	Paddlewheel		266 x 77			11/94

SOURCE: Maritime Reporter & Engineering News

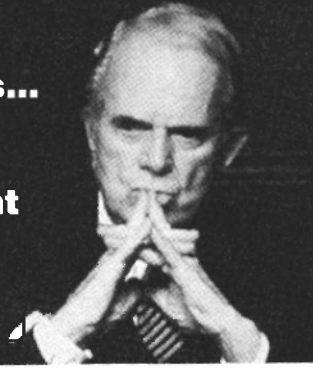
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GAMING VESSEL LEGISLATIVE UPDATE

To stay on top of the fast-paced gaming vessel market, owner/operators and builders alike must keep abreast of new and potential legislation on the state level. The following informa-

tion was excerpted from the Transportation Institute's latest update on Riverboat Gaming Legislation. For more information on the particular specifications or status of a state's

gaming laws, or to subscribe to the report, contact: Transportation Institute, 5201 Auth Way, Camp Springs, Md. 20746; tel: (301) 423-3335; fax: (301) 423-0634.

ALASKA

In 1993, House Bill (H.B.) 240 was the first gaming bill introduced since 1990. If passed the bill would allow gaming aboard ferries. Introduced by Representatives **Moses** and **Bunde**, the bill currently is in the House State Affairs Committee.

The first half of Alaska's two-year session ended in mid-May, and it reconvenes in January. Most recently, an August 1990 referendum to establish casino gaming in the state failed courtesy of a 65 percent "no" vote. Some casino-style gaming is available aboard foreign-flag cruise ships which sail seasonally.

CALIFORNIA

In 1993 Assembly Bill (A.B.) 74, which would allow casino gaming on U.S.-flag and foreign-flag cruise vessels during voyages between California ports, passed the California State Assembly. The bill was assigned to the Senate Committee on Governmental Organization, and was consequently designated a "two-year bill," allowing it to remain alive for the 1994 legislative session.

The committee is unlikely to take action on the bill this year. The state ban on shipboard gaming has been in effect since January 1, 1993.

As stipulated by other provisions of A.B. 74, even if the general ban on shipboard gaming is eliminated, such gaming will only be permitted under the following conditions: passengers are embarked on the vessel for 48 hours (allowed to leave the vessel for scheduled port visits or emergencies); meals and lodging are provided for every passenger; gaming is strictly an incidental part of the cruise; shipboard gaming is not advertised within California, other than by means of a photograph and a brief description in cruise brochures; gaming does not occur in California territorial waters; and the vessel visits at least one port other than the port or ports of embarkation and final disembarkation.

CONNECTICUT

The beginning of the year saw the introduction of Senate Bill (S.B.) 602 which would allow casino gaming on vessels, specifically ferry boats, on the Connecticut and Thames Rivers, and on other bodies of water designated by the division of special revenue. The measure died in committee in March, and the governor reportedly opposes the expansion of gaming in Connecticut. In a related move in April, the New London City Council approved the plans of entrepreneur **Thomas Graver, Sr.** to operate the Europa Jet, a Bahamian-flag vessel, on gaming cruises-to-

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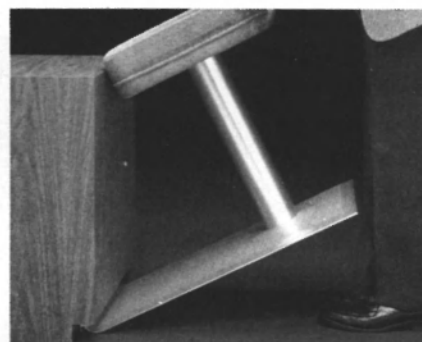


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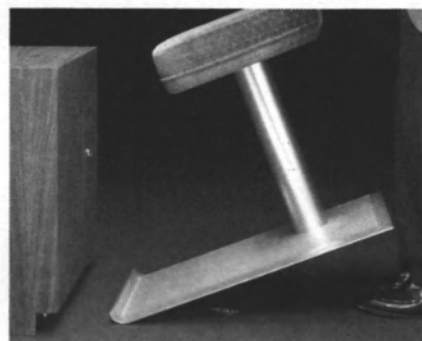
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nowhere from City Pier in New London harbor. Immediately the legality was questioned by state and federal officials, and on June 30 state officials informed Entertainment-A-Float, the operator, that if the vessel entered the port in New London, it would be seized and the principal officers of the company would be prosecuted. On July 6, three days after the Europa Jet arrived in New London, the U.S. District Court, District of Connecticut, granted an appeal by Entertainment-A-Float to enjoin local, state and federal law enforcement officials from seizing or acting against the Europa Jet pending a judgment from the court regarding the company's legal right to operate the cruise-to-nowhere vessel from New London.

The vessel plans to operate two six-hour cruises daily, and its casino is open only while the vessel is in international waters.

INDIANA

On June 30, the Indiana General Assembly overrode Governor **Evan Bayh's** veto of a budget bill (H.B. 1001SS) containing riverboat gaming provisions that allow as many as 11 gaming vessels in Indiana. Vessel specifications for the state require a self-propelled vessel at least 150 feet long, and U.S. Coast Guard-certified to carry 500 passengers.

Vessels operating on the Ohio River must replicate Indiana steamboat passenger vessels of the 19th century. The initial gaming license fee is \$25,000, with the initial license good for five years.

Thereafter, the license is to be renewed annually after payment of a \$5,000 renewal fee.

Gaming vessel operators licensed for Gary must construct or provide for the construction of an approved hotel (with at least 250 rooms), or generate economic development.

Applicants for gaming licenses must have affirmative action plans.

Also, holders of gaming licenses are required to establish goals of reserving at least 10 percent of the dollar value of the licensee's contracts for goods and services for minority business enterprises, and five percent for women's business enterprises.

IOWA

In 1993 three bills were introduced, and none were passed.

House File (H.F.) 13, would have increased the allowable space for gambling activities on an excursion gaming boat. H.F. 143, would have raised the age restriction for gaming from 18 to 21. And Senate File (S.F.) 358 was an attempt to change some of the regulations and increase gaming activities on riverboats and racetracks.

LOUISIANA

On June 18 Louisiana's Gaming Commission gave preliminary approval to seven applications for riverboat gaming licenses, bringing the number of approved applications to 15, the maximum number of licenses that may be issued under state law. The applicants still must be approved by the Louisiana State

Police before receiving their licenses. (NOTE: Louisiana is one of the more legislatively-active states for riverboat gaming. For full details please contact the Transportation Institute).

MASSACHUSETTS

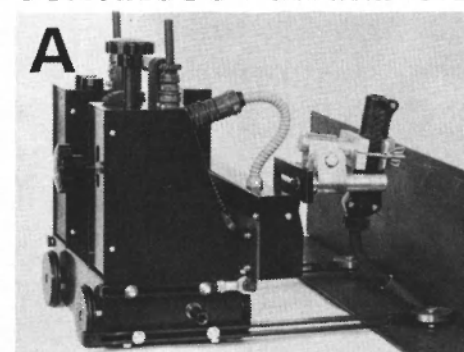
S.B. 1689 would permit either

riverboat or dockside gaming in Massachusetts, depending on the decision of the legislature. The bill, introduced on July 7 and referred to the Joint Committee on Government Regulations, would permit four waterborne gaming operations in the state, in Springfield, Fall River, Newburyport and Lowell. A hearing on the measure has not been scheduled. H.B. 5364 would permit

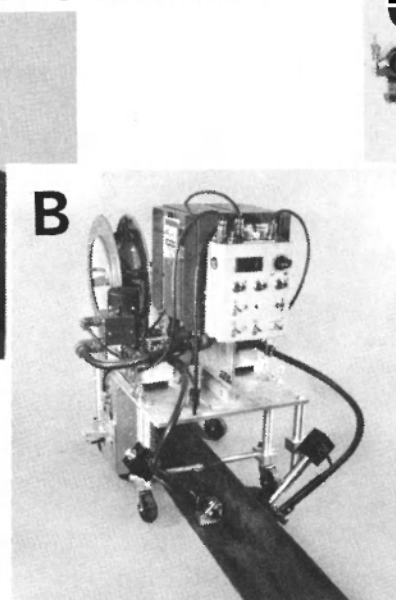
(Continued on page 72)

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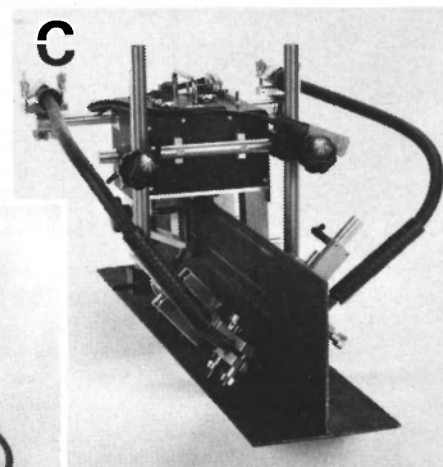
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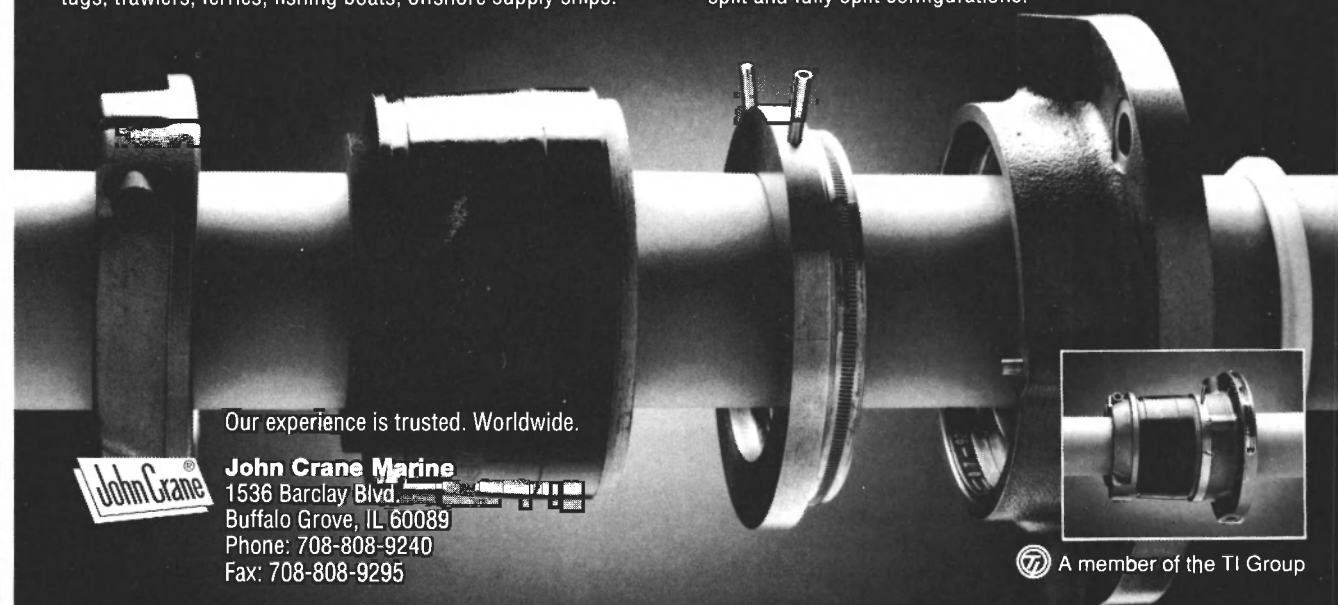
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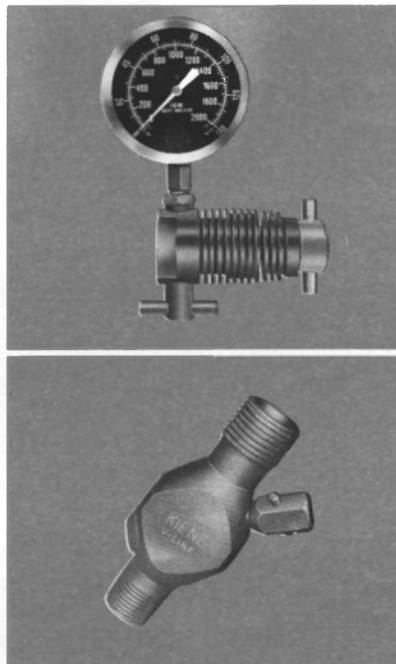
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Gaming Vessel Legislation

(Continued from page 71)

a maximum of 12 gaming vessels in the state. Five of the 12 would have to be docked in Boston. Gaming vessels could go into operation beginning January 1, 1994. Hearings on the bill have not been scheduled. H.B. 4945 would allow gaming on excursion vessels, and to date the bill remains in the House Government Regulations Committee, which held a hearing on the bill on May 19.

MISSOURI

In 1993 the debated revision of H.B. 149 (which was sponsored by Representative **Fallert**, passed in November 1992) which was sponsored by Senator **Wiggins**, was passed April 29, 1993 under S.B. numbers 10 and 11. The new law establishes the Missouri Gaming Commission, refines the riverboat gaming legislation, and after June 30, 1994, allows the lawful operation of the game bingo. To date six local communities on the Mississippi River voted in favor of riverboat gaming: Portage des Sioux, St. Louis, St. Charles, Maryland Heights, Jefferson County and Ste. Genevieve. On the Missouri River, seven communities voted in favor of riverboat gaming: St. Joseph and Buchanan Counties, North Kansas City, Kansas City, Riverside, Parkville, Sugar Creek and Jefferson City. The commission is empowered to select applicants based on their potential to open and generate tax revenue, giving existing boats an edge.

Vessels must, as nearly as possible, resemble Missouri's riverboat history, and shall provide for non-gaming areas, food service and a Missouri-theme gift shop. Applicants must identify the boat and its exact location for docking, etc. A non-refundable application fee of \$50,000 or \$15,000 for each person investigated (whichever is higher) is required. Thereafter, renewals will be every two years and the annual fee will be \$25,000.

PENNSYLVANIA

H.B. 1883 would permit gaming vessels to operate on rivers or other bodies of water which by themselves or in conjunction with other bodies of water form a "highway over which commerce may be carried on with other states or countries." Consistent with that restriction, excursion gaming vessels would be allowed to operate from ports located in "counties of the second class" and in any county, city, borough, town or township. No more than five gaming vessels could operate in any one county. H.B. 1883 was assigned to the House Finance Committee. The committee has not yet scheduled a hearing on the bill.

SOUTH CAROLINA

House Joint Resolution (H.J.R.) 3986 would amend Article XVII of the state constitution to allow riverboat gaming and establish a Gambling Commission; and H.B. 3962 would enact riverboat gambling authorization in the state.

TEXAS

Interest is high for establishing a riverboat gaming industry in the state. The Texas Riverboat Association (TRA) is a non-profit corporation chartered by the Secretary of State for the purpose of lobbying for legislation to permit riverboat gaming operations in Texas. In 1993, both the Senate and the House introduced bills for riverboat gaming legislation. Both bills (S.B. 597 and H.B. 445) are in committee, and no hearings have been scheduled yet.

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Mississippi OKs Plan To
Quicken Licensing Process

In an attempt to speed up the casino licensing process in Mississippi, state gaming officials have decided to accept background checks from other jurisdictions, rather than duplicating the work themselves. The commission has reportedly claimed it will, however, continue to update and/or expand upon the checks.

The commission reportedly has an investigation staff of 14, capable of carrying on about four investigations simultaneously. Each investigation reportedly lasts three months, and to date there are more than 20 applications pending.

James P. Colie Renovates
"Big Red Boat"

Marine general contracting firm James P. Colie & Associates, Inc. of Hollywood, Fla. renovated areas of Premier Cruise Lines' S.S. Majestic, also known as "The Big Red Boat." Work began September 26, and the boat returned October 12.

The project involved renovations to the Embarkation Lobby, the Satellite Cafe, several public restrooms and furniture fabrication. Craftsmen at James P. Colie's workshop fabricated two new desks for the Embarkation Lobby. Public restroom work encompassed new fixtures, sinks, vanities, wall laminates, floor tile, ceilings and a plumbing upgrade. For more information on the capabilities of James P. Colie & Associates,

Circle 33 on Reader Service Card

Bally Gaming Names Lam
Vice President of Technology

Bally Gaming appointed Paul Lam to the position of vice president of technology responsible for heading up the company's manufacturing plant, in addition to helping the company develop new products by using advanced technologies. Bally Gaming, Inc. is a Las Vegas-based designer and manufacturer of reel-spinning slot machines, video gaming devices and video lottery terminals, and a big supplier to the burgeoning gaming vessel market. For information on Bally Gaming,

Circle 34 on Reader Service Card

Kelvin Hughes Cruises With
Radar Contract

Kelvin Hughes Ltd. have recently made significant sales into the cruise ship market with contracts for seven cruise vessels to be fitted with its Nucleus 6000 Arpa Radar Systems. The sales are a result of time invested between Kelvin Hughes and its agents Radio Hol-

land U.S.A. in a market with strong competition. The first three vessels to be fitted with the Nucleus 6000 Arpa were from the Royal Caribbean Cruise Line, sailing in Alaska, Northern Europe, the Mediterranean and Caribbean Sea. The TSS Festivale from the Carnival Cruise Lines has also had the Nucleus 6000 Arpa installed and will have a further S-Band 6000 Arpa, with Interswitch added during September. Another three ships from the

Carnival Cruise Lines are due to be fitted with the Nucleus 6000 Arpa within the next three months.

The system was chosen for use on board of these busy vessels reportedly for their comprehensive operations and screen clarity. The 6000 Arpa also offers a wide variety of useful functions, such as interfacing and mapping capabilities. For more information,

Circle 62 on Reader Service Card

Thordon Helps Sabine
Improve Efficiency, Cut Costs

Using Thordon bearings has lengthened the maintenance and bearing replacement cycle, helping to improve operating efficiency and cost effectiveness for Sabine Transportation, according to Sabine's marine representative Scott

(Continued on page 76)

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Circle 251 on Reader Service Card

(Continued from page 75)

Hoffpauir. He oversees repairs and specifying materials and procedures for six tankers, seven harbor tugs, 12 inland towboats and 40 tank barges operated by the Port Arthur, Texas-based subsidiary of Dixie Carriers. The successful relationship with Thordon has numerous success stories, such as when Thordon was chosen for the pintle bearing and propeller shaft staves on the tanker Quadalupe. He said despite the fact that the upper pin-

tle bearing is running dry 50 percent of the time, the tanker still gets good wear life from the self-lubricating bearing. According to Mr. Hoffpauir, part of the product's longevity and success on all Sabine vessels is owed to Marine Industries Corp., the Thordon distributor he deals with, supplied a computer program to calculate installation tolerances. For more information,

Circle 32 on Reader Service Card

MTI Introduces Global-C, Inmarsat-C Terminal

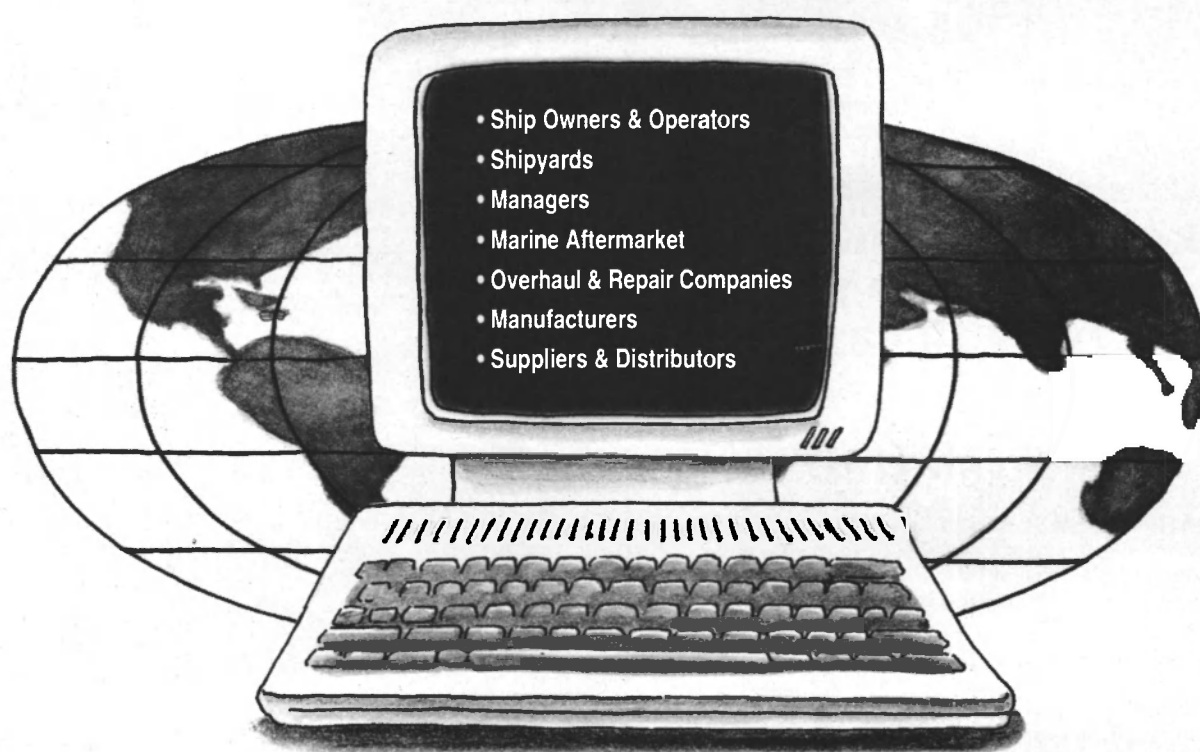
Mobile Telesystems, Inc. (MTI), a leading manufacturer of Inmarsat satellite communication terminals, is introducing the new Global-C, Inmarsat-C terminal at Europort '93 in Amsterdam.

The Global-C terminal features an enhanced communication software package to simplify communi-

cation tasks. It allows maritime users to send and receive text messages and computer files, as well as allow facsimile delivery and access to electronic mail networks. Global-C meets the most recent specifications of the Global Maritime Distress and Safety System (GMDSS) and the International Maritime Organization. The system has been Inmarsat type-approved for general maritime, GMDSS and land mobile applications. For free information from MTI,

Circle 50 on Reader Service Card

The Global Marine Parts Department...



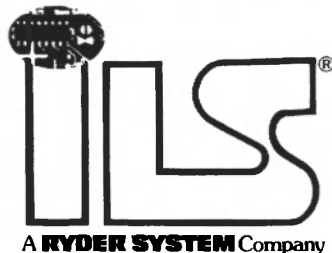
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Circle 24 on Reader Service Card

AMVER Provides For Safety At Sea

AMVER, the U.S. Coast Guard's (USCG) Automated Mutual-assistance Vessel Rescue system, began in 1958 as a computerized search and rescue tool for merchant ships in the North Atlantic Ocean. Today, AMVER is a worldwide safety network safeguarding ships from more than 124 nations in every ocean of the world.

AMVER participation is free, voluntary and available to ships of all nations, making it a cost-effective, efficient search and rescue tool. AMVER is endorsed by the International Maritime Organization and is available to the world's cruise and shipping communities. Every day more than 2,500 vessels worldwide participate in the AMVER Safety Network.

The heart of the system is a computer-generated database that last year plotted the voyages of more than 12,000 ships. Significant voyage information is transmitted to the new AMVER computer facility in Martinsburg, W. Va.

The computer can, as requested, reportedly dead-reckon the location of AMVER vessels in relation to a distress, as well as their direction of travel.

For additional information on AMVER,

Circle 51 on Reader Service Card

Datrex Launches Emergency Lighting System

A new emergency lighting system to fulfill future IMO requirements on ships and offshore installations has been developed and launched by Datrex. Dubbed Dalite®, the system is an electroluminescent pathway-marking system for emergencies during power loss or from smoke-filled passageways. The system uses solid state lamp cells encapsulated within a seamless polymer extrusion for watertightness.

The manufacturer claims the construction of the system provides greater vibration, impact and vandal resistance.

For free information on the new system from Datrex,

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Maritime Reporter/Engineering News

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Reefer vessels under construction at Boelwerf, Belgium.

Shipbuilding In the BENELUX Countries

by Alan Thorpe, contributing editor

Both Benelux countries involved in the shipbuilding industry, The Netherlands and Belgium, have undergone various reorganizations over recent years, although their future is still not assured as the individual yards fight against stiff competition from around the world for virtually every order.

The main problem is that the industry in Holland is not sure of further government support. Subsidy levels available from the Dutch government are allocated in a package form which has been negotiable each year. Individual yards claim their part of this package dependent upon turnover. It is estimated that subsidies are worth approximately four percent of individual ship contract values. The yards are currently in negotiations with the government for next year's allocation. Many of the yards are hoping

that the subsidy level for 1994 will be the same as this year, despite rumors that it will be reduced. However, some have expressed a preference for a change in the subsidy operation, looking at a yard operational subsidy arrangement instead of straight ship contract subsidies. Although many of the smaller Dutch shipowners support their shipbuilding industry, the larger operators play the international market for newbuildings. An example of this is the building program of the Nedlloyd Group, which normally includes various Japanese shipyards.

The environmental lobby in The Netherlands is very strong and many of the yards have replied to this new trend by operating shipbuilding facilities within covered berths. The largest is a Rotterdam's Van der Giessen-de Noord, with other covered facilities at IHC's Klinderdyk Shipyard, Wilton Fijenoord, which

is used for repair activities, and the majority of the small shipyards in the Groningen area. The yards are very modern, investment levels showing the confidence the shipbuilding companies have in the future of specialized markets.

Meanwhile, the Belgian government is currently in negotiations with the European Commission (EC) over their involvement in the country's only large shipyard, Boelwerf at Temse. The yard was declared bankrupt earlier this year and was closed for weeks. However, a rescue package was put together, involving various local businesses and the large Dutch conglomerate Begeman Group, and the yard is now once more fully operational. This package would also have to include financial involvement by the Belgian government, the subject of the negotiations. The interruption to Boelwerf's operation caused the yard

to lose the prestigious order from Dredging International for the world's largest dredger, the order being placed in Holland's IHC instead. Boelwerf had also recently delivered the last two of a series of four reefer ships for Sweden's Cool Carriers. Meanwhile, the yard is still building product and LPG carriers for Belgian owner Exmar, which uses the building facilities at Boelwerf on an exclusive basis.

SURVIVAL THROUGH SPECIALIZATION

The Dutch shipbuilding industry has survived over recent years by entering the specialized vessel construction market. The largest shipbuilding complex, Rotterdam's Van der Giessen-de Noord, has recently been building specialized freight-only ferries, with two ships being delivered to Italy's Finmare Group

d two larger, but similarly-designed vessels, ing to North Sea Ferries. The yard's marketing am is currently negotiating with a leading aropean ferry operator for two vessels.

Also located in Rotterdam is YVC Ysselwerf, hich also operates a ship repair division, YVC olnes, which counts on the production of three pecialized vessel types—chemical tankers, fish ctory vessels and heavy load carriers—to ope- te. The yard is currently building two chemical arriers for Swiss owner Vinalmar, and has on rder two fishing vessels for local Dutch owners nd two heavy lift carriers for Rotterdam's Kahn Shipping. YVC Ysselwerf has also recently made significant investments into the shipbuilding op- ration, a new section-building yard being con- structed at Groot Ammers and highly modern- ized welding systems being installed in the main yard. There is some technical cooperation be- tween YVC and three other Dutch shipyards— Merwerde, Frijsian and Verolme Heusden—to look at specific technical subjects to improve production and productivity. Verolme Heusden is part of the Wilton Fijenoord Holdings BV, which also operates Rotterdam's two largest ship repair yards, Wilton Fijenoord and Verolme Botlek. The yard recently has been one of the front-runners in the development of hatchless containerships, two recently being built for Dutch owners. One of the main examples of specializa- tion is IHC, which operates two yards at Klinderdyk and Slidrecht. The only ships built by these two yards are dredgers. Current orders at the larger Klinderdyk shipyard include a se- ries of three hopper dredgers for mainland Chi- na, and the world's largest dredger, a 17,000-sq- meter vessel, for Belgium's Dredging Interna- tional (an order which was taken over following the closure of Boelwerf in Belgium, as previously mentioned). One of the country's most amazing sites is the six autonomously-operated shipyards along the main canal outside Groningen, located in the north of the country. These yards, which comprise Pattje, Van Diepen, Ferus Smit, Volharding, Bodeswes and Bijholt, build short- sea traders mainly for local owners and operate very modern shipyards, the majority of which use covered building operations and side launching techniques. One of the main developments in northern Holland over recent years has been the formation of Conoship, which is a central design and marketing organization for a number of the yards around Groningen and other parts of the north area.

NAVAL BUILDERS EYE COMMERCIAL MARKET

An expected development in future years is the reintroduction of Holland's naval shipbuilders into the commercial market. Progress has already been made by De Schelde, Vlissingen, which recently deliv- ered a locally-owned passenger ferry. The yard is also building the Royal Dutch Na- vy's latest fleet replenishment vessel (AOR), the Amsterdam, the hull being sub-con- tracted to Rotterdam's Merwerde. Mean- while, Rotterdam Dry Dock (RDM), which builds the country's submarine fleet, has also made progress by winning a sub- contracted order for some of the series of six general cargo vessels ordered by Amsterdam-based owner Spliethoff. RDM is to build the hulls for three of these ships.

SHIP REPAIR STATUS STILL TOPS

Apart from Holland's shipbuilding in- dustry, Rotterdam remains Europe's lead- ing ship repair center with a total of six shipyards suitable for all types of ships. General repair operations are the obvious main source of work for all the yards, although since the reduction of operating subsidies in neighboring Germany, some



Ferries being built under cover at Rotterdam's Van der Giessen-de Noord.

yards have moved into the conversion industry. Wilton Fijenoord recently completed the conver- sion of a 25,000-dwt conventional tanker to a specialized offshore unit for Shell Tankers BV, and YVC Bolnes has recently won a contract to convert the semi-submersible heavy lift vessel Super Ser- vant 1 to a specialized stone dumping vessel for Belgium's Dredging International.

Also part of the Wilton Fijenoord Holdings BV Group is Rotterdam's Verolme Botlek, which suc- cessfully operates in both conventional shipping and the offshore industry. The yard's large No. 4 drydock, which measures 1,329 by 295 feet, can drydock ships up to VLCC size and semi-submers- ible and jack-up rigs, one of the very few repair facilities in northern Europe with this capability. Verolme Botlek, which recently became the first yard in Holland to gain the ISO 9002 accreditation for ship and offshore repairs, has recently been involved in a number of modification refits in the offshore industry, including the conversion of rigs to offshore tender-assisted vessels. Meanwhile, the yard is also very successful in the general repair market in the conventional shipping indus- try.

Apart from the recent conversion contract, Wilton Fijenoord's Schiedam shipyard is solely involved in the conventional shipping general repair market, a block booking arrangement signed recently for the second year running with Greek shipowner Angelicoussis (Anangel Shipping Services) and multi-ship contracts with Belgian and Dutch ferry operators. The yard has also recently been involved in other major contracts, as Wilton Fijenoord came in a close second to Bremerhaven's Lloyd Werft for the Peter Pan contract, a job which involved the conversion of a passenger/car ferry for the Australians, and the yard also bid late last year for the QE2 refit, which also eventually went to Germany. On the small ship side of the repair industry, Rotterdam boasts four main shipyards—Niehuis & van den Berg and Vlaardingen Oost (both part of the Damen Group); Van Brink; and YVC Bolnes. One of the largest contracts recently completed by these yards was the rebuilding of two cargo tanks onboard the Japanese tanker Shiokaze, which suffered extensive explosion damage while operating in northern Europe. The work

was carried out by Niehuis & van den Berg. Apart from the recent conversion contract signed by YVC Bolnes, the yard is also due to carry out work during the early part of next year involving two heavy lift carriers owned by Kahn Ship- ping, an owner which also has two newbuildings on order at YVC Ysselwerf. The two vessels both have two 200-ton capacity deck cranes, one of which on each vessel is due to be replaced by a new 400-ton capacity unit. The yard has also completed extensive fire dam- age repairs onboard the Dutch freezer trawler Johanna Maria SCH 33, which is owned by Jazon, Scheveningen.

Apart from Rotterdam, repair facili- ties also exist in Amsterdam (Shipdock Amsterdam) and Vlissingen (Scelderpoort, part of the Royal De Schelde Group). Cees de Bruin, the Rotterdam-based financier, is buying the shipyard assets of bankrupt prop- erty and forestry concern United Dutch. Venture Fund Rotterdam (VFR), Mr. de Bruin's investment vehicle, has bought shipyard Scheepswerf Maasbracht and associated company Staalbouw, a small Dutch yard special- izing in the maintenance of inland wa- terway vessels. The company will be- come a unit of Technische Marchand- Andriessen of Rotterdam, a VFR sub- sidiary. Last year, Mr. de Bruin tried to acquire Holland Sea Search through



Tanker repairs at Verolme Botlek.

(Continued on page 80)

(Continued from page 79)

his holding in Indofin.

The Damen Group also owns Antwerp Shiprepairers in Antwerp, which has recently been declared bankrupt, although the Belgian government has allowed the yard to remain fully operational while the future is determined.

Under Belgian law, a commercial and technical management group must be set up for the continued activity of Antwerp Shiprepairers and this has been completed by the existing management team under the name A.S.R., Damen. According to commercial manager **F. de Bock**, the main targets of the new management company are "to complete repairs to the Gulf Wave; to safeguard the installations; and to attract new orders and expand activities.

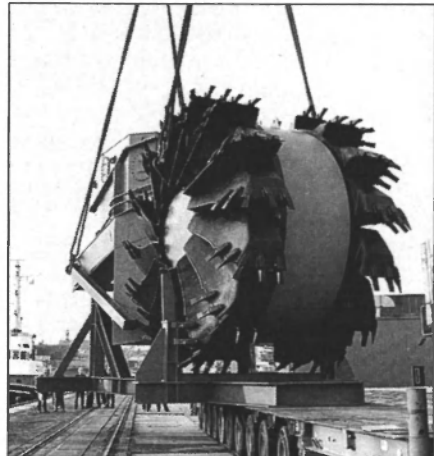
Meanwhile, the Damen Group will cooperate with the receiver to work out a solution to conclude an agreement suitable and workable to all parties."

The yard, which never actually fully closed, has been, and will continue to be, operated under this new arrangement.

However, the yard missed out on the large contract to refit the Belgian trailing dredger, Schelde 11, the contract being awarded to Fulton Marine, Antwerp.

The ship has been laying in a damaged condition at Zwindrecht since April.

Krupp Fordertechnik To Display Models Of Product



An underwater cutting wheel is loaded on an inland vessel.

Dredger and deck crane models, as well as large-scale slides and photomurals of built equipment will inform attendees at Europort 93 on the product range of the Marine Technology Div. of Krupp Fordertechnik at Lubeck. During the first half of the year, the company has supplied three non-self propelled underwater cutting wheel dredgers for offshore work in South Korea. Two identical floating dredgers were destined for Halla Engineering & Construction Corp. in Seoul, where they were built in cooperation with the Inchon yard of Halla Engineering & Heavy Industries. For information on the products of Krupp Fordertechnik,

Circle 64 on Reader Service Card

80

One of the main reasons behind the closure of Antwerp Shiprepairers has been the high level of work force, a pool system with up to 550 workers constantly available. The future of the yard, if it were to continue on a fully-operational basis, would be heavily dependent upon a substantial reduction of this figure.

While the shipyard weathers its current situation, the pool system will still be utilized but with only approximately 100 workers being used at one time.



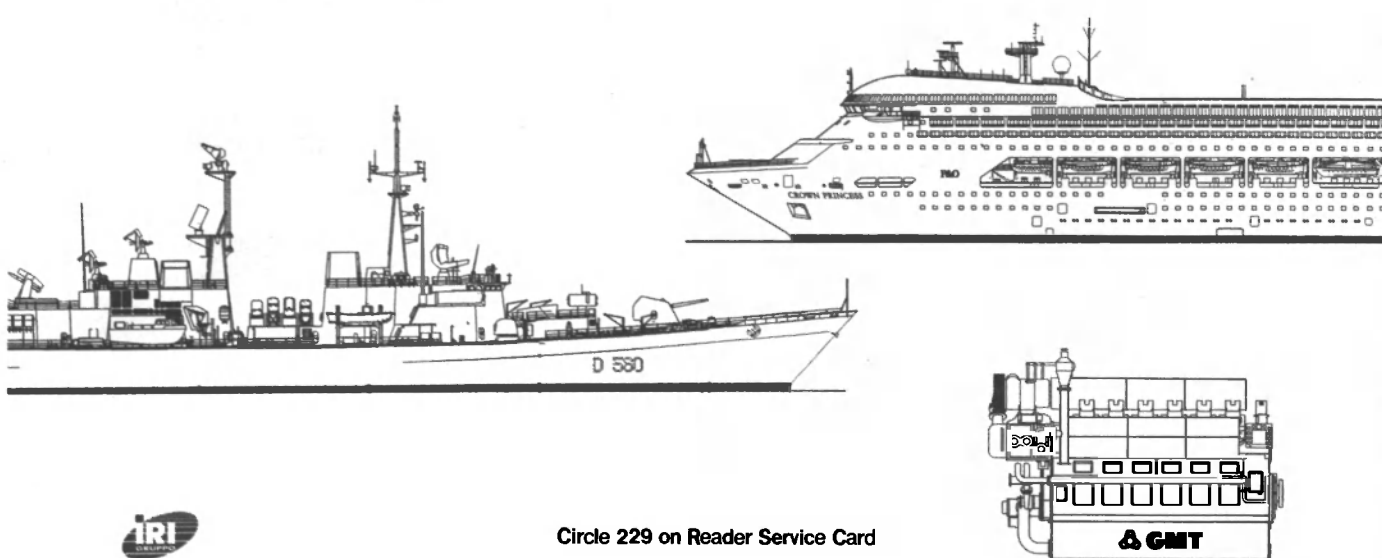
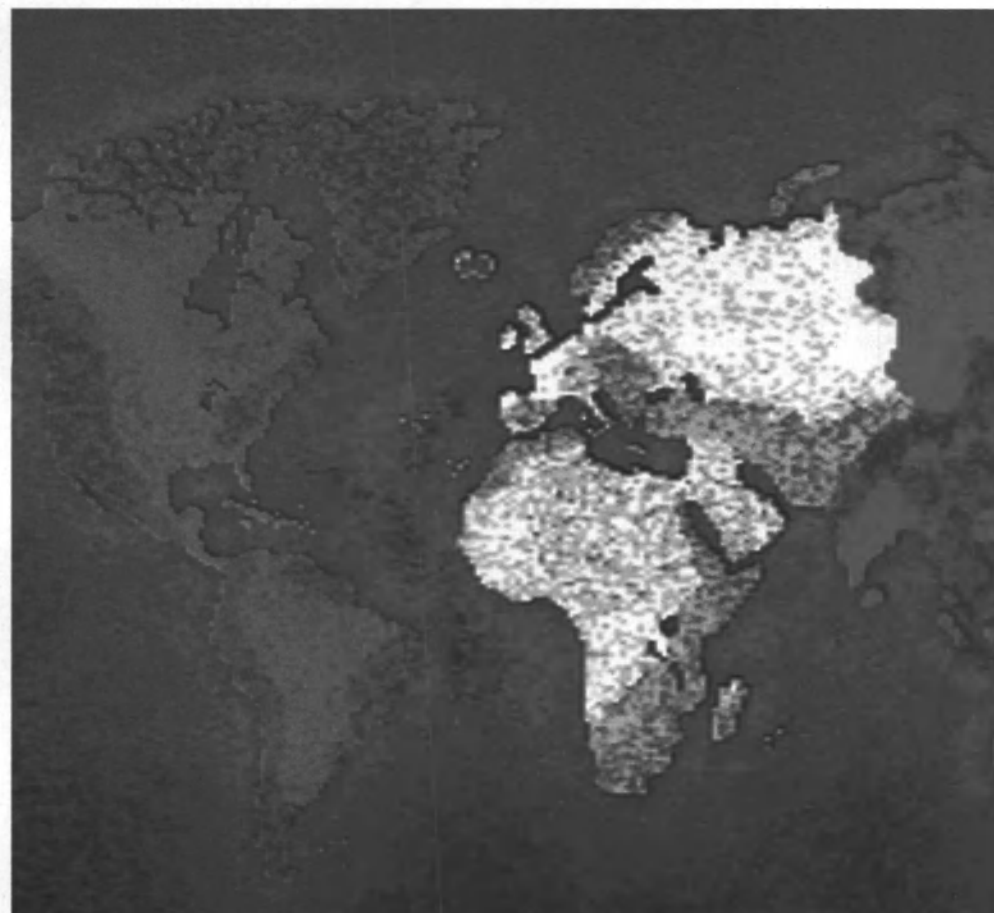
A hatchless containership built at Verolme Heusden and fitting out at Wilton Fijenoord.

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Circle 229 on Reader Service Card

**Texaco Appoints Stoner
General Manager Of
Producing Operations
in Scotland**

Janet Stoner has been appointed general manager, producing operations for Texaco's location in Aberdeen, Scotland, effective October 1, 1993. In her new position, Ms. **Stoner** will be responsible for all of Texaco's producing opera-

tions in the U.K. North Sea.

Ms. **Stoner** replaces **Jim Rowalt**, who moves to Texaco's Midland, Texas division to take the position of assistant division manager, production and drilling.

Ms. **Stoner's** most recent assignment was manager of the Offshore Division of the Eastern Exploration and Producing region of Texaco Exploration and Production, Inc. (TEPI), located in New Orleans. In that position, she was responsible for TEPI's exploration, drilling and

producing operations in the U.S. outer continental shelf of the Gulf of Mexico.

For more information on Texaco,

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**Doyle Available As
Coatings Consultant**

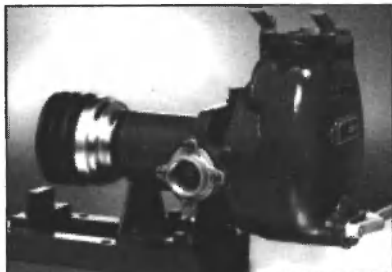
R.L. "Bob" Doyle has an-

nounced his availability as a Coatings Consultant. Mr. **Doyle** is well-known in the marine and industrial industries for his knowledge of coatings and corrosion control. His services will include specifications, failure analysis, inspection, and expert witness services. He is a registered PE in California, a NACE Coatings specialist, and an accredited member of SNAME. Mr. **Doyle** can be contacted at his California residence at (909) 597-9446.

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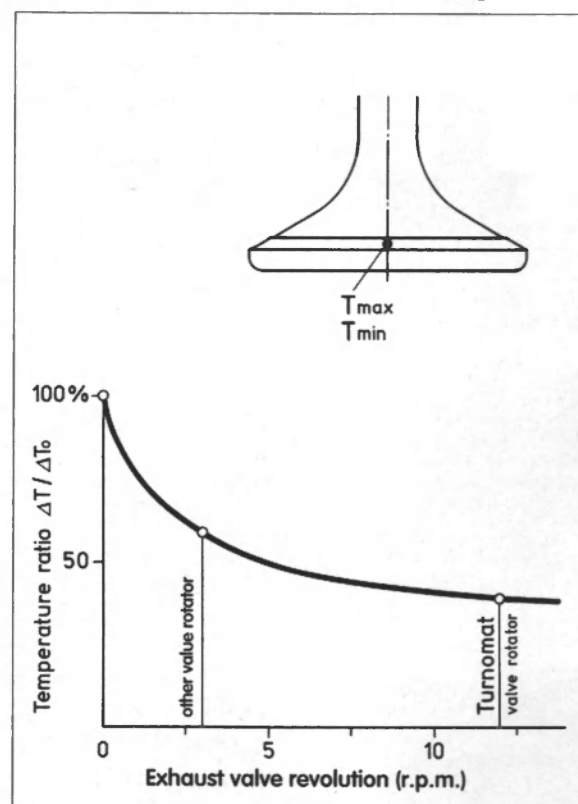
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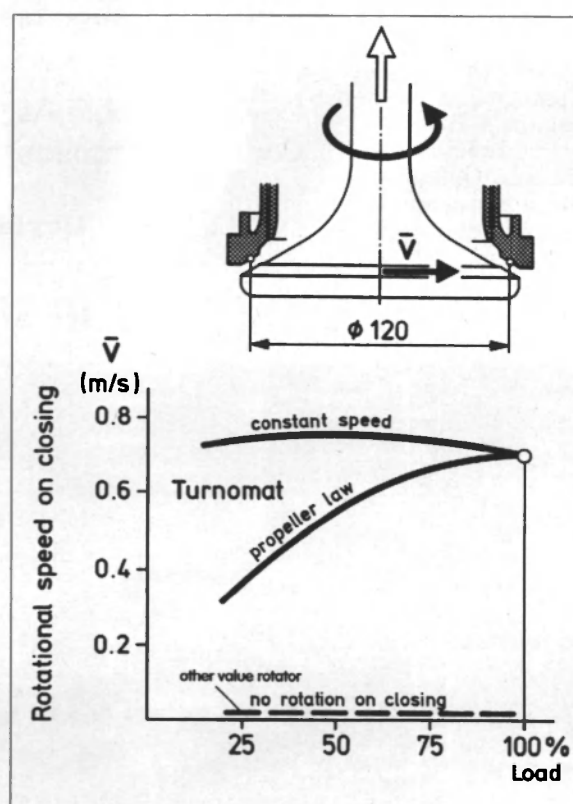
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Sulzer Adopts MWH Turnomat Valve After Tests Show Improved Performance



Equalizing effect of a rotating exhaust valve on the valve seat temperature for 720 kW/cyl at 510 rpm 165 bar Pmax (T₀ = T_{max} - T_{min} with non-rotating valve; T = T_{max} - T_{min} with rotating valve). (Source: New Sulzer Diesel, Winterthur.) From the even and relatively fast rotation of the valve spindle, the temperature of the valve is equalized, reducing peak temperatures on some areas of the valve seat, reducing thermal stress and improving corrosion resistance.



Exhaust valve rotational speed on closing (related to mean seat diameter of 120mm) for two valve rotating systems for 720 kW/cyl at 510 rpm, 165 bar Pmax. (Source: New Sulzer Diesel, Winterthur.) The rotation of the valve at the end of the closing stroke induces a polishing effect and rubs combustion residues from the seat, achieving a better heat exchange to the cold seat insert.

Following a successful test which reportedly demonstrated that the use of turnomat valves on Sulzer engines increases cost effectiveness and lifetime of the valve spindle as well as time between overhauls — effectively optimizing the reliability and availability of the engine — the valve rotator turnomat has been adopted as a standard component on the exhaust valves of the Sulzer ZA40S engine.

Markisches Werk Halver (MWH), which has extensive service experience with valve rotator turnomats on medium speed diesel or gas engines, found that turnomats, which rotate from eight to 15 rpm depending on engine type, significantly increased valve lifetime. At idle speed, the design of the turnomat also reportedly ensures a safe rotation.

In order to test the performance of the turnomat, one Sulzer 8 ZA40S engine was fitted with turnomats.

The first inspection was carried out by New Sulzer Diesel Winterthur (NSD) and MWH service engineers in mid-1992 aboard the M/S Olau Hollandia, after 3,400 hours of operation. The turnomats and the valve seat surfaces were found to be in excellent condition, and the rotation polishing effect was clearly noticeable.

In March 1993 a second inspection after 6,000 hours was performed by the New Sulzer Diesel Winterthur service engineers. The results of the first inspection were reportedly confirmed, the target improvement of engine reliability through the use of the rotator turnomat reportedly reached.

For more information on the products of Markisches Werk Halver,

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For more information on New Sulzer Diesel,

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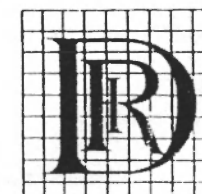
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National Waterways Conference Holds Elections

W. Richard Christensen of Ashland Oil, Inc. was elected chairman, and **Robert W. Portiss** of the Tulsa Port of Catoosa vice chairman, of the National Waterways Conference, Inc. (NWC). They were elected at the organization's annual meeting.

Mr. **Christensen**, an Ashland consultant and former vice president, took over the chairmanship in April and was named to a full term. Mr. **Portiss** is the port director at Tulsa.

Harry N. Cook of Washington, D.C., who has served as the Conference's president since 1978, won another term.

Moving up as first vice president and second in line for the Conference's chairmanship was **Dennis L. Kirwin** of Houston, vice president and general manager of Midland Marine Corp. **Gale H. Rhodes** of Lakin, W. Va., manager of river transportation for AEP Fuel Supply, was elected a vice president. All other Conference officers were re-elected.

Fifteen new directors were picked for the Conference's board of directors, and six new members were elected to the executive committee.

Those elected to the board of directors included **Terry R. Becker** of Minneapolis, president, Riverway Co.; **Christopher J. Brescia** of St. Louis, president, Midwest Area River Coalition 2000; **Michael E. Bright** of Charleston, W. Va., marine transportation manager, Union Carbide Corp.; **Dr. William A. Cunningham** of Mobile, Ala., director, Alabama Waterway and Transportation Research Center.

Allen J. Dupont of New Orleans, marketing manager, T.L. James & Co., Inc.; **Martin A. Gay** of Houston, marine transportation manager, Dow Chemical Co.; **James L. Guttman** of Belle Vernon, Pa., president, Mon River Towing, Inc.; **John W. Holt, Jr.**, of Shreveport, La., executive port director, Caddo-Bossier Parishes Port Commission.

Dr. Martin E. Lipinski of Memphis, Tenn., Center for River Studies; **J. Steven Lucas** of Wilton, Conn., director-logistics and operations, Louis Dreyfus Corp.; **Frank G. Martin, Jr.**, of Indianapolis, executive director, Indiana Port Commission; **Elmer A. Nichols** of St. Louis, operations manager, City of St. Louis Port Authority.

Craig E. Phillips of Nashville, senior vice president, Ingram Barge Company; **Barbara H. Standley** of Yazoo City, Miss., water transportation manager, Mississippi Chemical Co.; and **Ronald N. Zimmer** of St. Louis, principal, port projects, Sverdrup Corp.

Those elected to the executive committee included **Arthur W. Bayer** of Mt. Vernon, Ind., president and general manager, Mt. Vernon Barge Service, Inc.; **Jerry F. Lavelle** of Granite City, Ill., port district engineer, Tri-City Regional Port District; **C. Douglas McGinnis** of South Point, Ohio,

chairman, McGinnis, Inc.

A.J. Milligan of Birmingham, Ala., principal, fuel procurement and planning, Southern Company Services, Inc.; **Alan Willis** of Portland, Ore., government relations representative, Port of Portland; and **John T. Zick** of Chicago, senior vice president, Continental Grain Co.

In 1994, the Conference's annual meeting will be held on September 21-23 at the Inter-Continental Hotel in New Orleans.

LandSea Systems Named U.S. Distributor For Thrane & Thrane

LandSea Systems, Inc. has been appointed the U.S. distributor of Thrane & Thrane's brand name products. LandSea will provide complete support for the Danish company's 30 major products, which serve the following market segments: Inmarsat-C satellite com-

munications systems for land-mobile, maritime and aeronautical; radio telex systems; Digital Selective Calling (DSC) systems; and short-wave radio communications.

Thrane & Thrane, a world leader in communications, develops, produces and markets shortwave, VHF, UHF and satellite communications equipment. For more information on Thrane & Thrane products from LandSea Systems,

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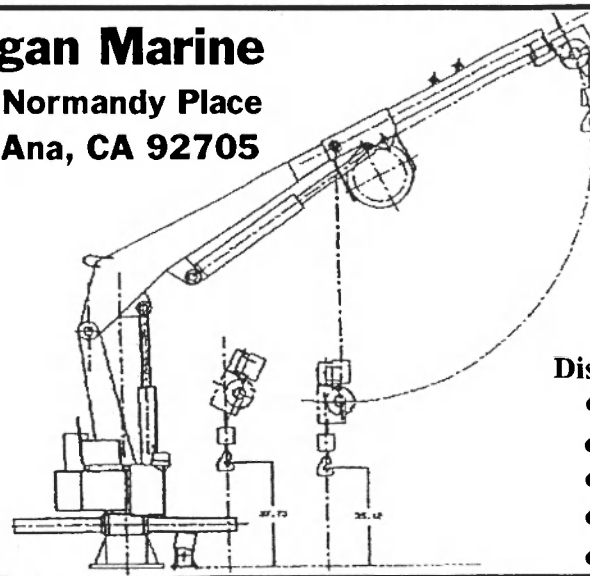


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Crowley Names Head Of Mexican Operations; Expands Container Service

Crowley American Transport recently announced changes in its Mexican operations.

Jay Brickman was appointed vice president, Mexico, to head Crowley's activities in that country. He was formerly vice president of

government services in Jacksonville, Fla. He joined Crowley in 1975.

Crowley will be starting a weekly containerized service between Port Everglades, Fla., and Progreso, Veracruz and Tampico/Altamira in Mexico.

The 323-teu M/V Almanía inaugurated the set-day-of-the-week service with a sailing on October 6. A sistership, M/V Helvetia, sailed one week later on October 13.

Two leading firms, Report SA and

Contrasa SA, have been appointed agents for the new service. Report will represent Crowley in the Yucatan, and Contrasa everywhere else in Mexico. Mr. **Brickman** will be the key person working closely with the new agents.

Crowley American Transport, headquartered in Jacksonville, provides scheduled ocean transportation services between the U.S. and 35 Latin American and Caribbean countries.

Solar Turbines Names Kop-Flex Quality Certified Supplier

Solar Turbines, a wholly-owned subsidiary of Caterpillar, Inc., recently recognized Kop-Flex, Inc. of Baltimore as one of its Quality Certified Suppliers during a ceremony at the Kop-Flex manufacturing plant in Hanover, Md. Kop-Flex President and CEO **Charles Mansur** accepted the award from Solar Turbines representatives. Maryland Governor **William Donald Schaefer** sent a special citation.

Kop-Flex, a manufacturer of power transmission products, is one of 27 companies nationwide to earn the designation from Solar Turbines, which manufactures industrial gas turbines rated from 1,000 to 14,000 hp. Kop-Flex, reportedly the first Maryland manufacturer to receive ISO 9000 accreditation, received it to the broadest scope, ISO 9001.

For more information on Caterpillar,

Circle 28 on Reader Service Card

Bird-Johnson Elects New Board Chairman



Admiral Carlisle A.H. Trost

Admiral **Carlisle A.H. Trost**, USN (Ret.) had been elected chairman of Bird-Johnson's board of directors and appointed trustee of the company. Admiral **Trost** succeeds Admiral **Alfred J. Whittle**, who died in April of 1993 after serving on Bird-Johnson's board for 11 years. A native of Columbus, Ill., Admiral **Trost** became Commander in Chief of the U.S. Atlantic Fleet and Deputy Commander in Chief of the U.S. Atlantic Command in 1985. In 1986, he became the U.S. Navy's 23rd Chief of Naval Operations.

Admiral **Trost** currently serves as a director of several corporations, including Lockheed, General Public Utilities, the Louisiana Land and Exploration Company, and Precision Components Corporation. He is also a member of the board of advisors of the General Dynamics Undersea Warfare Center, chairman of the board of the naval Submarine League, and a trustee of the U.S. Naval Academy Foundation. Bird-Johnson is a supplier to the U.S. Navy which complies with the Navy's requirements for a foreign-owned entity that seeks access to classified information and work, that access being the cornerstone of its controllable pitch propeller and specialized machining capability.

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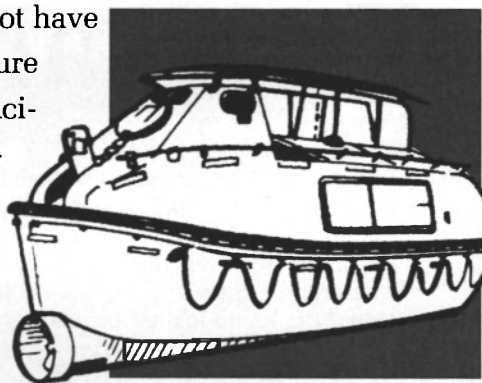
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Stephen Bednarz Joins Falk Corp.'s Sales Staff



Stephen Bednarz

Stephen P. Bednarz has been signed to the Atlanta, Ga. district office sales staff of the Falk Corporation, a Milwaukee-based subsidiary of the Sundstrand Corp. Falk is a major manufacturer of industrial power transmission machinery. In his new position, Mr. **Bednarz** will join district sales manager **Buck Brickett** in serving the company's customers in south central Tennessee, southern South Carolina and Georgia. Mr. **Bednarz** joined Falk in 1971 and has served in several positions. In 1971 he served as draftsman, in 1977 assistant supervisor of the Atlanta distribution center and in 1983, supervisor of the Atlanta distribution center.

CruisePhone Adds Account Executive; Expands Satellite Service



James Massialas

CruisePhone, Inc., a leading provider of cellular and satellite communications to the cruise industry, has named **James Massialas** account executive in the sales department. Mr. **Massialas** was account executive for commercial accounts at MCI Communications in their Ft. Lauderdale, Fla. office. He has also served as an account executive for Metromedia/ITT Long Distance.

CruisePhone also announced that it will team with American Mobile Satellite Corporation (AMSC) to provide a seamless mobile voice and data satellite communication service called MSat. The new service will cover the North American continent, the entire Caribbean, Canada, Alaska and Hawaii. All

November, 1993

necessary hardware and software are also provided by CruisePhone at no cost.

CruisePhone, Inc. is an affiliate of France Cables & Radio and is headquartered in Ft. Lauderdale. CruisePhone provides both in-cabin and public credit card telephone service on deck and facsimile capabilities to more than 20 cruise lines.

For more information on CruisePhone,

Circle 29 on Reader Service Card

Constable And EMMI Corp. Form Joint Venture

Brian Constable, former vice president of engineering for OMI Corp., has formed a joint venture with EMMI Corp. to pursue contract engineering management and consulting for vessel owners and operators.

Mr. **Constable** will head EMMI/Marisys Inc. in the following engineering services:

enhanced survey documentation (IACS requirements); U.S. Coast Guard inspections (TVE/CAIPS) and requirements; sale and purchase surveys and evaluations; technical repair/report/survey/specifications; and new construction/retrofit specifications and supervision. It will also be Mr. **Constable's** responsibility to assist in the expansion of EMMI's products and services into foreign markets.



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EUROPORT '93

November 16 to 20, RAI International Exhibition Center, Amsterdam

More than 42,000 attendees pursued the buying aisles at Europort '91, and according to show management, Europort '93 will build on that success, as a similar level of buyers and hundreds of manufacturers—representing the full spectrum of marine products—are expected at this year's 26th edition of the show.

More than 508 exhibitors from 21 different countries took part in Europort '91, and based on early returns, the 1993 show is shaping up to be a success as well (see exhibitor list for specifics). Of the exhibitors at the 1991 version, 195 were from outside The Netherlands.

Show management is citing two factors affecting world shipbuilding—the aging world fleet and new IMO regulations for tankers—as reasons why attendees should visit Europort '93, as it will give ship designers and constructors the opportunity to see modern equipment and systems to enhance productivity up close and first-hand.

Aside from the exhibition,

Europort '93 will feature a two-day international conference at the RAI International Congress Center. The conference is comprised of four individual half-day sessions, geared to provide a briefing on the key issues affecting all of those involved in the supply and purchase of products and services for the maritime industry. The four sessions are:

- Session One: Newbuilding Supply and Demand
- Session Two: The Engine Builders: Powered by the Market
- Session Three: The Bridge: Enhancing the Man-Machine Interface
- Session Four: The Changing Order in the East

Session One starts at 9:30 a.m. on Tuesday, November 16, and is chaired by **Josef Klar**, a member of the board with Bremer Vulkan. Noted speakers scheduled for this session will include **Cato Sverdrup**, chairman of Burmeister & Wain Skibsvaerft A/S; and Dr. T. **John Parker**, chairman of the Committee of EEC Shipbuilders' Associ-

ation. Session Two, starting at 2 p.m. that same day is to be chaired by Dr. **Manfred Link**, chairman, Krupp MaK Maschinenbau GmbH. Noted speakers for this session include: **Peter Sulzer**, chairman, New Sulzer Diesel Ltd.; **Pentti-Juhani Hintikka**, president, Wartsila Diesel Group; **Lars Holmblad**, executive vice president and CEO, MAN B&W Diesel A/S; **Jan Kristiansen**, marketing manager, Ulstein Bergen; and **Ken Saeki**, executive senior managing director, Mitsui Engineering & Shipbuilding Co. Ltd. On Wednesday, Session Three will open at 9:30 a.m., chaired by Captain **Brian H.E. Tayler** of the British Marine Equipment Council. Also speaking during this session are: **Helmut Janeba**, sales manager, Atlas Elektronik; and Captain **Lars Brodje**, maritime adviser, Inmarsat. Finally, Session Four wraps up the conference program, starting at 2 p.m. on Wednesday. **Ole-Jacob Libaek**, chairman of O-J Libaek & Partners A/S, will

chair the session, which will take individual looks at the Russian, Polish and Croatian shipbuilding markets.

For additional information on exhibiting at or attending Europort '93, contact: Europaplein, NL-1078 GZ, Amsterdam; tel: +31 (0) 20 5491212; fax: +31 (0) 6464469.

Europort Exhibitor List (partial):

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(Continued on page 88)

EUROPORT EXHIBITORS

(Continued from page 87)

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Central Industry Group

Centromor S.A.
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Wanson BV
Wartsila Diesel AB
Wartsila Diesel Oy
Wartsila Diesel Intl.
Westfalia Separator Nederland
Westinghouse Electric Corp.
Wirtec Navigation Systems
Wijsmuller Holding BV

Y
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Z
Machinefabriek van Zetten BV

Safety First Introduces Emergency Escape Smoke Hood System

Invented by **John Swann**, a retired sea captain and engineer, the Evac-U8™ emergency escape smoke hood is a filtration system which protects the face, eyes, head, neck, nose, mouth, throat and respiratory system. The unit is reportedly compact and easy to use. The size of

a soda can and weighing only 11 ounces, the Evac-U8 can be carried on a belt or mounted on a wall and can be put to use in less than 15 seconds. The unit is guaranteed for five years, and units used to escape fires or toxic fumes are replaced for free. For more information,

Circle 65 on Reader Service Card

Schottel Features Propulsion Systems At Show

Schottel, a leading manufacturer of azimuthing propulsion units and maneuvering aids, will be exhibiting examples of its main and auxiliary propulsion systems for all areas of shipping and the offshore industry at Europort '93 in Amsterdam. The new generation of Schottel Pump-Jets, with power ratings up to 2,600 kW, is one of four main propulsion units destined for a car ferry due to operate between Hovord and the island Ameland. For more information,

Circle 66 on Reader Service Card

PBS Turbochargers To Be Equipped On ABC Engines

An agreement was recently reached between engine manufacturer ABC Gent and PBS Velka Bites, a.s., which specifies PBS turbochargers for all ABC-built engines of the DXC and DZC series. The agreement follows the logic of engine manufacturers, particularly small engine producers, reaching agreements with two or three key suppliers to ensure price and quality. The engines affected include: the 6 DXC engine, rated at 660 kW, 750 rpm; the 8 DXC engine, 885 kW, 750 rpm; 6 DZC engine, 1,325 kW, 1,000 rpm; 8 DZC engine, 1,420 kW, 750 rpm; and the 8 DZC, 1,768 kW, 1,000 rpm. For more information on PBS Turbochargers,

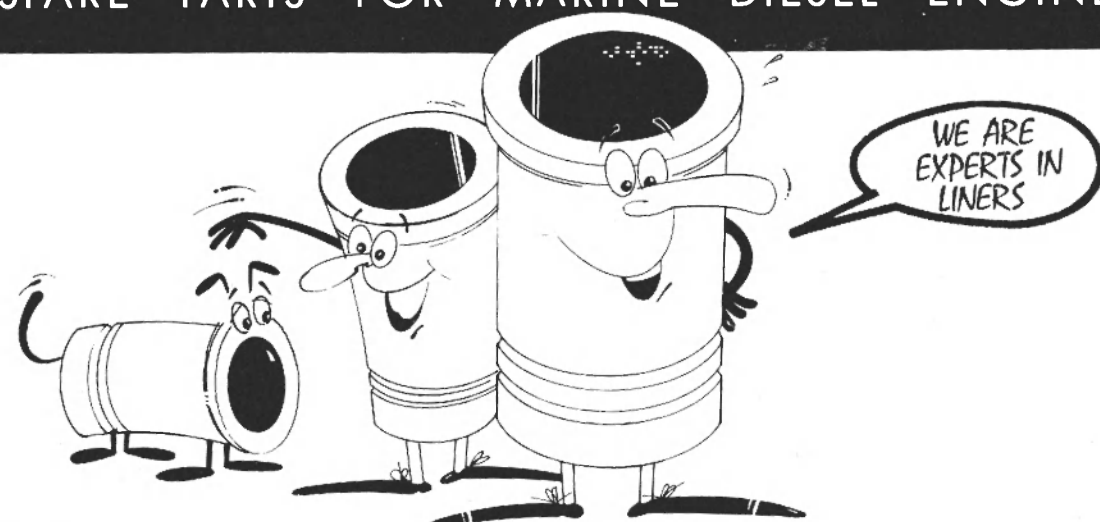
Circle 67 on Reader Service Card

Apelco Introduces Handheld GPS 15

Apelco rounds out its 1994 product line with the introduction of GPS 15, a handheld GPS which is not only differential ready, but also has a trackplotting function. The GPS 15 is a compact, waterproof, handheld GPS, measuring 7.5-inches high and weighing less than one pound. Up to eight satellites are monitored on five channels by the patch antenna, which helps ensure position accuracy. The unit stores up to 10 routes and 200 waypoints, but provides much more than basic navigation information. Routes and waypoints can be named with up to six alphanumeric characters and then sorted either alphanumerically or numerically. A graphic steering indicator provides the visual means to reach that favorite spot with great accuracy. For free information,

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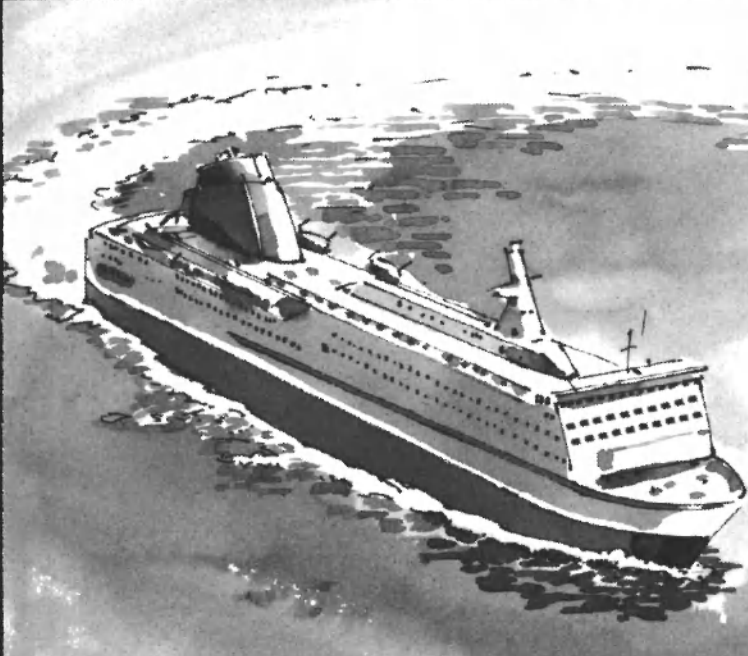


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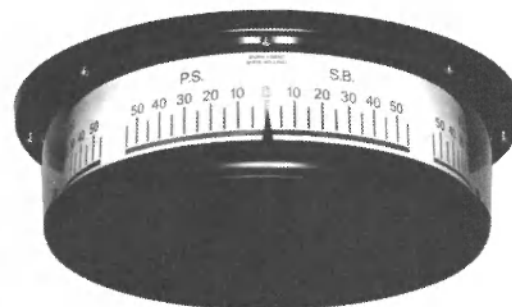
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Captain Okkie Grapow

Grapow Elected President Of ISU

Captain **Okkert E. Grapow** has been elected president of the International Salvage Union (ISU). Formerly ISU's vice president, Capt. **Grapow** succeeds **Klaas J. Reiningert**, managing director of Smit Tak BV.

Capt. **Grapow** is chairman of Pentow Marine, the major South

African marine salvage company. He first went to sea in the 1950s, received his master's certificate in 1964 and his extra master's certificate in 1969. Following a brief period with South African Lines, he joined Marine Diamond Corporation.

During this period, he gained command experience and was engaged in the operation of a large fleet of ocean mining vessels, tugs and support craft.

In 1973, Capt. **Grapow** joined Saffmarine and played a leading role in the formation of Pentow in 1986. He has been an active participant in the affairs of the ISU and has served on the organization's executive committee since 1986.

In related news, ISU executive committee member **J.A. Witte** has been named that organization's vice president.

Mr. **Witte** is president and CEO of the American salvage and environmental services company Donjon Marine Co. Inc.

Also, **Michael J. Lacey**, of solicitors Fox & Gibbons Williamson Horrocks, has been appointed special adviser to the ISU. Mr. **Lacey** has been closely involved in ISU affairs for over 15 years.

The International Salvage Union is an association of the world's leading marine salvage contractors. There are currently 44 member companies of the ISU, based in 30 countries.

New Astilleros Espanoles President Appointed To Replace Departing Saez

The board of directors of the Instituto Nacional de Industria (INI) has appointed **Carlos Martinez de Alborno** chairman and CEO of Astilleros Espanoles, SA and its group of companies.

The state-owned holding company INI is the main shareholder of Astilleros Espanoles SA and its group.

Mr. **Martinez de Alborno**, a civil engineer with a doctorate in engineering from the University of Glasgow, Scotland, was since 1990 chairman and CEO of Auxini, a construction company in the INI group. In those three years, Auxini experienced significant success, rising from losses of \$38.37 million in FY '89 to an \$11.5 million profit in 1992.

Mr. **Martinez de Alborno** is well-known in the shipbuilding industry, having been executive vice president of Astilleros Espanoles between 1988 and 1990, just before taking over Auxini.

His former responsibilities as executive vice president of Astilleros Espanoles included the Industrial Division, comprising offshore buildings and the Astano (in Ferrol) and Barreras (in Vigo) yards.

Before joining Astilleros Espanoles, Mr. **Martinez de Alborno** had been executive vice president for the Industrial and Special Projects and Offshore Construction division of Dragados y Construcciones, reportedly the leading Spanish construction company.

Mr. **Martinez de Alborno** replaces **Juan Saez**, who recently joined the Spanish national airline, Iberia.

For additional information on the vast array of products and services offered by Astilleros Espanoles,

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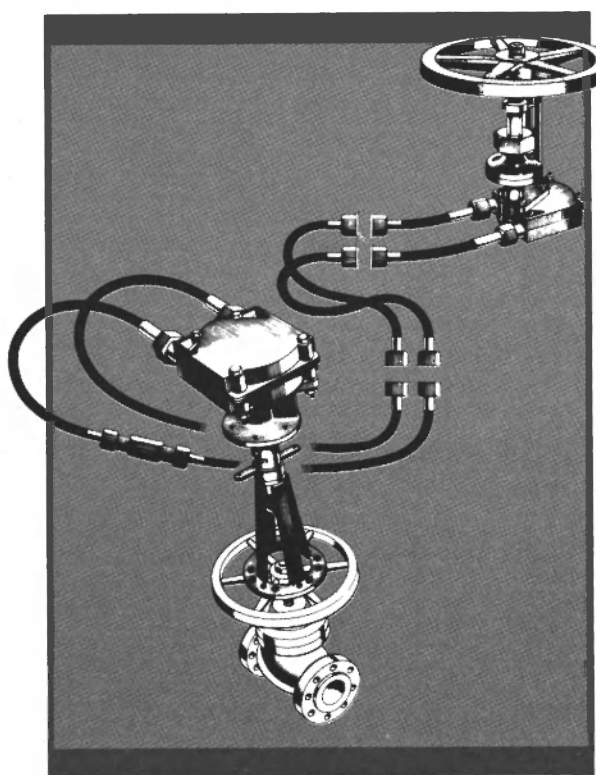
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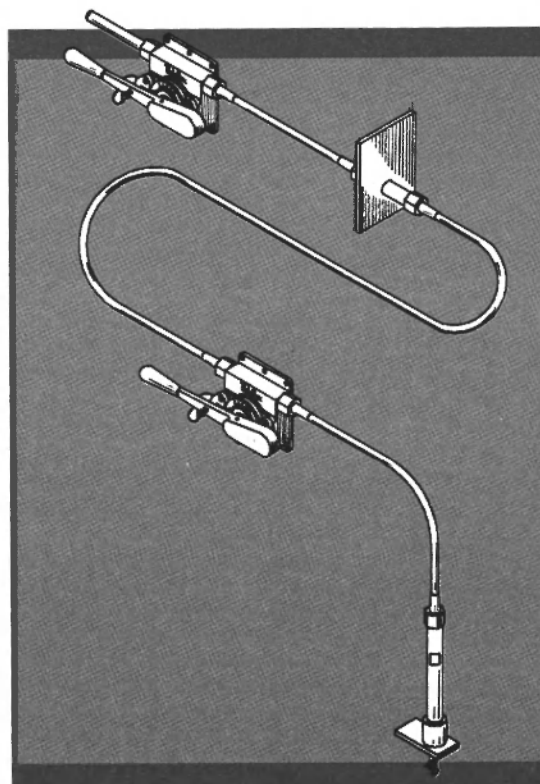
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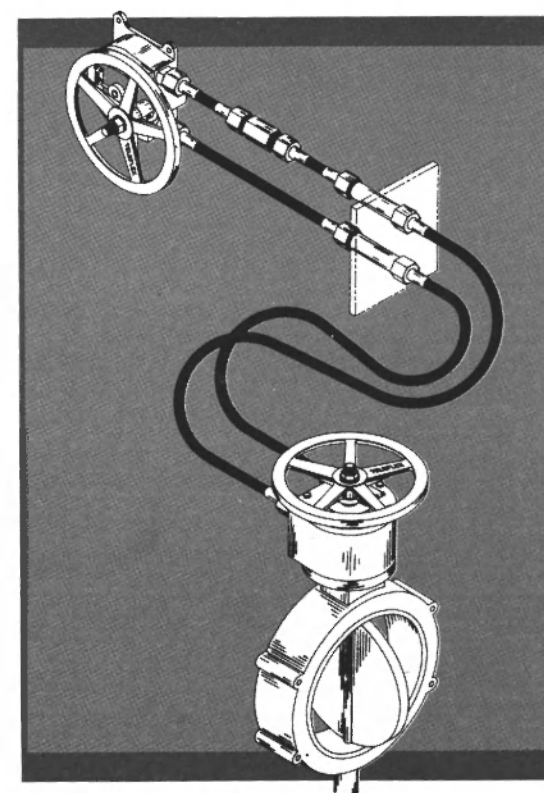
RMVA: Remote Mechanical Valve Actuator Systems for applications requiring delivery of multiple-turn rotary motion from remote locations.

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EG&G Marine Instruments Wins BHP Contract

EG&G Marine Instruments has been awarded a contract by BHP Ltd. Australia, to deliver an integrated Side Scan Sonar and X-Star™ Sub-Bottom Profiler.

This is the first of a new generation of hydrographic tools incorporating EG&G's field-proven side scan and sub-bottom profiling based on Full Spectrum (also called "chirp") technology.

The X-Star Full Spectrum sub-bottom profiler transmits an FM pulse that is linearly swept over a frequency range. Using Digital Signal Processing (DSP) techniques, the acoustic return received at hydrophone is matched filtered with the outgoing pulse. EG&G Marine Instruments manufactures a variety of marine products, including side scan, acoustic releases, current meters, acoustic navigation systems, seismic systems and other marine instrument technology.

For free information from EG&G Marine Instruments,

Circle 63 on Reader Service Card

Dollinger Debuts Gas Turbine Filtration System

Dollinger Corp. introduced a new filtration product line: OME - 1000 Oil Mist Eliminator.

A technologically advanced filtration system, the OME - 1000 is engineered and designed for the source of mist created by large, high speed rotating equipment including gas and steam turbines, axial and centrifugal compressors and large gear boxes.

The new line has culminated from more than 70 years of filtration experience. "Oil mist emissions can affect a company's bottom line as well," said William S. Cope, vice president, marketing. "Any oil lost from the stack can't be recovered or recycled, which can represent the loss of thousands of dollars a year."

The new OME product line offers 10 standard models, blower assisted and non-blower, for myriad power generating applications. For additional information on Dollinger's new filtration product line,

Circle 99 on Reader Service Card

Latest Sea-Hornet Vessel Monitoring System Installed On Boats In 7 Countries

The latest version of Sea-Hornet Marine Industries' Vessel Monitoring and Control systems has already found buyers in seven countries. The V-MAC 3302 has been installed on boats in Canada, Australia, New Zealand, Singapore, Spain and Russia. The 3302 is a microprocessor-driven system which can monitor up to eight engines, from small gensets and auxiliary powerplants to ships' diesels, providing warnings and alarms if necessary. A complete log of operations for each engine is maintained. The system is programmed in the factory, but is reportedly easy to customize to each user's requirements. The system has a built-in Low Mains Alarm and a "Watch Alert" function to warn drowsy helmsmen.

For more information on the 3302 from Sea-Hornet Marine Industries,

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MAN B&W, Russian Yard Reach Production Agreement

An agreement has been reached between MAN B&W and a Russian production company, Baltiysky Zavod, St. Petersburg, for the Alpha range of cp propellers from MAN B&W to be produced in Russia.

Licensed equipment includes four-blade propeller types VB and VBS with monoblock hub diameters from 1,200 to approximately 8,000 mm. The power range is approximately 500 to 20,400 bhp.

The agreement also includes three shaft line mounted servo units type VSA 385 - 560 and 630. For years two-stroke MAN B&W designs have been produced locally in Russia by the Bryansk Engineering Works, Bryansk. For more information on MAN B&W,

Circle 131 on Reader Service Card

Zodiac Life Rafts Receive USCG Approval

The Professional Products Division of Zodiac of North America has received approval from the U.S. Coast Guard (USCG) for its line of inflatable life rafts for commercial use.

The life rafts are available in four ranges—USCG, SOLAS, DOT and USCG Coastal.

The models range from four-to-25-person capacities, while the coastal models can accommodate between four and eight passengers.

The life rafts, already approved by most international maritime authorities, have been in use in other parts of the world for several years. The USCG approval means they can

now be sold domestically.

Zodiac of North America is a subsidiary of Zodiac International, reportedly the world's oldest and largest manufacturer of inflatable products.

For more information on Zodiac products,

Circle 136 on Reader Service Card

New IDB Satellite Service: More Powerful, Cheaper

IDB Mobile Communications, a unit of IDB Communications Group, Inc., and Seven Seas Communications plan to introduce Oceancell, a satellite telephone service intended to be affordable by all ships at sea, available in late 1994.

Seven Seas and IDB Mobile will be the exclusive providers of Oceancell, which will reportedly utilize the most powerful mobile communications satellite ever built, to be launched in August 1994.

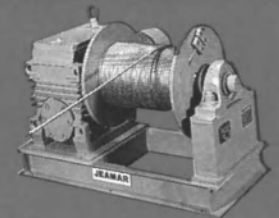
Because the satellite is so powerful, the size of the antenna on the mobile is much smaller, so the cost will reportedly be much lower than those needed for current Inmarsat phones.

IDB says the service will be cheaper as well: whereas Inmarsat A costs between \$7 and \$10 per minute and Inmarsat M costs \$5.50 per minute, IDB says its Oceancell will cost as low as \$1.50 per minute during peak times. Coverage will extend 200 miles offshore, including Alaska, the Caribbean and Canada, and will include fax, data and GPS capabilities.

For more information on the services offered by IDB Mobile Communications,

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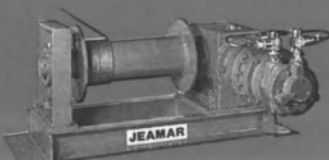


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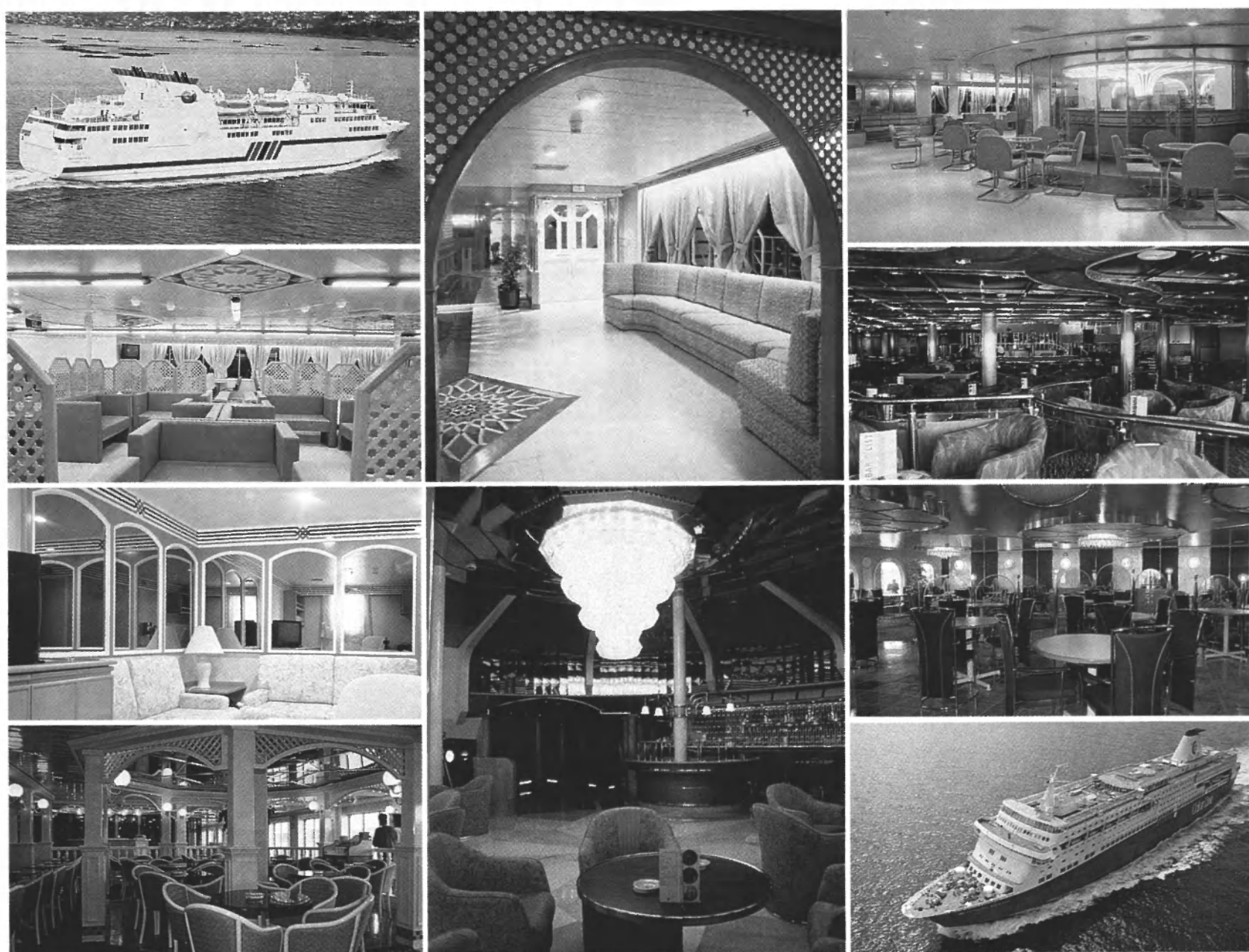
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